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Innovation and empowerment in Finland: How citizens and technology are reshaping government through crowdsourcing

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In this chapter on innovation and empowerment in Finland, I will examine a relevant case study on the government's use of new technology to promote social inclusion through crowdsourcing. I will focus on three major aspects in crowdsourced policymaking: motivations, outcomes and challenges. The chapter will be structured in three parts. First, I will outline the government's perspective—what crowdsourcing in policymaking is, why we do it and how we do it. Next, I will focus on the crowd's perspective. To do this, I will take the user's perspective to understand why the crowd participates, what their expectations are and what types of things they are experiencing when they participate in crowdsourced policymaking. The final part of my chapter will focus on outcomes, challenges and the way forward in crowdsourced policymaking.

So what challenges do we face in Finland, my home country? In Finland, we have significant snow coverage for most of the year, particularly in the northern part, by the Arctic Circle. Up there we move around with snowmobiles in the winter. One of the local residents who lives in Lapland

in Northern Finland is called Jaska. Jaska is a regular Finn living just by the Arctic Circle in a very remote village, one hour from grocery stores or post offices. Jaska uses his snowmobile on a daily basis: to commute, to run errands and so on. Jaska also uses his snowmobile to herd his reindeer, because for him the snowmobile is the most convenient way to get around remote areas in winter.

Addressing local complaints of citizens

A few years ago, Jaska was not very happy about where and how he could ride his snowmobile. The off-road traffic law governed off-road traffic—all the traffic that happened beyond established roads, like riding a snowmobile in winter or an all-terrain vehicle in summer. This law had been in place for about 20 years, but there were many complaints that the law had become outdated and should be reformed. The law had two basic goals: to protect nature from the harm that off-road traffic causes and ensure the safety of off-road traffic drivers and the people around them.

Jaska was not alone with his complaint. There were several stakeholder groups also complaining about the law; for instance, land owners. They were worried about the amount of compensation they received when their lands were being used for off-road traffic. Another stakeholder group were the Saami, the only officially recognised Indigenous people in Europe, who use snowmobiles for herding reindeer, hunting and fishing. They wanted special permission for using off-road vehicles.

Then, of course, we had the issue of individual snowmobile owners' rights (like Jaska's), and the value of conserving nature as it is, and every citizen's right to a peaceful environment. Imagine, for example, you have a cabin somewhere in the back country and you go there to relax only to be interrupted by somebody setting up an off-road traffic road next to your cabin. All of these factors were at play.

Some years ago, our then environment minister, Ville Niinistö, decided it was time to reform the off-road law. But he decided to do so in a new way, by involving citizens in the process; using crowdsourcing as a knowledge search method in the law reform process. In this context, by crowdsourcing I mean an online method for anybody to participate in a task that is open online. Anybody can participate by submitting ideas and comments online.

If you look at crowdsourcing as a phenomenon, it has previously been widely used for business purposes. Major companies like Procter & Gamble and Eli Lilly used crowdsourcing for their research and development, for example, through innovation intermediaries like InnoCentive. Generally, it worked like this: the company posted its particular problem online, and promised a financial reward (say \$40,000) for anyone able to solve the problem.

There are precedents to Finland using crowdsourcing in the policymaking process. Iceland used crowdsourcing in their constitution reform of 2010–13. Federal agencies in the United States have used crowdsourcing in their strategy reform, including the Federal Emergency Management Agency.

What is common to examples of crowdsourcing being used to make policy is the process. It starts with the initial knowledge search and ideation, then moves on to evaluation (sometimes the crowd is part of that step, sometimes not). The next step is policy drafting, where, like evaluation, the crowd may or may not be included. At the end of this process, we have reformed policy.

Using the processes of crowdsourcing to invigorate policymaking

Let us return to the Finnish case, where crowdsourcing was used to reform off-road traffic legislation. A crowdsourcing platform was established. Anybody could participate. People were invited to submit their ideas in certain categories, for instance, safety. The question participants were asked to address was, ‘How could we improve safety in off-road traffic? Please send in your idea’. There were additional questions about how to protect nature in a better way and so on. And the ideas proposed by the public would pop up on the platform, where they could be commented and voted on—thumbs up or thumbs down.

The first phase of the process we focused on was problem mapping. Participants were asked what type of problems and issues they had with the current law, and also with off-road traffic in general. That was called the ‘problem identification mode’. I was involved with this initiative: after the first phase was over, we synthesised and analysed the input with

my research team and policy experts in the government. This was used to design the second phase, in which we asked respondents to solve the problems they had identified in the first phase.

In other words, this stage moved from *complaining* to *constructing*, the stage of collaborative problem-solving. The third phase involved a two-step evaluation process: expert evaluation of the ideas by an international expert panel; and a crowd evaluation process. Then we moved to the fourth phase, which was the writing of the law.

Let us consider how crowdsourcing fits into a typical law-making process in the Finnish system. Typically, public servants write the bills of government, having taken their orders from the minister and the cabinet. The public servants carry out research as they draft the bill; they seek the help of interest groups and any expert committees they have set up to advise them.

According to convention, when the bill has been approved by the cabinet, it goes to the parliament where 200 elected representatives will discuss the bill, and then either accept it, revise it or send it back to the cabinet or the ministers to discuss it further. If this happens, the bill may be sent back to the public service for revision.

Why use crowdsourcing in policymaking?

How do we incorporate crowdsourcing into this process? The crowd adds one additional data point to the preparation part of the process. When the civil servants are drafting the bill, then, they would get more information from the crowd. In this way, the crowd does not touch the decision-making process, meaning it is still the parliament who decides the fate of any particular law.

This leads us to the very important question of what crowdsourcing is *not*. Crowdsourcing is not a decision-making tool or method in direct democracies because, ultimately, there the parliament wields the decision-making power, not the crowd. Nor is crowdsourcing a public opinion poll. This is because crowdsourcing is inherently based on self-selection, because it is only people who are interested in participating who will participate. It is not a random sample, and it does not have any statistical representativeness.

But equally, this self-selection illustrates the power of crowdsourcing: it is the people who have ideas who will share their ideas online. It is not an example of people gathering together to talk about an issue; we are not interested in their opinions, *per se*, but we are interested in the knowledge and ideas that they are sharing.

Why then are we using crowdsourcing? Because when we use crowdsourcing, we tap into the collective intelligence of people, and collective intelligence is based on the notion that when we have a large and diverse community—a diverse crowd—we are more likely to achieve a better solution than one produced by a homogeneous group of experts. When we use crowdsourcing, we extend the search for input from among the usual suspects ('knowledge neighbourhoods', as we call them in management science and engineering, meaning civil servants, policy analysts and experts). By crowdsourcing, we extend the knowledge search to the citizens' knowledge neighbourhood, consequently gaining much more diverse information that is based on people's everyday experiences.

When we use crowdsourcing in policymaking, it becomes a democratic innovation that brings citizens closer to the policymaking process. They are able to be part of something that they have not been able to be part of before. Why are democratic innovations relevant? Why should we care about those? Because, across the Western world, we are seeing a significant democratic recession. Voting activity is declining. Social cohesion is fracturing. Trust in institutions—especially political institutions—is decreasing.

I believe that when we use democratic innovations, and we try to study and apply them in an innovative way, we may be able to fight this democratic recession that so worries me. I do not claim that democratic innovations would take us directly to heaven, but I do feel we would be foolish if we lost the opportunity to use these new technologies and engagement methods to help people participate in policymaking.

One simple way that crowdsourced policy formulation already makes a difference is in the process itself. Thanks to crowdsourcing, we have more transparency in policymaking. We can divide transparency into two parts: horizontal transparency and vertical transparency. By horizontal transparency I mean transparency between the members of the crowd. In other words, the citizens. Because when people post their ideas online, anybody can see them and comment on them. That is horizontal transparency.

Vertical transparency refers to the transparency from the government to the crowd. When a government invites the public—the crowd—to be part of the reforming process, the vertical transparency is when the government keeps the crowd in the loop: posting updates about how the process will continue. This allows the participants to know the next step in the law reform process.

Evaluating the outcomes of crowdsourcing

Let us return to the Finnish example, and take a closer look at the evaluation stage of the campaign to use crowdsourcing to reform off-road vehicle legislation. When it came to the expert panel's evaluation of the crowd's input, we set up a group of international experts who received a sample of the posted ideas to be evaluated online. By this stage, we had received around 500 ideas and 4,000 comments. We clustered them together into certain categories and then established four criteria for the experts to use in considering the proposals: effectiveness, cost efficiency, ease of implementation and fairness.

For example, here is a proposed idea the experts had to evaluate: radio frequency identification tags should be added to all off-road traffic vehicles to decrease illegal riding. To do this, the experts used an evaluation scale of one to seven.

Then we built a new tool for crowd evaluation. We again invited the crowd to participate in the process and we gave them a random sample of ideas to evaluate. To do this, they would use three different methods. The first method involved the awarding of stars, which we called scoring. The participants would score the ideas based on their preferences. The second method involved ranking: participants were shown three to five preferences at a time and asked to rank them in order of preference. In the third, final method, participants compared ideas, as in binary decision-making mode, in order to choose which one they preferred. After this we ran some network analysis and found a significant majority cluster and minority cluster, allowing us to separate these preferences easily.

Moreover, because we conducted an entrance survey for all these crowd evaluators, we knew what their primary interest in the issue was. When we matched this information with our network map, we could see that the

majority cluster was mostly snowmobile owners who wanted to have less regulation, and the minority cluster was environmentalists, land owners and, typically, women, who wanted more.

We then handed these findings back to the government for further processing. All our publications about this, including much on the evaluation process, can be viewed on thefinnishexperiment.com.

There is another law reform process utilising crowdsourcing that is currently underway in Finland. It concerns the limited liability housing company law, which governs apartment buildings in Finland. If you own an apartment or if you are a tenant in an apartment, this law relates to you. It affects around 3 million people across Finland. The process to reform this law is similar to that concerning off-road vehicles, with one crucial difference: it was civil servants in the Ministry of Justice who initiated this process. We recently completed the second crowdsourcing stage, and I can confirm the ministry is running the process successfully.

What does the crowd gain from these innovations?

The second half of my chapter concerns the crowd's perspective. We will revisit Jaska, and the thousands of other participants who took part in these two cases.

First, what are the motivation factors? Why does the crowd participate? Why do they voluntarily spend their time online discussing and submitting ideas on this topic?

One reason is that participants experience a strong sense of empowerment. For example, one of the participants we interviewed said that this was the first time in their life they felt they were participating in democracy and influencing the decision-making process. It feels much more real than simply voting for a stranger. Another participant noted that the easiest way to participate in the democratic process from a remote location such as Arctic Finland is via the internet. Up there, alternative means of civic participation involve driving long distances, which is not always possible.

It became apparent that participants feel closer to the policymaking process when they participate online. The process may be simple, but it can make a tangible difference to both a participant's life and their perception of what role they play in a democracy. We identified four major motivation factors based on data from surveys and roughly 50 interviews conducted with participants. Ultimately, the main motivation factor for the people to participate was a desire to improve the law.

Participants had specific concerns with the law that drew them to sign up on the platform and submit their ideas. These people wanted to learn from other participants, their peers and the experts who were present on the platform, answering their questions and sharing information. They also wanted to hear what others thought about these two issues of off-road traffic and housing company law.

We can say that these drivers are mainly extrinsic, meaning crowdsourcing is an instrumental method for people to participate in the policymaking process. And it's a method to achieve something specific, whether changing the law or getting more information about it.

But then, in the bigger picture, participation turns into an avenue for advocacy. It becomes another way to get your desires through. It is also an avenue to be heard and to listen to the viewpoints of others. And yet, interestingly, participants have a very low expectation for the actual impact. Despite the fact that these are people who are generally self-confident and who speak up (we measure self-efficacy), they understand that their participation in this process is just raw material for the civil servants to consider and blend in with thousands of other ideas. This fascinates me, as it indicates that participants—who sometimes spend hours on the platform—don't let their motivation to contribute cloud the realisation that their contribution may not make it into the final reform. And yet, they still want to participate.

Another aspect that we have studied closely is the deliberation and learning aspect of crowdsourcing. This is interesting, as we designed these crowdsourcing processes exclusively as a search for knowledge. They were not designed for deliberation, nor for argument exchange, such as with citizen juries and other deliberation avenues, where people come together in a system designed for exchanging arguments. In contrast, our platform is designed purely to extract ideas and knowledge from people. And yet, in spite of this, deliberation happens. In the process of reforming

these two laws in Finland, participants exchanged comments, opinions and questions—some of which were answered by a civil servant from the Ministry of Justice.

Learning was occurring. From our perspective, it was predictable that participants would learn about the law from the materials on the website and from the organisers of the platform. But what we did not expect was for participants to, through the process, seek to understand other peoples' points of view. I consider this a victory in itself. Regardless of other results of these processes, I am happy if I know that the participants have learned to understand why somebody disagrees with them, or that somebody comes from a different perspective.

Consider also the demographic characteristics of the participants: Where do they come from? What type of democratic profile do they have? The participants were evenly distributed across rural and urban areas of Finland, and tended to be well educated, with the majority engaged in full-time employment. What was particularly interesting to us was their level of civic participation. Unsurprisingly, some of the participants were the usual suspects: the types of people who write to members of parliament and participate in town hall meetings. These people represented approximately one-third of the participants. But 70 per cent of our participants were not these people. It was valuable to us to realise crowdsourcing had engaged people who otherwise would not be civically active.

Achievements and next steps

In the final part of this chapter, I wish to shed light on the outcomes of these two processes, identify the challenges we have detected and look at the way forward. First, the off-road traffic law process. This was a successful process in terms of participation, activity and press coverage. But the process stalled in the law-writing stage, because the minister who initiated the process had to leave his position, and the new minister didn't care about the process. Unfortunately, as a consequence, all the ideas, evaluations and reports gained from a smooth crowdsourcing process are now sitting on the minister's desk.

For its part, the housing company law process is going very well. I think one of the key reasons for this is that in contrast to the off-road law reform process, this one is driven by civil servants who are hired for a substantial

amount of time; ministers, on the other hand, have their portfolios shuffled and are influenced by political changes and reality. These two contrasting experiences suggest that where civil servants are invested in these processes, there is a stronger likelihood of crowd input being analysed, evaluated and ultimately channelled into law.

There are other challenges we have identified along the way. One is the significant conflict that exists between the logic of the crowd and the logic of policymakers. I am working on this challenge at the moment. It can be divided into different aspects. The first concerns the nature of the input. In crowdsourced policymaking, for example, the crowd's input is *atomic*—it can be scattered. This contrasts with traditional policymaking where that input is *coherent*: it is synthesised and holistic; it can become law as is.

In the case of the crowdsourced off-road traffic law process, many of the proposed changes were submitted without thought as to whether they were feasible to be implemented; whether they affect other laws that are related to the off-road traffic law, for example. We contrast this with the proposals to the law from interest groups, for instance, which could often be simply copied and pasted into the law if we so wanted. They also tend to fit in with existing laws.

This creates a significant disruption to the momentum of trying to integrate the crowd's input into the law, because it requires somebody to synthesise and evaluate all these small ideas and think about how they could be transformed into a more holistic form and channelled into the law. In this situation, from the civil servants' perspective, faced with this volume and diversity, they sink in all this input. To alleviate this, we need better synthesis and evaluation methods so that we can use policymaking-related crowdsourcing in a meaningful way.

Along with my co-author, Yale University political scientist Helene Landemore, we came up with these five design principles that might help us when we design crowdsourced policymaking: accountability, transparency, inclusiveness, modularity and synthesis. We particularly emphasise the synthesis principle because of the above reasons.

Another big challenge in crowdsourced policymaking is balancing preference differences among the many people that participate. These differences can be very practical: they could be about whether a road permit should be in effect for six months or two months. And these

preference differences are not known before we do the crowdsourcing and evaluate the input. This situation differs from traditional policymaking, where the amount of preference differences is restricted to the ideologies of the various political parties and interest groups involved. In this scenario, the civil servants who draft the bill can anticipate the preference differences that will arise in advance, making it faster to channel that input into the policy.

But there are solutions. My background is in social science, but working with engineers and studying engineering scientists has made me view everything as a design challenge. To solve some of these problems, we are now experimenting with a new type of crowdsourcing. For now, I call it ‘inter-credit’ crowdsourcing.

As an example of this approach, I am working with the city of Palo Alto, which is the city next to Stanford University, to crowdsource input for their master plan, a 15-year strategy for the city. Earlier crowdsourcing stages for this resulted in many ideas from participants. And now we have launched a new tool whereby the city publicises certain ready-made synthesised holistic proposals perhaps to be included in the city plan, and then we ask the public to comment on them. We are doing it this way to make this evaluation and synthesising part of the process less burdensome for civil servants.

To conclude, I will return to what the individual gains from the process. Why do we need to care about the challenges and conflicts that arise between the logics of the crowd and the logics of traditional policymaking? Because we have people like Jaska who willingly and voluntarily participate in policymaking to come up with better solutions to our problems. Consequently, I feel it is both the responsibility of me and of the Government of Finland to figure out better ways to channel the crowd’s input into formulating policy—be that synthesis, evaluation or something else. And the only way to do that is to conduct more experiments and share the outcomes in volumes like this one.

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