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Reshaping Europe's Institutions Through Collective Intelligence

Introduction

From climate change to migration to political extremism, Europe faces a number of urgent and complex challenges. Yet, as recent crises like the COVID-19 pandemic have illustrated, existing institutions are too often unable to respond to the speed, scale, and complexity of these 21st century problems.

At the same time, a number of institutions in Europe and beyond have developed innovative tools, strategies and practices that channel the expertise and enthusiasm of the public into new laws, policies, projects and programs, enabling broader collaboration with residents to solve problems in new ways. These approaches run the gamut, from direct democracy efforts (such as Finland's Citizens 'Initiative law, which empowers any Finn to propose legislation through an online petitioning platform) to hybrid online/offline participatory budgeting initiatives (such as the City of Vienna's "Dein Vien for Future" initiative, which allocates €1 million for projects proposed and voted on by people ages 5 through 20) to deliberative "citizens' assemblies" (such as in East Belgium, where randomly-selected, representative bodies of citizens issue policy recommendations to the regional parliament). The common thread among these new methods is their effective use of collective intelligence - a term researchers and practitioners use to describe how groups work together, often aided by technology, to create or analyze information, deliberate, and make decisions.

In the literature, such greater public participation is associated with more legitimate and transparent decisionmaking. Building upon evidence of impact from these real-world examples, I argue that greater public participation not only increases the *legitimacy o*f decisionmaking, but can also enable more *effective* decisionmaking. This paper analyzes examples from city governments as well as examples from the emerging area of CrowdLaw, which describes the practice of using collective intelligence of the public in lawmaking. These examples illustrate a new way to govern - one where government moves beyond using public engagement to "tick the box" of procedural legitimacy and towards a future where public institutions can effectively leverage the distributed expertise and experience of the public to solve complex public problems.

The findings and arguments set forth in this paper are drawn from 30 original case studies - documenting examples of effective collaboration between crowds and institutions - as well as a cross-disciplinary literature review of nearly 100 publications.

From Athens to Helsinki: Engaging crowds to solve public problems

The city of Athens, Greece was hit hard by the global financial recession of 2007 – 2008. The country's economic downturn and accompanying austerity measures left the nation's capital riddled with vacant buildings and lots, and left its citizens 'trust in government shaken. At the same time, across the city, local community groups and individuals began to launch their own projects to address issues such as homelessness, poverty, and vandalism.

The city's government needed a way to support collaboration among, and awareness about, these grassroots initiatives. In 2013, former documentary filmmaker (and later Vice Mayor) Amalia Zepou began working with the mayor's office to develop a central hub that would connect citizens' projects across neighborhoods to share resources and learn from one another.

The result was an online platform, synAthina, which serves as a central portal for civic participation in Athens. Any nonprofit, business, or group of people can come to showcase their work on community-oriented projects. Since 2013, more than 450 civic groups have posted over 4,250 activities, contributing to a collaborative ecosystem that engages civil society and Athens's municipal government to address challenges from the integration of immigrants and refugees to the revitalization of public spaces.

In addition to creating a space where individuals can collaborate on projects, synAthina has also contributed to the rebuilding of trust between citizens and the city's government by engaging residents whose voices are typically not heard through formal mechanisms. By demonstrating the positive effects that community-led (rather than top-down) problem solving have had on Athens's quality of life, synAthina has helped to drive change in the mentality of the city's government. "This mentality of co-creation is a mentality that is now embroidered into the administration of Athens," Haris Bisksos, synAthina's project manager, said. "Now it's part of how the administration runs the city."

Another example of collaboration between residents and governments can be found in Helsinki, Finland. In 2017, the city government began to work with residents to co-design a plan for the city to achieve carbon neutrality by 2035. Considering the ambition of this overarching goal, and the many actions that would be required to achieve it, the city government knew that it would be important to create some mechanisms by which citizens could hold public servants accountable for doing their part.

The plan they created identifies 147 goals to achieve carbon neutrality, with concrete actions assigned to civil servants within Helsinki's government who are responsible for reporting on progress made towards each goal. The city created an open source online platform, called Climate Watch, where these public servants upload data that is used to calculate how much progress has been made towards accomplishing each goal. For example, progress towards Goal 2, which aims to construct a 130-kilometer bicycle path network by 2025, is measured in kilometers of bicycle paths within the city center. Through this collaborative approach, the whole city is involved in setting, achieving, and monitoring targets as well as fine-tuning the carbon neutral plan and its implementation.

Recognizing the value of this collaborative monitoring approach to address problems beyond Helsinki, the former product owner of Climate Watch went on to form a company, called Kausal, which is working

to replicate the model in other jurisdictions. Kausal is currently working with three other Finnish cities to track actions made towards their own efforts to combat climate change. Kausal's goal is to build additional tools for co-creation and collaboration and to scale the use of the platform to make it available to any city that wants to use it to achieve their carbon neutrality goals.

CrowdLaw: Increasing the effectiveness and legitimacy of lawmaking

Legislatures in Europe, as around the world, are also using technology and innovation to engage the public in the development of laws, policies and regulations that are in ways that are more efficient and more legitimate than traditional legislative methods.

In Belgium, the Parliament of the Brussels-Capital Region and the parliament of the French-speaking community have implemented a "[citizens' assembly](#)" of 45 randomly selected members of the public who work with members of parliament to design new policies. The assembly works alongside the relevant standing committee for the topic at hand (15 legislators in the regional parliament and 12 in the French-speaking parliament) to deliberate, develop, and vote on policy recommendations.

The first assembly convened in May 2021 on the topic of 5G cellular infrastructure in Brussels and approved 43 recommendations regarding the health and environmental considerations of implementing 5G technology, which are now under consideration by the Energy and Environment Commission and other parliamentary committees. Parliament has convened additional assemblies about biodiversity, the re-accommodation of homeless people, and the role of Brussels citizens in times of crisis, with a fifth assembly about work-study and vocational training planned for 2022. As mentioned, a similar citizens' assembly experiment is also underway in the German-speaking region of East Belgium.

Citizens 'assemblies are also being adopted at the city level. The City of Paris inaugurated its permanent citizens 'assembly - a 100-member body, selected from a random, representative sample of the City's population - in November of 2021. The assembly is empowered to deliberate, issue recommendations to the City Council and draft laws, among other powers.

While such "mini-publics" have been used as part of one-one reforms on specific issues - such as Estonia's 2013 [anti-corruption effort](#), or Ireland's 2012 and 2017 citizens' assemblies on same-sex marriage and abortion, respectively - the efforts in Belgium and Paris are the first of their kind to institutionalize the method as a formal lawmaking process.

To take another example, in 2021, the U.S. House Select Committee on the Modernization of Congress (a bipartisan committee whose mandate is to develop recommendations to improve and modernize the legislature) [worked with The GovLab](#) to crowdsource expert input to inform its process of developing recommendations on evidence-based lawmaking. The GovLab broke down the challenge of evidence-based lawmaking into a set of specific problems. We curated a set of more than 50 experts - including current and former Members of Congress experts in legislative operations and functions, and scientific researchers - who participated in two online advisory sessions to crowdsource solutions to the challenges

of sourcing and using high-quality, relevant information for use in lawmaking. These conversations surfaced more than 100 ideas about how Congress could improve access and use of data in lawmaking.

Since 2015, The GovLab has used this method of problem solving, which we call Smarter Crowdsourcing, to crowdsource solutions to a number of challenges, including COVID-19 in Latin America, government corruption in Mexico, and the measurement of non-academic skills in the U.S. education system. In every case, the result was a set of recommendations for specific actions partners (governments and foundations) could take to address the issues they cared about.

How Collective Intelligence is Making a Difference

While scholars from John Dewey to Sherry Arnstein have noted the importance of public participation for democratic accountability and legitimacy, there is too little empirical evidence that more participation alone improves the effectiveness of the resulting laws, regulations, policies and programs. Further, while effective models for public engagement have been explored in theory, there is limited guidance for how institutions can make the transition from closed-door to collaborative governance models. This is beginning to change.

For public institutions who wish to govern differently, greater public participation can bring a number of practical benefits, in addition to increasing legitimacy. More and better public engagement can enable government to engage larger and more diverse groups of citizens, tap additional expertise and perspectives, better understand the root causes of public problems, and foster more innovative problem-solving environments. Collective intelligence can also empower the public to hold government accountable for its decision-making.

This section integrates learnings from real-world examples of collaboration between crowds and institutions with findings from the literature to make the case for how government can leverage the collective intelligence of citizens to develop more effective solutions to public problems.

1. Getting more hands on deck

Engaging a crowd can bring additional expertise and perspectives not otherwise found in government, which can be helpful for solving problems. To take one example, research has shown that younger adults are less likely to participate in institutional processes, such as voting in national elections or participating in political parties. Therefore, additional efforts must be made to reach youth, or the government risks missing out on the valuable expertise and perspectives of young people. For example the City Council of Barcelona, recognizing that the COVID-19 pandemic had significantly impacted youth, convened a citizens 'assembly in which 99 participants ages 16-29 developed recommendations for policies the City could implement to improve young peoples 'ability to find jobs, access housing and mental health support. The City has committed to implement 20 of these ideas as policies. Barcelona's experience demonstrates how engaging those closest to the problem can enable the government to engage those who experience complex social problems in order to generate fresh ideas for solutions.

2. Engaging larger and more diverse audiences

Working with a larger and more diverse audience can allow institutions to benefit from the talents, interests, and experiences of the crowd. The Ushahidi project began as a simple web map to track acts of violence following the contested 2007 election in Kenya. The software's developers made the platform open source, allowing thousands of others to download and adapt the tool for their own data crowdsourcing and mapping projects. Today, Ushahidi's network includes 200,000 activists across 160 countries who have used the platform for projects ranging from preventing forest fires in Italy to crowdsourcing incidents of sexual harassment in Egypt.

To be sure, the interaction between crowd size and decision-making is complex, and scholars debate the merits of collaborating with both large and small groups. For government, the key is to engage the "right" group of participants - namely, that which has the expertise needed to solve the problem at hand.

3.   Understanding the root causes of problems

Working closely with people who experience problems can help institutions to understand root causes and co-create better solutions. To better understand the causes of loneliness among its residents, the city of York, England trained volunteers to become "community researchers", who spoke with more than 1,000 of their peers to identify root causes of loneliness. The city council, non-governmental organizations and community groups then worked together to develop solutions such as a 'community cafe 'at a local church, where lonely residents could have a safer place to connect.

A substantial amount of collective intelligence literature also points to the utility of digital technologies - namely, artificial intelligence and machine learning - to aid in the efficiency of data processing, and to help structure and organize knowledge, which has great potential to help governments better understand how and why problems occur, and whom is most impacted.

4.   Solving problems in new ways

Researchers have observed that crowds perform a variety of problem-solving tasks of potential value to government, including gathering, assimilating and analyzing large quantities of information. Crowdlaw research further indicates that crowds can and do perform a variety of lawmaking tasks, including defining problems, identifying solutions, drafting legislation, implementing and evaluating the outcomes of policies and programs.

Likewise, real-world experience shows that fostering a creative and collaborative problems-solving environment can allow institutions to overcome challenges in innovative ways. For example, through the Air Louisville research program, the Metro Government of Louisville, Kentucky used data collected by residents to better understand where triggers of asthma and chronic obstructive pulmonary disease (COPD) occurred using data collected by city residents. Using inhalers fitted with sensors, along with a mobile app, more than 1,000 participants collected 1.2 million data points on the location, date and time, and dosages of their own inhaler use, which was combined air quality and weather data to to better understand environmental factors that could trigger inhaler use. The research team then used this information to identify interventions that the eMetro Government could implement to improve air quality in at-risk areas (such as planting more trees, or routing trucks through lower-risk areas), as well as actions

that patients themselves could take to better manage their condition. Over 12 months, participants experienced an average of 82% reduction in asthma rescue inhaler use.

5. Providing greater accountability

Collective intelligence can empower the public to hold government accountable for its plans and promises. In Helsinki, the Climate Watch website enables ordinary residents to monitor the city's progress towards each of the 147 targets on which civil servants and citizens have collaboratively agreed. Beyond simply creating more transparency, research has shown that such online engagement platforms - boosted by the growing availability of open data - enable the public to meaningfully participate in oversight of government activities, from monitoring corruption and elections to evaluating budgets and public programs.

6. Strengthening legitimacy of decisions

As acknowledged above, involving residents in lawmaking, as well as other decisionmaking processes such as participatory budgeting, can help institutions to strengthen the legitimacy of decisions made. Legislative experiments in Belgium, Paris, and Barcelona are testing whether citizens 'assemblies can serve as an effective lawmaking process at the regional and city levels. As others have noted, these

collaborative governance models are distinct from "community listening" sessions and town halls in that

Figure 1: Ten Lessons Learned from the report, *Using collective Intelligence to Solve Public Problems*

they afford participants real decisionmaking power.

Conclusion

The examples analyzed above demonstrate how collaborating with crowds can empower institutions to solve problems in new and innovative ways. Whether by overcoming budgetary and staff shortages by engaging a crowd of volunteers or trialing new deliberative practices to get around bureaucracy, these findings have great implications for how institutions can overcome deadlock.

While this paper presents an initial framework for how collective intelligence can lead to more effective decisionmaking, it should be noted that many of the initiatives discussed in this paper are relatively new and understudied, and therefore their long-term impacts are not yet known. More empirical evidence into the outcomes and impacts of these collaborative governance mechanisms is needed.

Researchers and public institutions in Europe should continue to explore how collective intelligence can help to make public decision making better and more inclusive. Several questions that should be explored through further research and discussion include:

1. How should the European Union and other international institutions in Europe integrate the learnings and best practices from these participatory lawmaking and problem-solving experiments into their decisionmaking processes? How should national governments and other domestic institutions integrate these learnings as well?

2. In what ways do the arguments put forth in this paper about the value of increasing public engagement align with (or run counter to) established theories about the role of public participation in enabling effective, legitimate, and accountable decisionmaking?

3. How can future participatory lawmaking or problem-solving initiatives be designed for the explicit purpose of overcoming deadlock?

Additional examples and lessons learned are discussed in greater detail in the report *Using Collective Intelligence to Solve Public Problems* and the accompanying implementation guide, *Collective Intelligence: A Checklist for the Public Sector*.