UNIVERSITÀ DEGLI STUDI DI PADOVA

# DIPARTIMENTO DI SCIENZE POLITICHE, GIURIDICHE E STUDI INTERNAZIONALI

Corso di laurea *Magistrale* in European and Global Studies

*The use of digital tools for political participation in digital democracy:*
*Qualitative analysis of 10 case studies*

*Relatore:* Prof. GUIDO GORGONI

*Laureando:* MIHAJLO JAKOVLJEV

matricola N. 1236972

A.A. 2021/2022

# Abstract

This research aims to qualitatively analyze the use of digital tools for political participation in digital democracy using 10 case studies. Technological development is influencing every part of our reality. Political systems are not an exception. Democracies expanded by the use of information and communication technology are dubbed digital democracies. Digital democracies are forming new political participation forms by using digital tools to encourage political participation from their citizens. The core of the paper is an analysis of 10 case studies of digital participation platforms divided on three levels of applicability: parliamentary, local government and political party. There is a gap in understanding whether new digital innovations have a potential to shape the future of democratic processes or do they represent a failed experiment. The paper deals with understanding the use of digital tools for political participation in digital democracy from 2001 to 2020. Spatially, the paper will focus on Europe and individual countries of the world depending on the level of the analysis.

**Key words:** digital tools; political participation; digital democracy.

# Table of contents

# List of tables

# Introduction

Technological development is influencing and enhancing every part of our reality. Often, we describe this process from a purely technical perspective; however, how can technology influence the core of our society – the political system? Are political systems destined to remain chained by tradition and centuries old narratives? As much as a negative answer is instinctively applied, a more in-depth analysis on the development of democracy uncovers more questions than answers. One of the key aspects of the democratic processes is political participation. We are witnessing a steady decline in democratic governance in the 21st century and the rise of authoritarian governance. According to the Bertelsmann Stiftung's Transformation Index (BTI) "the decline in the quality of democracy has most often been driven by political elites focusing on securing their own political and economic power at the expense of societal development".[1] "The BTI 2022 finds evidence of a new low in terms of political and economic transformation"[2] showing that "most countries do not guarantee political participation rights and the rule of law to the extent needed to provide the population with a free and self-determined voice in the political decision-making process".[3] From the Freedom House, Sarah Repucci and Amy Slipowitz write that "the past 16 years have shown in stark terms that neither the prevalence of democratic ideas around the world nor the certainty of global progress toward democratic governance can be taken for granted".[4] Can democracy adapt to the rise of authoritarian governance? Is there a mechanism that can refresh political participation in democracy? This shows a gap in understanding if any new digital innovations have a potential to shape the future of democratic processes or they represent a failed experiment.

There are three key elements to understanding if digital innovation can provide an answer to this gap: (1) digital tools; (2) political participation; and (3) and digital democracy. Democracies enhanced by information and communication technology are usually dubbed

---

[1] *Global findings,* Bertelsmann Stiftung Transformation Index, Available from: https://bti-project.org/en/reports/global-dashboard?&cb=00000 (accessed 25 March 2022)

[2] *Global findings – Trend toward authoritarian governance continues,* Bertelsmann Stiftung Transformation Index, Available from: https://bti-project.org/en/reports/global-report (accessed 25 March 2022)

[3] Ibid.

[4] Sarah Repucci, Amy Slipowitz, Freedom in the World 2022: The Global Expansion of Authoritarian Rule, *Freedom House*, February 2022, Available from: https://freedomhouse.org/report/freedom-world/2022/global-expansion-authoritarian-rule (accessed 25 March 2022)

'digital' democracies.[5] In this work we build upon Marianne Knauer's definition of digital democracy as "an over-arching concept, namely the use of ICT by political actors (government, elected officials, media, political/societal organizations, and citizens) within political and governance processes in today's representative democracy"[6] and add that it is achieved by the "act of digitalizing democratic processes so that they can be carried out online".[7] Democracies are using digital tools to encourage political participation from their citizens. The aim of our research is understanding use of digital tools for political participation in digital democracy through a qualitative study method. We apply the qualitative study method in our research following Christopher Reddick and Donald F. Norris's remark that "researchers who undertake further studies of e-participation [should] consider the use of qualitative methods".[8] Time frame of our research is from 2001 to 2020. Spatially, the paper will focus on Europe and individual countries of the world depending on the need of the research.

The primary hypothesis of our research states that *digital tools are transforming political participation in digital democracy*. Can democracy adapt to the rising development in digital technology by conducting digital forms of political participation? The research also aims to address three alternate hypotheses: (1) *Democratic political system does not affect the successful use of digital tools for encouraging citizens' political participation in digital democracy*; (2) *Symbiotic relationship between the authoritative body and the citizens affects the successful use of digital tools for encouraging citizens' political participation in digital democracy*; and (3) *Universal roadmap to successful use of digital participation platforms does not yet exist*. The work is divided in three chapters, complemented by an introduction, conclusions, and bibliography.

The first chapter provides the reader with the theoretical framework for the use of digital tools to encourage political participation in digital democracy. The chapter is divided

---

[5] In our research we will consider terms such as 'e-democracy' or 'internet democracy' as synonymous to the term 'digital democracy'. In other words, we consider the prefix 'e' as referring to 'digital'. We use 'digital democracy' to denote all possible variations of the term.

[6] Marianne Kneuer, "E-democracy: A new challenge for measuring democracy", in *International Political Science Review / Revue internationale de science politique*, vol. 37, no. 5, 2016, p. 669.

[7] Solonian Democracy Institute, *Digital Democracy Report*, Solonian Democracy Institute, 2021, p. 3.

[8] Christopher Reddick, Donald F. Norris, "E-participation in local governments: An examination of political-managerial support and impacts", in *Transforming Government: People, Process and Policy*, vol. 7, no. 4, 2013, p. 469.

into five parts. The first subchapter introduces the basis of our research and key concept – digital democracy. The second subchapter answers the question of 'where' political participation in digital democracy is taking place. The reader is introduced to the policy-making process and three levels of applicability: parliamentary, local government and political party. The third subchapter answers the question of 'who' uses digital tools to impact the expansion of democracy to digital democracy. The subchapter aims to expand the role of citizens faced with new digital outlets of performing democratic processes. The fourth subchapter answers the question of 'how' citizens can be involved in the 'digital' democratic processes. The theoretical differentiation between digital *forms*, *tools* and *platforms* is introduced before providing a brief overview of 10 digital participation platforms used in our research: *Decidim*, *CONSUL*, *Citizen Lab*, *Your Priorities*, *e-Democracia*, *Polis*, *Citizen OS*, *Rousseaou*, *Participa* and *Liquid Feedback*. Finally, the fifth subchapter answers the question of 'when' is using digital tools for political participation successful. The aim of the subchapter is to define the criteria for successful use of digital tools for political participation in digital democracy. Four descriptive criteria will be applied throughout the paper on selected case studies: *form*, *functionality*, *scope,* and *impact*. The chapter firstly provides the base upon which answers the questions of 'where, how, who and when' of the use of digital tools for political participation in digital democracy.

The second chapter deals with practical applications of the use of digital tools for political participation in digital democracy through a qualitative analysis of 10 case studies. Digital participation platforms are introduced as the subcategory of digital tools. The chapter is divided into three parts following the previously established distinction on three levels of applicability: parliamentary, local government and political party. On each level the chapter points out examples of digital participation platforms and their use through case studies. We apply previously defined criteria for describing the use of digital tools in digital democracies: form, functionality, scope, impact. On the parliamentary level the chapter describes the use of digital participation platforms in four countries: (1) Brazil: *e-Democracia*; (2) Estonia: *Rahvaalgatus*; (3) and Taiwan: *vTaiwan*. On the local government level, the chapter describes the use of digital participation platforms in five cities: (1) Madrid: *Decide Madrid*; (2) Barcelona: *Barcelona Decidim*; (3) Reykjavik: *Better Reykjavik*; and (4) Leuven: *Co-Create it*. On the political party level, the chapter describes the use of digital participation platforms in three political parties: (1) *International Pirate Party*: LiquidFeedback; (2) *Podemos*: Participa; and (3) *Five Star Movement*: Rousseau.

*Conclusion* is dedicated to final closing remarks, recommendations for further research and answering research question.

# Chapter I: Theoretical framework

## 1.1. Defining digital democracy

In this subchapter we will terminologically deconstruct "digital democracy". The aim of this subchapter is to set the base of our research. The subchapter is divided into two key parts: (1) setting the base; and (2) defining digital democracy.

Ever since Francis Fukuyama authored a paper in 1989 proclaiming 'the end of history' we find ourselves in a democratic stalemate. The main reason for this is the difficulty of disapproving Fukuyama's argument. Fukuyama states that "the triumph of the West, of the Western idea, is evident first of all in the total exhaustion of viable systematic alternatives to Western liberalism",[9] continuing that "what we may be witnessing is not just the end of the Cold War, or the passing of a particular period of postwar history, but the end of history as such: that is, the end point of mankind's ideological evolution and the universalization of Western liberal democracy as the final form of human government".[10] Years later even Fukuyama himself started having doubts with his own proclamation;[11] however, in our research we will consider the Western liberalism as a political / institutional model of reference. Our primary focus shifts on three main political regimes: authoritarianism, hybrid regimes and democracy. By placing the base of our research in a sphere of Western liberalism and shifting our focus to three political regime types, we continue by expanding domestic political regimes with a digital sphere. Wright defines a domestic political regime as "a system of social organization that includes not only government and the institutions of the state, but also the structures and processes by which these interact with broader society".[12]

Following his aim to analyze the digital development of domestic political regimes, Wright finds digital variants "of each regime type emerging: digital authoritarianism (e.g.

---

[9] Francis Fukuyama, "The End of History?", in *The National Interest*, no. 16, 1989, p. 3.

[10] Ibid., p. 4.

[11] See: Ishaan Tharoor, "The man who declared the 'end of history' fears for democracy's future", *The Washington Post*, 9 February 2017, Available from: https://www.washingtonpost.com/news/worldviews/wp/2017/02/09/the-man-who-declared-the-end-of-history-fears-for-democracys-future/ (accessed 17 March 2022).

[12] Nicholas D. Wright, *Artificial Intelligence, China, Russia, and the Global Order*, Air University Press, Maxwell, AL, 2019, p. 21.

China), digital hybrid regimes (e.g. Russia) and digital liberal democracies (e.g. the US)".[13] First, Wright defines authoritarian regimes as "a belief in or practice of government "from above," in which authority is exercised regardless of popular consent".[14] Erol Yayboke and Sam Brannen define digital authoritarianism "as the use of the Internet and related digital technologies by leaders with authoritarian tendencies to decrease trust in public institutions, increase social and political control, and/or undermine civil liberties".[15] Yaybloke and Brannen point out that "the digital tools of leaders with authoritarian tendencies are ever evolving";[16] however, they "can be grouped into those used for repression and disruption [surveillance, cyber-attacks, espionage, censorship, social and electoral manipulation] and those used for strategic competition among great powers [digital infrastructure, advancing authoritarian visions of the internet]".[17] One of the examples of digital authoritarianism applied in practice is the case of 'The Great Firewall of China'. According to Shen Fei "the Great Firewall of China" describes "internet censorship in China, where foreign "harmful" ideas are prevented from invading the authoritarian state to safeguard its one-party rule through filtering content as well as monitoring users online".[18] The literature of defining digital authoritarianism as a regime is scarce; however, we can conclude that regardless of the terminological implications, digital authoritarianism refers to the use of digital tools to limit or prevent the use of the Internet and related digital technologies. Second, Wright defines hybrid regimes as those who "combine features of democracy and authoritarian systems".[19] Wright gives an example of Russia as according to him, "Russia's approach to information manipulation and control differs significantly from the Chinese system"[20] since it "emphasizes systemic technical censorship much less".[21] It is debatable if we can consider Russia to be a digital hybrid regime since authors like Yayboke and Brannan would consider

---

[13] Nicholas D. Wright, *Artificial Intelligence, China, Russia, and the Global Order*, op. cit., p. 21.

[14] Ibid., p. 22.

[15] Erol Yayboke, Sam Brannen, *Promote and Build: A Strategic Approach to Digital Authoritarianism*, Center for Strategic and International Studies Briefs, 2020, p. 1, Available from: https://www.csis.org/analysis/promote-and-build-strategic-approach-digital-authoritarianism

[16] Ibid., p. 3.

[17] Ibid., pp. 3-4.

[18] Fei Shen, Great Firewall of China, in Harvey, K. (Ed.), *In Encyclopedia of Social Media and Politics*, SAGE, Volume 2, 2014, p. 599.

[19] Nicholas D. Wright, *Artificial Intelligence, China, Russia, and the Global Order*, op. cit., p. 22.

[20] Ibid, p. 31.

[21] Ibid.

Russia to be an example of digital authoritarianism. If our criterion for differentiation is *systematic*, then Russia can be considered an example of a digital hybrid regime; however, if our criterion is *leadership* then Russia can be considered an example of digital authoritarianism. Regardless of the terminological dilemma we can conclude that digital hybrid regimes refer to the use of digital tools to limit but not fully prevent the use of the Internet and related digital technologies. The results of the discussion on digital authoritarianism and digital hybrid regimes would simply result in an array of disinformation. If the use of digital tools is limited or actively prevented – we cannot analyze their impact on the decision-making process since it simply does not exist. Furthermore, Wright denoting these 'regimes' as 'digital regimes' implies that their existence is outside of the scope of what is considered traditional political regimes, which is not the case. The term 'digital' does not suggest the creation of something new but a translation of existing into a new mode of function – digital. Digital authoritarianism and digital hybrid regimes will not be further analyzed in this paper. Furthermore, accepting 'digital liberal democracy', the third digital regime in Wright's argument, as a 'regime' can be used if by 'regime' we consider a general term meaning to organize something in a specific manner. In our research we will diverge from this notion to adopt a more precise definition.

Second, we bring our analysis to the sphere of democracy and introduce 'digital democracy'; however, not defined as a regime. To set the terminological base this analysis requires pointing out three key elements: (1) defining democracy; (2) defining digital; and finally, (3) defining digital democracy.

According to Huntington "a wave of democratization is a group of transitions from nondemocratic to democratic regimes that occurs within a specified period and that significantly outnumbers transitions in the opposite direction in the same period".[22] Wright summarizes that there are "three 'waves' of democratization globally, and [every] wave is then followed by a 'reverse wave' of increasing authoritarianism".[23] However compelling, Reske Doorenspleet finds two problems in Huntington's argument: (1) "The first is largely conceptual: the analysis fails to provide a clear and meaningful distinction between democratic and authoritarian regimes"[24] and (2) "Huntington has estimated the incidence of

---

[22] Samuel P. Huntington, "How Countries Democratize", in *Political Science Quarterly*, vol. 106, no. 4, 1991-1992, p. 579.

[23] Nicholas D. Wright, *Artificial Intelligence, China, Russia, and the Global Order*, op. cit., p. 23.

[24] Renske Doorenspleet, "Reassessing the Three Waves of Democratization", in *World Politics*, vol. 52, no. 3, 2000, p. 385.

transitions to democracy in terms of percentages involved"[25] and "since the denominator […] is the number of states in the world […] the measure can be misleading".[26] Doorenspleet continues to provide his own solution to the two problems noting that "what is required […] is a classification that not only is transparent and consistent but that also incorporates inclusiveness".[27] Hence, Doorenspleet defines liberal democracy as a regime "in which there is meaningful and extensive competition, sufficiently inclusive suffrage in national elections, and a high level of civil and political liberties".[28] Understanding that there are numerous ways of defining democracy, in this research we will not try to detangle the academic literature; instead, there are two reasons why we will follow Doorenspleet's definition of liberal democracy. First, Doorenspleet's definition is drawn from Huntington's idea of 'waves of democratization', which introduces how democracy spread over time – noting that democracy eventually became an over-arching idea. Second, Doorenspleet's definition includes three elements: (1) meaningful and extensive competition; (2) sufficiently inclusive suffrage in national elections; (3) high level of civil and political liberties; all of which explain that political participation is qualitatively susceptible to change, for better or worse. The use of digital tools to encourage political participation becomes an outlet of such change and its effects are qualitatively analyzed in our research.

Second, Wright defines 'digital' as "regime's modes of functioning [that are] critically enabled by the affordances (i.e. possibilities for action) that the digital technologies provide".[29] This broad definition is useful because we can consider, according to Wright, 'digital technologies' to "include computers, communication (e.g. the internet), big data and AI-related processing".[30] Following this line of though, we use 'digital' to refer to a 'mode of function'.

Third, our research, as mentioned in the introduction, builds upon Marianne Knauer's definition of digital democracy as "an over-arching concept, namely the use of ICT by political actors (government, elected officials, media, political/societal organizations, and citizens) within political and governance processes in today's representative democracy".[31]

---

[25] Renske Doorenspleet, "Reassessing the Three Waves of Democratization", op. cit., p. 386.

[26] Ibid.

[27] Ibid., p. 389.

[28] Ibid.

[29] Nicholas D. Wright, *Artificial Intelligence, China, Russia, and the Global Order*, op. cit., p. 25.

[30] Ibid.

[31] Marianne Kneuer, "E-democracy: A new challenge for measuring democracy", op. cit., p. 669.

This is not to note that Knauer's definition is the widely accepted definition since such a distinction does not yet exist. The paradigm of 'digital democracy' is still considered new and as such, various definitions emerge from the academic literature. Difficulties can here be briefly summarized through three problems: (1) terminology; (2) perspective; and (3) meaning. First, from a terminological point of view the term 'digital democracy' is not without variants. Knauer uses the term 'e-democracy' to refer to 'digital democracy', whereas Wright freely uses the term 'digital democracy'. Second, other authors are more focused on the perspective from which to deconstruct the term 'digital democracy'. Sebastian Berg and Jeanette Hoffmann have a starting point in 'digital democracy' and then they deconstruct the term into "three historical constellations in the evolution of digital democracy, each consisting of specific configuration of technologies and democratic imaginaries: (1) electronic democracy; (2) virtual democracy; and (3) web 2.0 / network democracy".[32] While Berg and Hofmann make this distinction based on the criteria of which digital technologies are used in a specific time frame, Lincoln Dahlberg branches out 'digital democracy' on the notion of 'positions'[33] to "liberal-individualist, deliberative, counter-publics, and autonomist Marxist".[34] Thirdly, we can point out three different meanings of 'digital democracy' from the existing literature: (1) Digital democracy as a regime (Wright); (2) Digital democracy as a concept (Knauer); (3) Digital democracy as an act (Solonian Democracy Institute (SDI)). The first two have already been introduced; however, the third shows the most promise since it establishes a clear link between democracy and digital technology. SDI defines digital democracy as an "act of digitalizing democratic processes so that they can be carried out online".[35] According to the 2021 Digital Democracy Report by the SDI, the starting point in understanding digital democracy is to define democratic processes as "any process which allows citizens or residents of a country of community to interact with their public political institutions".[36] From this point of view, digital democracy is simply an 'act of digitalization'. This definition surpasses Wright's 'regime' in noting that digital democracy does not represent a new political regime; furthermore, it surpasses Knauer's 'over-arching concept'

---

[32] Sebastian Berg, Jeanette Hofmann, "Digital democracy", in *Internet Policy Review*, vol. 10, no. 4, 2021, p. 3.

[33] "By position I am grouping within a general category a set of phenomena (rhetoric, practices, identities, and institutions) that can be identifies as sharing similar characteristics". (Lincoln Dahlberg, "Re-constructing digital democracy: An outline of four 'positions'", *New media & society*, vol. 13, no. 6, p. 856)

[34] Lincoln Dahlberg, "Re-constructing digital democracy: An outline of four 'positions'", op. cit., p. 857.

[35] Solonian Democracy Institute, *Digital Democracy Report*, op. cit., p. 3.

[36] Ibid., p. 3.

since it does not put 'digital democracy' in an abstract state, giving it a clear distinction. The main flaw in defining 'digital democracy' as an 'act' is that it becomes impossible to differentiate between 'digital democracy' and the process of digitalization. For these reasons, our research builds upon Knauer's definition of 'digital democracy' adding that it is achieved by the "act of digitalizing democratic processes so that they can be carried out online".[37]

To summarize, in our research we will not consider digital democracy as an independent and new political regime; instead, we will consider it to be, in general terms, an expansion of democracy. The 'digital' represents an 'expansion'. Wright's distinction between three digital variants becomes the expression of such expansion: taking the form of 'digital' authoritarianism, 'digital' hybrid regime or 'digital' liberal democracy. Finally, in this subchapter we set the base of our research on the idea of Western liberalism and the political regime of democracy. Furthermore, we expand our base with a key variation of a democracy analyzed in this paper as a 'concept achieved by act' which forms 'digital democracy'.

## 1.2. Levels of political participation

The aim of this subchapter is to answer the question of 'where' political participation in digital democracies is taking place. With this in mind, we will deconstruct: (1) the policy-making process; and (2) three levels of applicability: parliamentary, local government and political party.

First, deconstructing the policy-making process poses itself as the first obstacle towards understanding *where* political participation in digital democracies is taking place. We follow Michael Howlett's, Michael Ramesh's and Anthony Perl's general remark of policy-making as "a process that can be characterized as 'applied problem solving'".[38] According to Howlett et al., "in each of the theoretical frameworks that seek to make sense of policy, we can find three essential elements that are addressed, albeit differently":[39] (1) "understanding policy requires some knowledge about the actors who raise issues, assess options, decide on

---

[37] Solonian Democracy Institute, *Digital Democracy Report*, op. cit., p. 3.

[38] Michael Howlett, M. Ramesh & Anthony Perl, *Studying public policy: Policy cycles and policy subsystems* (Vol. 3), Oxford: Oxford University press. 2009, p. 4.

[39] Ibid., p. 48.

those options, and implement them";[40] (2) "policy insights also call for an appreciation of the ideas that shape policy deliberations";[41] (3) "policy-making takes place within a set of social and political structures that affect the deliberations of what is to be done".[42]

Establishing the three elements of understanding the policy-making process we further deconstruct the process into a cycle. Howlett et al. explain a five stage policy cycle: "[1] Agenda-setting refers to the process by which problems come to the attention of governments; [2] policy formulation refers to how policy options are formulated within government; [3] decision-making is the process by which governments adopt a particular course of action or non-action; [4] policy implementation relates to how governments put policies into effect; and [5] policy evaluation refers to the processes by which the results of policies are monitored by both state and societal actors, the outcome of which may be reconceptualization of policy problems and solutions".[43] Policy cycle in this instance is considered to be "an applied problem-solving model of the policy process".[44]

According to Howlett et al., "the term 'policy regime' attempts to capture how policy institutions, actors, and ideas tend to congeal into relatively long-term, institutionalized patterns of interaction that combine to keep public policy contents and processes more or less constant over time",[45] adding that "it can be thought of as combining a common set of policy ideas (a policy paradigm) and a common or typical set of policy actors and institutions organized around those ideas (a policy subsystem)".[46] The actors involved in the policy-making process are various and they range depending on the stage in the policy cycle. Howlett et al., make a distinction of what constitutes a policy universe opposed to the policy subsystem. Explaining the rise and fall in numbers of actors involved in the policy-making process, Howlett et al., start by stating that the "agenda-setting is a stage in which virtually any (and all) policy actors might be involved in decrypting problems and demanding government action"[47] hence " these policy actors […] can be termed the policy universe".[48]

---

[40] Michael Howlett, M. Ramesh & Anthony Perl, *Studying public policy: Policy cycles and policy subsystems*, op. cit., p. 48.

[41] Ibid.

[42] Ibid.

[43] Ibid., p. 12.

[44] Ibid., p. 10.

[45] Ibid., p. 86.

[46] Ibid., p. 87.

[47] Ibid., p. 12.

[48] Ibid.

Howlett et al., continue explaining that "at the next stage, formulation, only a subset of the policy universe – policy subsystem – is involved in discussing options to deal with problems recognized as requiring some government action", then "the number of actors is reduced even further, to only the subset of the policy subsystem composed of authoritative government decision-makers, weather elected officials, judges, or bureaucrats".[49] Finally, Howlett et al., make a full circle and deduce that "once implementation begins, however, the number of actors increases once again to the relevant subsystem and then, finally with the evaluation of the results of that implementation, expands once again to encompass the entire policy universe".[50] The most important notion here is to accept and understand the policy-making process as one of the main processes upon which we can describe the influence of digital tools.

In our research we will focus on the levels of applicability where political actors are involved in 'applied problem solving'. Hence, we will analyze the use of digital tools during the policy-making process on three distinct levels: (1) parliamentary policymaking; (2) local government policymaking; and (3) political party decision-making level. Dividing our analysis on these three levels is not a new concept. In their research, National Endowment for Science, Technology, and the Arts (later, NESTA) had used the three levels to analyze the successful application of digital tools in digital democracies, however, doing so from a more practical, rather than theoretical perspective. On the other hand, Randma-Liiv et al., have used the distinction between nation and local levels for their analysis of digital participation initiatives; however, not including the level of political parties nor digital participation forms such as participatory budgeting.[51] Here, our aim is to build and expand a strong theoretical framework from the existing literature that can be later applied in Chapter 2.

When discussing the parliamentary level of policymaking, we are required to note two key aspects: (1) our research places a focus on the legislative branch of the government; and (2) the public policy-making process. In Chapter 2 we will analyze three examples of applying digital tools to the public policy-making process in three countries: Brazil (presidential democracy), Estonia (parliamentary democracy) and Taiwan (semi-presidential

---

[49] Michael Howlett, M. Ramesh & Anthony Perl, *Studying public policy: Policy cycles and policy subsystems*, op. cit., pp. 13-14.

[50] Ibid., p. 13.

[51] See: Tiina Randma-Liiv, Kadi Maria Vooglaid, Veiko Lember, "Framework for analysis of the management and organization of e-participation initiatives", in Tiina Randma-Liiv and Veiko Lember (Eds.), *Engaging Citizens in Policy Making*, 2022.

democracy). Focusing on the legislative branch allows us to gauge the successful application of digital tools during the public policy-making process in three different government forms: presidential democracy, semi-presidential democracy, and parliamentary democracy.

Furthermore, we are considering the three distinct types of democracy: representative, deliberative, and participatory. According to Michele Sorice "there is a tendency to overlap the concept of direct democracy with those of deliberative and participatory democracy".[52] First, Sorice starts by explaining that "direct democracy previews that people can vote on different topics, usually having a binary choice; the policy making process is distinct from that of decision making",[53] giving an example of referendums. Second, "deliberative democracy is based upon the shared formation of opinions and preferences"[54] while "participatory democracy involves a series of social practices, continuous over time, aimed at improving representation in the logic of strengthening the quality of responsiveness".[55] Sorice concludes that "deliberative and participatory democracies are not alternatives to representative ones, but can enrich them",[56] and highlighting that "deliberative/participatory e-democracy can be the right way to reshape representative democracy and avoid risks of plebiscitary approaches, that instead structurally belongs to direct democracy".[57] The notion of 'enrichment' discussed by Sorice would entail 'betterment'; in order to avoid an early evaluation, we adopt a neutral term 'expansion' to note that this issue is debated in our research.

When discussing the local government policymaking we are required to note two important aspects: (1) our research places a focus on the category of 'smart cities' by (2) analyzing the use of digital tools during the local government policy-making process. In Chapter 2 we will analyze five examples of applying digital tools during the local government policy-making process in four cities: Madrid, Barcelona, Reykjavik, and Leuven. According to Rob Kitchin there are "two distinct but related understandings as to what makes

---

[52] Michele Sorice, "Between Direct Representation and Participatory Democracy", *Italian Institute for International Political Studies*, 21 May 2019, https://www.ispionline.it/en/pubblicazione/between-direct-representation-and-participatory-democracy-23152, (accessed 20 March 2022)

[53] Ibid.

[54] Ibid.

[55] Ibid.

[56] Ibid.

[57] Ibid.

a city 'smart'":[58] (1) "pervasive and ubiquitous computing and digitally instrumented devices built into the very fabric of urban environments (e.g. fixed and wireless telecom networks, digitally controlled utility services and transport infrastructure, sensor and camera networks, building management systems, and so on) that are used to monitor, manage and regulate city flows and processes, often in real-time, and mobile computing (e.g., smart phones) used by many urban citizens to engage and navigate the city which themselves produce data about their users (such as location and activity)",[59] and (2) considering that "a smart city is one whose economy and governance is being driven by innovation, creativity and entrepreneurship, enacted by smart people".[60]

In our research we will follow the second understanding of 'smart cities' as it reflects more on the governance influenced by the information and communication technology. Kitchin adds that "ICT is seen as being of central importance as the platform for mobilizing and realizing ideas and innovations, especially with respect to professional activities".[61] Here, we would argue that the use of digital tools (enabled using ICT) during the policy-making process (in this case – local government policy-making process) falls within the characteristics of describing a 'smart city'.

When discussing the political party decision-making process, we are required to note two important remarks: (1) our research focuses on political parties that have/had used digital tools to encourage political participation during (2) the process of decision-making. In Chapter 2 we will analyze three examples of applying digital tools during the process of inter-party policy or decision-making: International Pirate Party, Podemos (Spain) and Five Star Movement (Italy). When comparing the three levels of applicability, the political party level stands out in its limited policy-making capacity. Parliamentary level refers to a public policy-making process that reflects the entire country and local government level refers to a policy-making process that reflects on the certain city or region. On the other hand, the political party level does not suggest a policy-making process that focuses on a significantly smaller group of political actors. Instead, the political party correlate of the policy-making process is the decision-making process.

The reason for including a third level in our research lies in the fact that the use of digital tools to encourage political participation is not exclusive to nation or local governance

---

[58] Rob Kitchin, "The real-time city? Big data and smart urbanism", in *GeoJournal*, vol. 79, no. 1, 2014, p. 1.

[59] Ibid., p. 2.

[60] Ibid.

[61] Ibid.

levels. Political parties partake in democratic processes which is why it is possible for them to use digital tools to encourage political participation. This is to note that our research expands describing the use of digital tools to encourage political participation beyond the levels of public policymaking. According to Øystein Sæbø et al., "participation can take place within the formal political processes (for instance voting) or outside it (for instance political activism)".[62] Furthermore, Veiko Lember et al., suggest that "there is surprisingly little empirical research which systematically addresses how e-participation initiatives affect collaborative partnerships both within governments and with non-governmental actors, and ultimately, the links between e-participation practices and the actual policy-making process".[63]

With this in mind, we expand the category of 'policy-making' in order to focus on the 'decision-making' by highlighting that political parties not only make decision while having in mind certain public policies (thus formulating their policy goals), rather they are often involved with organizational decision-making which is also accessible through the use of digital tools. Marco Deseriis argues the "widespread frustration [after the 2008 financial crisis] at the ruling elites' mishandling of the crisis sparked international protest movements, and propelled a new generation of "technoparties" such as the Five Star Movement in Italy, Podemos in Spain, and the Pirate Party in Iceland".[64] Deseriis distinguishes "between two variants of technopopulism: a technocratic and leaderless variant, which pursues and enacts meritocratic forms of democratic participation; and a leaderist, more strictly populist, variant wherein charismatic leaders play a critical role in conferring unity and identity to their parties".[65] Emiliana De Blasio and Michele Sorice state that "the two variants are linked, in different ways, to the emergence of the platform-parties".[66] De Blasio and Sorice conclude that "the tools of democratic invocation (such as e-democracy, particularly a truly

---

[62] Øystein, Sæbø, Jeremy Rose, and Leif Skiftenes Flak, "The shape of eParticipation: Characterizing an emerging research area",in *Government information quarterly*, No. 25, 2008, p. 402.

[63] Veiko Lamber, Tiina Randma-Liiv and Kadi Maria Vooglaid, "Engaging citizens in policy making: The potential and challenges of e-participation", op. cit., p. 4.

[64] Marco Deseriis, "Technopopulism: The Emergence of a Discursive Formation", in *TripleC*, vol. 15, no. 2, 2017, p. 441.

[65] Ibid.

[66] Emiliana De Blasio, Michele Sorice, "Populism among technology, e-democracy and the depoliticisation process", *Revista Internacional de Sociologia*, vol. 76, no. 4, 2018, p. 11.

deliberative e-democracy) can reinforce democratic participation; however, they often do the opposite, becoming effective enhancers (directly or indirectly) of populist tendencies".[67]

The aim of this subchapter was to answer a question of 'where' does the application of digital tools impact the expansion of democracy to digital democracy (i.e., 'where' does political participation in digital democracy take place). By deconstructing two key elements: (1) the policy-making process; and (2) three levels of applicability: parliamentary, local government and political party; we can deduce an answer. In our research, digital democracy as a 'concept' is achieved by an 'act' of using digital tools during the policy-making process on parliamentary and local government level and the decision-making process of political parties.

### 1.3. Citizens and political participation

The aim of this subchapter is to answer the question of 'who' uses digital tools to impact the expansion of democracy to digital democracy. The idea behind it remains simple and we instinctively reach an assumption that the main actors of this process are citizens. However, how does the role of citizens in democracy change when faced with a new outlet of performing democratic processes, rather, a new mode of function – digital? This subchapter is divided into two parts: (1) political and digital participation; and (2) expanding the role of citizens.

In the first part it is necessary to deal with the concepts of political and digital participation. According to Trevor Garrison Smith "any meaningful definition of democracy that is to include all of its diverse and often radically divergent forms must centre on the idea that it involves some form of citizen participation, whether in the form of voting in elections, discussing issues in a public sphere, or direct participation in decision-making".[68] Smith continues that "participation in politics must include both the means to participate in the opinion mechanisms of debate and deliberation as well as participating in the decision making process".[69] Smith argues that "concerns of physical distance and time in an online context are not the overwhelming constraints they are in offline space, which allows us to move beyond the primary and most valid criticism of participatory democracy",[70] so that

---

[67] Ibid., p. 12.

[68] Trevor Garrison Smith, *Politicizing Digital Space: Theory, the Internet, and Renewing Democracy*, University of Westminster Press, 2017, p. 72.

[69] Ibid., p. 76.

[70] Ibid., p. 80.

"instead of positing the internet as a communications tool, alternative space, or useful supplement, the real potential lies in placing the infrastructure of politics online".[71] Smith expresses his preference towards participatory politics in numerous ways landing on a general aim that digital tools can be used to achieve 'true' participation of citizens in politics. Currently the main use of digital tools is to 'allow digital participation' of citizens in policy-making processes, and not yet, as Smith would call for, the translation of everything political to be online. When the policy-making process includes the use of digital tools we can construct the digital policy-making paradigm.

According to Van Dijk "most experience in [Digital participation] has been made in the phases of agenda setting, policy preparation and policy evaluation [while] applying eParticipation [i.e., Digital participation] in decision making and policy execution [i.e., implementation] is contested".[72] Van Dijk manages to correlate all five stages of the policy cycle with the corresponding application of digital participation. As seen in the previous paragraph we expand the definition of digital participation to denote not only to the relations of citizens to governments (Parliamentary level) and to public administrations (Local government level) but also to the relations between citizens and/or members of a political party to the authority within the political party (Political party level). This is to note that no policy-making process rests completely in the digital sphere, instead it is a mixture of online and offline activities that correlate to the digital policy-making paradigm. According to Sæbø et al., digital participation "involves the extension and transformation of participation in societal democratic and consultative processes mediated by information and communication technologies (ICT), primarily the Internet",[73] highlighting that "it aims to support active citizenship with the latest technology developments, increasing access to and availability of participation in order to promote fair and efficient society and government".[74]

Sæbø et al., define digital participation in a much broader scope allowing its application in our research on all three levels: parliamentary, local government and political party. Here, we move a step forward in mentioning that among the democratic process, the

---

[71] Trevor Garrison Smith, *Politicizing Digital Space: Theory, the Internet, and Renewing Democracy*, op. cit., p. 81.

[72] Jan A.G.M. Van Dijk, "Digital democracy: Vision and reality", in I. T. M. Snellen, M. Theans, & W. B. H. J. van de Donk (Eds.), *Public administration in the information age: revisited,* IOS Press, 2012, p. 57.

[73] Øystein, Sæbø, Jeremy Rose, and Leif Skiftenes Flak, "The shape of eParticipation: Characterizing an emerging research area", op. cit., pp. 400-401.

[74] Ibid., p. 401.

Solunian Democracy Institute, lists: "[1] elections (local, regional, national and supranational); [2] referenda and petitions; [3] public consultations and surveys; [4] participatory budgeting (where part or all of a community's budget is distributed in accordance with how members of that community have voted); [5] administrative processes such as requesting permits, parking tickets, etc.".[75] Digitalization of these democratic processes constitutes the existence of digital democracy. However, this is not to suggest that the mentioned list of democratic processes is completed.

By transferring these democratic processes into the digital sphere, we are expanding their reach and use. This transition allows us to consider digital participation *forms*. Jan Van Dijk recognizes thirteen forms of digital participation: "[1] Open Online Consultation; [2] ePetitions and eActivism; [3] Online Plan Consultations; [4] Online Forums for Policy Making; [5] Online Knowledge Communities and social Media serving Policy Making; [6] eVoting; [7] eCampaigning; [8] eMaintanance of the Law; [9] eGovernment services following the needs of citizens and including participation; [10] eGovernment services with participatory user-design; [11] eComplaints and eSurveillance; [12] Quality panels and individual evaluations of online public services; and [13] Citizen control sites and information services for public and government policy".[76] In more general terms these thirteen applications are forms of digitalized democratic processes that are used during the policy-making process. This suggests that this list can only be applied on a parliamentary and local government level.

This is not an exclusive list and there are different typologies for digital participation forms. NESTA recognizes ten aspects of digital democracy i.e. digital political participation forms: "(1) Informing citizens; (2) Issue framing; (3) Citizens providing information; (4) Citizens providing ideas; (5) Citizens providing technical expertise; (6) Deliberation; (7) Citizens developing proposals; (8) Citizens scrutinizing proposals; (9) Citizens making decisions; and (10) Citizens monitoring and assessing public actions and services".[77] When making this list, unlike Van Dijk, NESTA, did not take into account which of these forms can be applied during a specific stage of the policy-making process, rather leaving it as an open category. This leads us to refer to digital participation forms in more general terms as '*all-*

---

[75] Solonian Democracy Institute, *Digital Democracy Report*, op. cit., p. 3.

[76] Jan A.G.M. Van Dijk, "Digital democracy: Vision and reality", op. cit., p. 58

[77] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology and the Arts (NESTA), 2017, p.13.

*reaching*' (correlating to Sæbø et al. definition) rather than '*too specific*' (correlating to van Dijk's definition).

**Table 1.** *Policy-making phases and corresponding digital participation forms.*

| Policy making phases | Digital participation forms |
|---|---|
| *Agenda setting – "process by which problems come to attention of governments".* | Open Online Consultations (government and public administration); ePetitions and eActivism (citizens). |
| *Policy formulation – "how policy options are formulated within government".* | Online Plan Consultations (Government); Online Forums for Policy Making (Citizens); Online Knowledge Communities and Social Media serving Policy Making (Citizens). |
| *Decision-making process – "process by which governments adopt a particular course of action or non-action".* | eVoting (governments, election committees); eCampaigning (citizens and politicians). |
| *Policy implementation – "how governments put policies into effect".* | eMaintanance of the Law (by citizens invited by governments); eGovernment services following the needs of citizens and including participation (government initiative); eGovernment services with participatory user-design (government initiative); eCompaints and eSurvaillance (initiated by citizens) |
| *Policy evaluation – "process by which the result of policies are monitored by both state and societal actors, the outcome of which may be reconceptualization of policy problems and solutions".* | Quality panels and individual evaluations of online public services (government initiative); Citizen control sites and information services for public or government policy (citizen initiative). |

Note: Adapted from Jan A.G.M. Van Dijk, "Digital democracy: Vision and reality", in I. T. M. Snellen, M. Theans, & W. B. H. J. van de Donk (Eds.), *Public administration in the information age: revisited,* IOS Press,

2012, p. 58. and Michael Howlett, M. Ramesh & Anthony Perl, *Studying public policy: Policy cycles and policy subsystems* (Vol. 3), Oxford: Oxford university press. 2009, p. 12.

We would argue that for the description of the use of digital participation forms is better to have an open category than considering it as exact science. The reason for this is that it would enable research to qualitatively focus more on the context-specific case studies. We accept both given definitions of digital participation and their correlating digital participation forms; however, we only apply NESTA's typology and understanding of digital participation forms on our case studies. This allows us to consider different and all levels of applicability while qualitatively having sufficient range to describe the use of digital tools to encourage citizens' political participation.

The second part of this subchapter deals with citizens in digital democracy. This implies the need to discuss if the role of citizens is changing when faced with a new and different mode of function – digital. How is the expansion of democracy to digital democracy affecting citizens? New mode of function expands the role of citizens by allowing for new digital ways of exercising their rights. Digital participation forms constitute a *calling* that calls forth citizens to partake in democratic processes online. According to Engin Isin and Evelyn Ruppert "if callings summon citizen subjects, they also provoke openings and closings for making rights claims"[78] and they "consider openings as those possibilities that create new ways of saying and doing rights",[79] in other words, "openings are those possibilities that enable the performance of previously unimagined or unarticulated experiences of ways of being citizen subjects, a resignification of being speaking and acting being".[80] Enabling citizens to partake in various digital participation forms (i.e. answering to a *calling*) creates an *opening* for 'new ways of saying and doing rights' (e.g. partaking in democratic processes online). According to Isin and Ruppert, "if we constitute ourselves as digital citizens, we have become subjects of power in cyberspace [which] involves the inscription of rights in law (legality), claiming rights through performance (performativity), and responding to callings (imaginary) […]".[81] Isin and Ruppert state that "cyberspace became such a concept with which we experience being 'online' and participate in online

---

[78] Engin Isin, Evelyn Ruppert, *Being Digital Citizens*, Rowman & Littlefield, 2020, p. 57.

[79] Ibid.

[80] Ibid.

[81] Ibid., p. 38.

activities",[82] described "as a space of transactions and interactions between and among bodies acting through the Internet".[83]

Digital participation forms exist in cyberspace. Ted Piccone notes that "the diffusion of digital technology has vastly expanded citizens' opportunities to exercise their rights to freedom of expression and association, to participate in civic life, and to hold public officials accountable, […]".[84] Isin and Ruppert highlight that "what the figure of citizen – as we inherited and as yet to come – accomplishes is the bridging of […] two forms of politics that has emerged in the enactment of cyberspace: those who enact themselves as political subjects and make digital rights claims in or by saying and doing something through the Internet (enactment) and those who make digital rights claims in or by what they say in bills, charters, declarations, and manifestos (inscription)".[85] If citizens are going to be involved in democratic processes through digital participation forms in the cyberspace certain prerequisites are needed.

Lasse Berntzen and Evika Karamagioli identify four main prerequisites for digital democracy: (1) technological infrastructure; (2) access to technology; (3) accessibility; and (4) education and training.[86] Furthermore, Berntzen and Karamagioli note that "there are another set of prerequisites that are of political nature, and if not taken into account, all these efforts could be jeopardized or even doomed to failure".[87] The political prerequisites are: (1) freedom of speech; (2) right to privacy; (3) access to information; and (4) trust.[88] Berntzen and Karamagioli emphasize that digital democracy "is all about empowerment; empowerment of individuals to get involved and organize themselves in the information society, being able to act in bottom-up decision processes and make informed decisions as well as develop social and political responsibilities".[89]

---

[82] Engin Isin, Evelyn Ruppert, *Being Digital Citizens*, op. cit., p. 24.

[83] Ibid., p. 25.

[84] Ted Piccone, "Democracy and Digital Technology", in *International Journal on Human Rights*, vol. 15, no. 27, 2018, pp. 30-31.

[85] Engin Isin, Evelyn Ruppert, *Being Digital Citizens*, op. cit., p. 167.

[86] Adapted from: Lasse Berntzen, Evika Karamagioli, "Regulatory Measures to Support eDemocracy", in *2010 Fourth International Conference on Digital Society*, IEEE, 2010, p. 312.

[87] Lasse Berntzen, Evika Karamagioli, "Regulatory Measures to Support eDemocracy", op. cit., p. 312.

[88] Adapted from: Lasse Berntzen, Evika Karamagioli, "Regulatory Measures to Support eDemocracy", op. cit., p. 313.

[89] Lasse Berntzen, Evika Karamagioli, "Regulatory Measures to Support eDemocracy", op. cit., p. 316.

When answering the question of 'who' uses digital participation tools we can deduce that the main actors are citizens themselves. In our research, the figure of 'citizen' is drawn from a traditional understanding of citizenship as "membership with at least some rights of political participation in an independent republic that governs through some system of elected representatives – parliamentary, presidential, bicameral, unicameral, or some other variation".[90] Since we consider digital democracy to be an 'expansion' of democracy, the changing role of citizens faced with partaking in democratic processes online can also be considered as expansive to the traditional understanding. When the prerequisites are fulfilled, and citizens choose to engage with digital participation forms, we can refer to them as 'digital citizens'.

In our research, we adopt a narrow understanding that 'digital citizen' is a descriptive category for citizens actively using digital tools to participate in democratic processes online. This is not to claim that citizens who are not using such digital tools cannot become 'digital citizens' in a different manner. In other words, the use of digital tools for political participation is a narrow option of achieving the figure of 'digital citizens'. This implies detaching the idea of citizenship from the membership of a certain polity and attaching it to the perspective of performative citizenship. According to Isin "because citizenship is constitutive of rights and because who can exercise and claim these rights in itself contestable, citizenship is practiced not only by exercising these rights but also claiming them".[91] Isin points out two conclusion: (1) "performative citizenship involves exercising a right: this can be a particular or universal right, but the performance itself does not affect the content and scope of the right, and it may confirm rather than contest that right";[92] and (2) "performing citizenship involves claiming a right: this necessarily involves struggle, but such struggle is not necessarily transformative".[93] Citizens claim their rights by partaking in democratic processes online. 'Authoritative body' can develop, implement, publicize, etc., any digital participation form; however, if citizens are not actively claiming their rights by using them, the legitimacy is lost. According to Berntzen and Karamagioli:

---

[90] Rogers M. Smith, "Modern Citizenship", in Engin F. Isin & Bryan S Turner (Eds.), *Handbook of Citizenship Studies*, Sage, 2002, p. 107.

[91] Engin Isin, "Performative Citizenship", in Ayelet Shachar, Rainer Bauböck, Irene Bloemraad, and Maarten Vink, *The Oxford Handbook of Citizenship*, Oxford University Press, 2017, p. 500.

[92] Ibid., p. 516.

[93] Ibid.

*"eDemocracy is about empowerment, about giving citizens increased influence over political decision-making. Therefore, eDemocracy implies some kind of transfer to of power. If this does not happen, citizens are not likely to use eDemocracy applications".[94]*

The aim of this subchapter was to answer a question of 'who' uses digital tools for political participation in digital democracies. We consider this question from two aspects. First, the 'authoritative body', whether governments, parliaments, city councils, political parties, etc., can be responsible for choosing the right digital tool to encourage political participation and present for people to use. Furthermore, people can express their need for a certain digital tool to 'have their voice heard'. The second aspect rests entirely on the citizens themselves because they are the driving force behind the initiative for using digital tools. In other words, it is not enough to implement a certain digital tool to encourage political participation – a considerable number of people must use it to give it legitimacy. Digital political participation can now be conceived as a symbiotic relationship between the authoritative body and citizens. If a significant number of citizens are not using the digital participation platform; the initiative of using digital tools for political participation fails. If the digital participation platform is not connecting citizens with an appropriate authoritative body; the initiative would fail again. We can deduce that digital participation platforms must connect appropriate authoritative bodies with a significant number of citizens willing to actively partake in democratic processes online i.e., willing to claim their rights through performative citizenship.

## 1.4. Digital democracy tools for political participation

The aim of this subchapter is to answer the question of 'how' citizens can be involved in the 'digital' democracy processes. The idea behind this subchapter leads us to describe digital democracy tools that enable citizens to partake in democratic processes. The subchapter is divided into two parts: (1) discussing the category of 'digital democracy tools'; and (2) displaying digital participation platforms.

In the first part we start by considering three remarks on the category of digital democracy *tools*. First, According to SDI, we can define digital democracy tools as "software

---

[94] Lasse Berntzen, Evika Karamagioli, "Regulatory Measures to Support eDemocracy", op. cit., p. 316.

applications and/or processes which either transfer an existing democratic process online or create a new online democratic process for the purpose of either empowering the participants or seeking their input to make or validate a decision or assumptions".[95] Second, according to the Institute of Technology Assessment (ITA) there are three main categories of digital democracy tools: (1) "Monitoring tools serve to monitor, question and advise policy-makers, e.g. parliamentary monitoring websites";[96] (2) "Agenda-setting tools can be formal or informal, e.g. petition consultation or crowdsourcing websites and citizen initiatives";[97] (3) "Decision-making tools can be binding (e.g. e-voting) or non-binding (e.g. various e-budgeting processes)".[98] Third, according to NESTA "democratic innovations in this space have included the involvement of citizens in solving specific challenges (e.g. challenge.gov in the USA), creating petitions (e.g. We The People in the USA), making proposals (e.g. Your Priorities in Reykjavik), collaborating with public officials to draft policy (e.g. the Estonian Citizens' Assembly) or carrying out tasks that had hitherto been the preserve of public employees (e.g. Peer to Patent)".[99]

The common element to three remarks is referring to 'digital democracy tools' as *means* of achieving political participation. In other words, we can refer to 'digital democracy tools' as *means* that encourage political participation. We can deduce a difference between digital participation *tools* (i.e., platforms – software applications) and digital participation *forms* (e.g., participatory budgeting). Furthermore, we can make a distinction between digital democracy tools (i.e., a general category) and digital participation platforms (i.e., a subcategory of digital democracy tools). This means that every digital participation platform is a digital democracy tool; however, not every *tool* is a *platform*.[100]

The second part of this subchapter deals with digital participation platforms. People Powered (PP), a Global Hub for Participatory Democracy, define digital participation platforms as helping "governments, civil society group, and other institutions engage

---

[95] Solonian Democracy Institute, *Digital Democracy Report*, op. cit., p. 3.

[96] Institute of Technology Assessment, *ITA Dossier*, no. 21en, Institute of Technology Assessment, 2018, p. 1.

[97] Ibid.

[98] Ibid.

[99] Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology and the Arts (NESTA), 2017, p. 11.

[100] Example: Decidim is considered a digital participation *platform*. On this platform different digital participation *tools* can be used that are not platforms such as Slideshare, Mailchimp, etc., which give the platform additional value.

residents in all types and stages of participatory processes, ranging from planning and budgeting to citizens' assemblies and the drafting of legislation".[101]  PP recognizes three categories of digital participation platforms (Table 2): (1) complex; (2) simple; (3) specialty. Complex digital participation platforms "work well for complex participatory processes and/or use multiple features in one process".[102] Simple digital participation platforms "work well for simple participatory processes, such as those that focus on one type of participation".[103] Specialty digital participation platforms "work well for a particular process or linguistic or geographic context".[104] The list of digital participation platforms analyzed by PP is not exclusive; there are numerous other digital participation platforms. In this regard, our research adopts a different list of digital participation platforms that correspond to our 10 case studies. Categorization that PP provided can still be applied, noting that only some of the platforms PP analyzed will be described through case studies in Chapter 2.

**Table 2.** *Digital participation platforms included in PP research on platform rating.*

| Platform category | Platform name |
|---|---|
| *Complex* | Decidim; Citizen Lab; Your Priorities; CONSUL; Neighborland; Delib, Democracy OS; Cap Collectif; EngagementHQ. |
| *Simple* | Civocracy; Loomio; Social Pinpoint; Discuto; Fluicity; LiquidFeedback; Cocoriko; 76 Engage; Decision21. |
| *Specialty* | Ethelo; Cobudget; Pol.is; Assembl; CoUrbanize; Konveio; Mobilny Rozhlas (Czech); Hromadskyi Project (Ukranian). |

*Note:* Adapted from: People Powered Global Hub for Participatory Democracy, *Digital Participation Platforms*, https://www.peoplepowered.org/platform-ratings (accessed 21 March 2022)

In Chapter 2 we will describe the use of 10 digital participation platforms: Decidim, CONSUL, Citizen Lab, Your Priorities, e-Democracia, Polis, Citizen OS, Rousseaou, Participa and Liquid Feedback:

---

[101] People Powered Global Hub for Participatory Democracy, *Guide to Digital Participation Platforms*, https://www.peoplepowered.org/digital-guide/introduction (accessed 21 March 2022)

[102] Ibid.

[103] Ibid.

[104] Ibid.

- *(1) Decidim:* https://decidim.org/

  Released in 2017 by the Barcelona City Council, Decidim ("we decide" in Catalan) is a free and open digital platform for democratic participation that is maintained and developed by a community of users.[105] According to the platform's White Paper "Decidim is a public-common's, free and open, digital infrastructure for participatory democracy",[106] furthermore, "the platform allows any organization (local city council, association, university, NGO, neighborhood or cooperative) to create mass processes for strategic planning, participatory budgeting, public consultation, collaborative design for regulations, urban spaces and election processes, etc.".[107]

- *(2) CONSUL:* https://consulproject.org/en/

  Released in 2015. CONSUL is a digital tool that "empowers and enables all types of participatory processes undertaken by institutions around the world: citizen's proposals, debates, participatory budgeting, collaborative legislation, interviews and surveys, voting, etc.".[108] CONSUL Dossier states that "the project was originally developed by the Madrid City Council, and it's now being used by more than a hundred local, regional, and national governments".[109] CONSUL is used in 35 countries, 135 institutions encompassing over 90 million citizens.[110]

- *(3) Citizen Lab:* https://www.citizenlab.co/

---

[105] Ghita Ennadif, "The City of Barcelona's participatory democracy open source platform", *Joinup*, 1 July 2020, https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/participatory-democracy (accessed 22 March 2022)

[106] Xabier E. Barandiaran, Antonio Caleja-López, *Decidim: political and technopolitical networks for participatory democracy, White paper,* Decidim, 2018, p. 8.

[107] Ibid.

[108] Consul: Open Sofware for Citizen Participation, *CONSUL Dossier*, p. 2. Available on: https://consulproject.org/en/ (accessed 21 March 2022)

[109] Consul 1.0.0-beta, *Joinup*, https://joinup.ec.europa.eu/collection/joinup/solution/joinup-archive/release/100-beta (accessed 21 March 2022)

[110] Consul: Open Sofware for Citizen Participation, *CONSUL Dossier*, p. 11. Available on: https://consulproject.org/en/ (accessed 21 March 2022)

"Founded by Aline Muylaer, Koen Gremmelprez and Wietse Van Ransbeeck in 2015, CitizenLab is a civic engagement platform on which citizens co-create their city"[111] with aims to "help governments improve the efficiency and legitimacy of their decision-making by developing citizen participation".[112] While the majority of customers come from Belgium, the platform is also active in France, the Netherlands, the United Kingdom, Denmark and Chile, among others.[113] CitizenLab offers integrated emails, quick polling, surveys, options analysis, mapping, ideation, online workshops, participatory budgeting, proposals and volunteering.[114] CitizenLab is used in over 300 governments of all sizes across 18 countries.[115]

- *(4) Your Priorities:* https://citizens.is/

Released in 2008, this platform is one of the main services offered by the 'Citizen Foundation',[116] based in Iceland. Róbert Bjarnason, President and co-founder of Citizens Foundation, stated in an interview that "Your Priorities can both be used in public projects in the context of including large number of citizens in decision-making, and also in private projects where smaller groups of people can work together remotely on ideas, deliberation and decision".[117] Bjarnason and Lanthier-Welch describe the general mission of Your Priorities as "to build trust between citizens and

---

[111] "This Belgian startup brings civic engagement into the digital age: 4 things you need to know", *Silicon Canals*, Available from: https://siliconcanals.com/news/startups/this-belgian-startup-brings-civic-engagement-into-the-digital-age-4-things-you-need-to-know/ (accessed 22 March 2022)

[112] Ibid.

[113] Ibid.

[114] Citizen lab, *Press kit*, Available from: https://res.cloudinary.com/citizenlabco/image/upload/v1639580020/Press%20kits/Press-kit_US.pdf (accessed 22 March 2022)

[115] Citizen lab, *About*, Available from: https://www.citizenlab.co/about (accessed 22 March 2022)

[116] "The nonprofit Citizen Foundation was founded in 2008 in Iceland" with a "mission to connect governments and citizens by creating open state-of-the-art engagement platforms and offering consultation on how to best & execute successful citizen engagement projects". (See: "Organize Online Through Ideas and Civil Deliberation", *Citizens Foundation*, Available from: https://www.citizens.is/getting-started/ (accessed March 22, 2022))

[117] "Interview #2 – Robert Bjarnason (Citizens Foundation), *The Civic Tech Interviews*, 15 September2021, Available from: https://thecivictechinterviews.wordpress.com/2021/09/15/interview-2-robert-bjarnason-citizens-foundation/ (accessed 23 March 2022)

government authorities [and to] facilitate better decisions by crowdsourcing policy with the cooperation of citizens and government".[118]

- *(6) e-Democracia*: http://www.edemocracia.leg.br/

    In Brazil, the e-Democracia portal was created in 2009 and LabHacker in 2013. According to NESTA "the Brazilian Chamber of Deputies passed a resolution to create a permanent hackerspace – LabHacker – within the Chamber to act as an innovation lab and to forge links between parliamentarians, designers and developers, and civil society actors. The world's first parliamentary in-house innovation lab, LabHacker is now responsible for improving the e-Democracia portal, including via workshops and hackatons, as well as developing new digital tools to broaden public participation and improve the transparency of the legislative process".[119] LabHacker poses itself as a leading hub of innovation for digital participation in Brazil.

- *(7) Poli.is:* https://pol.is/home

    Polis is a real-time system for gathering, analyzing and understanding what large groups of people think in their own words, enabled by advance statistics and machine learning.[120] Poli.is was conceived around the time of Occupy Wall Street and the Arab Spring.[121] Pol.is is a new way to gather open ended feedback from large groups of people and it is well suited to gather organic, authentic feedback while retaining minority opinions.[122] The most famous example of Pol.is in use is vTaiwan "developed by g0v, a group of digital activists, following the Sunflower Movement in 2014".[123]

- *(8) Citizen OS:* https://citizenos.com/

---

[118] Robert Bjarnason, Joshua Lanthier-Welch, "Citizens Foundation – Citizen Participation and Digital Tools V23", *Powerpoint presentation, Google Docs*, Available from: https://docs.google.com/presentation/d/1pA2gcyFV4yD8zGQRdhkAyLE5YIOtZCEcNUqgkN8ldwY/edit#slide =id.g31d49352c4_0_726 (accessed 23 March 2022)

[119] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology and the Arts (NESTA), 2017, p. 18.

[120] Polis, Input Crowd, Output Meaning, Polis, Available from: https://pol.is/home (accessed 22 March 2022)

[121] "Polis-Documentation/Motivation.Md at Master: Pol-Is/Polis-Documentation", *GitHub*, Available from: https://github.com/pol-is/polis-documentation (accessed 22 March 2022)

[122] Ibid.

[123] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology and the Arts (NESTA), 2017, p. 27.

Released in 2015, Citizen OS is a free and secure open source platform for citizen initiatives and collective decision-making. [124] The most famous example of Citizen OS platform in use is the Citizen Initiative Portal 'Rahvaalgatus', set up in Estonia with an aim to "write proposals, hold discussions, compose, and send digitally signed collective addresses to the Estonian Parliament (Riigikogu)".[125]

- *(9) Rousseaou:* Paolo Gerbaudo summarizes that "the Five Star Movement platform named Rousseau was officially launched in 2016, on the back of previous platforms known under other names, such as 'Sistema Operativo 5 Stelle' (5 Star Operating System), which were established since 2012.".[126] According to SDI "Rousseau is used by members of the M5S [The Five Star Movement] to discuss and vote on the political policies of the movement and has had an impressive run, inter alia, setting the world record for most online votes on a single day when 80,000 members voted on the government coalition agreement".[127] Furthermore, "the platform has been particularly successful in turning online collaboration and engagement into offline engagement".[128]

- *(10) Participa:* Gerbaudo summarizes that "Podemos' Participa platform was officially launched in 2013" and has two parts: Plaza Podemos (party's discussion forum) and Nvotes (voting service).[129] It is important to note that Plaza Podemos has been updated in 2016 to use the CONSUL platform; however, only in a context-specific manner.

- *(11) LiquidFeedback:* According to Jan Behrens, Axel Kistner, Andreas Nitshe and Bjorn Swierczek, "LiquidFeedback combines concepts of a collectively moderated, self-organized discussion process (quantified, constructive feedback) and Liquid

[124] Citizen OS, *About Us*, Citizen OS, Available from: https://citizenos.com/about-us/ (accessed 23 March 2022)

[125] The Citizen Initiative Portal, *About,* The Citizen Initiative Portal, Available from: https://rahvaalgatus.ee/about (accessed 23 March 2022)

[126] Paolo Gerbaudo, "Are digital parties more democratic than traditional parties? Evaluating Podemos and Movimento 5 Stelle's online decision-making platforms", in *Party Politics*, vol. 27, no. 4, 2021, p. 734.

[127] Solonian Democracy Institute, *Digital Democracy Report*, op. cit., p. 33.

[128] Ibid., p. 34.

[129] Paolo Gerbaudo, "Are digital parties more democratic than traditional parties? Evaluating Podemos and Movimento 5 Stelle's online decision-making platforms", in *Party Politics*, vol. 27, no. 4, 2021, p. 734.

[129] SDI, *Digital Democracy Report*, SDI, 2021, p. 734.

Democracy (delegated or proxy voting)".[130] LiquidFeedback is mostly known for in its use in various Pirate Parties. According to Christian Blum and Christina Isabel Zuber "by combining direct democratic participation with a highly flexible model of representation, liquid democracy promises the best of both worlds: Citizens can freely choose to either vote directly on individual policy-issues, or to delegate their votes to issues-competent representatives who vote on their behalf".[131]

**Table 3.** *Connecting the dots: Digital participation platforms, their reach and chosen case studies for Chapter 2.*

| Platform name | Reach | Level | Case Study |
|---|---|---|---|
| *Decidim* | Widespread | Local government | Barcelona Decidim (Spain) |
| *Citizen Lab* | Widespread | Local government | Leuven: Co-Create (Belgium) |
| *CONSUL* | Widespread | Local government | Decide Madrid (Spain) |
| *Your Priorities* | Widespread | Local government | Better Reykjavik (Iceland) |
| *e-Democracia* | Partial | Parliamentary | e-Democracia (Brazil) |
| *Pol.is* | Partial | Parliamentary | vTaiwan (Taiwan) |
| *Citizen OS* | Partial | Parliamentary | Rahvaalgatus (Estonia) |
| *Rousseaou* | Limited | Political party | Five Star Movement (Italy) |
| *Participa* | Limited | Political party | PODEMOS (Spain) |
| *LiquidFeedback* | Limited | Political party | International Pirate Party |

We are dividing mentioned 10 digital participation platforms in three groups based on the reach of their use (Table 3). First group are the 'limited' digital participation platforms that were designed and implemented to suit a specific need of a given group of people.

---

[130] Jan Behrens, Axel Kistner, Andreas Nitsche, Bjorn Swierczek, *The Principles of LiquidFeedback*, Interaktive Demokratie e. V., 2014, p. 16.

[131] Christian Blum, Christina Isabel Zuber, "Liquid Democracy: Potentials, Problems, and Perspectives", in *The Journal of Political Philosophy*, vol. 24, 2016, pp. 162-163.

Second group expands the scope to platforms that allow the using party to implement their design according to the needs that arise; however, with a partial reach (e.g., only or mostly nation-scale use). Third, most prevalent group consists of four platforms which we consider in our research to be most internationally acclaimed based on their reach.

The aim of this subchapter was to answer the question of 'how' citizens can be involved in the 'digital' policymaking/decision-making process. There are numerous options when choosing the right digital participation form and tool. In our research we focus on 10 digital participation platforms and describe their use through 10 case studies – each correlating to one digital participation platform. The 10 platforms were divided on the criteria of their reach into three groups following the three levels of applicability. This is not an extensive list; however, it allows us to examine and explain the use of digital tools to encourage political participation in a manner that is more balanced and considering various levels of applicability. In conclusion, digital participation platforms allow citizens to participate in democratic processes.

## 1.5. Criteria for describing the use of digital tools

In the previous subchapters we established a base of our research upon which we answered questions of 'where', 'who' and 'how' of using digital tools to encourage political participation. The aim of this subchapter is to answer the question of 'when' is using digital tools for political participation successful and effective. The subchapter is divided into presenting four qualitative criteria that are used to describe the use of digital tools for political participation: (1) form; (2) functionality; (3) scope; and (4) impact.

The *form* criterion answers three questions about the use of digital tools to encourage political participation in our case studies: (1) Which platform is being used; (2) When was the platform launched; and (3) Which forms of digital political participation are enabled by the given platform. First two questions are context-specific and derived from literature review and content analysis. Third question proves more challenging because of the variety of descriptions, typologies, and remarks on what is enabled by the digital participation platform in all our case studies. According to NESTA "relatively little research focuses on how our democratic institutions can make use of digital technologies and how citizens themselves can be involved in the practice of everyday democracy – such as raising specific concerns,

developing and scrutinizing legislative proposals, making decisions or holding public officials to account".[132]

In our research, we would argue that the primary concern is not as much the 'lack of research', rather it's the 'variety in research' that prevents the formulation of a generally accepted typology of digital participation forms. This leads us to choose a broad typology that can be used for a qualitative analysis of our case studies. Our 10 case studies, described in Chapter 2, correspond to one or many digital participation forms. Hence, we adopt NESTA's typology, because of its broad interpretation, when qualitatively analyzing the *form* of using digital tools to encourage political participation in our 10 case studies (Table 4). Amongst our 10 case studies are few that were not previously analyzed by NESTA; however, the broad interpretation of digital participation forms allows us to implement the typology on any given case study.

**Table 4.** *A typology of digital democracy.*

| Forms | Explanation |
|---|---|
| *(1) Informing citizens* | Notifying citizens about and/or increasing access to upcoming debates, votes, and consultations. |
| *(2) Issue framing* | Enabling citizens to raise awareness of particular issues and set the agenda for public debate. |
| *(3) Citizens providing information* | Providing citizens with opportunities to share information about specific problems, or to understand individual needs or larger patterns and trends. |
| *(4) Citizens providing ideas* | Enabling citizens to provide ideas for new, improved, or future solutions. Typically builds on contextual knowledge and experiential knowledge. |
| *(5) Citizens providing technical expertise* | Platforms and tools to tap into people's distributed expertise. Typically requires a higher level of domain specific knowledge. |
| *(6) Deliberation* | Platforms and tools which enable citizens to deliberate. |
| *(7) Citizens developing ideas* | Enabling citizens to generate, develop and amend specific proposals individually, collectively; and/or with state officials. |

---

[132] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology and the Arts (NESTA), 2017, p. 12.

| (8) Citizens scrutinizing proposals | Enabling citizens to scrutinize specific options. |
|---|---|
| (9) Citizens making decision | Enabling citizens to make decisions e.g. through referendums, voting on specific proposals or participatory budgeting. |
| (10) Citizens monitoring and assessing public actions and services | Providing information about policy and legislation implementation, decision making processes, policy outcomes and the records of elected officials, to enable citizen monitoring and evaluation. |

*Note:* Adapted from: Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology, and the Arts (NESTA), 2017, p. 13.

The *functionality* criterion answers three questions about the use of digital participation forms in each case study: (1) How does the process of digital participation work on the platform; (2) Which features are enabled by the digital participation platform; and (3) Is it successful. Considering that digital participation forms are broad categories of digital participation they differ not only amongst each other rather each category can be differently implemented using a variety of features enabled by the software. This leads us to differentiate between how digital participation forms are conducted. Concerning the third question, NESTA recognizes six common factors for success. First, "if people feel that there is value in their contribution".[133] Second, "fundamental to selecting the right activities is having clarity about the nature of the issue to be addressed and who needs to be engaged".[134] Third, "traditional outreach and engagement still matter"[135] implying a blend of offline and online activity. Fourth, "securing buy-in from those in power".[136] Fifth is securing "the necessary finance, human resources and skills".[137] Finally, "ensuring that tools and platforms are easy to use and navigate".[138] The mentioned 'factors for success' are vaguely defined and do not

---

[133] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology and the Arts (NESTA), 2017, p. 65.

[134] Ibid., p. 67.

[135] Ibid., p. 72.

[136] Ibid., p. 74.

[137] Ibid., p. 76.

[138] Ibid., p. 77.

allow for the analysis to be conducted in a 'fill the blanks' manner; however, they allow us to consider the specific context of each case study and perform a qualitative analysis with explanatory and exemplary means.

The third criterion is 'scope'. The 'scope' criterion answers two questions about the use of digital tools to encourage political participation: (1) For which group of people is the digital tool designed; (2) How accepted is/was the digital tool within the target audience; (3) What are the requirements for using the digital participation platform. Answering these questions allows us to understand how effective platforms are and to note if the right choice has been made using the given platform. This suggests the need for a qualitative analysis backed up with available data.

The fourth criterion is 'impact'. The 'impact' criterion answers three questions about the outreach of using digital tools to encourage political participation: (1) What is the value added; (2) Did the digital participation platform achieve local acclaim i.e. how many initiatives passed through the digital participation platform; and (3) Did the digital participation platform achieve national acclaim and international acclaim i.e. how many other actors were influenced to use the given platform based on the positive experience of the given case study.

In our research we focus on the notion of 'political impact'. Political impact is described by the SDI as assessing "of the vendor solution on public decision-making"[139] by giving "stronger weighting to vendors whose solutions increase the impact participants ('ordinary voters') are able to have on decisions than to vendors who merely help to digitalize the existing process".[140] At best, this description of 'political impact' is debatable. First, 'public' decision-making is a category limited to a stage in the policy-making process on parliamentary and local government levels whereas we explained in previous subchapters that there is no need for such limitation (See Subchapter 2) when describing the use of digital tool to encourage political participation. Furthermore, there is no difference between the two aspects: increasing the 'impact of participants on decisions' *can mean* digitalizing existing democratic processes. The fact that some democratic processes are conducted using digital tools does not create new forms of democratic processes. It does, on the other hand, refer to using a new mode of function – digital – for the existing democratic processes. Hence, SDI's understanding of political impact is insufficient for our research. With this in mind, we are

---

[139] Solonian Democracy Institute, *Digital Democracy Report*, op. cit., p. 5.

[140] Ibid., p. 5.

inclined towards referring to 'political impact' in more general terms i.e., to refer to the value added by the digital participation platform within the context-specific political circumstances.

The remaining questions deal with local, national, and international acclaim. Local acclaim is achieved mostly on the local government level of applicability whereas the use of digital tools encouraged political participation and fostered significant results. National and international acclaim refer to other instances (countries, cities, and political parties outside of the territory where the digital participation platform is used) that, inspired by the first instance, adapted the same digital participation platform in their context-specific areas.

**Table 5.** *Criteria for description of the use of digital participation tools to encourage political participation; Roadmap for describing case studies in Chapter 2.*

| Criteria | Questions | Answers |
|---|---|---|
| *Form* | • Which digital participation platform is being used?<br>• When was the digital participation platform launched?<br>• Which digital participation forms are enabled by the given platform? | Literature review, content analysis, and typology of digital participation forms. |
| *Functionality* | • How does the process of digital participation work on the platform?<br>• Which features are enabled by the digital participation platform?<br>• Is it successful? | Literature review, content analysis, and six conditions for successful use of digital participation tools. |
| *Scope* | • For which group of people is the digital tool designed?<br>• How accepted is/was the digital tool within the target audience?<br>• What are the requirements for using the digital participation platform? | Literature review, content analysis, description, and explanation. |

| | | |
|---|---|---|
| *Impact* | • What is the value added?<br><br>• Did the digital participation platform achieve local acclaim?<br><br>• Did the digital participation platform achieve national acclaim and international acclaim? | Literature review, content analysis, description, and explanation. |

Methodological framework of questions and answers in qualitative analysis of digital participation tools is not new. Tiina Randma-Liiv, Kadi Maria Vooglaid and Veiko Lember present a detailed analytical framework for the management and organization of digital participation initiatives through five aspects, each divided in over 15 questions.[141] In our research, we diverge from such an analytical framework for three reasons. First, the limitations on our research taking form in page and character counts prevent us from using a detailed analytical framework. Second, most of the case studies in our research are not mentioned in Randma-Liiv et al. research which gives us the foundation to adapt accordingly. Third, the aim of our research would be breached if we used a highly detailed analytical framework since it goes beyond *describing* the use of digital tools to encourage political participation. In this subchapter we pointed out four criteria that will be applied during our qualitative analysis of case studies (Chapter 2). Form, functionality, scope, and impact are used to describe the use of digital tools to encourage political participation on parliamentary, local government and political party levels of applicability.

---

[141] See: Tiina Randma-Liiv, Kadi Maria Vooglaid, Veiko Lember, "Framework for analysis of the management and organization of e-participation initiatives", in Tiina Radma-Liiv, Veiko Lember (Eds.), *Engaging Citizens in Policy making: e-Participation Practices in Europe*, Edward Elgar Publishing, 2022.

# Chapter II: The use of digital participation platforms

In Chapter II, we describe the use of digital participation platforms for political participation in 10 case studies: (1) Brazil: *eDemocracia*; (2) Estonia: *Rahvalgatus*; (3) Taiwan: *vTaiwan*; (4) Madrid: *Decide Madrid*; (5) Barcelona: *Decidim Barcelona*; (6) Leuven: *Leuven co-create it*; (7) Reykjavik: *Better Reykjavik*; (8) *Pirate Party's LiquidFeedback*; (9) Podemos: *Participa*; and (10) Five Star Movement: *Rousseau*. The use of digital tools for political participation in 10 case studies is qualitatively analyzed on three levels of applicability: parliamentary level, local government level and political party level.

## 2.1. Parliamentary level

On the parliamentary level of applicability, we describe the use of digital tools for political participation in three case studies: (1) *eDemocracia*; (2) *Rahvaagatus*; (3) *vTaiwan*. The qualitative analysis on each case study is elaborated through six sections. In the first section titled *'brief'* we provide contextual information on: (1) the country's political system and legislative branch; (2) democracy development with the 'Freedom in the World' report and the Economist Intelligence Unit's Democracy Index; (3) political participation development with Bertelsmann Stiftung's Transformation Index (BTI); (4) digital participation development using the UN E-participation index (whereas possible); and (5) circumstances leading up to the implementation of the corresponding digital participation platform. Following the *brief,* the next four sections correspond to applying the four criteria for describing the use of digital participation platforms for political participation: *form*, *functionality*, *scope*, and *impact*. The qualitative analysis on each case study ends with the *discussion* section in which we summarize learned lesions and debatable topics.

## 2.1.1. Brazil: *eDemocracia*

*Brief*. Brazil is presidential democratic republic in which the bicameral legislative branch of power is vested upon the National congress – the Federal Senate and the Chamber of Deputies. Since 2003 Brazil is described as a free country according to the 'Freedom in the World' report scoring 75/100 points in 2020.[142] The Economist Intelligence Unit's Democracy Index shows a decline in Brazil's overall score by 0.46 points from 2006 to 2020 falling in the category of "flawed democracies".[143] On the other hand, Bertelsmann Stiftung's Transformation Index (BTI) shows a more convoluted development of democracy in Brazil. According to BTI, from 2006 (score: 9,0) to 2020 (score: 8.3), Brazil's Political Participation score has declined by 0.7 points, meaning that Brazil's political participation is described as *sound*.[144] UN E-Participation Index placed Brazil at the 42nd place in 2010 scoring only 0.2 points; however, Brazil was placed at the 18th place in the world scoring 0.9 points in 2020.[145] This means that the overall trend of slow democratic decline did not come at the expense of digitalization and introducing digital tools to encourage political participation.

*Form*. The first digital participation platform we mention in our research on the parliamentary level of applicability is *eDemocracia*, launched in 2009 by the lower house of the National Congress of Brazil, the Chamber of Deputies. According to Cristiano Ferri Soares de Faria "e-Democracy portal is an interactive virtual space with user-friendly interface created with the intention of stimulation citizens and civil society organizations of every description and area of interest, to contribute to the process of formulation federal laws

---

[142]   *Brazil:   Freedom   in   the   World   2020*,   Freedom   House,   Available   from: https://freedomhouse.org/country/brazil/freedom-world/2020 (accessed 14 April 2020)

[143] Brazil was ranked 49th in the world, with 9.58 points in 'Electoral process and pluralism', 5.36 points in 'Functioning of government', 6.11 points in 'Political participation', 5.63 points in 'Political culture', and 7.94 in 'Civil liberties', giving it an overall score of 6.92 points in 2020. (Adapted from: The Economist Intelligence Unit, *Democracy Index 2020: In sickness and in health?*, The Economist Intelligence Unit Limited, 2021, p. 10.)

[144]   *BTI Transformation Atlas*, Bertelsmann Stiftung's Transformation Index, Available from: https://atlas.bti-project.org/ (Accessed 14 April 2020)

[145]   *UN E-Participation Index 2020 Brazil*, UN E-Government Knowledgebase, Available from: https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/24-Brazil (accessed 14 April 2022)

and also to assist the Representatives in actions of surveillance, inspection and control".[146] According to NESTA, *e-Democracia* portal enables seven digital participation forms: (1) Informing citizens; (2) Citizens providing information; (3) Citizens providing technical expertise; (4) Deliberation; (5) Citizens developing proposals; (6) Citizens scrutinizing proposals; and (7) Citizens monitoring and assessing public actions and services.[147] Faria continues that *e-Democracia* "makes it possible for Brazilian society to participate in the legislative process via internet by: a) sharing information, studies and other contents in written or audio-visual form that are useful to support and inform discussion on draft bills; b) participating in the deliberative process in the discussion forums for that purpose; c) organizing social networks by themes for legislative purposes; and d) presenting collaboratively composed legislative texts to support the Representatives in their decision making".[148] Rafael Rubio and Ricardo Vela highlight "that citizen participation, as conceived by the e-democracy project, is not just about developing laws, but also helping parliamentarians to monitor and control Government activity".[149] This is to suggest that the digital participation platform e-Democracia allows citizens to be involved in agenda setting, agenda formulation, policy evaluation and decision-making to a certain extent.[150]

*Functionality*. NESTA points out that "the e-Democracia site itself is organized into three main areas: virtual communities on thematic areas; 'free space'; and Wikilegis, a tool for drafting bills collaboratively".[151] According to Faria "Wikilegis is an attempt on the part of the e-Democracy programmers to implement a form of interaction that not only facilitates participation but facilitates the organization of the ideas by having them written down in

---

[146] Cristiano Ferri Soares de Faria, *The open parliament in the age of the internet: Can the people now collaborate with legislatures in lawmaking?*, Documentation and Information Center, Brasília, 2013, p. 195.

[147] Addapted from: Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 19.

[148] Cristiano Ferri Soares de Faria, *The open parliament in the age of the internet: Can the people now collaborate with legislatures in lawmaking?*, op. cit., p. 195.

[149] Rafael Rubio, Ricardo Vela, "Open parliaments around the world. Open Parliament's tools in comparative perspective", Working Paper Series, LUISS School of Government, Rome, 2019, p. 46.

[150] *Brazil: E-Democracy*, Latinno – Innovations for Democracy in Latin America, Available from: https://www.latinno.net/en/case/3157/ (accessed 15 April 2022)

[151] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 19.

legislation form".[152] In other words, "participants are allowed to write their own version of the draft bill under discussion or suggest alterations to specific parts of the text, either of the original draft or of the version produced by the select committee's rapporteur".[153] Patricia Gonçalves da Conceição Rossini et al., points out that "there are many ways in which citizens can participate: they can join the debate on the forums, suggest amendments to the bills (using a wiki tool named wikilegis), access a virtual library, and join online chats, with predefined date and time, which allow real time conversation between representatives and users and function as web-based public audiences".[154] According to NESTA, there are three factors for the success of *e-Democracia*: (1) strong levels of senior buy-in; (2) support from legislative consultants; and (3) feedback loops between citizens and representatives.[155]

*Scope*. Faria concludes that the "positive consequence of the system is the freedom enjoyed by the participant who can contribute to the legislative process in a variety of different formats and intensities"[156] stating that "the citizen is at liberty to take part in an on-line chat with Representatives at one moment or express his ideas in depth in the specific forum discussions, or he may even assist the parliamentarians in the work of elaborating the legal text using the Wikilegis option".[157] On the other end, Faria points out that "there is a price to pay for such broad freedom of choice"[158] considering that participants experienced "a certain sensation of disorientation on being faced with so many forums and other forms of participation in the Wikilegis, all of which are available at the same time".[159]

*Impact*. The *e-Demoracia* is the first digital participation platform on a parliamentary level of applicability in Brazil encouraging other platforms to emerge. From 2009 onwards, noteworthy examples are e-Citizenship, e-Monitoring, Citizen Monitoring of the Open

---

[152] Cristiano Ferri Soares de Faria, *The open parliament in the age of the internet: Can the people now collaborate with legislatures in lawmaking?*, op. cit., p. 197.

[153] Ibid.

[154] Gonçalves da Conceição Rossini, Patricia Gonçalves, Vanessa Veiga De Oliveira, "E-democracy and collaborative lawmaking: The discussion of the political reform in Brazil", in *International Journal of Communication*, Vol. 10, 2016, p. 5.

[155] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 21.

[156] Cristiano Ferri Soares de Faria, *The open parliament in the age of the internet: Can the people now collaborate with legislatures in lawmaking?*, op. cit., p. 255.

[157] Ibid.

[158] Ibid.

[159] Ibid.

Government Plan, Multiannual Participatory Plan, Participa.br, and many other short- and long-term initiatives.[160] On the national level, the initial success of the *e-Democracia* portal also led the Brazilian Chamber of Deputies to create a permanent hackerspace named *LabHacker* "within the Chamber to act as an innovation lab to forge links between the parliamentarians, designers and developers, and civil society actors".[161] NESTA highlights the "the world's first parliamentary in-house innovation lab, LabHacker is now responsible for improving the e-Democracia portal, including via workshops and hackatons, as well as developing new digital tools to broaden public participation and improve the transparency of the legislative process"[162] adding that "all the tools used on the platform and being developed by LabHacker are open-source, with the intention of encouraging a wider community of developers to engage in their improvement".[163] From 2009 to 2020 *Latinno – Innovations for Democracy* in Latin America recognizes 77 digital participation initiatives on the continent.[164] For this reason it is difficult, if not impossible to deem which innovations, if any, were influenced by the *e-Democracia* digital participation platform.

*Discussion*. The case study of *e-Democracia* leads us to two lesions. First, the complexity of the process is a consequence of having a plethora of digital tools (Interactive Public Hearings, Wikilegis, Open space, e-Monitor, Open Data, etc.). Second, the consequence of this complexity is the lackluster approach of citizens to the digital participation platform. The *e-Democracia* portal is a complex digital participation platform with an ambivalent output. Citizens can partake in numerous thematic discussions, propose their own ideas, etc.; however, there is no guarantee that the authoritative body is going to use such contributions. Admittedly, no digital participation platform guarantees this scenario; however, there an ever-present danger that citizens might feel overwhelmed by the complexity of the process in which it is very difficult to 'have their voice heard'.

---

[160] *Innovations: Brazil 2009-2020*, Latinno – Innovations for Democracy in Latin America, Available from: https://www.latinno.net/en/innovations/?country=brazil (accessed 15 April 2022)

[161] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 20.

[162] Ibid.

[163] Ibid.

[164] *Innovations: Brazil 2009-2020*, Latinno – Innovations for Democracy in Latin America, Available from: https://www.latinno.net/en/innovations/?country=brazil (accessed 15 April 2022)

## 2.1.2. Estonia: *Rahvaalgatus*

*Brief.* Estonia is a parliamentary democratic republic in which the unicameral legislative branch of power is vested upon the Parliament (*Riigikogu*). Estonia is described as a free country according to the 'Freedom in World' index scoring 94/100 points in 2020.[165] The Economist Intelligence Unit's Democracy Index shows a slow democratic development putting Estonia in the category of flawed democracies from 2006 to 2020, slightly below the benchmark for full democracy.[166] The BTI shows that "from 2006 to 2022, Estonia's Democracy Status score has increased by 0.25 points [from 9.40 to 9.65]"[167] meaning that Estonia is considered a democracy in consolidation with highly advanced transformation. Furthermore, BTI shows that in same time period Political Participation score of Estonia had increased by 0,2 (from 9.8 in 2006 to 10 in 2020) points describing political participation in Estonia as in *excellent performance*.[168] High level of democracy development leads us to examine the use of digital tools for political participation in Estonia. According to Maarja Toots et al., "Estonia undertook first steps to develop e-democracy in the early 2000s, creating the first e-participation platform in 2001 and holding electronic elections since 2005".[169] The first noteworthy digital participation initiative in Estonia was *Rahvakogu* (the "People's Assembly"), "a one-off initiative in early 2013 in which Estonian citizens proposed and discussed policy ideas to remedy political corruption via an online crowdsourcing platform and in-person deliberation".[170] In 2014, UN E-Participation Index placed Estonia at

---

[165] *Estonia: Freedom in the World 2020*, Freedom House, Available from: https://freedomhouse.org/country/estonia/freedom-world/2020 (accessed 15 April 2020)

[166] Estonia is ranked 27th in the world, with 9.58 points in 'Electoral process and pluralism', 7.86 points in 'Functioning of government', 6.67 points in 'Political participation', 6.88 points in 'Political culture', and 8.24 points in 'Civil liberties', giving it an overall score of 7.84 points in 2020. (Adapted from: The Economist Intelligence Unit, *Democracy Index 2020: In sickness and in health?*, The Economist Intelligence Unit Limited, 2021, p. 9.)

[167] *BTI Transformation Atlas*, Bertelsmann Stiftung's Transformation Index, Available from: https://atlas.bti-project.org/ (Accessed 15 April 2020)

[168] Ibid.

[169] Maarja Toots, Tarmo Kalvet, Robert Krimmer, "Success in eVoting – Success in eDemocracy? The Estonian Paradox", in *International Conference on Electronic Participation*, Springer, Cham, 2016, p. 55-56.

[170] Rahvakogu: Turning the E-Republic into an E-Democracy, Crowdlaw for Congress Series, Available from: https://congress.crowd.law/case-rahvakogu.html (Accessed 15 April 2022)

22$^{nd}$ place in the world scoring 0.76 points.[171] Six year later, in 2020, UN E-Participation Index placed Estonia at 1$^{st}$ place in the world scoring a full 1.0 point.[172] The *Rahvakogu* initiative was a success and the use of digital tools for political participation gained momentum.

*Form.* The second digital participation platform we mention in our research on the parliamentary level of applicability is *Rahvaalgatus*, launched in 2016 using the Citizen OS open-source platform by the Estonian Cooperation Assembly with the Chancellery of *Riigikogu*. According to NESTA, *Rahvaalgatus* allows three digital participation forms: (1) Issue framing; (2) Citizens providing ideas; and (3) Deliberation.[173] *Rahvaalgatus* uses the Citizen OS digital participation platform. According to Kadi Maria Vooglaid and Tiina Randma-Liiv "the core technical innovation of the platform is a back-end solution for the digital mass signing of documents through the use of the Estonian digital identification system, which is a fast and reliable way of collecting signatures".[174] Vooglaid and Randma-Liiv point out drivers and barriers divided on national, organizational, and individual levels for the *Rahvaalgatus* process. The drivers on the national level are: (1) Citizens' trusts in digital solutions; (2) technological infrastructure; and (3) high level of formalization and legally binding procedures; on the organizational level: (4) autonomous quasi-governmental organization as a proprietor of the platform; and on the individual level: (5) enthusiastic individuals leading the platform.[175] The barriers on the national level are: (1) failures of e-participation platforms in the past; (2) multiplicity of e-participation portals; and (3) fragmentation and low capacity of civil society; on the organizational level: (4) ambivalent ownership and accountability relations; (5) difficulties in providing feedback on the

---

[171] *UN E-Participation Index 2020 Estonia*, UN E-Government Knowledgebase, Available from: https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/57-Estonia (accessed 15 April 2022)
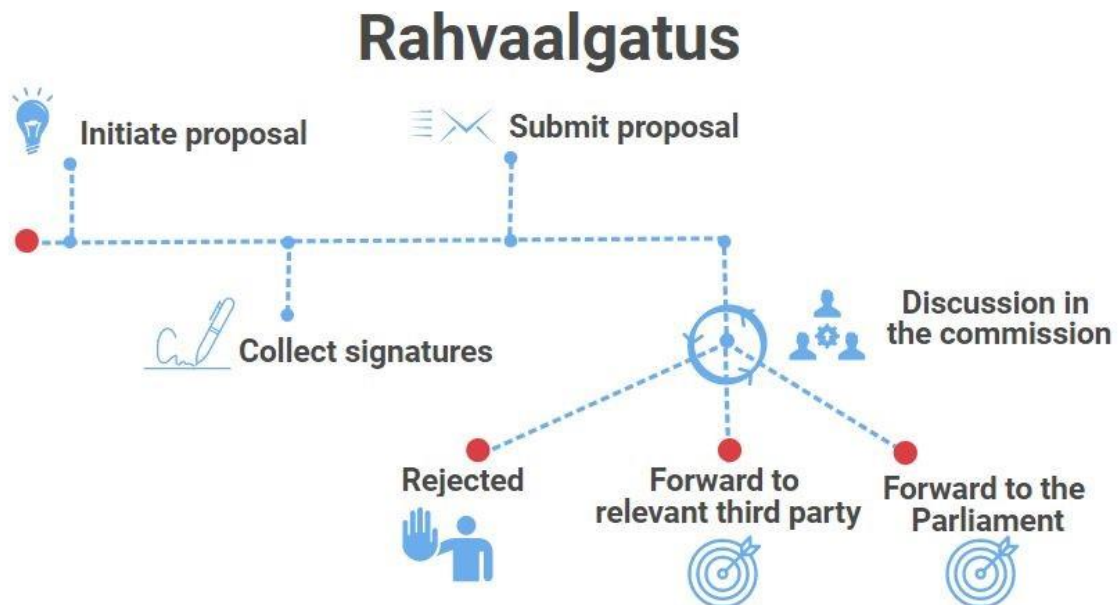
[172] Ibid.

[173] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 34.

[174] Kadi Maria Vooglaid, Tiina Randma-Liiv, "The Estonian Citizens' Initiative Portal: Drivers and barriers of institutionalized e-participation", in Tiina Randma-Liiv and Veiko Lember (Eds.), *Engaging Citizens in Policy Making*, 2022, p. 108.

[175] Adapted from: Kadi Maria Vooglaid, Tiina Randma-Liiv, "The Estonian Citizens' Initiative Portal: Drivers and barriers of institutionalized e-participation", op. cit., p. 116.

proposals; and (6) limited human and financial resources; and on the individual level: (7) little awareness among citizens and MPs.[176]



Note: Rahvaalgatus process. Image from: https://www.opengovpartnership.org/stories/rahvaalgatus-ee-yet-another-e-platform-for-civic-engagement-no-a-process-of-democratic-renewal-instead/

*Functionality.* *Rahvaalgatus* allows citizens to "write proposals, hold discussions, compose and send digitally signed collective addresses to the Estonian Parliament (*Riigikogu*)",[177] requiring that the "collective address should have at least 1000 signature in support, given by at least 16 year old citizens of Estonia".[178] *Rahvaalgatus* also enables initiative creation on the local level.[179] After the collective proposal is officially submitted, the Parliament verifies "whether it is in accordance with the law and corresponds to the requirements"[180] and "the Board of the Riigikogu appoints a lead committee who will discuss the proposal".[181] The committee has six months to make its decision after the collective

---

[176] Ibid.

[177] *About*, Rahvaalgatus, Available from: https://rahvaalgatus.ee/about (accessed 16 April 2022)

[178] Ibid.

[179] "Initiative is submitted to the local government if it has signatures of at least 1% of its residents with voting rights". (See: *Rahvaalgatus*, Available from: https://rahvaalgatus.ee/ (accessed 16 April 2022))

[180] *Submit collective proposal*, Riigikogu, Available from: https://www.riigikogu.ee/en/introduction-and-history/have-your-say/submit-collective-proposal/ (accessed 17 April 2022)

[181] Ibid.

proposal has been submitted.[182] There are six possible outcomes from the process: the committee may decide to initiate a legislative draft, initiate a deliberation of matter of significant national importance, hold a public sitting, make a proposal to the competent institution to the Government to take a position and reply to the collective proposal, make a motion to reject the proposal or solve the problem raised in the proposal in some other way.[183]

*Scope. Rahvaalgatus* "is a citizen initiative portal that connects the citizenry, the Riigikogu, and local governments"[184] and "it enables people to implement their right to submit collective proposals conveniently by making political decision-making processes more transparent and dialogue more open".[185] Kadi Maria Vooglaid and Tiina Randma-Liiv explain that "the Cooperation Assembly and the Chancellery of the Riigikogu share responsibility for the administration of citizens' initiatives, with the Cooperation Assembly focusing on the maintenance of the portal and Chancellery dealing with the coordination of the political process".[186] According to Toots et al., "somewhat paradoxically, the country that has been a champion of e-government and a pioneer in e-voting has not quite been a success story in e-participation and has consequently failed to develop a full-fledged e-democracy as some had initially hoped".[187] Estonia had 1.3 million citizens in 2020; and yet, only 1000 signatures is needed for an initiative to reach the Parliament through the *Rahvaagatus* process. Vooglaid and Randma-Liiv note that "since its inception in 2015, up to August 2020, 246 discussions have been started on the platform, 132 collective addresses have been co-created and 47 initiatives have been forwarded to the Riigikogu for deliberation; altogether, 90,065 signatures have been collected".[188] In other words, from 2015 to 2020, in a country of around 1.3 million citizens, *only* 47 initiatives reached the Parliament. Vooglaid and Randma-Liiv try to explain 'the Estonian paradox' stating that "the e-participation platform is

---

[182] Ibid.

[183] Ibid.

[184] https://kogu.ee/en/rahvaalgatus-ee/ *Rahvaalgatus.ee (public initiative web portal)*, The Estonian Cooperation Assembly, Available from: https://kogu.ee/en/rahvaalgatus-ee/ (accessed 17 April 2022)

[185] Ibid.

[186] Kadi Maria Vooglaid, Tiina Randma-Liiv, "The Estonian Citizens' Initiative Portal: Drivers and barriers of institutionalized e-perticipation", op. cit., p. 110.

[187] Maarja Toots, Tarmo Kalvet, Robert Krimmer, "Success in eVoting – Success in eDemocracy? The Estonian Paradox", in *International Conference on Electronic Participation*, op. cit., p. 63.

[188] Kadi Maria Vooglaid, Tiina Randma-Liiv, "The Estonian Citizens' Initiative Portal: Drivers and barriers of institutionalized e-perticipation", op. cit., p. 111.

not a panacea for increasing citizens' engagement in policy making, as many NGOs that might potentially benefit from the opportunity presented by online participation have little experience in petitioning the government, insufficient skills for carrying out a campaign and few resources to allocate to coordinated dissemination activities".[189] Toots et al., conclude that "citizens do not appear to be particularly interested in taking advantage of all the opportunities for direct access to decision-making that contemporary technologies can offer, especially if the benefits are not immediately evident".[190]

*Impact.* On the national level, we can argue that *Rahvalgaatus* was created because of the political impact made by *Rahvakogu*; however, reaching for the political impact of *Rahvalgaatus* we are bound only to the initiatives discussed and passed through the Parliament. According to Vooglaid and Randma-Liiv "there have been a number of initiatives concerning the environment, ranging from local issues, such as air quality in an industrial town in east Estonia, to initiatives calling for the protection of certain species or banning pesticides, to highly complex issues, such as Estonia's exit strategy from coal energy dependency".[191] The output of *Rahvalgaatus* does not allow for the creation of something previously unimagined and the only noteworthy value added is the process of digital signatures, enabled by the platform Citizen OS. On the international level, Citizens OS software was notably used in Indonesia in the '34 Islands Project' – "a grassroots project using participatory decision-making to solve local waste problems across Indonesia".[192] The information of whether Citizen OS software was used in other countries, inspired by *Rahvalgaatus*, as a digital tool for political participation could not be found.

*Discussion*. The case study of *Rahvaagatus* leads us to three conclusions. First, the number of citizens is not a viable criterion for determining the effectiveness of digital participation platforms. Second, high level of digital governance in a country does not automatically entail high level of digital participation. Third, high level of formalization does

---

[189] Kadi Maria Vooglaid, Tiina Randma-Liiv, "The Estonian Citizens' Initiative Portal: Drivers and barriers of institutionalized e-perticipation", op. cit., p. 117.

[190] Maarja Toots, Tarmo Kalvet, Robert Krimmer, "Success in eVoting – Success in eDemocracy? The Estonian Paradox", in *International Conference on Electronic Participation*, op. cit., p. 64.

[191] Kadi Maria Vooglaid, Tiina Randma-Liiv, "The Estonian Citizens' Initiative Portal: Drivers and barriers of institutionalized e-perticipation", op. cit., p. 110.

[192] *Turning citizen ideas into action on waste – Bintan, Indonesia.*, Citizen OS, Available from: https://citizenos.com/news/turning-citizen-ideas-into-action-on-waste-bintan-indonesia/ (accessed 17 April 2022)

not automatically entail high level of effectiveness of the digital participation platform. The result of the Rahvaalgatus process is always a collective proposal. The biggest shortcoming is the limited transfer of power. The process takes six months; not including the period needed to collect over 1000 signatures, which varies depending on the initiative. In other words, not only is there virtually no transfer of power, but the process itself is incredibly slow. Assuming that a high level of formalization of digital participation initiatives can be a viable reason to blame the citizens themselves for inactivity is debatable. On one end, formalization plays a vital role in the symbiotic relationship in digital political participation between the authoritative body and citizens since it shows willingness for a transfer of power. On the other end, if such formalization entails only a petitionary process managed by ambivalent ownership, how can we even expect the civil society to thrive in such a system? With this debate in mind, we would argue that the 'misguided' formalization of the Rahvaalgatus process is maybe equally questionable for the inability of digital participation platforms in Estonia to increase citizens' engagement in policymaking.

### 2.1.3. Taiwan: *vTaiwan*

*Brief*. Taiwan is a semi-presidential democratic republic[193] in which the unicameral legislative branch of power is vested upon the Parliament (Legislative Yuan). Taiwan is described as a free country according to the 'Freedom in World' index scoring 93/100 points in 2020.[194] The Economist Intelligence Unit's Democracy Index shows a steady democratic development in Taiwan scoring from 7.82 points in 2006 to 8.94 points in 2020 and is considered a full democracy ever since.[195] According to BTI, from 2006 (score: 10,0) to 2020 (score: 9.8), Brazil's Political Participation score has slightly declined by 0.2 points; however, political participation in Taiwan can still be considered as in *excellent*

---

[193] In our research we will not discuss the convoluted political relationship between Taiwan and the People's Republic of China.

[194] *Taiwan: Freedom in the World 2020*, Freedom House, Available from: https://freedomhouse.org/country/taiwan/freedom-world/2020 (accessed 18 April 2020)

[195] Taiwan was ranked 11th in the world, with 10.00 points in 'Electoral process and pluralism', 9.64 points in 'Functioning of government', 7.22 points in 'Political participation', 8.13 points in 'Political culture', and 9.71 points in 'Civil liberties', giving it an overall score of 8.94 points in 2020. (Adapted from: The Economist Intelligence Unit, *Democracy Index 2020: In sickness and in health?*, The Economist Intelligence Unit Limited, 2021, p. 9.)

*performance*.[196] UN E-Participation index does not include Taiwan. According to Yu-Tang Hsiao et al., "the climate of discontent and need for a practice of open consultations reached its paroxysm with the Sunflower Movement in 2014"[197] when "citizens occupied the Legislative Yuan (Parliament) in Taipei to protest the opacity of the Cross-Strait Service Trade Agreement that aimed at liberalizing trade in services between Taiwan and Chine".[198] Hsiao et al., continue that "during this occupation, Sunflower activists engaged Taiwan civil society in a large-scale public deliberations and consultations".[199] These events had brought about a need to change, revitalize and transform democratic processes in Taiwan to be aimed more towards the inclusion of citizens. The result of this endeavor is the creation of digital participation platforms to encourage political participation from citizens. Audrey Tang, Digital Minister of Taiwan, states that "Taiwan's transformation to a digital democracy took place within a generation"[200] and that the Sunflower Movement showed "how a citizens' assembly, assisted by professional facilitators and empowered by civic technologies, can lead to effective democratic action".[201]

*Form.* The final digital participation platform we mention in our research on the parliamentary level of applicability is *vTaiwan*, launched in 2015 by the *g0v* movement (civic tech community in Taiwan) on the request of the Taiwanese government. Hsiao et al., explain that "the "v" in vTaiwan stands for "vision", "voice", "vote" and "virtual", as vTaiwan embarks on a "virtual venture" of open consultation processes with the citizens".[202] According to NESTA, vTaiwan allows four digital participation forms: (1) Citizens providing technical expertise; (2) Deliberation; (3) Citizens developing proposals; and (4) Citizens

---

[196] *BTI Transformation Atlas*, Bertelsmann Stiftung's Transformation Index, Available from: https://atlas.bti-project.org/ (Accessed 18 April 2020)

[197] Yu-Tang Hsiao, Shu-Yang Lin, Audrey Tang, Darshana Narayanan, Claudina Sarahe, *"vTaiwan: An Empirical Study of Open Consultation Process in Taiwan"*, in *Proceedings of OOO, OOO, OOO*, 2018, p. 1.

[198] Ibid.

[199] Ibid.

[200] Audrey Tang, and Australian Strategic Policy Institute, "Digital Democracy in Taiwan: Crowdsourcing for an Inclusive and Resilient Indo-Pacific", in *The Sidney Dialogue: Playbook*, Australian Strategic Policy Institute, 2021, p. 12.

[201] Ibid.

[202] Yu-Tang Hsiao, et al., *"vTaiwan: An Empirical Study of Open Consultation Process in Taiwan"*, op. cit., p. 2.

scrutinizing proposals.[203] These digital participation forms correspond to the stages in vTaiwan process.
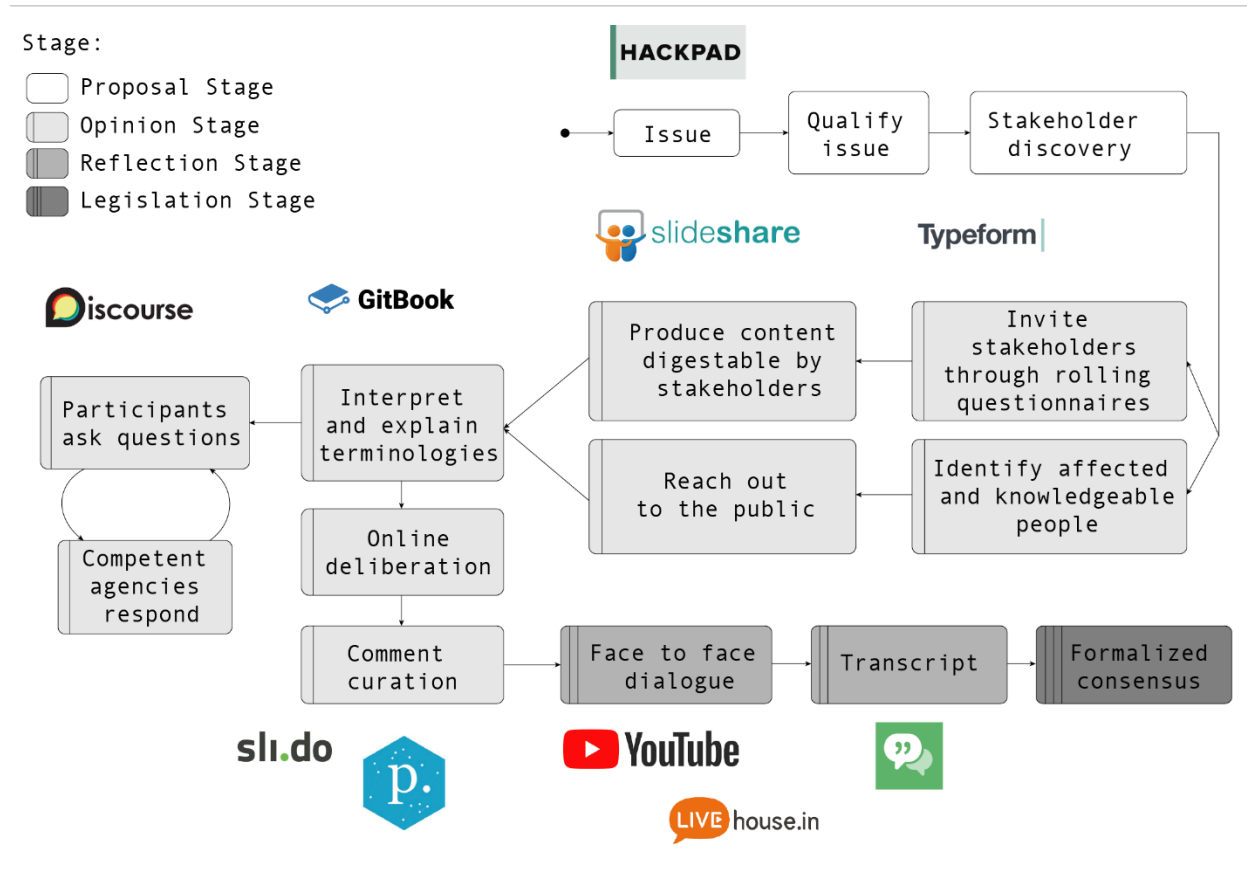


**Figure 1**. The vTaiwan process. We note a variety of digital tools used for political participation, regardless of their primary use: Hackpad, Typeform, Slideshare, GitBook, Iscourse, Sli.do, Pol.is, YouTube, Livehouse, etc. Polis is a digital participation platform used in the Opinion stage of the vTaiwan process with an aim to consider opinions from a large group of people to formulate scalable feedback to later achieve consensus on a given matter.  Image from: https://info.vtaiwan.tw/

*Functionality.* vTaiwan *functionality* can be qualitatively assessed from two perspectives: (1) stages in the vTaiwan process; and (2) digital innovations of Polis. First, Hsiao et al., explain that "the vTaiwan process consists of four successive stages: proposal, opinion, reflection and legislation".[204] At the first stage "vTaiwan hosts weekly mini hackathons – an online-offline open community taking shape as a hackathon – to welcome all

---

[203] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 27.

[204] Yu-Tang Hsiao, et al., *"vTaiwan: An Empirical Study of Open Consultation Process in Taiwan"*, op. cit., p. 2.

opinions from all walks of life, including programmers, designers, public servants, journalists, scholars, legal specialists, students and so on" where "contributors submit an issue to a competent government authority who has the choice to accept (be accountable for the issue) or refuse to open the proposal topic".[205] At the second stage vTaiwan launches 'online opinion collections' which "may take one or several rounds of opinion surveys".[206] The surveys are conducted using four digital participation tools: Discourse, Polis, Typeform, and Sli.do. At the third stage "the facilitator hosts an online-offline in-person consultation with stakeholders, including scholars, public servants, private sector representatives and community participants".[207] At the final stage vTaiwan "presents the consensus on the policy or legislative solutions".[208] This suggests two options; either the issue might be "resolved with a guideline, a policy or a statement by the competent authority"[209] or "it could be formulated into a draft bill sent to the Legislative Yuan".[210] Second, vTaiwan uses the digital participation platform *Polis*. The most important feature of Polis is that it points out what all user' comments have in common, rather than dividing them based on their opinion. The aim is to reach a consensus rather than calculate the majority. In a more technical way of speaking, we can point out that "the most prominent feature of Polis platform is its visual and structural expression of patterns in support for user-generated opinions".[211] Another interesting feature of Polis is that it allows people only to agree, disagree or pass on the opinions of others; there are no replies. This allows for the process to be fundamentally deconstructed to only a handful of opinions. If we take a small community of around 100 residents and propose to solve a problem on a particular matter by listening to everyone and deducing a solution, it is not an impossible scenario, but it would be a very difficult and time-consuming scenario. What would happen if we took a community of 2.6 million people (which is the population of Taipei) and proposed to solve a problem on a particular matter? It is impossible; the reason for vTaiwan success lies in something that is beyond such

[205] Yu-Tang Hsiao, et al., *"vTaiwan: An Empirical Study of Open Consultation Process in Taiwan"*, op. cit., p. 2.

[206] Ibid, p. 3.

[207] Ibid.

[208] Ibid.

[209] Ibid.

[210] Ibid.

[211] Audrey Tang, *Digital Tools Open Up Taiwan's Democratic Imaginations*, Pol.is Blog, 24 May 2016, Available from: https://blog.pol.is/digital-tools-open-up-taiwans-democratic-imaginations-d8f80432305c (Accessed 19 April 2022)

capabilities which is real-time machine learning that allows for creation of clusters of predominant opinions from large groups of people. According to Chip Huyen, "real-time machine learning is the approach of using real-time data to generate more accurate predictions and adapt models to changing environments".[212] In other words, it is "the process of training a machine learning model by running live data through it, to continuously improve the model".[213] This means that the more data is added to Polis, the more accurate is the resulting scalable feedback. Allowing for people to feel the value of their contribution throughout the four stages of the process and using real-time machine learning to collect and analyze opinions from a large group of people to reach a consensus contributes greatly to the success of vTaiwan process.

*Scope*. According to Chand Rejendra-Nucolucci and Ethan Zuckerman "platforms like vTaiwan could be the town squares of the civic logic ecosystem, serving as meticulously designed spaces that host larger conversations and encourage groups who spend much of their time in separate networks to connect".[214] In 2020 vTaiwan counted "200,000 participants in a nation of 23 million".[215] NESTA contributes the success of vTaiwan to government buy-in, multiple stakeholder buy-in, neutrality, strong volunteer support, an agile operation and the use of innovative digital tools.[216] The key aspect that needs to be pointed out is the symbiotic relationship between authoritative bodies and the citizens. Every citizen is welcomed to partake in manner depending on the phase in the vTaiwan process and "all government ministries are signed up with an account".[217] Additionally, "any member of the public can ask them [ministries] to share information regarding existing laws or regulations, to which the relevant ministry is obliged to respond on the forums within seven days".[218]

---

[212] Chip Huyen, "Real-time machine learning: challenges and solutions", *Chip Huyen*, January 2nd 2022, Available from: https://huyenchip.com/2022/01/02/real-time-machine-learning-challenges-and-solutions.html (accessed 21 May 2022)

[213] What Is Real-Time Machine Learning?, *Hazelcast*, Available from: https://hazelcast.com/glossary/real-time-machine-learning/ (accessed 21 May 2022)

[214] Chand Rejenda-Nicolucci, Ethan Zuckerman, *Civic Logic: Social media with opinion and purpose*, Knight First Amendment Institute, 20 November 2020, Available from: https://knightcolumbia.org/blog/civic-logic-social-media-with-opinion-and-purpose (accessed 19 April 2022)

[215] Ibid.

[216] Adapted from: Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 31.

[217] Ibid.

[218] Ibid.

*Impact.* Political impact of vTaiwan on the national level of acclaim can be qualitatively assessed through three events. First, in 2016 Taiwan introduced a new Minister without Portfolio for digital affairs (Digital Minister of Taiwan), role that has ever since been taken up by Audrey Tang, one of the activists of the Sunflower Movement. Second, in 2015 "to promote open government, the National Development Council has established a public policy participation platform (https://join.gov.tw/) […] as a regular channel for citizens to participate in public affairs, enabling Taiwanese citizens to discuss and give advices on policy issues during the drafting and implementation stage".[219] Third, participatory budgeting "is relatively new to Taiwan: not until the 2014 local elections was the idea floated and debated by Taipei City mayoral candidates […]".[220] The idea was developed in two models: (1) "the first model allows agency chiefs to allot part of their budgets to promote projects within their remits";[221] (2) "the second model of participatory budgeting centers on local councilors who allot money from the government funds that are at their discretion".[222] This suggests that the idea behind vTaiwan is constantly developing and evolving; the starting point was a success which encouraged other political actors and citizens to partake in digital democracy processes. The information of whether a process like vTaiwan was used in other countries as a digital tool for political participation could not be found. On the other hand, digital participation platform Polis was used in multitude of cases such as City of Bowling Green's Civic Assembly (Kentucky, USA), the Louisville Civic Assembly (Kentucky, USA), Ministry of Canadian Heritage (Toronto, Canada), Engage Britain (United Kingdom), etc.[223] None of the mentioned cases can be compared to the form, functionality, scope, and impact of vTaiwan.

*Discussion*. Despite the worldwide depiction of vTaiwan as a revolutionary participatory process there are numerous challenges that need to be addressed. Hsiao et al., point out that "as an ongoing institutionalized process funded by the government, vTaiwan

---

[219]     *e-Participation*, National Development council, Available from: https://www.ndc.gov.tw/en/Content_List.aspx?n=C3C5AABC54ECEA0D (accessed 19 April 2022)

[220] Practical Politics for You and Me: Participatory Budgeting, New Southbound Policy Portal, Available from: https://nspp.mofa.gov.tw/nsppe/news.php?post=178808&unit=410&unitname=Stories&postname=Practical-Politics-for-You-and-Me:-Participatory-Budgeting (accessed 19 April 2022)

[221] Ibid.

[222] Ibid.

[223]     *Featured Case Studies*, The Computational Democracy Project, Available from: https://compdemocracy.org/Case-studies/ (accessed 19 April 2022)

experiment struggles to terrain autonomy in the selection of topics".[224] The authoritative body can deny putting forward a particular question through the vTaiwan process. This is a lack of willingness to transfer power, which is to be expected when traditional models of democratic decision-making are faced with a completely new paradigm. Another challenge is that is that traditional democratic processes struggle to keep up with the new paradigm. Hsiao et al., give an example stating that "a small revision of a questionnaire takes more than a half a day to confirm inside the government, while it only takes several minutes to carry out at a mini hackathon".[225] However, Hsiao et al., conclude that "despite challenges, vTaiwan is a feasible model of decentralized consultation for society".[226]

## 2.2. Local government level

On the local government level of applicability, we describe the use of digital tools for political participation through four case studies: (1) *Decide Madrid*; (2) *Decidim Barcelona*; (3) *Leuven co-create it*; and (4) *Better Reykjavik*. The qualitative analysis on each case study is elaborated through six sections. In the first section titled *'brief'* we provide the reader with contextual information: (1) on the country's political system, population, 'Freedom in the World' report, the Economist Intelligence Unit's Democracy Index and percentage of households with access to the internet; (2) on the city's population, IESE Cities in motion Index (whereas possible), Smart City Index (whereas possible); and (3) circumstances leading up to the implementation of the corresponding digital participation platform. Following the *brief,* we apply four criteria for describing the use of digital tools for political participation: *form*, *functionality*, *scope*, and *impact*. The qualitative analysis on each case study ends with *discussion* in which we summarize learned lesions and debatable topics.

---

[224] Yu-Tang Hsiao, et al., *"vTaiwan: An Empirical Study of Open Consultation Process in Taiwan"*, op. cit., p. 4.

[225] Ibid.

[226] Ibid.

## 2.2.1. Madrid: *Decide Madrid*

*Brief.* Spain is a constitutional monarchy with a population of 47 million in 2020.[227] Spain is a free country with high levels of political rights and civil liberties according to the 'Freedom in World' reports scored 92/100 points in 2020.[228] The Economist Intelligence Unit's Democracy Index shows a slight decrease in Spain's overall score from 2006 to 2020 by 0,22 points; however, Spain is still barely maintained its status as a full democracy.[229] In 2020, Madrid, capital of Spain, counted 3.3 million in population.[230] According to IESE Cities in Motion Index (CIMI) 2020, Madrid ranked 25th in the world with a CIMI of 71,42/100.[231] Another source Smart City Index 2020 places Madrid at a 45th position in the world with a rating of BB based on the UN Human Development Index (HDI).[232] Furthermore, "in 2020, 96 percent of households in Spain had access to the internet".[233] According to Ángel Iglesias Alonso and Roberto Barbeito Iglesias "the context of the Great Recession prompted by the financial crisis, and the cutback policies and structural and austerity reforms forced on some Mediterranean countries by the EU, Spain among them, helped catalyze the discomfort and indignation that a large part of the Spanish population entertained for the functioning of democracy".[234] As a result, Iglesias and Barbeito explain

---

[227] *National Results for Series 2020-2070*, Instituto Nacional de Estadística, Available from: https://www.ine.es/jaxiT3/Datos.htm?t=36642 (accessed 21 April 2022)

[228] *Spain: Freedom in the World 2020*, Freedom House, Available from: https://freedomhouse.org/country/spain/freedom-world/2020 (accessed 21 April 2020)

[229] Spain is ranked 22nd in the world, with 9,58 points in 'Electoral process and pluralism', 7.14 points in 'Functioning of government', 7.22 points in 'Political participation', 8.13 points in 'Political culture', and 8.53 in 'Civil liberties', giving it an overall score of 8,12 points in 2020. (Adapted from: The Economist Intelligence Unit, *Democracy Index 2020: In sickness and in health?*, The Economist Intelligence Unit Limited, 2021, p. 9.)

[230] *Cifras oficiales de población resultantes de la revisión del Padrón municipal a 1 de enero*, Instituto Nacional de Estadística. Retrieved 23 April 2022, Available from: https://www.ine.es/jaxiT3/Datos.htm?t=2911

[231] Pascual Berrone, Joan Enric Ricart, *IESE Cities in Motion Index 2020*, IESE Business School, University of Navarra, 2020, p.28.

[232] *Smart City Index 2020*, International Institute for Management Development and Singapore University of Technology and Design, 2020, p. 9

[233] *Household internet access in Spain 2007-2020*, Statista Research Department, 18 October 2021, Available from: https://www.statista.com/statistics/377704/household-internet-access-in-spain/ (accessed 21 April 2022)

[234] Ángel H. Iglesias Alonso, Roberto L. Barbeito Iglesias, "Participatory Democracy in Local Government: An Online Platform in the City of Madrid", in *Hrvatska i komparativna javna uprava: časopis za teoriju i praksu javne uprave,* Vol. 20, No. 2, 2020, pp. 248-249.

that "the project originated with the desire to transfer to the municipal government the practices deployed by the movement Idignados (or 15-M movement) during the Spanish social protests of 2011-2014".[235] In other words, the emergence of digital tools for political participation was, at the time of Spanish social protests, caused by a strong support for political parties pushing a digital participation agenda. Vicente Pina, et al., explain that "in Madrid, Podemos was associated with other left-wing political parties through Ahora Madrid, which governed the city from May 2015 to May 2019, with citizen participation being one of the flagships of its electoral program".[236]

*Form.* The first digital participation platform we mention in our research on the local government level of applicability is *Decide Madrid*, launched in 2015 by the Madrid City Council. *Decide Madrid* is created using *Consul* software; a sequence of events brought upon by the Ahora Madrid electoral program. According to Royo et al., Decide Madrid initiative had a "smooth adoption […] mainly due to a mix of strong political support, favorable ICT-related factors, and environmental pressure for transformation from stakeholders (normative isomorphism)".[237] NESTA recognizes that Decide Madrid enables five digital participation forms: (1) Issue framing; (2) Citizens providing ideas; (3) Deliberation; (4) Citizens developing proposals; (5) citizens making decisions.[238] According to Royo et al., "citizens can participate in three moments of the policy cycle: (1) agenda setting, (2) policy analysis and preparation, (3) policy formulation and, to some extent, policy monitoring".[239] Royo et al., continue that "Decide Madrid is embedded in the city policy-making process, has made a progressive change in the perception of the staff of other areas about direct citizen participation, internal collaboration with other departments has been high and all of them are adapted to the new organizational culture",[240] however, "the existence of Decide Madrid is not guaranteed by any law and depends on political will".[241]

---

[235] Ibid., p. 250.

[236] Vicente Pina, Lourdes Torres, Sonia Royo, Jaime García-Rayado, "*Decide Madrid*: A Spanish best practice on e-participation", in Tiina Randma-Liiv and Veiko Lember (Eds.), *Engaging Citizens in Policy Making*, 2022, p. 155.

[237] Sonia Royo, Vicente Pina, Jaime García-Rayado, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", in *Sustainability*, Vol. 12, No. 4, 2020, p. 13.

[238] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 47.

[239] Sonia Royo, Vicente Pina, Jaime García-Rayado, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", in *Sustainability*, op. cit., p. 7.

[240] Ibid., p. 12.

*Functionality.* Consul enables five main features for Decide Madrid. First, *debates* in which "anyone can open threads on any subject, creating separate spaces where people can discuss the proposed topic".[242] Second, *proposals* which create "a space for everyone to create a citizens' proposals and seek support".[243] According to Pina et al., "proposals with the support of 1 per cent of Madrid residents aged 16 and over (27,662 inhabitants in 2018) are voted on in the polls section".[244] Third, *participatory budgeting* that allows "citizens to propose and decide directly how to spend part of the budget, with monitoring and rigorous evaluation of proposals by the institution".[245] In the case of Decide Madrid, Pina et al., point out that "annually, citizens can decide directly on how a part of the next year's budget will be spent (100 million euros in the 2019 edition, representing 2 percent of the municipal budget and around 30 euros per inhabitant)".[246] Fourth, *voting* refers to a "secure voting system for citizen proposals and enquiries from the institution".[247] According to Pina et al., "polls are carried out then a proposal receives 1 percent support [of the Madrid population older than 16] or when the city council wants citizens to decide on an issue".[248] Fifth, *collaborative legislation* that enables "any legislative text [to] be shared with the public to receive comments on any particular part of it".[249] Royo et al., point out that "Decide Madrid can be considered successful, or at least as a benchmark e-participation initiative, because of its continuity after a change of government in the municipality and its internal and external institutionalization […]".[250]

*Scope.* Royo et al., point out that "the development, implementation and the operational costs associated with Decide Madrid are funded by the city council's budget, so

[241] Ibid., p. 8.

[242] *Consul Project*, Available from: https://consulproject.org/en/# (accessed 22 April 2022)

[243] Ibid.

[244] Vicente Pina, Lourdes Torres, Sonia Royo, Jaime García-Rayado, "*Decide Madrid*: A Spanish best practice on e-participation", op. cit., p. 155.

[245] *Consul Project*, Available from: https://consulproject.org/en/# (accessed 22 April 2022)

[246] Vicente Pina, Lourdes Torres, Sonia Royo, Jaime García-Rayado, "*Decide Madrid*: A Spanish best practice on e-participation", op. cit., p. 156.

[247] *Consul Project*, Available from: https://consulproject.org/en/# (accessed 22 April 2022)

[248] Vicente Pina, Lourdes Torres, Sonia Royo, Jaime García-Rayado, "*Decide Madrid*: A Spanish best practice on e-participation", op. cit., p. 155.

[249] *Consul Project*, Available from: https://consulproject.org/en/# (accessed 22 April 2022)

[250] Sonia Royo, Vicente Pina, Jaime García-Rayado, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", op. cit., p. 16.

Decide Madrid is free for users".[251] Royo et al., further explain that "the platform is open to everyone without registering, but participation is limited according to the different types of activities" meaning that "everyone, including associations, NGOs and companies, can be registered in the platform, create debates or proposals and make comments in all sections […] however, only registered individual citizens of Madrid over 16 can verify their accounts and then they can create proposals for participatory budgeting and support and vote proposals".[252] Offering a more precise remark, Iglesias and Barbeito explain that "in all the cases participation was individual, not collective"[253] and "even members of the civic associations participated as individuals, never as social representatives, except in the evaluation phases if the municipal government considered it useful to consult their opinion".[254] Furthermore, Royo et al., add that 'the restriction of the legislative framework for citizen participation in Spain (e.g., the minimum support needed for citizens' initiatives in Spanish municipalities with more than 20,000 inhabitants is 10% of the citizens) were avoided by the commitment of the city council to take the results of the pools and participatory budgets as binding, independently of the number of participants, which has been key to its implementation and internal institutionalization".[255]

*Impact.* Decide Madrid achieved local, national, and international acclaim. Decide Madrid achieved continuity in its application despite the change in power of ruling parties showing a strong local acclaim. Iglesias and Barbeito argued that Decide Madrid shows "a basic weakness of […] democratic innovations: they are rather unstable, for they depend on the ideological alignment of the government, and they usually expire after a change or a coalition or ruling parties".[256] However, Royo et al., highlight that "Decide Madrid is still being used after the change of government in Madrid municipality that took place in June 2019; seven processes have been carried out from mid-June 2019 to mid-January 2020

---

[251] Ibid., p. 9.

[252] Sonia Royo, Vicente Pina, Jaime García-Rayado, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", op. cit., p. 7.

[253] Ángel H. Iglesias Alonso, Roberto L. Barbeito Iglesias, "Participatory Democracy in Local Government: An Online Platform in the City of Madrid", op. cit., p. 254.

[254] Ibid.

[255] Sonia Royo, Vicente Pina, Jaime García-Rayado, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", op. cit., p. 14.

[256] Ángel H. Iglesias Alonso, Roberto L. Barbeito Iglesias, "Participatory Democracy in Local Government: An Online Platform in the City of Madrid", op. cit., p. 264.

[…]".[257] Furthermore, Royo et al., point out that "two examples of successful participatory activities are the proposals of "Madrid 100% sustainable" and "Single ticket for public transport", which obtained enough support to reach the voting phase and won".[258] This is not an exclusive list, numerous other initiatives can be found as examples of local acclaim in the period from 2015 to 2020.[259] On a national scale the use of Consul inspired by the successful Decide Madrid gained traction when cities such as Valencia, La Coruña, Palma de Mallorca, etc., started using the platform themselves. On an international scale, Royo et al., point out that "the features of the Consul software and promotional activities carried out by the city council have resulted in an active international network of public sector entities interested in e-participation that collaborate to improve the platform and in a positive image of Decide Madrid".[260] This reflects on the success of Consul and its international acclaim that was previously mentioned. Furthermore, Decide Madrid was awarded with the United Nations Public Service Award in 2018 and is recognized by the OECD Observatory of public sector innovation.

*Discussion.* There are two important lessons learned from the case study of Decide Madrid. First, the political support for the active use of the digital participation platform is one of the key factors in determining its success. The received popular support in 2015 Madrid city council elections encouraged Ahora Madrid to promote the use of digital participation platforms for political participation to the citizens in Madrid. Second, despite the change in power, digital participation platform can achieve continuity if it became deeply rooted in the local government policy-making process and had an appropriate scope and political impact. Decide Madrid prevailed despite the change in power and achieved continuity in its use. Royo et al., conclude that there is "[…] high motivation for e-participation and direct citizen participation for both the city council and the citizens, although it seems that both citizens and the city council need more time to adapt to online direct participation".[261] The continuous use and function of Decide Madrid are not put into question, rather only the adaptability of the symbiotic relationship between the authoritative

---

[257] Sonia Royo, Vicente Pina, Jaime García-Rayado, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", op. cit., p. 12.

[258] Ibid.

[259] *Decide Madrid*, Available from: https://decide.madrid.es/ (accessed 22 April 2022)

[260] Sonia Royo, Vicente Pina, Jaime García-Rayado, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", op. cit., p. 15.

[261] Ibid., p. 16.

body and the citizens is mildly questioned as it poses a problem solved only by the amount of transpired time.

### 2.2.2. Barcelona: *Barcelona Decidim*

*Brief.* Political system and democracy evaluation of Spain has already been presented in the previous case study of Decide Madrid – for this reason we move forward to the city of Barcelona to avoid repetition. Barcelona, city in Spain and the capital of the autonomous community of Catalonia, in 2020 had a population of 1,6 million.[262] According to IESE Cities in Motion Index (CIMI) 2020, Barcelona ranked 26th in the world with a CIMI of 71,41/100.[263] Smart City Index 2020 places Barcelona at a 49th position in the world with a rating of BB based on the UN Human Development Index (HDI).[264] Barcelona has for a long time ranked and remarked highly in term of smart city initiatives.[265] It comes as no surprise that significant advances by the city of Barcelona have also been made in the field of digital political participation. According to Ismael Peña-López the goals of enabling active digital participation "are in line with the ethos of the Spanish *Indignados* Movement and the demands for better democracy in Spain, which was the central philosophy of political parties, like *Ahora Madrid* in Madrid and *Barcelona en Comú* in Barcelona, that took office in the Spanish local elections of 2015".[266] According to Francesca Bria, Chief Technology and innovation Officer at Barcelona City Council, "Barcelona aspires to evolve the smart city agenda towards becoming a digital sovereign city – a city which empowers citizens to discuss

---

[262] *Cifras oficiales de población resultantes de la revisión del Padrón municipal a 1 de enero*, Instituto Nacional de Estadística. Retrieved 23 April 2022, Available from: https://www.ine.es/jaxiT3/Datos.htm?t=2911

[263] Pascual Berrone, Joan Enric Ricart, *IESE Cities in Motion Index 2020*, op. cit., p. 28.

[264] *Smart City Index 2020*, op. cit., p. 9.

[265] See: *Smart City 3.0 – Ask Barcelona about the next generation of smart cities*, Urban Hub, 13 February 2018, Available from: https://www.urban-hub.com/cities/smart-city-3-0-ask-barcelona-about-the-next-generation-of-smart-cities/ (accessed 22 April 2022); *Smart City Series: the Barcelona Experience*, Zigurat global Institute of Technology, 7 February 2019, Available from: https://www.e-zigurat.com/blog/en/smart-city-barcelona-experience/ (accessed 22 April 2022); Josep-Ramon Ferrer, "Barcelona's Smart City vision: an opportunity for transformation", in *Field Actions Science Reports*, Special Issue 16, 2017, pp. 70-75, Available from: https://journals.openedition.org/factsreports/4367?lang=fr (accessed 22 April 2022); Harry Stott, *Barcelona Future, Smart City*, 1 January 2020, Available from: https://www.barcelona-metropolitan.com/living/barcelona-future-smart-city/ (accessed 22 April 2022).

[266] Ismael Peña-López, *decidim. barcelona, Spain*, IT For Change, 2017, p. 6.

and articulate their own priorities, and set directions as well as deciding upon ethical uses of technological innovations with clear social impact and public return".[267] Political support of the *Barcelona en Comú* in 2015 Barcelona city council elections led to the introduction of digital participation in Barcelona.

*Form.* The second digital participation platform we mention in our research on the local government level of applicability is *Decidim Barcelona*, launched in 2016 by the Barcelona City Council using *Decidim* software. Raffaele Bazurli and Pablo Castaño Tierno explain that the political platform "Barcelona en Comú has innovated in this field with a new Regulation of Citizens' Participation and the creation of Decidim Barcelona ("We Decide Barcelona"), a website that allows residents to ger directly involved in the elaboration of public policy".[268] According to the platform's White Paper, Decidim "came about from Barcelona City Council's need to open up a technologically mediated citizen-participation process around the Municipal Action Plan (PAM), with three major goals: making a process that is transparent and traceable, expanding participation through the digital platform and integrating face-to-face and digital participation".[269] An important remark and innovation of Decidim is precisely its intention to connect and expand offline and online political participation activities. According to Peña-López "the government thus began the procedures to create the new strategic plan for the city, with an aim to make it participatory and have strong digital components, both in terms of administrative management and citizen input".[270] Decidim poses itself as an extremely versatile digital participation tool because of its open-source transparent character that allows customization to suit the needs of the user. Also stated in the White Paper is that "Decidim was originally designed exclusively for hosting this process [PAM] tough the need for extending it to other participation processes was quickly spotted"[271] and "it was here that the idea for today's Decidim came to pass".[272]

---

[267] Francesca Bria, *Building digital cities from the ground up based around data sovereignty and participatory democracy: The case of Barcelona*, Barcelona Centre for International Affairs, 2019, p. 86.

[268] Raffaele Bazurli, Pablo Castaño Tierno, "Barcelona, a Beacon By the Sea", in *Jacobin Magazine*, 2018, p. 8.

[269] *Brief History*, Decidim, Available at: https://docs.decidim.org/en/understand/about/#_brief_history (accessed 23 April 2022)

[270] Ismael Peña-López, *decidim. barcelona, Spain*, op. cit., p. 5.

[271] *Brief History*, Decidim, Available at: https://docs.decidim.org/en/understand/about/#_brief_history (accessed 23 April 2022)

[272] Ibid.

*Functionality.* Desiiris explains that "Decidim institutionalizes participatory processes that are locally grounded and mostly focused on the allocation of resources",[273] and "reduces the burden of decision through the adoption of a hybrid model of participation which outsources some components of the deliberative process to neighborhood assemblies and some others to traditional representative bodies".[274] The way the Decidim platform works is that "users […] interact through participatory mechanisms known as components within different participatory spaces that channel their democratic power to specific results [initiatives, processes, assemblies, consultations meetings, proposals, blogs, debates, static information pages, surveys, results and comments]".[275] Decidem features are divided into participatory spaces (initiatives, processes, assemblies, and consultations) and participatory components (comments, proposals, amendments, votes, results, debates, surveys, sortitions, pages, blogs, newsletters, meetings, participatory texts, accountability, and conferences).[276] Participatory spaces "are frameworks that define how participation will be carried out, the channels or means through which citizens or members of an organization can process requests or coordinate proposals and make decisions".[277] Participatory components "are participatory mechanisms that allow a series of operations and interactions between the platform users within each of the participatory spaces".[278] Philip Preville comments that "it helps that the [Decidim] website is simple to use: it provides a list of consultation topics, links to relevant reports from city staff, minutes from relevant council and committee meetings, and a searchable list of proposals"[279] concluding that "it's a remarkable platform that takes the byzantine workings of any civic administration, sorts and collates them on an issue-by-issue basis, and provides instant and comprehensive online briefings on any civic

---

[273] Marco Deseriis, "Reducing the Burden of Decision in Digital Democracy Applications: A Comparative Analysis of Six Decision-making Software", in *Science, Technology, & Human Values*, 2021, p. 13.

[274] Ibid.

[275] Xabier E. Barandiaran, Antonio Caleja-López, *Decidim: political and technopolitical networks for participatory democracy, White paper, Decidim, 2018, p.* 9.

[276] *General description and introduction to how Decidim works*, Decidim, Available from: https://docs.decidim.org/en/features/general-description/ (accessed 23 April 2022)

[277] Ibid.

[278] Ibid.

[279] Philip Preville, "How Barcelona is leading a new era of digital democracy", *Sidewalk Talk features, Medium*, 13 November 2019, Available from: https://medium.com/sidewalk-talk/how-barcelona-is-leading-a-new-era-of-digital-democracy-4a033a98cf32 (accessed 24 April 2022)

initiative that has been funneled through its processes".[280] Decidim platform in many ways draws inspiration from the Consul platform and takes it a step forward in an attempt to answer the drawbacks. In other words, Decidim is a modular platform that allows for mixing and matching different participatory processes depending on the owner (city, region, organization, etc.), the aim of the project (participatory budgeting, municipal strategic plans, etc.) and/or everyday use (citizen proposals, petitions, deliberation, etc.)

*Scope.* According to Rosa Borge Bravo et al., "in the Strategic City Planning, citizens were able to make policy proposals through the digital platform, and each proposal could be openly discussed in a forum and voted on by other citizens who had previously registered" which led to "10,860 proposals (9,560 initiated by citizens), 18,192 comments, and 25,435 online participants".[281] Decidim is not intended as a replacement for traditional models of participation, rather as their expansion; citizens, among other things, can use the platform to organize offline meetings. In the case of Barcelona's municipal plan 2016-2019 over 500 offline meetings were organized with encompassing over 15 thousand participants via the Decidim platform.[282] Furthermore, Desiiris points out that "the system developers and administrators of Decidim, who initially drew inspiration from Consul, decided not to implement any support threshold for citizens' initiatives [for Consul the threshold is set at 1%]".[283]

*Impact.* According to Adrian Bua and Sonia Bussu "participation in Barcelona's 2016-2019 municipal plan (accounting for 40 per cent of municipal expenditure) was coordinated through a staged participatory process [in which] over 70 per cent of the proposals were developed by over 40,000 citizens on *Decidim*, and many more were engaged

---

[280] Ibid.

[281] Rosa Borge Bravo, Joan Balcells, Albert Padró-Solanet, "A Model for the Analysis of Online Citizen Deliberation: Barcelona Case Study", in International Journal of Communication, Vol. 13, 2019, p. 5679.

[282] Pablo Aragón, Virgile Deville, *Decidim and the Municipal Action Plan in Barcelona: co-producing and auditing public policy through a political network*, Slideshare presentation, 25 May 2019, Available from: https://www.slideshare.net/mysociety/decidim-and-the-municipal-action-plan-in-barcelona-coproducing-and-auditing-public-policy-through-a-political-network-pablo-aragn-universitat-pompeu-fabra-spain-virgile-deville-open-source-politics-code-for-france-democracy-earth (accessed 24 April 2022)

[283] Marco Deseriis, "Reducing the Burden of Decision in Digital Democracy Applications: A Comparative Analysis of Six Decision-making Software", op. cit., p. 21.

in offline collective assemblies and consultations".[284] Following the initial success of the platform on a local scale, Barcelona city council continued its use for the 2020-2023 municipal plan. On a national scale, the use of the open-source platform Decidim spread to other cities, mostly in Catalonia, such as Calafell, Esparreguera, Terrassa, Sabadell, Reus, and others.[285] On an international scale, Decidim is used in numerous cities (New York City in the United States, Helsinki in Finland, Kakogawa in Japan, Milano in Italy, Zürich in Switzerland, etc.) and regions around the world (Puglia region in Italy, Canton of Geneva in Switzerland, department of Loire-Atlantique in France, etc.).[286] Decidim achieved its local, national and international acclaim with its most prominent rival being Madrid's Consul platform.

*Discussion.* Comparing Consul and Decidim from their respective documentation (White Papers, Dossiers, institutional publications, websites, etc.) it is difficult to summarize the advantages and disadvantages because the primary use of those documents to draw clients and understandably, they use a rather 'pompous' rhetoric. Nevertheless, according to Xabier E. Barandiaran "the main difference between the two projects can be divided into three layers: political, technopolitical and technological".[287] Barandiaran explains that "with regard to the political layer, Consul is a project with a greater institutional and international projection",[288] on the other hand, "Decidim and Barcelona City Council haven't done so bad but the repercussions and scope is clearly smaller, despite having a substantial reach in France and having Helsinki City Council among its prominent international users".[289] From a technopolitical perspective Barnadiaran explains that "Consul is a tool that mainly focuses on local councils and municipal authorities […] and promotes four very specific models for participatory democracy",[290] however, "you won't be able to adapt the platform".[291] On the

---

[284] Adrian Bua, Sonia Bussu, "Between governance-driven democratization and democracy-driven governance: Explaining changes in participatory governance in the case of Barcelona", in *European Journal of Political Research*, Vol. 60, 2021, p. 725.

[285] *These cities, regions and organizations are already using decidim*, Decidim, Available from: https://decidim.org/usedby/ (accessed 24 April 2022)

[286] Ibid.

[287] Xabier E. Barandiaran, *comparison of decidim and consul*, Decidim, 14 January 2019, Available from: https://decidim.org/blog/2019-01-14-consul-comparison/ (accessed 25 April 2022)

[288] Ibid.

[289] Xabier E. Barandiaran, *comparison of decidim and consul*, Decidim, 14 January 2019, Available from: https://decidim.org/blog/2019-01-14-consul-comparison/ (accessed 25 April 2022)

[290] Ibid.

other hand Bernadiaran points out that Decidim has taken a different approach and creates "a system for designing participatory democracy spaces of any kind".[292] Furthermore, "Consul is a project led and governed by Madrid City Council",[293] but "Decidim, in contrast, is open to a participatory and democratic design".[294] In conclusion, Bernadiaran states that "Consul is better-adapted to a very specific participation model [that may or may not work in other instances] and particularly to participation budgets"[295] and "has more publicity, has been promoted and is more widespread".[296] On the other hand, "Decidim is much more configurable and allows more things to be done than what Consul makes possible"[297] because it is "more modular, collaborative, versatile and more democratic and participatory".[298] Bernadiaran offers an objective comparison of Consul and Decidim and based on his work we can note that the main difference between the two is versatility and publicity. Either way, both platforms offer a highly developed digital participation platform for encouraging political participation.

### 2.2.3. Leuven: *Leuven co-create it*

*Brief.* Belgium is a constitutional monarchy with a population of 11 million residents by 1 January 2020.[299] Since 2003 Belgium is described as a free country with levels of political rights and civil liberties and according to the 'Freedom in World' reports scored 96/100 points in 2020.[300] In 2020, furthermore, "91 percent of households in Belgium had

---

[291] Ibid.

[292] Ibid.

[293] Ibid.

[294] Ibid.

[295] Ibid.

[296] Ibid.

[297] Ibid.

[298] Ibid.

[299] On 1 January 2020, Belgium had 11,492,641 inhabitants, *Statbel: Belgium in figures*, Available from: https://statbel.fgov.be/en/news/1-january-2020-belgium-had-11492641-inhabitants (accessed 26 April 2022)

[300] *Belgium: Freedom in the World 2020*, Freedom House, Available from: https://freedomhouse.org/country/belgium/freedom-world/2020 (accessed 26 April 2022)

access to a broadband internet connection",[301] which is "an increase of three percent on the previous year and 21 percent compared to 2010".[302] Leuven, city in Belgium, counted 102 thousand in population as of 1 January 2020.[303] According to Paula Rodriguez Müller "the Leuven case has set a new precedent in Belgium, as it was one of the first Belgian municipalities to achieve extensive active participation by citizens".[304] For these reasons, Leuven stands out as a necessary case study on the use of digital tools for political participation. Nevertheless, there is a gap in academic literature on this case study because it is most recent among the ones selected in this Chapter; however, using the limited literature and information sources we can apply out criteria for describing the use of digital tools for political participation. After April 2019, according to Müller "in the policy memorandum entitled 'Ground-breaking Leuven', the city council established ten ambitions [A connected, involved and participative city; Affordable housing; A reachable, accessible and traffic-safe city; A safe and attractive city with welcoming residential areas; An inclusive and caring city; A sustainable, climate-proof and circular city; A bustling city, with jobs for everyone and a breeding ground for talent; A healthy and sporty city; A vibrant city, for every taste; An innovative and performing city that cooperates] in consultation with experts and civil servants and with a budget of 450 million euros".[305]

*Form.* The third digital participation platform we mention in our research on the local government level of applicability is *Lueven co-create it (Leuven, maak het mee! (LMHM)*. Following NESTA's typology we can point out that *Leuven co-create it* allows five digital participation forms: (1) Informing citizens; (2) Issue framing; (3) Citizens providing information; (4) Citizens providing ideas; and (5) Deliberation. Müller explains that "*Leuven, co-create it* adopted an existing e-participation platform outsourced to CitizenLab, a

---

[301] Share of households with broadband internet access in Belgium 2005-2020, *Statista*, Statista research Department, 18 August 2021, Available from: https://www.statista.com/statistics/702491/broadband-internet-household-penetration-belgium/ (accessed 26 April 2022)

[302] Ibid.

[303] Leuven, *City Population*, Available from: https://www.citypopulation.de/en/belgium/vlaamsbrabant/leuven/24062__leuven/ (accessed 26 April 2022)

[304] Paula Rodriguez Müler, "Citizens' engagement in policy making: Insights from an e-participation platform in Leuven, Belgium", in Tiina Randma-Liiv and Veiko Lember (Eds.), *Engaging Citizens in Policy Making*, 2022, p. 182.

[305] Paula Rodriguez Müler, "Citizens' engagement in policy making: Insights from an e-participation platform in Leuven, Belgium", op. cit., p. 185.

Brussels-based SaaS (cloud-based software as a service) start-up in civic tech".[306] Introduction of a new digital participation platform *Leuven co-create it* established the means of crowdsourcing ideas from citizens as a response to the memorandum *Ground-breaking Leuven. Leuven co-create it* is a digital participation platform that is, at the time of writing, still available for citizens to use; however, in its initial stage *Leaven co-create it* was used for crowdsourcing ideas for the *multi-annual plan 2020-2025 project*.

*Functionality.* The *project* was divided into four phases: Gathering ideas (March 1, 2019 – June 9, 2019); Feedback on the ideas (10 June 2019 – 15 October 2019); Write the plan (Fall 2019); Execute the plan (From January 2020 to 2026).[307] Digital participation platform *Leuven co-create it* played a vital role in generating ideas from the citizens of Leuven that would later be implemented in the official plan. Müller explains that "four factors were particularly relevant for the success of *Leuven, co-create it*: the support of the politico-administrative level, the offline-online approach implemented to engage citizens, the substantive communication organized to inform and motivate potential participants and the transparency efforts".[308] *CitizenLab* digital participation platform enables 8 key features (ideation, online workshops, participatory budgeting, option analysis, surveys, volunteering, proposals, and polls) that can be used in full or in part, depending on the needs of the client. With this in mind, *Leauven co-create* it is a unique digital participation platform because it takes advantage of such customization to encourage political participation.

*Scope.* Ilona Lodewijckx, from CitizenLab, explains that "in the first phase of the project, over 3,007 citizens registered on the online platform and shared a total of 2,331 ideas"[309] with the administration of Leuven providing feedback in the second phase on "96% of gathered proposals".[310] Müller points out that "citizens could also vote or comment on ideas , promoting peer discussion"[311] and that "in total, the city reported 31,492 votes and

---

[306] Ibid., p. 182.

[307] Leuven, maak het mee!, *Stad Leuven maak het mee*, Available from: https://leuvenmaakhetmee.be/nl-BE/projects/betrokken-en-participatieve-stad (accessed 27 April 2022)

[308] Paula Rodriguez Müler, "Citizens' engagement in policy making: Insights from an e-participation platform in Leuven, Belgium", op. cit., p. 192.

[309] Ilona Lodewijckx, Case Study: over 3,000 citizens contribute to Leuven's multi-annual plan, *CitizenLab*, 13 August 2019, Available from: https://www.citizenlab.co/blog/civic-engagement/case-study-3000-citizens-contribute-to-leuven-multi-annual-plan/ (accessed 27 April 2022)

[310] Ibid.

[311] Paula Rodriguez Müler, "Citizens' engagement in policy making: Insights from an e-participation platform in Leuven, Belgium", op. cit., p. 189.

2253 comments".[312] Müller explains that "in order to participate in the e-participation platform [*Leuven co-create it*], citizens should register on the platform by providing their name, city district, e-mail address, and an indication of whether the user is a student, a citizen, a visitor, or an organization".[313] This wide range of actors that can be involved on the platform created a cause for concern, especially when it came to voting. Müller points out that "the working group decided not to consider the votes when selecting the ideas as some citizens and organizations with larger networks could have an advantage".[314]

*Impact.* On the local level, Müller points out that "the influence of LMHM [*Leuven co-create it*] on policy formulation in the context of Leuven's strategic multi-annual plan is shown by the inclusion of 373 ideas to be implemented in the period 2020-2025".[315] On the international level, Leuven is not ranked in the IESE Cities in Motion Index (CIMI) 2020; however, Leuven was named the European Capital of Innovation (iCapital) in 2020 described as a "mission-driven city that excels through inspiring governance models and the systems put in place for the public to innovate and to get involved in critical decision-making processes".[316] Political impact was achieved on the local and international level. On the national level, there are other cities using similar digital participation platforms in Belgium; however, at the moment of writing, they cannot be considered as influenced by *Leuven co-create it* platform rather, they are influenced by the accessibility of the Brussels' based *CitizenLab* digital participation platform.

*Discussion. Leuven co-create it* was a part of a larger political process of formulating city's strategic multi-annual plan from 2020 to 2025. This means that the platform, from its creation, was used towards achieving a specific goal in mind in a similar manner to the Decidim Barcelona. We can argue that this is an important lesson – one of the reasons for the success of Leuven co-create it is that it gave citizens of Leuven a clear purpose as to why they should actively participate on the platform. This is not a common factor with digital participation platforms; however, significant results are achieved when the use of digital tools for political participation is perceived as *what enables the project* and *not the project itself*.

---

[312] Ibid.

[313] Ibid., p. 186.

[314] Ibid., p. 189.

[315] Ibid., p. 191.

[316] European Capital of Innovation (iCapital) 2020, *European Commission*, Available from: https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/prizes/icapital/icapital-2020_en (accessed 27 April 2022)

On the other hand, it comes as no surprise that Müller concludes that *Leuven co-create it* "actual impact will depend on the sustainability of the participatory process in the city".[317] Considering that the project for multi-annual plan from 2020 to 2025 is over, and citizens no longer have a clear aim of why they should be using the digital participation platform, a viable sustainability concern is raised for the future of *Leuven co-create it*.

## 2.2.4. Reykjavik: *Better Reykjavik*

*Brief.* Iceland is a parliamentary republic with a population of 364 thousand by 1 January 2020.[318] Since 2003 Iceland is described as a free country according to the 'Freedom in World' reports scoring 94/100 points in 2020.[319] The Economist Intelligence Unit's Democracy Index shows a slight decrease in Iceland's overall score from 2006 to 2020 by 0,34 points; however, Iceland still maintained its status as a full democracy.[320] In 2020, Reykjavik, capital of Iceland, counted 131 thousand in population.[321] According to IESE Cities in Motion Index (CIMI) 2020, Reykjavik ranked fifth in the world with a CIMI of 80,47/100.[322] Furthermore, "in 2020, Iceland was the European country with the highest share [98%] of household connected to the Internet".[323] Derek Lackaff points out that "as one of the world's most digital highly developed nations (boasting not just a high internet access rate, for example, but also the one of the world's highest Facebook usage rate), many new

---

[317] Paula Rodriguez Müler, "Citizens' engagement in policy making: Insights from an e-participation platform in Leuven, Belgium", op. cit., p. 193.

[318] Iceland's population grew by 2.0% last year, *Statistics Iceland*, 20 March 2020, Available from: https://statice.is/publications/news-archive/inhabitants/the-icelandic-population-1-january-2020-11643/ (accessed 25 April 2022)

[319] *Iceland: Freedom in the World 2020*, Freedom House, Available from https://freedomhouse.org/country/iceland/freedom-world/2020 (accessed 25 April 2022)

[320] Iceland was ranked second in the world, with 10,00 points in 'Electoral process and pluralism', 8.57 points in 'Functioning of government', 8.89 points in 'Political participation', 10.00 points in 'Political culture', and 9.41 in 'Civil liberties', giving it an overall score of 9,37 points in 2020. (Adapted from: The Economist Intelligence Unit, *Democracy Index 2020: In sickness and in health?*, The Economist Intelligence Unit Limited, 2021, p. 8.)

[321] Adapted from: Reykjavik Population 2022, *World Population Review*, Available from: https://worldpopulationreview.com/world-cities/reykjavik-population (accessed 25 April 2022)

[322] Pascual Berrone, Joan Enric Ricart, *IESE Cities in Motion Index 2020*, op. cit., p. 28.

[323] Household internet access in Iceland 2005-2020, *Statista*, Statista Research Department, 18 August 2021, Available from: https://www.statista.com/statistics/377769/household-internet-access-in-iceland/ (accessed 25 April 2022)

Icelandic initiatives attempted to leverage digital platforms to improve governmental access, transparency, and accountability".[324] Briefly given data points out that Iceland, despite begin a significantly smaller country, can be considered a digital democracy and Reykjavik categorized as a smart city. Starting as a '*Shadow City initiative*',[325] Bjarnason et al., explain that the Best Party called for the creators of the platform to modify it "for the purpose of collecting opinions and ideas of citizens on the city council and community".[326] The Best Party in Iceland understood the importance of the website and after actively using it "on May 29, 2010 the Best Party defeated the incumbent Independence Party in the city council elections".[327] The newly elected mayor Jón Gnarr asked the creators of the Shadow City to modify the website and invited the citizens of Reykjavik to actively participate on the new platform. In this case study, we qualitatively analyze the use of digital tools for political participation on the local government level of Reykjavik.

*Form.* The final digital participation platform we mention in our research on the local government level of applicability is *Better Reykjavik (Betri Reykjavík)* that uses *Your Priorities* as its software foundation. According to NESTA, Better Reykjavik allows five digital participation forms: (1) Issue framing; (2) Citizens providing information; (3) Citizens providing ideas; (4) Deliberation; and (5) Citizens making decisions.[328] According to Lackaff, Better Reykjavik was "launched in 2009 by grassroots activists as a platform for a frustrated citizenry to express their views about how to move forward, the project was subsequently endorsed by a new political party, the Best Party, that went on to win the

---

[324] Derek Lackaff, "Escaping the middleman paradox: Better Reykjavik and open policy innovation", in *JeDEM-eJournal of Democracy and Open Government*, Vol. 7, No. 2, 2015, p. 137.

[325] Website created by the creators of Your Priorities where "each of the eight political parties vying for seats on the council was provided with a "branded" section of the site to use to connect with potential voters and learn about voters' political pritorities" (Derek Lackaff, "Escaping the middleman paradox: Better Reykjavik and open policy innovation", op. cit., p. 148.)

[326] Robert Bjarnason, Gunnar Grimsson, Gina Joerger, "Better Reykjavik: Municipal Open Innovation", *Crowdlaw for Congress Series*, 2019, p. 4. Available from: https://congress.crowd.law/case-better-reykjavik.html (accessed 25 April 2022)

[327] Derek Lackaff, "Escaping the middleman paradox: Better Reykjavik and open policy innovation", op. cit., p. 148.

[328] Adapted from: Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 42.

Reykjavik municipal government election".[329] Lackaff argued back in 2015 that Better Reykjavik "is unique among similar projects for three primary reasons: First, it is developed and maintained by a grassroots nonprofit organization, and not a government; second, it has significant deliberative mechanisms, unlike many other ePetition initiatives; and third, it rapidly achieved significant buy-in from citizens, policy-makers, and public administrators and has been normalized as an ongoing channel for citizen-government interaction across multiple elected administrations".[330]

*Functionality.* According to Róbert Bjarnason, Gunnar Grimsson and Gina Joerger, Better Reykjavik "has multiple democratic functions which can roughly be split into three divisions: Agenda setting (Your Voice At The City Council), Participatory budgeting (My neighborhood) and Policy crowdsourcing ("Reykjavik's Education Policy")".[331] With regards to the "Your Voice At The City Council" feature, Bjarnason et al., explain that "citizens of Reykjavik are given the opportunity to submit, debate, and prioritize policy proposals and ideas"[332] and "on the last working day of every month, the five top rated ideas, as well as the top ideas in each category [tourism, operations, recreation and leisure, sports, human rights, etc.], are collected by a project manager […] for evaluation and possible implementation".[333] Bjarnason et al., continue by stating that "from idea to decision takes 3-6 months at the end of which all the participants, including the proposer and those who voted for the proposal are notified about the outcome".[334] With regards to the My Neighborhood feature, Bjarnason et al., explain that "this 450 million ISK (4.2 million USD, 3.6 million EUR) participatory budgeting initiatives enables the public to spend approximately 6% of the city's capital investment budget".[335] Participatory budgeting process lasts for a year and "during a three-week span between February and March the ideas from all 10 neighborhoods are collected, and from the end of the "idea collection" period to May, the ideas are processed by both the project management team and the political district committees to decide which ones are

---

[329] Derek Lackaff, "13 Case Study: Better Reykjavik – Open Municipal Policymaking", in *Civic media: Technology, design, practice*, 2016, p. 229.

[330] Derek Lackaff, "Escaping the middleman paradox: Better Reykjavik and open policy innovation", op. cit., p. 148.

[331] Robert Bjarnason, Gunnar Grimsson, Gina Joerger, "Better Reykjavik: Municipal Open Innovation", op. cit., pp. 4-5.

[332] Ibid., p. 7.

[333] Ibid.

[334] Ibid.

[335] Ibid., p. 9.

reasonable and implementable".[336] According to Lackaff there are three key reasons for the success of Better Reykjavik: "first, the initiative was implemented quickly, and is subject to a fast iterative process where successful projects attract attention and meaningful resources",[337] "second, the scale of the project was clear, and goals were clearly defined",[338] and "third, a direct connection with social media networks like Facebook and Twitter reduces barriers to participation while situating policy discussions within the users' real social networks".[339]

*Scope.* On the Better Reykjavik digital participation platform "anyone can view the open forum and registered users who approve the terms of participation can participate in the forum […] by presenting their ideas, viewing other users' ideas, arguing issues, voicing their opinion and by rating ideas and argumentation by supporting or opposing them".[340] The symbiotic relationship was achieved by a partnership between the City of Reykjavik and the Citizens Foundation and despite the change in power in 2014, digital participation platform Better Reykjavik achieved continuity with the new local government showing support for active digital participation. This in turn, reflected positively on the citizens of Reykjavik as they were motivated with a clear output for their active participation on the platform. The only threshold that exists is the number of proposals that are sent to the project manager (top 5 each month and depending on the category), there is no minimum requirement for signatures or votes; however, the final decision is made by the city government.

*Impact.* High number of users and a high number of implemented ideas created a steady symbiotic relationship between the authoritative body and the citizens achieving local acclaim. According to NESTA, "to date [2017], more than 70,000 people have taken part, out of a population of 120,000 people in Reykjavik".[341] According to Bjarnason et al., "to date [2019], 27,000 registered users have submitted over 8,900 proposals and 19,000 arguments for and against",[342] furthermore, "over 7600 projects have been implemented as the result of

---

[336] Better Reykjavik, *Citizens Foundation*, Available from: https://www.citizens.is/portfolio_page/better_reykjavik/ (accessed 25 April 2022)

[337] Derek Lackaff, "13 Case Study: Better Reykjavik – Open Municipal Policymaking", op. cit., p. 232.

[338] Ibid.

[339] Ibid.

[340] *Better Reykjavik*, Available from: https://betrireykjavik.is/domain/1 (accessed 26 April 2022)

[341] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 43.

[342] Robert Bjarnason, Gunnar Grimsson, Gina Joerger, "Better Reykjavik: Municipal Open Innovation", op. cit., p. 10.

My Neighborhood with visible and usable results in all neighborhoods [...]".[343] The political impact is not only shown on the local level since this scenario caught the attention of many international actors. According to NESTA, on an international level, "the platform [Your Priorities] has now [2017] been used by at least 700,000 people, including organizations such as the Pirate Party, the Estonian national government, and NHS England in the UK, among others".[344] In 2011 the Citizens Foundation was awarded the European e-Democracy Award and in 2015 Better Neighborhoods won the Nordic Best Practice Challenge in the category of Public Communication. These facts entail that the political impact of Your Priorities in Iceland greatly resounded in the international sphere, meaning that other actors became increasingly intrigued with implementing the platform themselves. In brief, the political impact was achieved by both local and international acclaim. According to Bjarnason et al., Your Priorities is used "to crowdsource questions to the government from two majority parliamentarians in France and for projects in Scotland, Norway, Hungary, Slovenia, Croatia and in the Estonian Rahvakogu (People's Assembly) resulting in law and policy changes".[345]

*Discussion.* The case study on Better Reykjavik leads us towards two lessons. First, the political support of the ruling party is once again noted as one of the key factors for the successful use of digital tools for political participation. Second, complexity or simplicity of the platform are not key variables for the success of the digital participation platforms. In comparison to *Decide Madrid*, *Decidim Barcelona* and *Leuven co-create it*, Better Reykjavik is a simplified digital participation process. Nevertheless, its success and effectiveness place it on the same rank as previously mentioned case studies. This bares the question if such a simplified process (i.e., a process that lacks a significant number of features) is only applicable to a small-scale city (or small-scale group, organization, project, etc.), which is debatably Reykjavik. There is no answer. Qualitative analysis can show equal success and effectiveness of a platform implemented in a city of several thousands and a multi-million city. This is to suggest that Your Priorities *may* be considered a project that can be fully realized only in smaller environments and on specific issues. However, the success of this platform, its high participation rate in used examples, leads us to consider it being one of the

---

[343] Robert Bjarnason, Gunnar Grimsson, Gina Joerger, "Better Reykjavik: Municipal Open Innovation", op. cit., p. 10.

[344] Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 42.

[345] Robert Bjarnason, Gunnar Grimsson, Gina Joerger, "Better Reykjavik: Municipal Open Innovation", op. cit., p. 12.

driving forces of developing digital tools for encouraging political participation *despite* its lack of features and the size of the city.

## 2.3. Political party level

On the political party level of applicability, we describe the use of digital tools for political participation through three case studies: (1) *Pirate Party's LiquidFeedback*; (2) *Rousseau*; (3) *Participa*. The qualitative analysis on each case study is elaborated through six sections. In the first section titled 'brief' we provide the reader with contextual information on the political party foundation, aims, principles and circumstances leading up to the implementation of the corresponding digital participation platform. Following the *brief,* we apply four criteria for describing the use of digital tools for political participation: *form*, *functionality*, *scope*, and *impact*. The qualitative analysis on each case study ends with *discussion* in which we summarize learned lesions and debatable topics.

### 2.3.1. International Pirate Party: *LiquidFeedback*

*Brief.* Pirate Parties International is a non-profit international non-governmental organization formed in 2010 to serve as a worldwide organization for Pirate Parties, currently representing members from 43 countries.[346] According to Bart Cammaerts "the Pirate Parties articulate attacks on digital rights and freedoms as one of the symptoms of the lack of accountable democratic institutions and proper democratic control in the interest of citizens".[347] Dmytro Khutkyy summarizes that "the values shared by PPs [Pirate Parties] can be grouped into three broad categories: civil rights (human rights, diversity, equality, information privacy, freedom of information, culture, speech and self-expression), democratic participation (openness and accessibility, directed and liquid democracy), and government responsibility (transparency, accountability, consideration of people's voices, social justice)".[348] Blum and Zuber add that "they are also suggesting a model of collective

---

[346] About PPI, Pirate Party International, Available from: https://pp-international.net/about-ppi/ (accessed 26 April 2022)

[347] Bart Cammaerts, "Pirates on the liquid shores of liberal democracy: Movement frames of European pirate parties", in *Javnost-The Public*, Vol. 22, No. 1, 2015, p. 3.

[348] Dmytro Khutkyy, "Pirate parties: The social movement of electronic democracy", in *Journal of comparative politics*, 2019, p. 57.

decision-making that seeks to remedy democratic systems from within, namely liquid democracy, a model they are already applying for intra-party decision-making".[349] Deseriis categorizes Pirate Parties as "technopopulist" suggesting a "technocratic and leaderless variant, which pursues and enacts meritocratic forms of democratic participation".[350] Khutkyy points out that "in terms of internal organization, models or initial institutional designs of PPs [Pirate Parties] were based on the principles of accessibility, participation, self-governance, democracy, direct democracy (especially in agenda-setting, decision-making, and election), and online electronic democracy".[351]

*Form.* The first digital participation platform we mention on the political party level is LiquidFeedback, used by most of the Pirate Parties, with variable success and effect. Following NESTA's typology we can deduce that LiquidFeedback enables five digital participation forms: (1) Issue framing; (2) Citizens providing information; (3) Citizens providing ideas; (4) Deliberation; (5) Citizens making decision.

*Functionality.* Desseriis points out that "LiquidFeedback has been closely associated with Liquid Democracy, an emerging decision-making protocol"[352] and adds that "rather than assuming that all members of an organization or a political party are equally knowledgeable on every issue, LiquidFeedback lets participants decide whom to delegate on specific initiatives"[353] meaning that "those who hold proxy votes can in turn transfer them to other delegates, facilitating the emergence of networks of trust".[354] The most noteworthy digital innovation offered by LiquidFeedback is precisely its *voting system.* Blum and Zuber continue that "all members of a political community that satisfy a set of reasonable participatory criteria (adulthood, baseline rationality) are entitled to: (1) directly vote on all policy issues (direct democratic component); (2) delegate their votes to a representative to vote on their behalf (flexible delegation component); (3) delegate those votes they have received via delegation to another representative (meta-delegation component); and (4)

---

[349] Christian Blum, Christina Isabel Zuber, "Liquid Democracy: Potentials, Problems, and Perspectives", in *The Journal of Political Philosophy*, vol. 24, 2016, p. 162.

[350] Marco Deseriis, "Technopopulism: The Emergence of a Discursive Formation", in *TripleC*, vol. 15, no. 2, 2017, p. 441.

[351] Dmytro Khutkyy, "Pirate parties: The social movement of electronic democracy", op. cit., p. 58.

[352] Marco Deseriis, "Technopopulism: The Emergence of a Discursive Formation", op. cit., p. 450.

[353] Ibid.

[354] Ibid.

terminate the delegation of their votes at any time (instant recall component).[355] Deseriis adds that LiquidFeedback also "allows participants to propose amendments to existing political initiatives"[356] i.e. "if the author of an initiative refuses to amend it, other participants can […] create an amended proposal that will compete with the original one in the voting phase".[357] When the voting phase begins, the members are entitled to vote for or against a particular proposal and if there are competing proposals, they can rank their votes based on preference.[358]

*Scope.* The use of LiquidFeedback in Pirate Parties, or in general political parties, is intended for the members of such political parties. According to Bahrens et al., "organizations (e.g., political parties) usually have a member database"[359] that is used for the "accreditation process [which] has to ensure that only entitled persons get access to the system with exactly one account".[360]

*Political impact.* What is the value added? In Germany the idea of liquid democracy and consequently the use of LiquidFeedback gained traction when "besides the Pirate Party […], also the party "The Left" (*Die Linke*) and the Social Democratic Party of Germany (*Sozialdemokratische Partei Deutschland*, SPD)"[361] tested the software. In the German Pirate Party, the use of LiquidFeedback sparked a controversy which highlighted a flaw in the voting system – *recorded votes* that show how each member voted. The political impact here is a qualitative category that encouraged further discussion on the idea of liquid democracy in Germany. LiquidFeedback has been universally adopted by the German Pirate Party as a

---

[355] Christian Blum, Christina Isabel Zuber, "Liquid Democracy: Potentials, Problems, and Perspectives", op. cit., p. 165.

[356] Marco Deseriis, "Technopopulism: The Emergence of a Discursive Formation", op. cit., p. 450.

[357] Ibid.

[358] See: Markus Schulze, "A new monotonic, close-independent, reversal symmetric, and condorcet-consistent single-winner election method", in *Social choice and welfare*, Vol. 36, No. 2, 2011, pp. 267-303.)

[359] Jan Behrens, Axel Kistner, Andreas Nitsche, Bjorn Swierczek, *The Principles of LiquidFeedback*, Interaktive Demokratie e. V., 2014, p. 120.

[360] Ibid., p. 121.

[361] Björn Swierczek, "Five Years of Liquid Democracy in Germany", in *The Liquid Democracy Journal*, Vol. 1, No. 1, 2014, p. 16.

digital tool for political participation; however, the decision made using LiquidFeedback are only a reference system rather than binding policy decision.[362]

*Discussion*. The case study on LiquidFeedback leads us to two conclusions. First, using LiquidFeedback only as a reference system shows a lack of willingness to transfer power and causes a lackluster symbiotic relationship between the authoritative body and members of the political party. Members are involved in the decision-making process on a very superficial level which compromises their willingness to use the digital participation platform. Second, the voting system (Shultz model) proved to be a necessary digital innovation that could be used to encourage political participation; however, the flaws in the process prevented it from achieving its potential. Furthermore, the implemented voting system at its base still focuses on showing the majority instead of a consensus (the use of Polis in vTaiwan process). We can point out that the main advantage of the case study on LiquidFeedback and Pirate Parties lies in its ability to foster a debate on the idea of Liquid democracy.

### 2.3.2. Podemos: *Participa*

*Brief*. According to Carlos Rico Motos "the emergence of Podemos (*We Can*) in Spanish politics is closely connected to the protests of the *Indignados Movement* on May 15, 2011, the moment in which the effects of the economic crisis that started in 2008 were strongly felt in the country".[363] Santiago Pérez-Nievas et al., explain that "Podemos was founded in January 2014 by a group of Madrid-based intellectuals and university lecturers with the aim of competing for the upcoming European elections".[364] According to Karen Sanders et al., "the emergence of Podemos as well as other political groups together with the popular disillusionment with, and distrust of, mainstream politicians and political parties have placed the phenomenon of political populism firmly on the Spanish political and public

---

[362] See: Jose Ramos, "Liquid Democracy: The App That Turns Everyone into a Politician", *Shareable*, 20 January, 2014, Available from: https://www.shareable.net/liquid-democracy-the-app-that-turns-everyone-into-a-politician/ (accessed 27 April 2022)

[363] Carlos Rico Motos, "'Let the Citizens Fix This Mess!' Podemos' Claim for Participatory Democracy in Spain", in *Political and Governance*, Vol. 7, No. 2, 2019, p. 191.

[364] Santiago Pérez-Nievas, José Rama-Caamaño, Carlos Fernández-Esquer, "New wine in old bottles? The selection of electoral candidates in general elections in Podemos", in Guillermo Cordero & Xavier Coller (Eds.), *Democratizing Candidate Selection*, Palgrave Macmillan, Cham, 2018, p. 128.

agenda".[365] Deseriis goes a step further and categorizes Podemos as technopopulist suggesting a "leaderist, more strictly populist, variant wherein charismatic leaders play a critical role in conferring unity and identity to their parties".[366] Sanders, et al., note that "in the May 2014 European Parliament elections, Podemos (We Can), a party registered in March 2014, won five seats and 1.2 million votes".[367] Motos continues that "after the European elections in May 2014, Podemos appeared as the political force that wanted to institutionally channel the cultural change symbolized by the *indignados* (outraged)".[368] Furthermore, Rosa Borge Bravo and Eduardo Santamarina Sáez note that "in the local elections held on 24 May 2015, the citizen left-wing coalition that included *Podemos* won control of the municipal governments in Madrid, Barcelona, A Coruña, Cádiz and Zaragoza"[369] and "in the Spanish general election held on 20 December 2015, *Podemos* obtained more than five million votes and nearly 21% share of the votes".[370] Bravo and Sáez conclude that "as a result, *Podemos* became the third largest political force in Spain".[371] Motos explains that "the intensive use of digital technologies sets Podemos substantially apart from all other Spanish parties, by ensuring that its supporters can participate in the party's organic life at a low cost in terms of time and effort".[372]

*Form*. The second digital participation platform we mention on the political party level are *Participa and Plaza Podemos*. These two platforms are mostly used in the same process of decision-making in intra-party politics of Podemos, hence we view them as connected. According to NESTA, Podemos' digital participation platforms allow four digital

---

[365] Karen B. Sanders, Rosa Berganza, Roberto de Miguel, "Spain. Populism From the Far Right to the Emergence of Podemos", in Toril Aalberg, Frank Esser, Carsten Reinemann, Jesper Stromback & Claes De Vreese (Eds.), *Populist Political communication in Europe*, Routledge, 2018, p. 255.

[366] Marco Deseriis, "Technopopulism: The Emergence of a Discursive Formation", op. cit., p. 441.

[367] Karen B. Sanders, Rosa Berganza, Roberto de Miguel, "Spain. Populism From the Far Right to the Emergence of Podemos", op. cit., p. 249.

[368] Carlos Rico Motos, "'Let the Citizens Fix This Mess!' Podemos' Claim for Participatory Democracy in Spain", op.cit., p. 191.

[369] Rosa Borge Bravo, Eduardo Santamarina Sáez, "From protest to political parties: Online deliberation in new parties in Spain", in *Media Studies*, Vol. 7, No. 14, 2016, p. 109.

[370] Ibid.

[371] Ibid.

[372] Carlos Rico Motos, "'Let the Citizens Fix This Mess!' Podemos' Claim for Participatory Democracy in Spain", op.cit., p. 191.

participation forms: (1) Issue framing; (2) Citizens providing information; (3) Citizens developing proposals; and (4) Citizens making decisions.[373]

*Functionality*. According to Deseriis and Vittori "until 2015, the citizen initiatives were submitted via Plaza Podemos, a website based on the social news site Reddit that allowed participants, including nonmembers, to "upvote" or "downvote" proposals"[374] however "beginning in October 2015, Podemos simplified this procedure by launching Plaza Podemos 2.0, which retains the same features of the previous version, but is housed under Participa and is thus accessible only to members".[375] Deseriis and Vittori continue by explaining that "the most voted-on proposals [would be] moved to Participa, where they still needed to collect 10% of registered members' support to be transformed into binding referendums".[376]

*Scope*. Podemos' members are entitled to use the digital tools at their disposal to be involved in intra-party politics. Santiago Pérez-Nievas et al., explain that "with regard to membership, those who want to enroll in Podemos need to be over 16 and they simply have to subscribe on the party's website […] by doing so, they become party members with full rights to vote on different matters such as the choice on alternative party manifestos organizational proposals or party primaries".[377] Bravo and Saez point out that in November 2014, "Plaza Podemos received 280,000 unique visitors and more than 2.4 million page views".[378] Pérez-Nievas et al., continue by noting that "Podemos members do not need to pay periodic fees, nor do they have to attend any meetings; yet, they can participate in all the above-mentioned processes by simply casting a vote in a telematic way".[379] We notice that the party membership is rather different than party membership in 'traditional' political

---

[373] Adapted from: Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 61.

[374] Marco Deseriis, Davide Vittori, "The Impact of Online Participation Platforms on the Internal Democracy of Two Southern European Parties: Podemos and the Five Star Movement", in *International Journal of Communication*, Vol. 13, 2019, p. 5702.

[375] Ibid.

[376] Ibid.

[377] Santiago Pérez-Nievas, José Rama-Caamaño, Carlos Fernández-Esquer, "New wine in old bottles? The selection of electoral candidates in general elections in Podemos", op. cit., p. 131.

[378] Rosa Borge Bravo, Eduardo Santamarina Sáez, "From protest to political parties: Online deliberation in new parties in Spain", op.cit., p. 109.

[379] Santiago Pérez-Nievas, José Rama-Caamaño, Carlos Fernández-Esquer, "New wine in old bottles? The selection of electoral candidates in general elections in Podemos", op. cit., p. 131.

parties, noting that this aspect adapted to the new mode of function – digital. Santiago Pérez-Nievas et al., conclude that "online participation is one of the essences of Podemos, and this reflects in its conceptualization of party membership".[380]

*Impact.* Political impact of Podemos is described with respect to two key types of elections Podemos participated in since its creation: (1) Elections for Spanish Congress of Deputies in 2015, 2016 and 2019; (2) European parliament elections in Spain in 2014. In Elections for Spanish Congress of Deputies in 2015, Podemos won 12.67% of the votes, in 2016 Podemos won 13.37% of the votes, in April 2019 Podemos (United We Can) won 11.39% and in November 2019 Podemos (United We Can) won 9.80% of the votes.[381]  In European elections in Spain in 2014 Podemos won 5 seats as part of the Confederal group of the European United Left.[382]

*Discussion.* Santiago Pérez-Nievas et al., explain that "this early success in European Elections is important to understand the early development of Podemos since it gave the new party national relevance and visibility in one stroke".  The success and/or downfall of Podemos elections results cannot be the only viable criteria for qualitatively analyzing the use of digital tools for political participation which is why we only mention it briefly to demonstrate that digital intra-politics and using digital tools for decision-making in political parties can achieve significant results. Santiago Pérez-Nievas et al., conclude their research stating that "despite Podemos's discourse on democratic regeneration and direct democracy, the procedure followed during the primaries as well as its final result reflected a decision-making power that, in practice, remained restricted to a limited oligarchy within the national leadership of the party".[383]

---

[380] Ibid., p. 132.

[381] See: Election for Spanish Congress of Deputies 2015, *ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/2725/ (accessed 29 April 2022);  Election for Spanish Congress of Deputies 2016, *ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/2917/ (accessed 29 April 2022); Election for Spanish Congress of Deputies 2019, *ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/3217/ (accessed 29 April 2022); Election for Spanish Congress of Deputies 2019, *ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/3359/ (accessed 29 April 2022).

[382]         https://www.europarl.europa.eu/election-results-2019/en/national-results/spain/2014-2019/outgoing-parliament/

[383] Ibid., p. 143.

### 2.3.3. Five Star Movement: *Rousseau*

*Brief*. Caroline Stockman and Vincenzo Scalia introduce the Five Star Movement as an anti-establishment, populist political party, formed in 2009 in Italy.[384] Two key personalities played a vital role in the creation of the Five Star Movement (5SM): Beppe Grillo, Italian comedian that led the 5SM until 2018 and Gianroberto Casaleggio, entrepreneur whose technical background led to the creation of Rousseau, 5SM's digital participation platform. Gianroberto Casaleggio passed away in 2016 and his son Davide inherited his work. According to Gerbaudo "the Five Star Movement platform named Rousseau was officially launched in 2016, on the back of previous platforms known under other names, such as 'Sistema Operativo 5 Stelle' (5 Star Operating System) which were established since 2012".[385] Stockman and Scalia explain that Rousseau is "a purposefully built, politically laden, curated platform, which is designed on proprietary software and controlled by one company who is closely allied with its client: a political party [Five Star Movement], who actively uses it for its own promotion and continuation".[386]

*Form*. The final digital participation platform we mention on the political party level is Five Star Movement's *Rousseau*. According to NESTA, Rousseau allows four digital participation forms: (1) Issue framing; (2) Citizens developing proposals; (3) Citizens scrutinizing proposals; and (4) Citizens making decisions.[387] Desiiris suggests that Rousseau enabled "*direct parliamentarianism*, that is, a hybrid institutional arrangement wherein the direct participation of citizens to policy making does not reduce the autonomy of elected representatives, but *on the contrary reinforces it and legitimizes it*".[388] Geraudo points out that the Five Star Movement using the digital participation platform Rousseau "presented

---

[384] Caroline Stockman, Vincenzo Scalia, "Democracy on the Five Star Movement's Rousseau platform", in *European Politics and Society*, Vol. 21, No. 5, 2020, p. 603.

[385] Paolo Gerbaudo, "Are digital parties more democratic than traditional parties? Evaluating Podemos and Movimento 5 Stelle's online decision-making platforms", in *Party Politics*, vol. 27, no. 4, 2021, p. 734.

[386] Caroline Stockman, Vincenzo Scalia, "Democracy on the Five Star Movement's Rousseau platform", op. cit., p. 607.

[387] Adapted from: Julie Simon, Theo Bass, Victoria Boelman, Geoff Mulgan, *Digital Democracy: The tools transforming political engagement*, op. cit., p. 63.

[388] Marco Deseriis, "Direct Parliamentarianism: An analysis of the political values embedded in Rousseau, the "operating system" of the Fiver Star Movement", in *JeDEM-eJournal of Democracy and Open Government*, Vol. 9, No. 2, 2017, p. 48.

itself as a 'party of the web' and has made digital democracy a key element of its identity"[389] adding that "it has held online primaries called *parlamentarie* (to select candidate for parliamentary elections), *comunarie* and *regionarie* (for local elections) alongside internal referendums and discussion on policy".[390]

  *Functionality*. Gerbaudo points out that the "Rousseau platform enlists various areas enabling members to discuss legislation: Lex Parlamento, Lex Regione, Lex Europa and Lex Iscritti".[391] Gerbaudo continues to explain that "the first three features can only be initiated by 'elected spokesperson', namely Italian and European MPs and local councilors of the movement"[392] giving members 60 days to "provide comments and suggest objections, integrations and modification, which may then be integrated in the final text".[393] The fourth feature Lex Iscritti (Lex Members) can be initiated by the members. According to Desiriis and Vittori, even though using the Lex Members feature "the members themselves vote for their favorite proposals through special voting sessions, the parliamentary group also applies a screening procedure to ensure consistency with the party line"[394] which results in the fact that "a negligible number of 5SM-sponsored bills are directly based on member proposals".[395] Desitiis and Vittori continue explaining that "members can upload a proposal bill of law and read and vote on other members' proposals, but they cannot collectively debate or amend the proposals".[396] Other than these four features Desiiris points out that Rousseau also "allows its users to select candidates via online primaries, vote the party program, provide feedback to elected representatives on draft legislation, publicize local events, and submit their own legislative proposals to Members of Parliament"[397] adding that "the platform allows 5SM city councilors and regional councilors to take online courses on

---

[389] Paolo Gerbaudo, "Are digital parties more democratic than traditional parties? Evaluating Podemos and Movimento 5 Stelle's online decision-making platforms", op. cit., p. 732.

[390] Ibid.

[391] Ibid., p. 735.

[392] Ibid.

[393] Ibid.

[394] Marco Deseriis, Davide Vittori, "The Impact of Online Participation Platforms on the Internal Democracy of Two Southern European Parties: Podemos and the Five Star Movement", op. cit., p. 5699.

[395] Marco Deseriis, Davide Vittori, "The Impact of Online Participation Platforms on the Internal Democracy of Two Southern European Parties: Podemos and the Five Star Movement", op. cit., p. 5699.

[396] Ibid., p. 5702.

[397] Marco Deseriis, "Direct Parliamentarianism: An analysis of the political values embedded in Rousseau, the "operating system" of the Fiver Star Movement", op. cit., p. 48.

the regulatory framework of local authorities and exchange administrative acts with other councilors across the nation".[398] According to Filippo Tronconi "in special sections it was possible to comment on the bills proposed to representative assemblies and to present for the attention of the elected members issues to be brought to parliament".[399] Tronconi continues that "in the intentions of its creators, this allowed a direct and continuous interaction between the militants and their 'spokespersons' in the decision-making arenas".[400] Tronconi explains that the Five Star Movement combines two elements: "on the one hand the vertical control of the organization by Grillo and Casaleggio and the repression of internal dissidence; on the other, the attempt, however symbolic and with however little success, activists being given a decision-making role through the Rousseau online platform".[401] According to Desiriis and Vittori, "while the platform places great emphasis on lawmaking, this is, by and large, designed as a crowdsourcing process rather than a collaboration between members and representatives".[402]

*Scope*. The lack of deliberation and unbinding character of decisions made using Rousseau leads to a steady decline in popularity. Desiriis and Vittori note that "participation via Rousseau did not show any increase in absolute terms from December 2012 to December 2017, while membership figures more than quadrupled during the same period as membership rose from 31,000 to 135,000".[403] They conclude that "while the 5SM's capacity to attract new members and new voters increased dramatically over the years, the capacity of the Rousseau platform to enable participation decreased in the very same period".[404] Furthermore, Gerbaudo points out that "the decline in members' numbers followed a hacker attack in 2017 that resulted in the leakage of members' personal details".[405]

---

[398] Ibid.

[399] Filippo Tronconi, "The Italian Five Star Movement during the Crisis: Towards Normalisation?", in *South European Society and Politics*, Vol. 23, No. 1, p. 175.

[400] Ibid.

[401] Ibid., pp. 175-176.

[402] Marco Deseriis, Davide Vittori, "The Impact of Online Participation Platforms on the Internal Democracy of Two Southern European Parties: Podemos and the Five Star Movement", op. cit., p. 5702.

[403] Marco Deseriis, Davide Vittori, "The Impact of Online Participation Platforms on the Internal Democracy of Two Southern European Parties: Podemos and the Five Star Movement", op. cit., p. 5707.

[404] Ibid.

[405] Paolo Gerbaudo, "Are digital parties more democratic than traditional parties? Evaluating Podemos and Movimento 5 Stelle's online decision-making platforms", op. cit., p. 734.

*Impact.* According to Desiiris and Vittori "Rousseau has a higher political weight within the party organization – as demonstrated by the higher number of functionalities and the higher frequency of consultations",[406] but "Rousseau does not allow members to communicate with one another"[407] which means that "these "citizen initiatives" […] are undermined on a normative level"[408] that "greatly reduce their number and political impact".[409] Tronconi concludes more decisively that "the result was that the activists' contribution to the parliamentary activity through the online platform was close to zero".[410]

*Discussion.* We can point out several controversies surrounding the Five Star Movement and digital participation platform Rousseau ranging from repeated hacker attacks, date privacy issues, robust interface issues all the way to the most noteworthy controversy – ownership. In a guest article for the Financial Times, Ben Munster commented that "while Rousseau platform ostensibly allowed for direct democratic participation, it became clear the software itself was in the hands of a private company controlled by a single man [Davide Casaleggio]".[411] Munster continues that Casaleggio " was demanding €450,000 in back payments from current and former MPs for maintenance of Rousseau, the lack of payment of which had [supposedly] made the software unusable".[412] This would later set in motion a turn of events that would cause the Five Star Movement to discontinue the Rousseau platform. It is debatable if we could deem the Rousseau platform a failed digital participation experiment. On one hand, the rise of the Five Star Movement in Italy can, at least in some part, be attributed to the use of digital tools for political participation. On the other hand, the controversies around Rousseau are one of the signs of the dwindling popularity of the Five Star Movement in Italy while the causes remain outside of the limits set by our research. We can, however, based on information provided, strongly argue that what started as a (symbolic) political party digital participation experiment ended as a vendor-based product of a private company.

---

[406] Marco Deseriis, Davide Vittori, "The Impact of Online Participation Platforms on the Internal Democracy of Two Southern European Parties: Podemos and the Five Star Movement", op. cit., p. 5711.

[407] Ibid.

[408] Ibid.

[409] Ibid.

[410] Filippo Tronconi, "The Italian Five Star Movement during the Crisis: Towards Normalisation?", in *South European Society and Politics*, Vol. 23, No. 1, p. 175.

[411] Ben Muster, "Italy's ill-fated dalliance with techno-democracy", The Financial Times, 15 October 2021, Available from: https://www.ft.com/content/e6d9d1b1-ff87-4f2c-94c3-50f4f7357071 (accessed 30 April 2022)

[412] Ibid.

# Conclusion

The aim of our research was to qualitatively analyze the use of digital tools for political participation in digital democracy. In the final part of our research, we examine our primary and three alternate hypotheses.

In the first part of our research, we set the theoretical *base* upon which we answered the questions of *where*, *how*, *who*, and *when* of the use of digital tools for political participation. Our primary hypothesis and research question stated:

*Digital tools are transforming political participation in democracy. Can democracy adapt to the rising development in digital technology by conducting digital forms of political participation?*

In our research, digital democracy is referred to as a *concept* achieved by an *act* of using digital tools during the policymaking process on three levels of applicability: parliamentary, local government, and political party. We identified a typology that differentiates between *digital participation forms*, *digital tools*, and *digital participation platforms*. Digital participation forms are broad categories of democratic processes put online (e.g., digital voting). Digital tools enable digital participation forms to take place and include a vast variety of elements (e.g., PowerPoint presentation can be used as a digital participation tool). Digital participation platforms are digital tools that enable digital participation forms. Political participation in a new mode of function – digital – is based on a symbiotic relationship between citizens and authoritative bodies. This entails that digital participation platforms must connect appropriate authoritative bodies with a significant number of citizens willing to actively partake in democratic processes online.

We identified four criteria for describing the use of digital participation platforms: form, functionality, scope, and impact. We deduce that the use of digital participation platforms on three levels of applicability can be described as successful and effective in an appropriate scope if they achieve political impact. The concept of digital democracy followed by the rapid development and spread of digital tools used for political participation from 2001 to 2020 confirms that a digital transformation of traditional understandings of political participation is taking place. The confirmation of our primary hypothesis suggests that *digital participation forms* have already transformed traditional understandings of political

participation by introducing a new mode of function – digital. The trend of using digital tools for political participation suggests that democracy can adapt to the rising development of 21$^{st}$ century digital technology.

The second part of our research, mainly dedicated to our three alternate hypotheses, introduces 10 case studies qualitatively analyzed on three levels of applicability. Our first alternate hypothesis stated:

*Democratic political system does not affect the successful use of digital tools for encouraging citizens' political participation in digital democracy.*

To examine our first alternate hypothesis, we identify additional reasons for choosing the specific case studies qualitatively analyzed in our research. This would allow us to highlight the diversification of our 10 case studies.

On the parliamentary level of applicability, we qualitatively analyzed three case studies: (1) Brazil: *eDemocracia*; (2) Estonia: *Rahvaagatus*; (3) Taiwan: *vTaiwan*. There are four reasons for choosing these three case studies: *Political system*: Brazil, Estonia, and Taiwan have three different democratic political systems (presidential, parliamentary, and semi-presidential); *Geographical distance*: Brazil, Estonia, and Taiwan are geographically located on three different continents (Latin America, Europe, and Asia); *Software*: Brazil uses the uniquely developed *eDemocracia* open-source software, Estonia uses the *Citizen OS* open-source software, and Taiwan uses primarily the *Polis* software; and *Process*: Brazil, Estonia and Taiwan created different processes and digital participation forms to encourage citizens' political participation.

On the local government level of applicability, we qualitatively analyzed four case studies: (1) *Decide Madrid*; (2) *Decidim Barcelona*; (3) *Leuven co-create it*; and (4) *Better Reykjavik*. There are four reasons for choosing these case studies: *Population*: Madrid and Barcelona have significantly larger population than Leuven and Reykjavik; *Strategic importance*: Only Madrid and Reykjavik are capital cities; *Software*: Madrid uses the uniquely developed *Consul* open-source software, Barcelona uses the *Decidim* open-source software, Leuven uses *CitizenLab* open-source software, and Reykjavik uses *Your Priorities* open-source software; and *Process*: Madrid, Barcelona, Leuven, and Reykjavik created different processes and digital participation forms. Furthermore, Spain and Belgium are democratic constitutional monarchies while Iceland is a parliamentary republic. This suggests

that on the local government level the use of digital tools for political participation can be successful regardless of the political system.

On the political party level of applicability, we qualitatively analyzed three case studies: (1) *Pirate Party's LiquidFeedback*; (2) Podemos: *Participa*; (3) The Five Star Movement: *Rousseau*. Drawing a conclusion on the populistic tendencies of mentioned political parties goes beyond the theoretical limits of our research. On the other hand, we can argue that the use of digital tools for political participation on the political party level of applicability can produce significant results (as seen in the case studies of Podemos and the Five Star Movement) and foster a widespread debate on the implication of participatory democracy (as seen in the case of the International Pirate Party).

Using case studies from different democratic political systems and identifying them as successful examples of the use of digital tools for encouraging citizens' political participation we can confirm out first alternate hypothesis. Furthermore, in describing the use of digital tools for political participation certain regularities can be identified. This allows for further diversification of future research as it clearly sets apart different elements and criteria for qualitative analysis. In our research we identified three other factors that, along with the democratic political system, do not affect the successful use of digital tools for encouraging citizens' political participation in digital democracy:

(1) *Geographical location* of the country/city/political party does not affect the use of digital tools for political participation. In our research we focused on case studies from three different continents: Europe, Asia, and Latin America. In the case of Madrid and Barcelona we can argue that *Decidim* was created as a response to *Consul* which suggests the *geopolitical proximity* can be considered one of the factors for *spreading* the use of digital tools for political participation. However, if we focus only on the first example of a given digital participation platform in any county/city/political party we can strongly argue, based on the arguments provided in out research, that geographical location does not affect the use of digital tools for political participation. This would explain how completely different digital participation platforms can be created and used on the opposite sides of the world with the same, or similar, levels of success.

(2) *Population* does not affect the successful use of digital tools for encouraging citizens' political participation in digital democracy. On the parliamentary level, we qualitatively analyzed three countries with numbers in population ranging from 1.3 million in Estonia and 23 million in Taiwan to 212 million in Brazil. On the local

government level, we qualitatively analyzed cities with numbers in population ranging from 102 thousand in Leuven to 3.3 million in Madrid. On the political party level, the population numbers do not affect the ability of the political party to draw in more members. This would suggest that digital participation platforms can be successful in encouraging citizens' political participation regardless of the population. This would explain how digital participation platforms can be successful in the smallest cities and biggest countries in the world.

(3) *Software* does not affect the successful use of digital tools for encouraging political participation in digital democracy. Amongst the three cases studies on the parliamentary level of applicability *vTaiwan* achieved arguably the largest international acclaim*, e-Democracia* falls slightly short because of the complexity of the platform, and *Citizen OS* would be paradoxically underwhelming example of the use of digital tools for political participation. We could argue that the lackluster results can be blamed on the used software, stating that the differences in the case study simply fall in the category of using different software, hence achieving different results. Instead, we would argue that lackluster results do not depend on the software itself rather than the body responsible for choosing the software. If the responsible body makes a software choice by not focusing primarily on the willingness to transfer power, creation of a symbiotic relationship between the authoritative body and citizens, and encouraging political participation, we cannot condemn the software for lackluster results. This would suggest that digital participation platforms can be successful in encouraging citizens' political participation regardless of the chosen software. This would explain how different results can be achieved with the same software.

The additional arguments reached in our research allow us to expand our initial statement and argue that democratic political system, geographical location, population, and software, do not affect the successful use of digital tools for encouraging citizens' political participation in digital democracy.

In our research, opposing the notion of what does not affect the use of digital tools for political participation we aimed to identify at least the most noteworthy elements that play a key role in the successful engagement of citizens in digital democracy. Our second alternate hypothesis stated:

*Symbiotic relationship between the authoritative body and the citizens affects the successful use of digital tools for encouraging citizens' political participation in digital democracy.*

The existence of successful examples of digital participation platforms used for political participation, 10 of which we qualitatively analyzed in our research, suggests that certain regularities in their implementation do exist. Symbiotic relationship between the authoritative body and the citizens presents itself as the leitmotiv of our research explained in the first part and demonstrated through case studies in the second part. The recurrence is not coincidental. The successful use of digital tools to encourage political participation is a consequence of the willingness to transfer power from the authoritative body to the citizens on different levels of applicability. The willingness of the authoritative body to transfer power is one of the reasons for the willingness of citizens to actively partake in democratic processes online. Given that all our case studies present themselves as creating and fostering, in different volumes, the symbiotic relationship we can confirm out second alternate hypothesis. Furthermore, in our research we identified three other factors that affect the successful use of digital tools for encouraging citizens' political participation:

(1) *Political support*: In all 10 of our case studies, we have identified that circumstances leading up the use of digital participation platforms. In the case of Brazil, we highlighted the institutionalization factor of *LabHacker*, in the case of Estonia high formalization, and in the case of Taiwan the creation of a new ministerial seat without portfolio for digital affairs. In the cases of Madrid, Barcelona, and Reykjavik we highlighted that the use of digital participation platforms was introduced because of electoral programs of winning political parties that came into power at that time. In the study case of Leuven, we highlighted that the use of digital participation platform was put forward by the local government. Finally, the three political parties qualitatively analyzed in our research show the support of the authoritative body to engage in inter-party politics using digital tools. This would suggest that political support can be considered one of the factors that enable and foster the creation of a symbiotic relationship. This would explain the apparent advantage of case studies that have this factor as opposed to others that were formed on the *ad hoc* basis.

(2) *Combination of offline and online decision-making*: Digital tools can allow for democratic processes to be conducted online which opens as new world of possibilities and risks; however, digital tools do not offer a replacement but allow for

an expansion for traditional offline decision-making. Our 10 case studies have shown the different ways in which combinations of offline and online decision-making can take place. This would suggest that the combination of offline and online decision-making affects the successful use of digital tools for encouraging citizens' political participation in digital democracy. In other words, neither of the 10 case studies creates a process that is completely virtual and takes place only in cyberspace.

(3) *Clearly defined aim of the digital participation platform*: The clearly formulated reason for introducing a digital participation platform calls upon citizens to actively partake in democratic processes put online with intent and benefit. This is especially prevalent in the case of Barcelona's Municipal Action Plan and Leuven's multi-annual plan 2020-2025. This suggests that the clearly defined aim of the digital participation platform increases the chances of successful encouragement of citizens' political participation.

Our 10 case studies show all four elements in differing volumes; however, their existence allows us to identify them as common factors for successfully using digital tools for encouraging citizens' political participation. The arguments provided allows us to expand our initial statement and argue that political support, symbiotic relationship, combination of offline and online decision-making, and a clearly defined aim of the digital participation platform affect the successful use of digital tools for encouraging citizens' political participation in digital democracy.

In our research we identified that the use of digital tools for political participation heavily relies on context-specific circumstances. As mentioned throughout our research, certain organizations and authors have made attempts to formulate a generalized roadmap for successful implementation of digital participation platforms. We decided to argue that exactly the volume of differences in the proposed roadmaps draws only one possible remark. Our third alternate hypothesis stated:

*Universal roadmap to successful encouragement of citizens' political participation in digital democracy using digital participation platforms does not yet exist.*

The common element to our 10 case studies is the diversity in their implementation. Each case study qualitatively analyzed in our research suggests different circumstances, aims, and process of implementing a particular digital participation platform. We could argue that

implementation is dependent on the choice of the software; however, same software can be used in different scenarios and achieve different results as it's noted in the cases of Your Priorities (used for *Better Reykjavik* in Iceland and *Rahvakogu* in Estonia). This suggests that the universal roadmap for successful encouragement of citizens' political participation in digital democracy using digital participation platforms does not yet exist. In other words, the roadmap is not universal and depends on context-specific circumstances. The arguments provided allow us to confirm our third alternate hypothesis.

In our research, we confirmed our primary and three alternate hypotheses. Future research on this topic would require qualitatively analyzing the use of digital tools for political participation during the COVID-19 global pandemic. Secondly, further research should focus on comparatively analyzing digital and traditional forms of political participation to examine the validity of criticisms, challenges, and innovation. Thirdly, further research should examine and define all possible levels of applicability. In our research we focused on three levels: parliamentary, local government, and political party; however, international organizations, civil society and non-governmental organizations can also, to a certain extent, be objects of this qualitative analysis. Finally, further research should compare the private vendor-based digital participation platforms to digital participation platforms that are more embedded in the governmental political system. This would open questions of exploitation of interests, manipulation of information, and the volume of citizens' trust.

Because of its enticing nature, the use of digital tools for political participation in academic literature is still relatively new and relevant. This leads a multitude of scholars to put forward their own typologies, definitions, understandings, and arguments. The variety of theories, typologies, and perceptions of the use of digital tools for political participation shown in our research suggests that expansive effects of digital tools have a positive connotation and under the context-specific circumstances it can be classified as *enhancing*. While this is debatably the beauty of social sciences, there is no definitive consensus on these questions which leads to a wide array of competing theories. On one end, the use of digital tools for political participation in digital democracy is only a supplement to traditional offline decision-making. On the other hand, the general roadmap, or at least a typology of common elements, for implementing digital tools to encourage citizens' political participation is missing – this is highly dependent on context-specific circumstances. Given the basic confirmations we established in our research, we can conclude that this wide array of competing theories still did not reach its peak; however, using digital tools for political

participation in digital democracy is a legitimate way of enhancing citizens' political participation.

# Bibliography

About PPI, *Pirate Party International*, Available from: https://pp-international.net/about-ppi/ (accessed 26 April 2022)

*About Us*, Citizen OS, Available from: https://citizenos.com/about-us/ (accessed 23 March 2022)

About, Citizen lab, https://www.citizenlab.co/about, (accessed 22 March 2022)

About, *Rahvaalgatus*, Available from: https://rahvaalgatus.ee/about (accessed 16 April 2022)

About, The Citizen Initiative Portal, Available from: https://rahvaalgatus.ee/about (accessed 23 March 2022)

Aragón, Pablo, Deville, Virgile, *Decidim and the Municipal Action Plan in Barcelona: co-producing and auditing public policy through a political network*, Slideshare presentation, 25 May 2019, Available from: https://www.slideshare.net/mysociety/decidim-and-the-municipal-action-plan-in-barcelona-coproducing-and-auditing-public-policy-through-a-political-network-pablo-aragn-universitat-pompeu-fabra-spain-virgile-deville-open-source-politics-code-for-france-democracy-earth (accessed 24 April 2022)

Barandiaran, Xabier E., Caleja-López, Antonio, *Decidim: political and technopolitical networks for participatory democracy, White paper*, Decidim, 2018.

Barandiaran, Xabier E., *comparison of decidim and consul*, Decidim, 14 January 2019, Available from: https://decidim.org/blog/2019-01-14-consul-comparison/ (accessed 25 April 2022)

Barnadiaran, Xabier E., Caleja-López, Antonion, Decidim: political and technopolitical networks for participatory democracy, White paper, Decidim, 2018.

Bazurli, Raffaele, Castaño Tierno, Pablo, "Barcelona, a Beacon By the Sea", in *Jacobin Magazine*, 2018, pp. 1-12.

Behrens, J., et al., *The Principles of LiquidFeedback*, Interaktive Demokratie e. V., 2014.

Belgium: Freedom in the World 2020, *Freedom House*, Available from: https://freedomhouse.org/country/belgium/freedom-world/2020 (accessed 26 April 2022)

Berg, Sebastian, Hofmann, Jeanette, "Digital democracy", in *Internet Policy Review*, vol. 10, no. 4, 2021, pp. 1-23.

Berntzen, Lasse, Karamagioli, Evika, "Regulatory Measures to Support eDemocracy", in *2010 Fourth International Conference on Digital Society*, IEEE, 2010, pp. 311-316.

Berrone, Pascual, Ricart, Joan Enric, *IESE Cities in Motion Index 2020*, IESE Business School, University of Navarra, 2020.

*Better Reykjavik*, Available from: https://betrireykjavik.is/domain/1 (accessed 26 April 2022)

Better Reykjavik, *Citizens Foundation*, Available from: https://www.citizens.is/portfolio_page/better_reykjavik/ (accessed 25 April 2022)

Bjarnason, Robert, Grimsson, Gunnar, and Joerger, Gina, "Better Reykjavik: Municipal Open Innovation", *Crowdlaw for Congress Series*, 2019, Available from: https://congress.crowd.law/case-better-reykjavik.html (accessed 25 April 2022)

Bjarnason, Robert, Lanthier-Welch, Joshua, "Citizens Foundation – Citizen Participation and Digital Tools V23", *Powerpoint presentation, Google Docs*, Available from: https://docs.google.com/presentation/d/1pA2gcyFV4yD8zGQRdhkAyLE5YIOtZCEcNUq gkN8ldwY/edit#slide=id.g31d49352c4_0_726 (accessed 23 March 2022)

Blum, C., Zuber, C.I., "Liquid Democracy: Potentials, Problems, and Perspectives", in *The Journal of Political Philosophy*, vol. 24, 2016, pp. 162-182.

Blum, Christian, Zuber, Christina Isabel, "Liquid Democracy: Potentials, Problems, and Perspectives", in *The Journal of Political Philosophy*, vol. 24, 2016, pp. 162-182.

Bravo, Rosa Borge, Balcells, Joan, Padró-Solanet, Albert, "A Model for the Analysis of Online Citizen Deliberation: Barcelona Case Study", in *International Journal of Communication*, Vol. 13, 2019, pp. 5671-5695.

Bravo, Rosa Borge, Sáez, Eduardo Santamarina, "From protest to political parties: Online deliberation in new parties in Spain", in *Media Studies*, Vol. 7, No. 14, 2016, pp. 104-122.

Brazil: E-Democracy, *Latinno – Innovations for Democracy in Latin America*, Available from: https://www.latinno.net/en/case/3157/ (accessed 15 April 2022)

Brazil: Freedom in the World 2020, *Freedom House*, Available from: https://freedomhouse.org/country/brazil/freedom-world/2020 (accessed 14 April 2020)

Bria, Francesca, *Building digital cities from the ground up based around data sovereignty and participatory democracy: The case of Barcelona*, Barcelona Centre for International Affairs, 2019, pp. 83-92.

Brief History, *Decidim*, Available at: https://docs.decidim.org/en/understand/about/#_brief_history (accessed 23 April 2022)

BTI Transformation Atlas, *Bertelsmann Stiftung's Transformation Index*, Available from: https://atlas.bti-project.org/ (Accessed 14 April 2020)

Bua, Adrian, Bussu, Sonia, "Between governance-driven democratization and democracy-driven governance: Explaining changes in participatory governance in the case of Barcelona", in *European Journal of Political Research*, Vol. 60, 2021, pp. 716-737.

Cammaerts, Bart, "Pirates on the liquid shores of liberal democracy: Movement frames of European pirate parties", in *Javnost-The Public*, Vol. 22, No. 1, 2015, pp. 19-36.

Chip Huyen, "Real-time machine learning: challenges and solutions", *Chip Huyen*, January 2nd 2022, Available from: https://huyenchip.com/2022/01/02/real-time-machine-learning-challenges-and-solutions.html (accessed 21 May 2022)

Cifras oficiales de población resultantes de la revisión del Padrón municipal a 1 de enero, *Instituto Nacional de Estadística*. Retrieved 23 April 2022, Available from: https://www.ine.es/jaxiT3/Datos.htm?t=2911

Cifras oficiales de población resultantes de la revisión del Padrón municipal a 1 de enero, *Instituto Nacional de Estadística*. Retrieved 23 April 2022, Available from: https://www.ine.es/jaxiT3/Datos.htm?t=2911

*Consul 1.0.0-beta*, Joinup, https://joinup.ec.europa.eu/collection/joinup/solution/joinup-archive/release/100-beta (accessed 21 March 2022)

*CONSUL Dossier*, Consul: Open Sofware for Citizen Participation, Available on: https://consulproject.org/en/ (accessed 21 March 2022)

*Consul Project*, Available from: https://consulproject.org/en/# (accessed 22 April 2022)

Dahlberg, Lincoln, "Re-constructing digital democracy: An outline of four 'positions'", in *New media & society*, vol. 13, no. 6, 2011, pp. 855-872.

De Blasio, E., Sorice, M., "Populism among technology, e-democracy and the depoliticisation process", *Revista Internacional de Sociologia*, vol. 76, no. 4, 2018, pp. 1-14.

de Faria, Cristiano Ferri Soares, *The open parliament in the age of the internet: Can the people now collaborate with legislatures in lawmaking?*, Brasília, Documentation and Information Center, 2013.

Decide Madrid, Available from: https://decide.madrid.es/ (accessed 22 April 2022)

Deseriis, Marco, "Direct Parliamentarianism: An analysis of the political values embedded in Rousseau, the "operating system" of the Five Star Movement", in *JeDEM-eJournal of Democracy and Open Government*, Vol. 9, No. 2, 2017, pp. 47-67.

Deseriis, Marco, "Reducing the Burden of Decision in Digital Democracy Applications: A Comparative Analysis of Six Decision-making Software", in *Science, Technology, & Human Values*, 2021, pp. 1-27.

Deseriis, Marco, "Technopopulism: The Emergence of a Discursive Formation", in *TripleC*, vol. 15, no. 2, 2017, pp. 441-458.

Deseriis, Marco, Vittori, Davide, "The Impact of Online Participation Platforms on the Internal Democracy of Two Southern European Parties: Podemos and the Five Star Movement", in *International Journal of Communication*, Vol. 13, 2019, pp. 5696-5714.

*Digital Participation Platforms*, People Powered Global Hub for Participatory Democracy, Available from: https://www.peoplepowered.org/platform-ratings (accessed 21 March 2022)

Doorenspleet, Renske, "Reassessing the Three Waves of Democratization", in *World Politics*, vol. 52, no. 3, 2000, pp. 384-406.

Election for Spanish Congress of Deputies 2015, *ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/2725/ (accessed 29 April 2022)

Election for Spanish Congress of Deputies 2016, *ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/2917/ (accessed 29 April 2022)

Election for Spanish Congress of Deputies 2019*, ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/3217/ (accessed 29 April 2022)

Election for Spanish Congress of Deputies 2019, *ElectionGuide: Democracy Assistance & Election News*, Available from: https://www.electionguide.org/elections/id/3359/ (accessed 29 April 2022)

Ennadif, Ghita, "The City of Barcelona's participatory democracy open source platform", *Joinup*, 1 July 2020, https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/participatory-democracy (accessed 22 March 2022)

e-Participation, *National Development council*, Available from: https://www.ndc.gov.tw/en/Content_List.aspx?n=C3C5AABC54ECEA0D (accessed 19 April 2022)

Estonia: Freedom in the World 2020, Freedom House, Available from: https://freedomhouse.org/country/estonia/freedom-world/2020 (accessed 15 April 2020)

European Capital of Innovation (iCapital) 2020, *European Commission*, Available from: https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/prizes/icapital/icapital-2020_en (accessed 27 April 2022)

European election results 2019: Spain, *European Parliament*, Available from: https://www.europarl.europa.eu/election-results-2019/en/national-results/spain/2014-2019/outgoing-parliament/ (accessed 29 April 2022)

Featured Case Studies, *The Computational Democracy Project*, Available from: https://compdemocracy.org/Case-studies/ (accessed 19 April 2022)

Ferrer, Josep-Ramon, "Barcelona's Smart City vision: an opportunity for transformation", in *Field Actions Science Reports*, Special Issue 16, 2017, pp. 70-75, Available from: https://journals.openedition.org/factsreports/4367?lang=fr

Fukuyama, Francis, "The End of History?", in *The National Interest*, no. 16, 1989, pp. 3-18.

Garrison Smith, Trevor, *Politicizing Digital Space: Theory, the Internet, and Renewing Democracy*, University of Westminster Press, 2017.

General description and introduction to how Decidim works, *Decidim*, Available from: https://docs.decidim.org/en/features/general-description/ (accessed 23 April 2022)

Gerbaudo, Paolo, "Are digital parties more democratic than traditional parties? Evaluating Podemos and Movimento 5 Stelle's online decision-making platforms", in *Party Politics*, vol. 27, no. 4, 2021, pp. 730-742.

*Global Findings – Trend toward authoritarian governance continues,* Bertelsmann Stiftung Transformation Index, Available from: https://bti-project.org/en/reports/global-report (Accessed 25 March 2022)

*Global Findings,* Bertelsmann Stiftung Transformation Index, Available from: https://bti-project.org/en/reports/global-dashboard?&cb=00000 (Accessed 25 March 2022)

*Guide to Digital Participation Platforms*, People Powered Global Hub for Participatory Democracy, Available from: https://www.peoplepowered.org/digital-guide/introduction (accessed 21 March 2022)

Household internet access in Iceland 2005-2020, *Statista*, Statista Research Department, 18 August 2021, Available from: https://www.statista.com/statistics/377769/household-internet-access-in-iceland/ (accessed 25 April 2022)

Household internet access in Spain 2007-2020, *Statista Research Department*, 18 October 2021, Available from: https://www.statista.com/statistics/377704/household-internet-access-in-spain/ (accessed 21 April 2022)

Howlett M., Ramesh M., Perl A., *Studying public policy: Policy cycles and policy subsystems* (Vol. 3), Oxford: Oxford University press. 2009.

Hsiao, Yu-Tang, Lin, Shu-Yang, Tang, Audrey, Narayanan, Darshana, Sarahe Claudina, "vTaiwan: An Empirical Study of Open Consultation Process in Taiwan", in *Proceedings of OOO, OOO, OOO*, 2018, pp. 1-5.

Huntington, Samuel P., "How Countries Democratize", in *Political Science Quarterly*, vol. 106, no. 4, 1991-1992, pp. 579-616.

Iceland: Freedom in the World 2020, *Freedom House*, Available from https://freedomhouse.org/country/iceland/freedom-world/2020 (accessed 25 April 2022)

Iceland's population grew by 2.0% last year, *Statistics Iceland*, 20 March 2020, Available from: https://statice.is/publications/news-archive/inhabitants/the-icelandic-population-1-january-2020-11643/ (accessed 25 April 2022)

Iglesias Alonso, Ángel H., Barbeito Iglesias, Roberto L., "Participatory Democracy in Local Government: An Online Platform in the City of Madrid", in *Hrvatska i komparativna javna uprava: časopis za teoriju i praksu javne uprave*, Vol. 20, No. 2, 2020, pp. 246-268.

Innovations: Brazil 2009-2020, *Latinno – Innovations for Democracy in Latin America*, Available from: https://www.latinno.net/en/innovations/?country=brazil (accessed 15 April 2022)

*Input Crowd, Output Meaning*, Polis, Available from: https://pol.is/home (accessed 22 March 2022)

*Interview #2 – Robert Bjarnason (Citizens Foundation)*, The Civic Tech Interviews, 15 September 2021, Available from: https://thecivictechinterviews.wordpress.com/2021/09/15/interview-2-robert-bjarnason-citizens-foundation/ (accessed 23 March 2022)

Isin, E., Ruppert, E., *Being Digital Citizens*, Rowman & Littlefield, 2020.

Isin, Engin, "Performative Citizenship", in Ayelet Shachar, Rainer Bauböck, Irene Bloemraad, and Maarten Vink, *The Oxford Handbook of Citizenship*, Oxford University Press, 2017, pp. 500-530.

*ITA Dossier*, Institute of Technology Assessment, no. 21en, 2018.

Khutkyy, Dmytro, "Pirate parties: The social movement of electronic democracy", in *Journal of comparative politics*, Vol. 12, No. 2, 2019, pp. 49-68.

Kitchin, Rob, "The real-time city? Big data and smart urbanism", in *GeoJournal*, vol. 79, no. 1, 2014, pp. 1-14.

Knauer, Marianne, "E-democracy: A new challenge for measuring democracy", in *International Poltical Science Review / Revue internationale de science politique*, vol. 37, no. 5, 2016, pp. 666-678.

Lackaff, Derek, "13 Case Study: Better Reykjavik – Open Municipal Policymaking", in *Civic media: Technology, design, practice*, MIT Press, Gordon – Civic Media, 2016, pp. 229-234.

Lackaff, Derek, "Escaping the middleman paradox: Better Reykjavik and open policy innovation", in *JeDEM-eJournal of Democracy and Open Government*, Vol. 7, No. 2, 2015, pp. 137-161.

Leuven, *City Population*, Available from: https://www.citypopulation.de/en/belgium/vlaamsbrabant/leuven/24062__leuven/ (accessed 26 April 2022)

Leuven, maak het mee!, *Stad Leuven maak het mee*, Available from: https://leuvenmaakhetmee.be/nl-BE/projects/betrokken-en-participatieve-stad (accessed 27 April 2022)

Lodewijckx, Ilona, Case Study: over 3,000 citizens contribute to Leuven's multi-annual plan, *CitizenLab*, 13 August 2019, Available from: https://www.citizenlab.co/blog/civic-engagement/case-study-3000-citizens-contribute-to-leuven-multi-annual-plan/ (accessed 27 April 2022)

Motos, Carlos Rico, "'Let the Citizens Fix This Mess!' Podemos' Claim for Participatory Democracy in Spain", in *Political and Governance*, Vol. 7, No. 2, 2019, pp. 187-197.

Müler, Paula Rodriguez, "Citizens' engagement in policy making: Insights from an e-participation platform in Leuven, Belgium", in Tiina Randma-Liiv and Veiko Lember (Eds.), *Engaging Citizens in Policy Making*, 2022, pp. 180-195.

Muster, Ben, "Italy's ill-fated dalliance with techno-democracy", *The Financial Times*, 15 October 2021, Available from: https://www.ft.com/content/e6d9d1b1-ff87-4f2c-94c3-50f4f7357071 (accessed 30 April 2022)

National Results for Series 2020-2070, *Instituto Nacional de Estadística*, Available from: https://www.ine.es/jaxiT3/Datos.htm?t=36642 (accessed 21 April 2022)

On 1 January 2020, Belgium had 11,492,641 inhabitants, *Statbel: Belgium in figures*, Available from: https://statbel.fgov.be/en/news/1-january-2020-belgium-had-11492641-inhabitants (accessed 26 April 2022)

*Organize Online Through Ideas and Civil Deliberation*, Citizens Foundation, https://www.citizens.is/getting-started/ (accessed March 22, 2022)

Peña-López, Ismael, *decidim. barcelona, Spain*, IT For Change, 2017.

Pérez-Nievas, Santiago, Rama-Caamaño, José, Fernández-Esquer, Carlos, "New wine in old bottles? The selection of electoral candidates in general elections in Podemos", in

Guillermo Cordero & Xavier Coller (Eds.), *Democratizing Candidate Selection*, Palgrave Macmillan, Cham, 2018, pp. 123-146.

Piccone, Ted, "Democracy and Digital Technology", in *International Journal on Human Rights*, vol. 15, no. 27, 2018, pp. 29-38.

Pina, Vicente, Torres, Lourdes, Royo, Sonia, and García-Rayado, Jaime, "Decide Madrid: A Spanish best practice on e-participation", in Tiina Randma-Liiv and Veiko Lember (Eds.), *Engaging Citizens in Policy Making*, 2022, pp. 152-165.

*Polis-Documentation/Motivation.Md at Master: Pol-Is/Polis-Documentation*, GitHub, Available from: https://github.com/pol-is/polis-documentation (accessed 22 March 2022)

Practical Politics for You and Me: Participatory Budgeting, *New Southbound Policy Portal*, Available from: https://nspp.mofa.gov.tw/nsppe/news.php?post=178808&unit=410&unitname=Stories&postname=Practical-Politics-for-You-and-Me:-Participatory-Budgeting (accessed 19 April 2022)

*Press kit*, Citizen lab, https://res.cloudinary.com/citizenlabco/image/upload/v1639580020/Press%20kits/Press-kit_US.pdf (accessed 22 March 2022)

Preville, Philip, "How Barcelona is leading a new era of digital democracy", *Sidewalk Talk features, Medium*, 13 November 2019, Available from: https://medium.com/sidewalk-talk/how-barcelona-is-leading-a-new-era-of-digital-democracy-4a033a98cf32 (accessed 24 April 2022)

*Rahvaalgatus*, Available from: https://rahvaalgatus.ee/ (accessed 16 April 2022)

Rahvaalgatus.ee (public initiative web portal), *The Estonian Cooperation Assembly*, Available from: https://kogu.ee/en/rahvaalgatus-ee/ (accessed 17 April 2022)

Rahvakogu: Turning the E-Republic into an E-Democracy, *Crowdlaw for Congress Series*, Available from: https://congress.crowd.law/case-rahvakogu.html (Accessed 15 April 2022)

Ramos, Jose, "Liquid Democracy: The App That Turns Everyone into a Politician", *Shareable*, 20 January, 2014, Available from: https://www.shareable.net/liquid-democracy-the-app-that-turns-everyone-into-a-politician/ (accessed 27 April 2022)

Randma-Liiv, T., Lember, V., (Eds.), *Engaging Citizens in Policy Making*, 2022.

Rejenda-Nicolucci, Chand, and Zuckerman, Ethan, "Civic Logic: Social media with opinion and purpose", *Knight First Amendment Institute*, 20 November 2020, Available from:

https://knightcolumbia.org/blog/civic-logic-social-media-with-opinion-and-purpose (accessed 19 April 2022)

Repucci,Sarah, Slipowitz, Amy, *Freedom in the World 2022: The Global Expansion of Authoritarian Rule*, Freedom House, February 2022, Available from: https://freedomhouse.org/report/freedom-world/2022/global-expansion-authoritarian-rule (Accessed 25 March 2022)

Reykjavik Population 2022, *World Population Review*, Available from: https://worldpopulationreview.com/world-cities/reykjavik-population (accessed 25 April 2022)

Royo, Sonia, Pina, Vicente, and García-Rayado, Jaime, "Decide Madrid: A Critical Analysis of an Award-Winning e-Participation Initiative", in *Sustainability*, Vol. 12, No. 4, 2020, pp. 1-19.

Rubio, Rafael, Vela, Ricardo, "Open parliaments around the world. Open Parliament's tools in comparative perspective", *Working Paper Series*, Rome, LUISS School of Government, 2019.

Sæbø, Ø., Rose, J., and Flak, L.S., "The shape of eParticipation: Characterizing an emerging research area",in *Government information quarterly*, no. 25, 2008, pp. 400-428.

Sanders, Karen B., Berganza, Rosa, de Miguel, Roberto, "Spain. Populism From the Far Right to the Emergence of Podemos", in Toril Aalberg, Frank Esser, Carsten Reinemann, Jesper Stromback & Claes De Vreese (Eds.), *Populist Political communication in Europe*, Routledge, 2018, pp. 249-260.

Schulze, Markus, "A new monotonic, close-independent, reversal symmetric, and condorcet-consistent single-winner election method", in *Social choice and welfare*, Vol. 36, No. 2, 2011, pp. 267-303.

Share of households with broadband internet access in Belgium 2005-2020, *Statista*, Statista research Department, 18 August 2021, Available from: https://www.statista.com/statistics/702491/broadband-internet-household-penetration-belgium/ (accessed 26 April 2022)

Shen, Fei, Great Firewall of China, in Harvey, K. (Ed.), *In Encyclopedia of Social Media and Politics*, SAGE, Volume 2, 2014, pp. 599-602.

Simon, J., et al., *Digital Democracy: The tools transforming political engagement*, National Endowment for Science, Technology and the Arts (NESTA), 2017.

Smart City 3.0 – Ask Barcelona about the next generation of smart cities, *Urban Hub*, 13 February 2018, Available from: https://www.urban-hub.com/cities/smart-city-3-0-ask-barcelona-about-the-next-generation-of-smart-cities/ (accessed 22 April 2022)

*Smart City Index 2020*, International Institute for Management Development and Singapore University of Technology and Design, 2020.

Smart City Series: the Barcelona Experience, *Zigurat Global Institute of Technology*, 7 February 2019, Available from: https://www.e-zigurat.com/blog/en/smart-city-barcelona-experience/ (accessed 22 April 2022)

Smith, Rogers M., "Modern Citizenship", in Engin F. Isin & Bryan S Turner (Eds.), *Handbook of Citizenship Studies*, Sage, 2002, pp. 105-115.

Solonian Democracy Institute, *Digital Democracy Report*, Solonian Democracy Institute, 2021.

Sorice, Michele, Between Direct Representation and Participatory Democracy", *Italian Institute for International Political Studies*, 21 May 2019, Available from: https://www.ispionline.it/en/pubblicazione/between-direct-representation-and-participatory-democracy-23152 (Accessed 20 March 2022)

Spain: Freedom in the World 2020, *Freedom House*, Available from: https://freedomhouse.org/country/spain/freedom-world/2020 (accessed 21 April 2020)

Stockman, Caroline, Scalia, Vincenzo, "Democracy on the Five Star Movement's Rousseau platform", in *European Politics and Society*, Vol. 21, No. 5, 2020, pp. 603-617.

Stott, Harry, Barcelona Future, *Smart City*, 1 January 2020, Available from: https://www.barcelona-metropolitan.com/living/barcelona-future-smart-city/ (accessed 22 April 2022).

Submit collective proposal, *Riigikogu*, Available from: https://www.riigikogu.ee/en/introduction-and-history/have-your-say/submit-collective-proposal/ (accessed 17 April 2022)

Swierczek, Björn, "Five Years of Liquid Democracy in Germany", in *The Liquid Democracy Journal*, Vol. 1, No. 1, 2014, p. 8-19.

Taiwan: Freedom in the World 2020, *Freedom House*, Available from: https://freedomhouse.org/country/taiwan/freedom-world/2020 (accessed 18 April 2020)

Tang, Audrey, and the Australian Strategic Policy Institute, "Digital Democracy in Taiwan: Crowdsourcing for an Inclusive and Resilient Indo-Pacific", in *The Sidney Dialogue: Playbook*, Australian Strategic Policy Institute, 2021, pp. 11-13.

Tang, Audrey, Digital Tools Open Up Taiwan's Democratic Imaginations, *Pol.is Blog*, 24 May 2016, Available from: https://blog.pol.is/digital-tools-open-up-taiwans-democratic-imaginations-d8f80432305c (Accessed 19 April 2022)

Tharoor, Ishaan, "The man who declared the 'end of history' fears for democracy's future", *The Washington Post*, 9 February 2017, Available from: https://www.washingtonpost.com/news/worldviews/wp/2017/02/09/the-man-who-declared-the-end-of-history-fears-for-democracys-future/ (accessed 17 March 2022)

The Economist Intelligence Unit, *Democracy Index 2020: In sickness and in health?*, The Economist Intelligence Unit Limited, 2021.

These cities, regions and organizations are already using decidim, *Decidim*, Available from: https://decidim.org/usedby/ (accessed 24 April 2022)

*This Belgian startup brings civic engagement into the digital age: 4 things you need to know*, Silicon Canals, https://siliconcanals.com/news/startups/this-belgian-startup-brings-civic-engagement-into-the-digital-age-4-things-you-need-to-know/ (accessed 22 March 2022)

Toots, Maarja, Kalvet, Tarmo, and Krimmer, Robert, "Success in eVoting – Success in eDemocracy? The Estonian Paradox", in *International Conference on Electronic Participation*, Springer, Cham, 2016, pp. 55-66.

Tronconi, Filippo, "The Italian Five Star Movement during the Crisis: Towards Normalisation?", in *South European Society and Politics*, Vol. 23, No. 1, pp. 163-180.

Turning citizen ideas into action on waste – Bintan, Indonesia., *Citizen OS*, Available from: https://citizenos.com/news/turning-citizen-ideas-into-action-on-waste-bintan-indonesia/ (accessed 17 April 2022)

UN E-Participation Index 2020 Brazil, *UN E-Government Knowledgebase*, Available from: https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/24-Brazil (accessed 14 April 2022)

UN E-Participation Index 2020 Estonia, UN E-Government Knowledgebase, Available from: https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/57-Estonia (accessed 15 April 2022)

Van Dijk, Jan A.G.M., "Digital democracy: Vision and reality", in I. T. M. Snellen, M. Theans, & W. B. H. J. van de Donk (Eds.), *Public administration in the information age: revisited,* IOS Press, 2012, pp. 49-62.

Vooglaid, Kadi Maria, Randma-Liiv, Tiina, "The Estonian Citizens' Initiative Portal: Drivers and barriers of institutionalized e-participation", in Tiina Randma-Liiv and Veiko Lember (Eds.), *Engaging Citizens in Policy Making*, 2022, pp. 104-119.

What Is Real-Time Machine Learning?, *Hazelcast*, Available from: https://hazelcast.com/glossary/real-time-machine-learning/ (accessed 21 May 2022)

Wright, Nicholas D., *Artificial Intelligence, China, Russia, and the Global Order*, Air University Press, Maxwell, AL, 2019.

Yayboke, Erol, Brannen, Sam, *Promote and Build: A Strategic Approach to Digital Authoritarianism, Center for Strategic and International Studies Briefs*, 2020, p. 1, Available from: https://www.csis.org/analysis/promote-and-build-strategic-approach-digital-authoritarianism, (accessed 20 March 2022)