



THE COMMITTEE FOR THE FUTURE is an established, standing committee in the Parliament of Finland. The Committee consists of 17 Members of the Finnish Parliament. The Committee serves as a Think Tank for futures, science and technology policy in Finland. The counterpart cabinet member is the Prime Minister. The Committee was established in 1993.

# Crowdsourcing for Democracy:

A New Era in Policy-Making

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# Foreword

**F**INNISH PEOPLE are now more educated and capable of following world affairs than ever before. Yet over the long run traditional forms of political participation have declined considerably. Voter turnout remains relatively low, most parties are losing members and it is more difficult to get people to run for office.

It would probably be an exaggeration to state democracy is in crisis. Finnish people are still interested in politics and society. However, people's trust in the political system and representatives has eroded – and, as many fear, it is likely to keep on eroding in the future.

We need to do something. We must update democracy for this millennium using new technologies.

Crowdsourcing is less a new idea than a new concept. It covers a wide array of tools

that use the power and knowledge of crowds brought together through the internet.

Crowdsourcing offers exciting possibilities for democracy. Citizens can take part in brainstorming, discussing, developing, and even implementing decisions that used to be the domain of political and expert elites.

People's participation through crowdsourcing does not replace traditional democratic tools or experts, but complements and supports them. Participation can yield better decisions. A thousand pairs of eyes will spot potential problems easier and a thousand heads will come up with more new ideas than just a few. This benefits all. Tanja Aitamurto has done ground-breaking work in introducing crowdsourcing to Finland. I hope this report will inspire state and local authorities as well as companies and civic groups to experiment and implement crowdsourcing.

**Oras Tynkkynen**

Vice Chairperson, Lead in the Crowdsourcing Project  
Committee of the Future,  
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# 1. Introduction

**A**N ARRAY of local and national governments around the world have applied crowdsourcing as a participatory method to engage citizens in political processes. Citizens are invited to share their ideas, perspectives and opinions about matters that traditionally were beyond their access and influence.

This book is an introduction to crowdsourcing in policy-making. By introducing case studies from several countries, the book demonstrates how crowdsourcing has been used in participatory budgeting in Canada, federal strategies in the United States, and constitution reform in Iceland. By drawing on these cases, the book analyzes the role of crowdsourcing in democracy. Furthermore, the book summarizes the best practices for crowdsourcing and outlines the benefits and challenges of open processes.

The book is based on a report for the Committee of the Future in the Parliament of Finland, delivered by the author in the Spring of 2012. The author, Tanja Aitamurto, is a visiting researcher<sup>1</sup> at the Liberation Technology Program at Stanford University. Due to the

author's academic orientation, this book has an academic touch to it, yet it is also meant to serve as a handbook for crowdsourcing in policy-making.

The book is structured as follows. In Chapter 2, we'll get an overview of crowdsourcing in several fields, thus giving context to the rise of participatory culture. This chapter addresses often posed questions about crowdsourcing and related phenomena like microwork and crowdfunding. Chapter 3 introduces an array of cases, in which crowdsourcing has been used in policy-making. Chapter 4 analyses the role of crowdsourcing in democratic processes, crowdsourcing as a part of Open Government practices, and the impact of crowdsourcing on democracy. Chapter 5 outlines the factors for successful crowdsourcing. Chapter 6 discusses the challenges of crowdsourcing. Chapter 7 gives policy recommendations for enhancing transparency, accountability and citizen participation in the Finnish governance. Chapter 8 concludes the book by encouraging actors in society to experiment with new tools for openness, transparency and accountability.

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# 2. What is crowdsourcing?

## Definition of crowdsourcing

**C**ROWDSOURCING is an open call for anybody to participate in a task open online (Brabham, 2008; Howe, 2008), where ‘the crowd’ refers to an undefined group of people who participate. Outsourcing, in contrast, means that the task is assigned to a specific agent. In crowdsourcing applications, the crowd is invited to participate in an online task by submitting information, knowledge, or talent. Crowdsourcing has become a popular tool to engage people in processes ranging from urban planning (Brabham, 2010) to new product design and solving complex scientific problems (Aitamurto, Leiponen & Tee, 2011.) Crowdsourced tasks are typically open for anybody to participate in online. ‘Anybody’ is, however, always a constrained population: not everybody has access to the Internet, and not everybody knows about the possibility to participate. The term ‘crowdsourcing’ is also used in contexts in which the task is open only to a restricted group like employees in a certain organization. Companies, for instance, use crowdsourcing as a part of their design process within the organization.

Crowdsourcing serves as a tool to gather collective intelligence for a variety of purposes. Collective intelligence (Levy, 1997) is based on the idea that knowledge is most accurate when it consists of inputs from a distributed population. Levy describes collective intelligence as “a form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in the effective mobilization of skills” (Levy, 1997, p. 13.) The opposite of collective intelligence is reliance on a single agent—for example, one knowledgeable expert. Collective intelligence typically involves the notion of cognitive di-

versity (c.f. Hong and Page, 2012), which can be amplified by deploying crowdsourcing. Collective intelligence can refer to wisdom, talent, and knowledge alike; ‘collective wisdom’ can be used instead to emphasize the temporal dimension: that wisdom extended through space and generations, and through collective memory (Landemore, 2012). Improved communication technologies have enabled more sophisticated use of collective intelligence, and co-creation and crowdsourcing have become popular methods to harness collective intelligence.

Crowdsourcing can be roughly divided into voluntary (non-pecuniary) and paid (pecuniary) crowdsourcing.<sup>1</sup> Voluntary crowdsourcing refers to tasks that people participate in voluntarily, without receiving a payment. Pecuniary crowdsourcing, instead, refers to paid tasks. “Microtasks” and “microwork” which are done through virtual market places such as Amazon Mechanical Turk, for instance, are pecuniary crowdsourcing. Innovation challenges, which are crowdsourcing solutions for design tasks or scientific problems, fall between these two categories. In these challenges, it is possible to get a monetary reward, but one is not guaranteed, because it is a competition. (More about crowdsourcing in innovation challenges later in Chapter 2.)

This book focuses on voluntary crowdsourcing. Particularly, the focus is on crowdsourcing for democratic processes. An important conceptual notion here for the sake of clarity: in this book, we don’t focus on Wikitype collaboration, which can be defined as commons-based peer production (Benkler,

<sup>1</sup> There is a growing number of typologies for crowdsourcing, and many of those are more detailed than the one presented here. For those, see e.g. Aitamurto, Leiponen & Tee, 2011.



2006.) In commons-based peer production, participants collaborate to achieve a goal, for instance, writing a piece of text. The flow-like process is open for anybody to participate in.

Wikipedia is an example of commons-based peer production. In crowdsourcing, there are clearly defined tasks for people to

participate in; for instance: share your opinion, send a picture, or solve this problem. Typically, there is a time constraint in the task. However, these concepts are not mutually exclusive. Another perspective on the conceptual hierarchy defines crowdsourcing as a tool for commons-based peer production.

# Crowdsourcing in practice

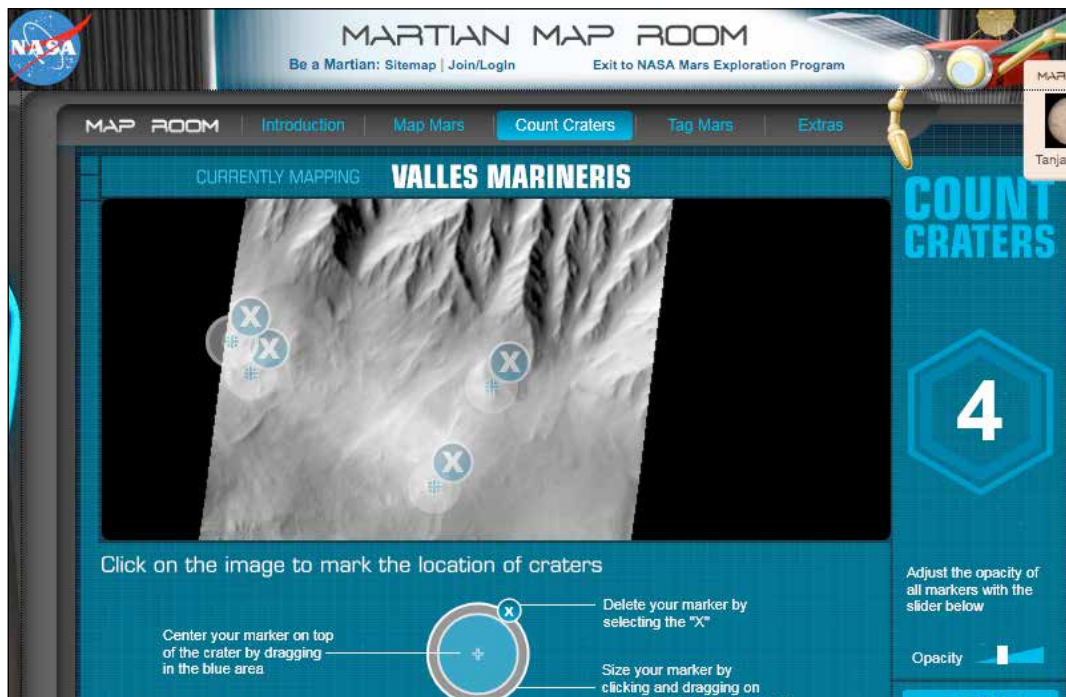
## Crowdmapping

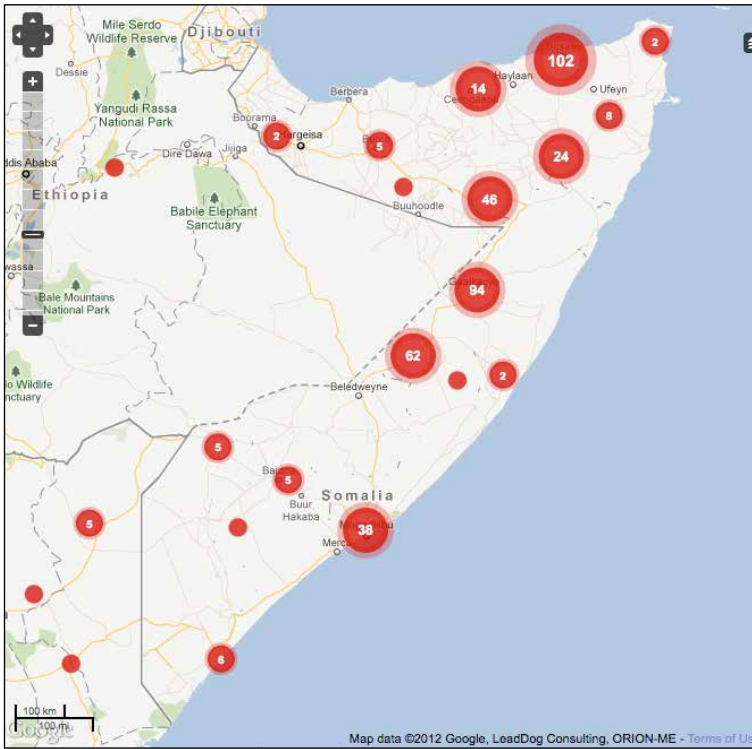
**T**HIS CHAPTER introduces examples about crowdsourcing in several realms. Let's start from space. NASA (National Aeronautics and Space Administration) in the United States crowdsources space research by inviting citizens to participate. Anybody can join NASA's research by mapping craters on their 'Be A Martian' web

initiative<sup>2</sup>, or by examining the Milky Way.<sup>3</sup> There are clear instructions on these sites on how to participate in crowdsourcing. In these initiatives the tasks the citizens do are fairly simple and routine. They are tasks that

<sup>2</sup> NASA's Citizen Science Lab: <http://beamartian.jpl.nasa.gov/welcome>  
<sup>3</sup> <http://www.milkywayproject.org/>, and news about the Milky Way project: <http://www.jpl.nasa.gov/news/news.cfm?release=2012-062>

**Picture 1.** Citizens participate in space research in NASA's Be A Martian Citizen Science Laboratory online. They can, for instance, count craters on Mars.





**Picture 2.** Crowdmapping the voice of Somalians about the nation's future on Al-Jazeera news site. <http://www.aljazeera.com/indepth/spotlight/somaliacconflict/somaliaspeaks>

couldn't be done without mass-participation, and would most likely be left undone without crowdsourcing. The surface of Mars, for example, has been only partially mapped, and the mapping can't be completed without massive participation.

Crowdsourcing has also become common in the form of *crowdmapping*, which can be used, for gathering eyewitness testimonials. In crowdmapping, the task is to send information about election fraud, for example, and the information is then placed on a map. The information can typically be sent to the map initiator by SMS or by filling out a form online. The reports are gathered on a map online. Crowdmapping is an efficient way to visually demonstrate the geographical spread of a phenomenon, whether that is violence, bribing, snow storms, or traffic jams. Crowdmapping has efficiently been used to map the consequences of crises and to locate the need for help. Ushahidi<sup>4</sup>, an open-source

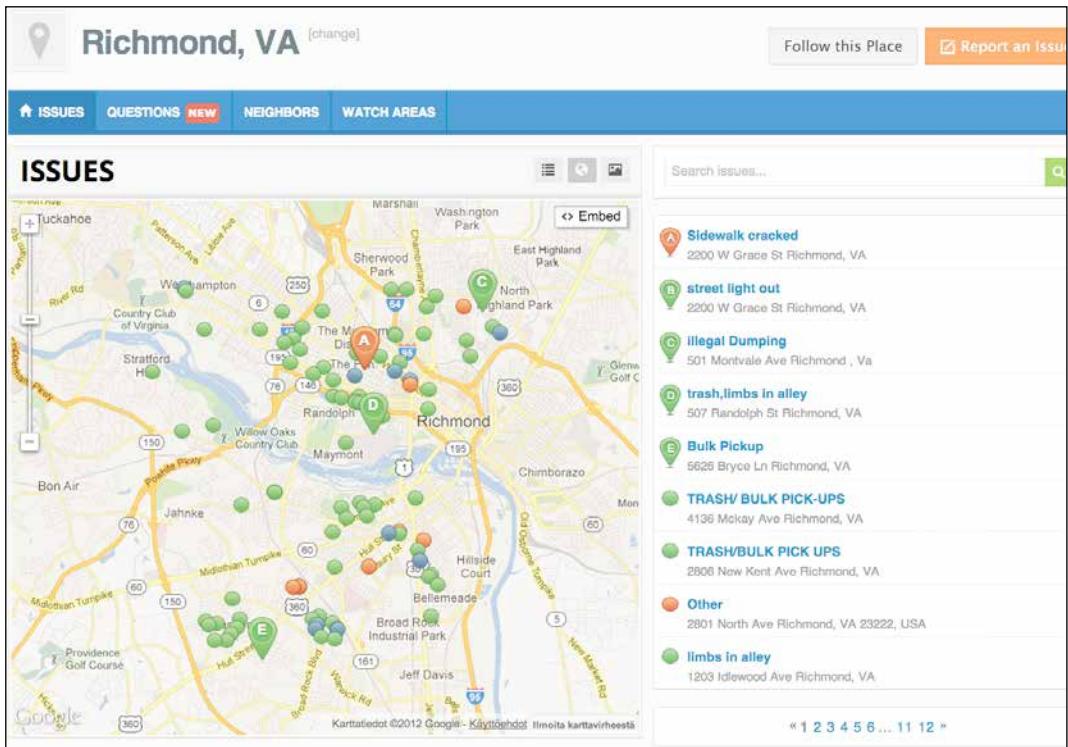
platform, has been commonly used in crowd-mapping. Crowdmapping has been used to map consequences of the 2010 earthquake in Haiti, election fraud in Egypt and India (Meier, 2011), and most recently in 2012, violence and crime in Syria.<sup>5</sup>

Crowdmapping has also been applied to track less catastrophic problems. With applications like SeeClickFix and FixMyStreet, residents can locate a problem in their neighborhood on a map. In some cities, the city picks up reports from the application, responds to the service requests, and also informs users about progress on the site. For example, the city of Richmond in Virginia, United States, asks its residents to report broken streetlights<sup>6</sup>, potholes, and similar problems on SeeClickFix (see Picture 3.) When the city has fixed the problem, it is moved on the site to the 'closed' category. Thus, the residents can follow maintenance progress. Cities use crowdsourcing to complement traditional methods (phone

<sup>4</sup> <http://ushahidi.com/>

<sup>5</sup> <https://syriatracker.crowdmap.com/>

<sup>6</sup> <http://seeclickfix.com/richmond/issues/hot>



**Picture 3.** The residents in Richmond report problems in their neighborhood on a crowdmapping service.

calls, mail, email) of submitting maintenance requests, because crowdsourcing provides an easy way to report issues online.

In crowdmapping, “reports” or eyewitness testimonials are either published immediately without checking the credibility of information or the credibility is checked.

One of the major challenges in crowdsourcing is verifying and assuring the quality of crowd-sourced information. Fact checking done by humans requires resources and knowledge. New, more automated methods of checking information are being developed; but even those face challenges.

## Innovation processes

**C**OMPANIES use crowdsourcing to gather ideas for product development and to sense trends among users. InnoCentive is one of the best-known platforms for product development crowdsourcing. Companies such as Procter & Gamble and Eli Lilly ask the crowd to submit solutions to problems, ranging from complicated chemistry problems to finding a way to

encourage people to use preventative care for health programs, through InnoCentive. The solvers are rewarded with a monetary prize of anywhere from a few thousands to hundred of thousands of dollars.

By crowdsourcing, companies receive several solutions to their problems. In an ideal case, they also save money: instead of recruiting new R&D teams for solving one

**Picture 4.** Nokia crowdsources ideas for innovations in its IdeasProject community.

problem, the solution can be crowdsourced. This is an advantage particularly in cases in which finding a solution requires expertise beyond the company’s R&D core expertise. To go through the recruitment process to achieve a solution to a particular problem would be senseless.

Some research findings indicate that problem solvers outside the specific knowledge-area of the problem (e.g. physics, chemistry, mechanical engineering) can, through crowdsourcing, help devise novel solutions. For example, in a study about crowdsourcing in new product development, the non-experts created solutions which had more novelty value and customer benefit according to the evaluation panel than those created by experts (professional engineers and designers), though somewhat lower in feasibility (Poetz and Schreier, 2011.) In this study, results from researchers within a company were compared with ideas from users by evaluators blind to the source of the ideas (professionals vs. users). They evaluated the novelty of the idea compared to existing solutions, the value of the idea in solving customers’ needs and the feasibility of the idea. Another study indicates that a problem solver beyond the field of the problem is more successful at the task than

an expert from the field (Jeppesen ja Lakhani, 2010.) Crowdsourcing for innovation processes is a reflection of larger transformations in division of labor. It is becoming more common that workers apply their knowledge in several fields, working on several assignments with overlapping tasks, rather than working for only one employer.

By using crowdsourcing in innovation processes, companies apply the principles of open innovation (Chesbrough, 2003.) Open innovation refers to the flow of innovation and knowledge both inbound to the company from external collaborators and outbound from the company. In the inbound flow, the company receives ideas, which the organization can use in its internal innovation processes. This means moving away from the traditional “Not Invented Here” syndrome associated with the closed innovation model, a scheme of thinking in which ideas beyond the company’s boundaries are ignored. In the outbound flow, the company encourages others to commercialize its technologies. Companies thus no longer restrict themselves to markets that they serve directly, but rather use partners to find new markets and business models for their technologies and other intellectual properties (Enkel et al., 2009.) Open inno-

vation is implemented for example by Open Application Programming Interfaces (Open APIs) (Aitamurto & Lewis, 2012). Through Open APIs, organizations encourage external actors to use their content and open data sets. Among other companies, Nokia, a mobile internet company, applies the open innovation strategy by using its IdeasProject platform<sup>7</sup>. On IdeasProject, Nokia crowdsources ideas for instance for social innovations in collaboration with organizations like WorldBank and United Nations. The best ideas are rewarded

7 <http://www.ideasproject.com/index.jspa>

and executed as applications to the Nokia Ovi Store.

Open innovation has deliberately been applied and studied mainly in companies (Dahlander & Gann, 2010). More recently, open innovation has been moving to the public sector. Organizations are increasingly arranging open innovation challenges in which they crowdsource innovations and business ideas. One of the best-known ones is the X-Prize awarded by the X-Prize Foundation<sup>8</sup> in the United States.

8 [http://en.wikipedia.org/wiki/X\\_Prize\\_Foundation](http://en.wikipedia.org/wiki/X_Prize_Foundation)

## Creative work and entertainment

**T**HE FINNS have been pioneers in crowdsourcing for creative work. The movie *IronSky*<sup>9</sup> premiered in the Spring of 2012 in Finland, and a part of the production process was crowdsourced. The crowd was invited to participate by writing and recording the script and producing marketing trailers. *IronSky* was produced by the Finnish Wreck-a-Movie<sup>10</sup> crowdsourcing platform. Crowdsourcing has also been used in opera production. The opera made in the OperaByYou<sup>11</sup> -project premiered at the Savonlinna Opera Festival in Summer 2012 in Finland.

Crowdsourcing is used also in mar-

keting. Organizations crowdsource design work like logos and advertisements. For instance, the car brand Chevrolet<sup>12</sup> crowdsourced its SuperBowl advertisement in 2011. Companies either do crowdsourcing on their own websites, or alternatively, they use crowdsourcing communities<sup>13</sup> for creative works such as Jovoto<sup>14</sup> or 99designs.<sup>15</sup> Whether the crowdsourced task is to produce an ad or to record a piece of a movie script, the process contributes to spreading awareness of the end product. The more people are involved with the production process, the more people anticipate the result of this joint effort.

9 <http://www.ironsky.net/>

10 <http://www.wreckamovie.com/about>

11 <http://operabyyou.wreckamovie.com/>

12 <http://www.chevrolet.com/culture/article/superbowl-route66/>

13 <http://www.youtube.com/watch?v=IR6VMLUeRXw&feature=relmfu>

14 <http://www.jovoto.com/>

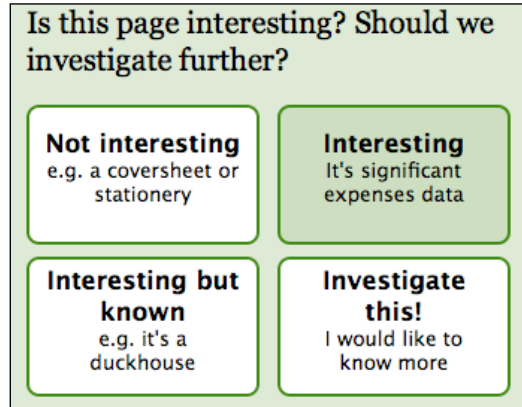
15 <https://99designs.com/>

# Journalism

**C**ROWDSOURCING IS USED in journalism to find story topics, information, and sources. One of the first well-known crowdsourcing initiatives in journalism was from *Talking Points Memo* (TPM), an American political publication, in 2007. TPM asked the readers to weed through thousands of emails to find relevant information about a case in which the United States Justice Department fired lawyers with allegedly unjustified reasons.

The British newspaper the *Guardian* used crowdsourcing in the UK in 2009. Readers were invited to investigate hundreds of thousands of documents relating to the nationwide political scandal (Aitamurto, 2011). Tens of thousands of readers helped the *Guardian* to parse the documents. Crowdsourcing was executed by using a simple software with which the readers were able to sort out documents (picture 5). The *Guardian* has also used crowdsourcing in several other instances, for instance in tracking the consequences of budget cuts in the UK.

In the Spring of 2009, *Huffington Post*, an online newspaper headquartered in the United States, gave a task to its readers: to compare the original stimulus bill from the US Senate with the compromise. The readers were instructed to point out “any significant differences,” particularly “any examples of wasteful spending or corporate giveaways that aren’t stimulative.” To give a few more examples about crowdsourcing in journalism: the American cable channel CNN crowdsources eyewitness reports from all over the world. A Swedish newspaper *Svenska Dagbladet* has crowdsourced mortgage interest rates from 25,000 readers, and information



**Picture 5.** British newspaper *The Guardian* asked its readers to parse MPs’ expense receipts to discover the ones worth investigating further.

about problems in senior health care and in development aid. In Finland, *Huuhkaja.fi*<sup>16</sup> uses crowdsourcing systematically in magazine and feature journalism. A Finnish women’s magazine *Olivia*<sup>17</sup>, published by publishing company Bonnier, uses crowdsourcing on a platform designed for collaboration between readers and journalists. The leading daily newspaper in Finland, the *Helsingin Sanomat*, investigated stock shortselling in its award-winning story series in 2011<sup>18</sup>, in which crowdsourcing was used.<sup>19</sup> By crowdsourcing, the journalist received a tip from a reader, and this tip led into revelation of a questionable holding company arrangement in *Osuuspankki*, a Finnish co-operative bank.

<sup>16</sup> <http://huuhkaja.fi/>

<sup>17</sup> [www.omaolivia.fi](http://www.omaolivia.fi)

<sup>18</sup> <http://www.hs.fi/talous/OP-Pohjolan+pankkiirit+saaneet+miljoonaosin+koja/a1305552278888>

<sup>19</sup> <http://www.iltasanomat.fi/kotimaa/tutkivan-journalismin-palkinto-hsn-tuomo-pietilaiselle/art-1288459021538.html>

## Microwork

**P**ECUNIARY CROWDSOURCING entails crowdsourcing of work for “an undefined” crowd of workers. These tasks are distributed in virtual marketplaces, like Amazon Mechanical Turk. On Mechanical Turk<sup>20</sup>, anybody can sign up as a worker and as an assignment giver. The workers, who are called ‘turkers,’ do typically simple tasks – called microwork or microtasks – such as checking numbers on a spreadsheet or tagging pictures. The tasks are rewarded with a payment, which typically is very small. An hourly pay can be from one to two dollars (Ross et al. 2011).

Most turkers live either in the United

States or in India. By using virtual work marketplaces such as Mechanical Turk, companies can outsource routine small tasks to an enormous crowd of workers. In contrast to traditional outsourcing, in which the performing agent of the task is known, in crowdsourcing, the task is open to an undefined crowd, out of which some will take up the work. Crowdsourcing work is a quickly growing phenomenon, which will globally change the division of labor. Finnish companies are also part of the evolving scheme: a company called MicroTask<sup>21</sup> specializes in digitizing documents by crowdsourcing.

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20 <https://www.mturk.com/mturk/welcome>

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21 <http://www.microtask.com/>

## Crowdfunding

**C**ROWDFUNDING REFERS to an activity in which funds are gathered online from a large crowd. Crowdfunding is used for a variety of purposes, like for social good, start-up investments, art projects, and journalism. One of the best-known crowdfunding platforms is Kickstarter<sup>22</sup>, on which people gather funding for projects on art, literature, and technology. Crowdfunding dissolves traditional funding models, whether investments or donations, and provides a new, ideally efficient way to quickly fund a project. Crowdfunding can be seen as a manifestation of collective intelligence: by investing or donating money, the crowd indicates the technologies or companies they believe in and the kind of societal problems they think are worth investigating, the kind of books they feel are worth writing, and so on.<sup>23</sup>

Typically, in crowdfunding, individual investments or donated funds are small. The power is based on the volume of participants: when enough small amounts are gathered together, the end-sum becomes large. On Kickstarter, over three million dollars were gathered to make a movie<sup>24</sup>, in what was a record-breaking crowdfunded project.

Crowdfunding has also become more popular in journalism. Spot.Us, head-quartered in the United States, is one of the best-known crowdfunding platforms for journalism.<sup>25</sup>

Crowdfunding can also refer to loans – like microloans or microlending – in which assets are gathered from a variety of sources online. Microlending has become more common through organizations such as Kiva.org.<sup>26</sup> An investor lends a small amount money to an

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22 <http://www.kickstarter.com/>

23 Aitamurto, 2011

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24 <http://www.kickstarter.com/projects/66710809/double-fine-adventure>

25 <http://spot.us/>

26 <http://www.kiva.org/>

**Drawing a Drawing 365**  
 A Painting project in New Britain, CT by Michael Shapcott · [send message](#)

PROJECT HOME | UPDATES 4 | BACKERS 341 | COMMENTS 20 | REMIND ME

341 BACKERS  
**\$49,930**  
 PLEDGED OF \$10,000 GOAL  
**6**  
 DAYS TO GO

THIS PROJECT WILL BE FUNDED ON SATURDAY APR 26, 11:59PM EDT.

**BACK THIS PROJECT**  
 \$1 MINIMUM PLEDGE

PLEDGE \$5 OR MORE

1,713 people like this. Be the first of your friends. | Tweet | EMBED | <http://kck.st/GSMaRg>

**Picture 6.** On Kickstarter, one of the best-known crowdfunding platforms in the world, people raise funding for their projects. This art project has gathered \$50,000.

entrepreneur in a developing country. That small amount helps the entrepreneur to proceed with their business. When the business makes a profit, the entrepreneur pays the loan back. The investor can then reinvest the money in another entrepreneur.

Crowdfunding has become more com-

mon also as a funding model for start-ups. In this model, the start-up gathers funds from investors through crowdfunding, for example through companies such as CrowdCube and GrowVC, which function as crowdfunding intermediaries. The investor can get started with as little as 20 dollars in a month.



# Evolution of crowdsourcing

**A**S THE PREVIOUSLY introduced examples of crowdsourcing demonstrate, crowdsourcing is used widely in several realms. The interesting cases of crowdsourcing are endless: KhanAcademy, a source for online education, crowdsources subtitles for videos. The United States Trademark and Patent office crowdsources patent reviews.<sup>27</sup> Cell researchers crowdsource parts of cell research.<sup>28</sup> And so on.

Crowdsourcing, however, is not based on a novel mechanism. In the 1800s in Great Britain, a solution for determining longitude was crowdsourced. The Government of the country set up the Longitude-prize<sup>29</sup> to encourage problem solving.

The mechanism of crowdsourcing still works the same as it worked in 1800s Britain: the task is open for anybody to participate in. ‘Anybody’ was, and still is, determined by knowledge and expertise. Improved communication technologies distinguish crowdsourcing then from now. New technologies enable more efficient crowdsourcing, and since the web is accessible to a growing number of people, more people can participate in crowdsourcing. In 1800s, the crowd was

much more restricted in size and diversity.

Crowdsourcing is a part of broader societal developments, in which the citizens – and consumers – can participate in processes previously closed. Along with the rise of participatory culture (Jenkins, 2004; 2006) citizens channel their *cognitive surplus* (Shirky, 2010) into online processes, such as crowdsourcing. Cognitive surplus refers into our cognitive resource, which is remaining after we accomplish all mandatory tasks. Transformations in culture, leisure time, and the nature of work life contribute to that surplus. Citizens increasingly expect the chance to participate, and citizen activism is increasingly being channeled online (Shirky, 2008.) In this modern activity, communication is real-time, dynamic, and multi-way: the flow goes from citizens to institutions and back. The communication flows also from citizens to citizens since the citizens’ input is there for anybody to see and comment on. The recipient in this scheme is also a sender and producer. The same mechanism also applies to democracy: the citizen becomes more active and moves from the spectator’s seat onto the stage.

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<sup>27</sup> <http://www.peertopatent.org/>

<sup>28</sup> <http://www.scientificamerican.com/article.cfm?id=victory-for-crowdsourced-biomolecule2>

<sup>29</sup> [http://www.royalnavalmuseum.org/info\\_sheets\\_john\\_harrison.htm](http://www.royalnavalmuseum.org/info_sheets_john_harrison.htm)

# 3. Crowdsourcing in democratic processes

**T**HIS CHAPTER FOCUSES on crowdsourcing in policy-making. Crowdsourcing is used in listening to citizens' opinions and gathering information. This book does not cover all instances of such crowdsourcing, but focuses on cases in which the establishment initiates the crowdsourcing process. This book examines crowdsourcing as a part of traditional, established democratic processes. The emphasis is on cases in which crowdsourcing is leading to an end-goal, whether that is budget, strategy, or law. This chapter does not include cases in which civil society independently crowdsources something without a "pipeline" into the traditional decision-making process.

It is important to note that this chapter briefly introduces several cases in which crowdsourcing has been applied in policy-making, but does not analyse their success or failure. This is due to the lack of criteria of success in the phenomenon introduced in this book. The question is: How should we measure the success? Should we assess the success by the volume of participation, the diversity or quality of participation, or by the quality of outcome? How can we define 'quality' in this context? These vital questions remain unanswered in the study of crowdsourcing for policy-making, and are yet to be addressed in the forthcoming work by scholars in this field.

## Law and strategy processes

### Constitution reform in Iceland

**C**ROWDSOURCING WAS USED in Iceland in 2010 and 2011 in the constitution reform process<sup>1</sup>. The constitution needed reforming, and the Prime Minister **Johanna Sigurðardóttir**, among others, wanted to invite the citizens to join the reform process. The citizens' knowledge, ideas, and expertise were crowdsourced for the constitutional reform.

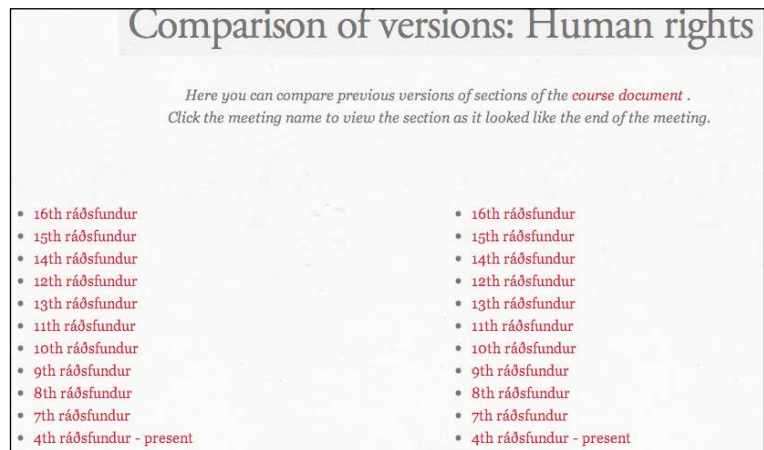
Iceland was recovering from a heavy financial crisis, which led into a recession. This crisis also led to democratic recession, since the citizens' trust in the powerholders deteriorated.

As preceding events to crowdsourcing, there had been national assemblies<sup>2</sup> for citizens to discuss the country's values and future. In the assembly in 2010, Icelanders shared perspectives about the constitution. Input from 1,000 people was summarized into this mind map <http://thjodfundur2010.is/nidurstodur/tre/>, which was later used in the constitution reform. Based on proceedings in the national assemblies, crowdsourced constitution process was set to start. First, the Icelanders chose 25 representatives to a constitution reform council. These representatives were regular citizens rather than professional politicians,

<sup>1</sup> Video about the constitution reform process in English <http://youtu.be/4uJOjh5QBgA>

<sup>2</sup> <http://www.thjodfundur2010.is/> and <http://www.thjodfundur2009.is/>

**Picture 7.** Versions of the human rights article in the Icelandic constitution. By clicking on the links the user can read both the versions and track changes.



and they were chosen in elections. There were hundreds of candidates for the council. The group of 25 representatives started the very ambitious reform process, which was set to be completed in only a couple of months. Though the Supreme Court of Iceland did not accept the result of the reform council elections due to alleged technical problems in the election, the Parliament in Iceland supported the election result, and thus the reform board was able to start its work, despite the controversy.

The council was assigned to use guidelines drafted in national assemblies. After the meetings the most recent versions of the constitution draft were published online and citizens were invited to comment on the drafts. Participants left thousands of comments online. (Picture 7)

The comments were left on the website; additionally, individuals sent emails and traditional letters to the reform council. The reform council also heard from experts in traditional offline ways in the process.

The reviews of the reformed constitution draft state that though it allocates more power to the citizens than the current one, it is not as radical as anticipated. The reformed constitution is currently under review in the Parliament of Iceland, and it has to be approved by two Parliaments. In the Fall of 2012, a non-binding referendum was organized in Iceland about the reformed constitution. Twothirds

of Icelanders supported the draft.<sup>3</sup> As the referendum is non-binding, Alþingi, the Icelandic parliament, will ultimately decide whether the draft will be used as a guideline for a new constitution, which would replace the existing constitution from 1944.

Crowdsourcing brought new perspectives to the constitution, perspectives which might not have been noted otherwise. For instance, the reform board received a tip to include the issue of segregation based on genomics, which has become more pressing along with the spread of consumer genomics tests. Thus, crowdsourcing made the gathering of knowledge in the constitution reform process efficient: The search for information is extended to the “crowd’s” knowledge neighborhoods (c.f. Afuah and Tucci, 2012), thus extending the search to unknown and unexpected areas of knowledge. Typically, the knowledge search is broadcast only to known and local knowledge neighborhoods.

The process raised a nationwide discussion about the meaning of constitution. Thus, the open process holds the potential to raise citizens’ awareness of democratic processes and policy-making. The open process also resulted in an alternative to the current constitution – an alternative that the citizens can form opinions about, comment on, and discuss. Traditionally, law reform processes

<sup>3</sup> <http://gigaom.com/europe/icelanders-approve-their-crowdsourced-constitution/>

are closed to the public, and only established experts are heard. Therefore, the open process creates a possibility for citizen empowerment, which can lead to the strengthening of political legitimacy. Citizens can feel that they are a part of the process, and therefore, feel ownership over the political processes that shape their lives.

The open constitution reform process did not work out – of course – without problems. This pioneering process was very ambitious: the constitution had to be reformed with a new method in only couple of months. The novelty and tight schedule resulted into challenges, such as spreading awareness about the process. How to inform the citizens about the process and encourage them to participate? How to choose a representative, diverse reform board?<sup>4</sup>

There are more challenges: How to create access to the process for those who don't have

online access? How to make citizens' voice heard throughout the process, when the traditional policy-making process takes over? How to keep people motivated to participate? How to make them demand accountability from the politicians so that citizens are (at least) given a reason when their feedback is not taken into account? The voice of Icelanders has sometimes been ignored, when some political parties have opposed the reform. That is not surprising, since the constitution draft does have radical reforms. (More about the details in the constitution in this study: <https://webspace.utexas.edu/elkinszs/web/CCP%20Iceland%20Report.pdf>).<sup>5</sup>

In sum, the open process in Iceland was groundbreaking and very ambitious. The experiment also left some crucially important lessons for Iceland – and the whole world – about how we can use novel methods, such as crowdsourcing, in listening to citizens.

4 See e.g. Olafsson (2011).

5 <http://www.comparativeconstitutions.org/2012/10/we-review-icelandic-draft-constitution.html>

## National Dialogues in the United States

**T**HE FEDERAL GOVERNMENT in the United States has used crowdsourcing for several years now. Crowdsourcing as a form of citizen participation is a part of the national Open Government-strategy, which President Barack Obama initiated in the beginning of his first term in

office.<sup>6</sup> Transparency, collaboration, and participation are the core of that strategy. These guidelines resulted in an Open Government Initiative in the United States Government. The Open Government Initiative is executed

6 [http://www.whitehouse.gov/the\\_press\\_office/Transparency\\_and\\_Open\\_Government/](http://www.whitehouse.gov/the_press_office/Transparency_and_Open_Government/)



**Picture 8.** The participants shared ideas and comments about the strategy to improve federal websites in the United States.

**Picture 9.** The participants collected points and their activity was recorded to their personal activity streams.

**Candi Harrison**  
Member since 6 months ago

**6 ideas posted** **798 points**  
62 comments 141 votes

**Badges**

**NEW**

Powered by BadgeFarm

**Candi Harrison is a member of:**  
National Dialogue on Improving Federal Websites

**Activity Stream**

- Received positive feedback on Comment: [Go from Complete Redesigns to Incremental Continuous Change](#) 6 months ago
- Voted on Idea: [Have WAY MORE dialogs like this one!](#) 6 months ago
- Voted on Idea: [Make this ongoing](#) 6 months ago
- Voted on Idea: [Provide access to services, not systems](#) 6 months ago
- Voted on Idea: [Use specialists to build your web content](#) 6 months ago
- Received positive feedback on Comment: [Go from Complete Redesigns to Incremental Continuous Change](#) 6 months ago
- Received positive feedback on Idea: [Create a culture of customer service](#) 6 months ago
- Received positive feedback on Idea: [Create content around topics/customers - not](#)

in several contexts of governance, from the White House to federal agencies. The progress of the initiative can be followed in the reports, which are published online.

The concept of Open Government refers to applying the principles of transparency and participation to governance and policy-making. The national data hub for open data<sup>7</sup>, national crowdsourcing platform<sup>8</sup>, and We the People -platform<sup>9</sup> for citizen petitions are a part of the Open Government Initiative.

Furthermore, several federal agencies too have applied crowdsourcing in their operations. For instance, when General Services Administration was assigned to improve the public service websites, the agency decided to have a national dialogue on how to improve these websites. Parts of the reform process were opened to the public so that the citizens could participate in the process online. Citizens and experts were invited to share ideas, perspectives, and opinions about how to improve the websites. At the same time, the first

national web strategy was in the making, and perspectives were also requested regarding the strategy.

The topic of the dialogue, improvement of the public service websites, was divided into 12 categories. These categories were discussed using a crowdsourcing software called IdeaScale for a couple of weeks. The participants responded to questions which were posted online. The participants could comment on others' ideas and vote for or against them. The participants also tagged their ideas by categories. Thus, the ideas were searchable on the website by categories. (Picture 8)

Conversation catalysts were recruited to spur the discussion and share their expertise. They were individuals considered to be leaders in the subject matter, such as **Craig Newmark**, the founder of Craigslist. These conversation catalysts attracted participants, and they too responded to questions and comments on the crowdsourcing platform.

The participants created a profile, which recorded their activity. (Picture 9) The participants collected points for their activity, which could be also followed in the leaderboard for

<sup>7</sup> <http://www.data.gov/>

<sup>8</sup> <http://challenge.gov/>

<sup>9</sup> <https://www.whitehouse.gov/petitions>

## Top 10 Most Popular Ideas

508 / WCAG 2.0 Accessibility	– 59 votes
Web To Mobile - Content Portability	– 41 votes
Develop Shared Services Catalog	– 41 votes
Make Govt. Mobile Apps Easy for Elderly and Disabled	– 30 votes
Create Mobility Centers of Excellence	– 28 votes
The power of crowds	– 27 votes
Collaboration: the next-generation of information sharing	– 26 votes
Apps are easy... enterprise strategy, not so much	– 25 votes
Consider Responsive Web Design	– 25 votes
Establish Federal Mobility Infrastructure Standards	– 25 votes

**Picture 10.** The 10 most popular ideas in the crowdsourced federal mobile strategy process in the United States.

the site. The leaderboard informed users of the most active participants and their activity (e.g., ideation, voting, or commenting).

The organizers also used intense “dialogue moments” to activate the discussion. These roughly hour-long segments were called “dialogue-a-thons,” the name modified to follow popular hackathons and codeathons. Hackathons and codeathons are intensive gatherings of coders, designers, and other subject matter experts, in which prototypes for web solutions are developed in a day or two. This model was partially applied in online conversations.

The process resulted in about 440 ideas, 1,700 comments, and over 8,000 votes from about 1,000 participants. There were clear themes that arose from the discussions. For instance, the participants hoped that the websites were structured following citizens’ needs rather than according the structural categorization of governmental departments, so that the users would find the information faster. Participants also hoped that the principles of user-centric design would be applied to the website development processes in the public sector. This would ensure clarity and smooth user-experience on those websites. In a similar vein, the participants urged the government to do more thorough user-testing before the websites are launched. They also hoped that disabilities such as vision disabilities would be taken into account in the design. The participants also wished for better search functionality in the government websites. When this question was posted on the site, the conversation moderators informed the

participants about a search function called USA Search, which was already in place. Thus, the open process served as a way to inform the citizens about government services.

A similar national dialogue about federal mobile strategy took place in January 2012. The strategy is intended to improve public service and to engage citizens. The idea is that when the best tools are identified, governmental work becomes more efficient and resources are saved. Crowdsourcing was used to gather ideas and perspectives for the mobile strategy.

Just like in the previous example, ideation and discussion were open for anybody to participate in. Ideas which were beyond the scope of the theme for crowdsourcing initiative were classified as ‘off topic’ and were not displayed on the main page on the crowdsourcing platform. The community hosts spent about half an hour a day responding to questions and moderating the conversations. Awareness about the open process was spread, for instance, in social media and in the White House blog. Hundreds of ideas, votes, and comments were gathered in a couple of weeks. (Picture 10)

Both the strategies elaborated above are still works in progress, and so the impact of participation can’t be examined in the ready strategy. However, based on the experiences thus far, we can conclude that crowdsourcing brings in citizens’ ideas – both from the “inexpert crowd” and the “expert crowd.” Many participants were civil servants or former government employees, and the participation wasn’t very large in volume.

# Participatory budgeting

## Budget preparation in Chicago

**C**ROWDSOURCING was used in budget preparation in the city of Chicago in the United States in 2011. Crowdsourcing was pushed forward by the Mayor, **Rahm Emanuel**. The city had to make big budget cuts, and the mayor asked the Chicago residents to speak out on what to prioritize in the budget.

City officials reviewed the ideas from the crowdsourcing process, and the participants could follow the progress on the crowdsourcing platform. For instance, when an idea moved forward to the ‘Review’ category, the idea status changed on the crowdsourcing platform. If idea ended up in the budget, or if it already was there, the status was changed into ‘Budget’-category. Thus the participants were able to stay up-to-date about the process.

The Chicago city employees, who were hosting the crowdsourcing community, also commented on the ideas. The participants were also informed if a similar proposition was already in the budget or if a similar service existed in Chicago. (picture 11) The awareness of the process was actively spread on Facebook (picture 12), Twitter, and YouTube.

The city of Chicago has been pioneering in its social media use to engage citizens. The mayor has invited the citizens several times to pose questions online. The mayor responds to those questions on live “Facebook Town Hall Meetings,” which are broadcast on the Mayor’s channel on YouTube.<sup>10</sup> Questions can also be sent to Twitter by using the #AskChicago hashtag as well as the AskChicago crowdsourcing platform, where participants can vote for ideas and comments.<sup>11</sup>

Participatory budgeting has become a trend in the United States. Just like Chicago, Cook County in the United States crowdsourced a part of the budget preparation in 2011.<sup>12</sup> Cook County had to make big budget cuts. A lot of information about budget expenses, income, and trends from previous years was published online. The citizens were provided with background information to comprehend the budget process, and to evaluate the reasons and the impact of budgetary

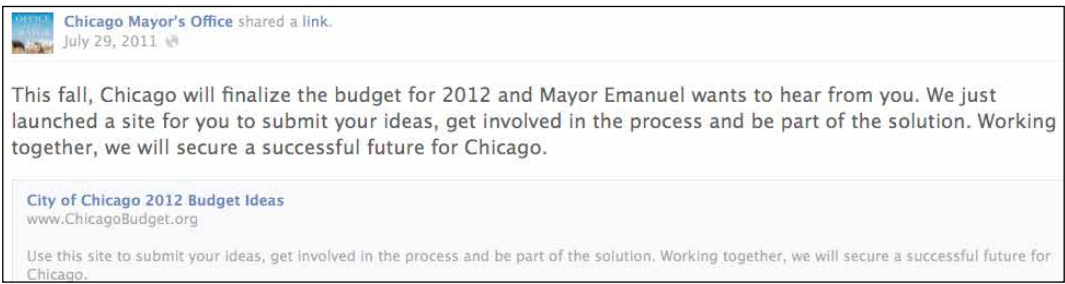
<sup>10</sup> <http://www.youtube.com/watch?v=t4473SeuKaA&feature=share&list=UUzVUmQC2R4PEH6ru6N3x5SA>

<sup>11</sup> <http://askchicago.org/>

<sup>12</sup> <http://blog.cookcountylil.gov/budget/closing-the-gap/>

**Picture 11.** The representatives from the Mayor’s office in the City of Chicago responded to participants’ questions on the crowdsourcing platform and informed them about existing city services. Thus crowdsourcing had an educational function.





**Picture 12.** Awareness about the participatory budget process in Chicago was spread on social media, for instance, on Facebook.

cuts. Citizens were asked to share their ideas and perspectives about budget and transparency in governance. The Cook County Board President, **Toni Preckwinkle**, also announced that for the first time in the history of Cook

County budget expenses would be published every quarter. Thus, the citizens can follow the city’s budget throughout the budget period.

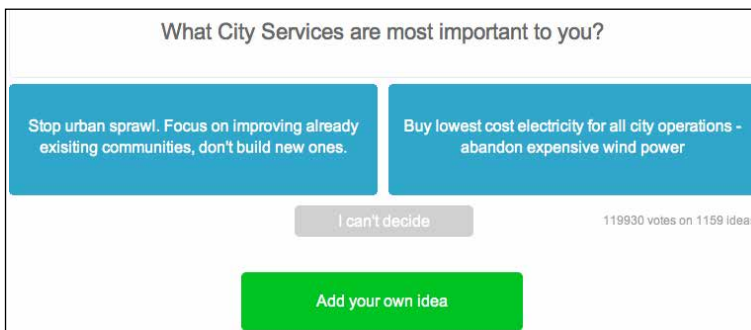
## Budget preparation in Calgary

**T**HE CITY of Calgary in Canada crowdsourced the city’s budget process in 2011.<sup>13</sup> The process had several stages and entailed both offline and online activities.

Citizens were asked to share their opinion about city services and requested to prioritize those. Prioritization happened through binary decision-making: The participants were presented two options online and asked to choose one which was more important (Picture 13.) They could also add their own proposal on the platform.

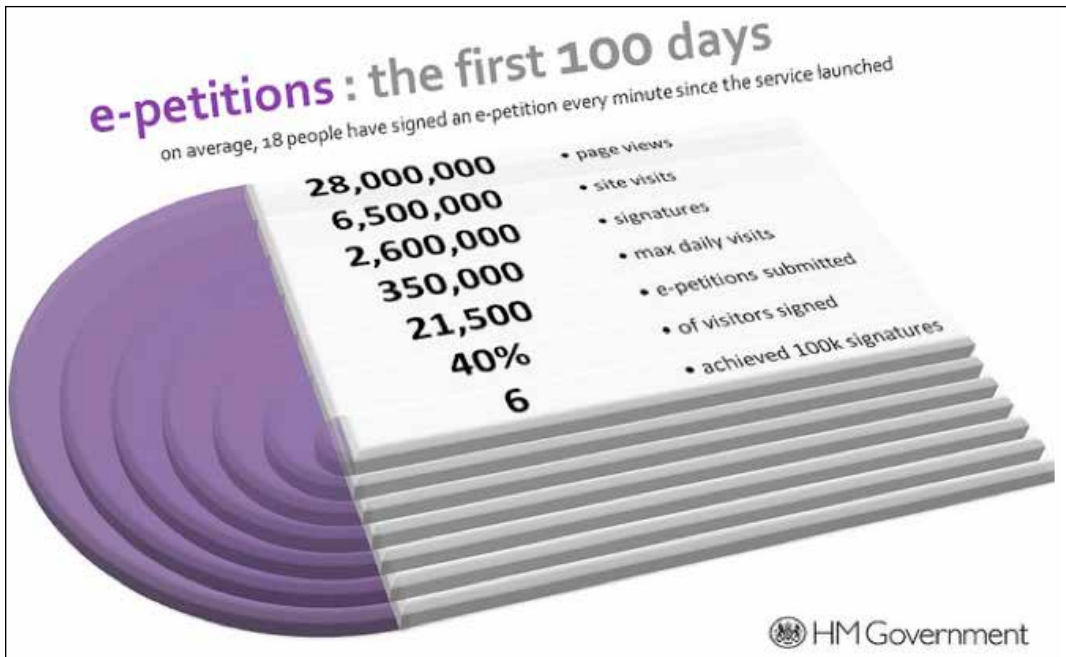
Participation was possible on mobile application and social media like Facebook and Twitter were also used. Off-line events were organized as well. In these events, citizens received educational material about the city’s budget, and the city’s services and budget were discussed. The participants proposed altogether about 1 400 ideas and there were around 120 000 votes. Citizens’ participation resulted in reforming the budget plans so as to be written in clearer language that provided information in a better way to both citizens and civil servants.

<sup>13</sup> <http://www.calgarycitynews.com/2011/04/which-city-services-matter-most.html>



**Picture 13.** In Calgary, Canada, the residents were asked to prioritize city services by using a binary decision-making software called AllOurIdeas.org.





Picture 14. User statistics after the first 100 days in the new e-petition site in Great Britain.

## Citizen petition sites

**C**ROWDSOURCING has become more common in publishing citizen petitions and gathering signatures from them. For instance, in Great Britain citizens can sign petitions electronically in a service set up by the Government (Picture 14).

Petitions which gather over 100 000 signatures early 2000's.

natures are discussed in the Parliament but they do not automatically lead to changes in legislation or other actions. Digital petitions are also used in local governance. They have, for instance, been used in the Parliament of Queensland in Australia<sup>14</sup> since

<sup>14</sup> <http://www.parliament.qld.gov.au/work-of-assembly/petitions/overview>

## Open Ministry in Finland

**I**N THE SPRING OF 2012, a change in Finnish constitution spurred crowdsourcing online. According to the New Citizens' Initiative Act,<sup>15</sup> when a petition gathers at least 50,000 signatures in six months, the petition has to be discussed in

the Finnish Parliament. Ideas for petitions and signatures are crowdsourced online. The signatures can be gathered offline or online by using online bank user identification.

There are two types of proposals that citizens may now initiate. One type is asking the government to take actions towards a goal and to change an existing legislation. This propos-

<sup>15</sup> <http://www.dw.de/new-website-lets-finnish-citizens-propose-laws/a-15795534-1>

**AVOIN MINISTERIÖ** Listaa kaikki Anna idea

IDEA **LUONNOS** LAKIEHDOTUS LAKI

 **Joonas Pekkanen** 1.3.2012

**Esitys opintotukilain muuttamiseksi**

Ehdotetaan opintorahan ja asumislisän takaisinperintään liittyvän 15 prosentin rangaistusluonteisen korotusmaksun korvaamista kulloinkin voimassaolevalla viivästyskorolla sekä takaisinperintää koskevien opintotukikuukausien palauttamista takaisin opiskelijan käytettäväksi.

**YLEISPERUSTELUT**

**Nykytila ja ehdotetut muutokset**

**Tehdäänkö tästä laki?**

KYLÄ
EI

244 äänen jakautuminen



● 239 Kyllä ääntä 98.0%  
● 5 Ei ääntä 2.0%

**Picture 15.** In the Finnish Open Ministry citizens can start petitions for bill proposals and sign petitions using electronic signature.

al type ends up with a ministry responsible for the field. The other type of proposal is a new legal bill that is formulated in a crowd-sourced manner (Picture 15). This proposal type ends up with the Parliament.

Shortly after the Citizens’ Initiative Act came into action, a group of voluntary activists set up an online platform to gather petitions and signatures. The platform is called Open Ministry ([www.avoinministerio.fi](http://www.avoinministerio.fi)), and this non-profit with its pioneering platform has gained international attention.<sup>16</sup>

<sup>16</sup> <http://techpresident.com/news/22927/finland-open-ministry-brings-legislation-crowd>, <http://gigaom.com/europe/online-crowdsourcing-can-now-help-build-new-laws-in-finland/>

Open Ministry enables citizens to create an alternative policy-making agenda and push their initiatives to formal democratic processes. Politicians and other power holders, on the other hand, can see citizens’ hopes and preferences for change. Open Ministry is a pioneering model to crowdsource initiatives for legislation in collaboration with citizens. Because of the Citizens’ Initiative Act, Open Ministry also has a ready-made pipeline to established democratic processes – if a petition gets enough support, it has to be discussed in established political institutions.

# We the People in the United States

**T**HE WHITE HOUSE in the United States has set up a platform for citizen petitions. The platform is called We the People.<sup>17</sup> When a petition gathers more than 25,000 signatures in 30 days, the White House finds an expert in the government to respond to the petition (Picture

16). The responses are published on the We the People website. On some occasions, the White House has also set up conference calls with people behind the petitions to discuss both the issue and the potential follow-up.

When a citizen leaves a petition on the site and has written a short abstract summarizing

17 <https://www.whitehouse.gov/petitions>

**Picture 16.** On White House's We the People petition site citizens can start petitions for bills. If a petition receives enough support, the White House gives an official response to the petition.

the WHITE HOUSE PRESIDENT BARACK OBAMA ★★★★★ THE WHITE HOUSE WASHINGTON ★★★★★

BLOG PHOTOS & VIDEO BRIEFING ROOM ISSUES the ADMINISTRATION

# WE the PEOPLE

YOUR VOICE IN OUR GOVERNMENT

HOME CREATE A PETITION OPEN PETITIONS RESPONSES HOW & WHY

WE PETITION THE OBAMA ADMINISTRATION TO:

## Support mandatory labeling of genetically engineered foods (GMOs).

We have a right to know how the food we eat and feed our families is produced, but under current FDA regulations, we don't have that ability when it comes to genetically engineered foods (GMOs).

More than forty countries, including Russia and China, already require labels on genetically engineered foods. And a recent poll found that nearly all Democrats (93%), Independents (90%), and Republicans (89%) support labeling of GMOs. At a time when partisan rancor dominates the public conversation, there are few topics that can muster such overwhelming support.

And although over 1 million people submitted comments in favor of labeling, the FDA has yet to act.

Created: Apr 12, 2012

Issues: [Agriculture](#), [Consumer Protections](#), [Health Care](#)

[Learn about Petition Thresholds](#)

SIGNATURES NEEDED BY MAY 12, 2012 TO REACH GOAL OF 25,000	0	TOTAL SIGNATURES ON THIS PETITION	29,138
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the issue, the platform identifies if there are any existing petitions related to that issue. If there are, the We the People platform displays the existing petition for signing purposes to avoid duplicates in the petitions.

We the People was launched in the Fall of 2011.<sup>18</sup> This platform is a part of the digital transparency and engagement strategy in the Obama government. The site became far more popular than what the White House anticipated, and therefore, the threshold for signatures was raised from the initial 5,000 to the current 25,000.<sup>19</sup>

We the People serves as a channel between the citizens and the Obama Government. The service doesn't have a direct pipeline to the Congress, where the proposals could be pro-

cessed. Thus, the model is different from that of the Finnish Open Ministry, in which a proposal which has gathered enough signatures has to be processed by a Ministry or the Parliament. However, some actions have resulted from citizens' initiatives at the We the People site, says the White House. As a response to two petitions regarding the freedom of the internet and piracy (SOPA and PIPA), Obama's government took a stance in the matter, as well as in a petition to stop unhealthy commercial breeding.<sup>20</sup>

We the People uses the open-source code and the goal is to publish the code so that the crowdsourcing model can be used by anybody, for instance, the local government and foreign countries.

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<sup>18</sup> <http://www.whitehouse.gov/blog/2011/09/22/petition-white-house-we-people>

<sup>19</sup> <http://www.whitehouse.gov/blog/2011/10/03/good-problem-have-raising-signature-threshold-white-house-petitions>

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<sup>20</sup> <https://www.whitehouse.gov/petitions#/response/were-listening-seriously>

# Open innovation and innovation challenges

**C**ROWDSOURCING has become more common as a part of the open innovation strategy and practices in the public sector (More about open innovation and crowdsourcing in Chapter 2). Open innovation manifests in the public sector in *innovation challenges*. The crowd is invited to participate in these challenges by submitting their ideas or prototypes for new services. In the United States, several federal agencies have arranged open innovation challenges. The challenges are announced on the United States' national open innovation challenge platform (<http://challenge.gov/>). The challenges are open for anybody to participate in.

To cite an example, the Environmental Protection Agency (EPA) in the United States organized a challenge for mobile innovations in the field of environment and energy saving. The challenge was called "Apps for the Environment," and the applicants posted their ideas or the descriptions of their prototypes on the Challenge.gov-platform. The goal was to find novel, innovative ways to use the open datasets EPA had published online and to discover new innovations, which could make their way to consumers' hands.

EPA spread the word about the challenges in social media, blogs, and events such as hackathons. Hackathons are events in which the participants quickly develop prototypes based on EPA's datasets. EPA also organized webinars about innovation challenges. The webinars informed about EPA datasets, listened to people's wishes regarding forthcoming datasets, and answered questions about the challenges.

The challenge received about 40 submis-

sions<sup>21</sup>, from which the jury chose the winners. The participants came from a wide variety of groups: web developers, entrepreneurs, organizations, and schools. The common denominator was interest in the environment. Several federal agencies have organized innovation challenges similar to EPA's challenge. NASA (National Aeronautics and Space Administration) has done pioneering work in open innovations. In the recent open government strategy<sup>22</sup>, NASA emphasizes on open innovation even more.

Typically, in innovation challenges in the public sector the awards are small amounts of money for the best applications. These challenges encourage citizens to use open data to develop solutions for improving public services. One motivation factor for getting citizens to participate is to get publicity for their service. Thus, they can find new markets for their solutions. As a result, they become a part of the open data and open government ecosystem. Developers and entrepreneurs play a crucial role in this ecosystem because they discover ways to use open data and they find markets for their solutions. Government can't be actively developing a huge number of cutting-edge web and mobile applications, find users for them, and develop sustainable business models. Therefore, government can't take on the role of developers and entrepreneurs. As the EPA concludes after reflecting on the lessons learned in their initiative, announcing the innovation challenge winners is not an end of a process but rather a beginning of another process, in which the relationship between developers, entrepreneurs, and organizations is growing.

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<sup>21</sup> <http://appsfortheenvironment.challenge.gov/>

<sup>22</sup> <http://open.nasa.gov/plan/>

# 4. The role of crowdsourcing in democratic processes

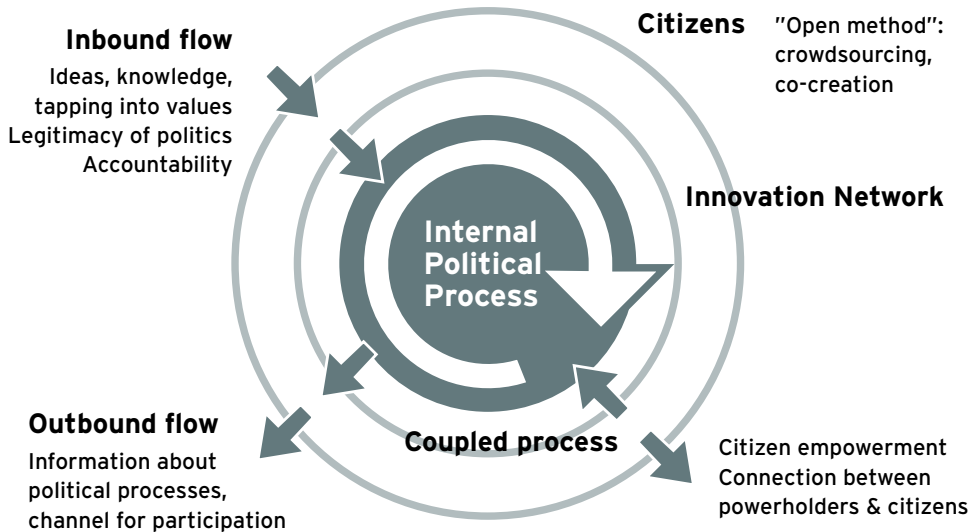
## Impact of crowdsourcing on democracy

**T**HIS CHAPTER EXAMINES the role of crowdsourcing in larger societal trends and the meaning of crowdsourcing in a democracy. Figure 1 illustrates the impact of crowdsourcing in democratic processes. When policy-making processes are opened, information about policy-making flows out to the citizens. Therefore, citizens get an opportunity to participate in the processes, which they previously did not have access. In Figure 1, the arrow called ‘Outbound flow’ indicates this process. In inbound flow, the internal political process receives ideas, perspectives, and insights from a big crowd. In Figure 1, the arrow called ‘Inbound flow’ indicates this process. Thus, crowdsourcing functions as a method of gathering information and knowledge from an undefined crowd, for instance, in the legislative process.

Simultaneously, policy-makers can sense citizens’ values and attitudes. With crowdsourcing, policy-makers can listen to citizens. Thus, crowdsourcing functions as a method for “citizen hearings.”

Opening the political process holds the potential to increase legitimacy of politics, and increasing transparency can strengthen the credibility of policy-making. In an ideal case, citizens are empowered by participating in an open process because they are a part of the political process even between the elections. The arrow labelled ‘Coupled process’ refers to this in Figure 1. When boundaries between traditional, closed decision-making, and citizen activism become more *porous*, a new connection between citizens and decision-making is created. Therefore, in Figure 1, the boundary between internal and external

**Figure 1.** The impact of participatory practices on policy-making



Altamurto, 2012

process is marked with a sequenced line.

Crowdsourcing as a part of open innovation strategy creates an innovation network around political institutions. The innovation network is in the outer skirts of the circle in the Figure 1. The innovation network consists of entrepreneurs, technology experts, and citizens, who use open data, develop services on it, and thus, make it a part of their businesses. As a result, these groups provide services to citizens, and they become a part of the ecosystem which is created by Open Government practices. The benefits of crowdsourcing are summarized in the Table 1.

**Table 1. Benefits of Crowdsourcing.**

1. Possibility to gather information from a large crowd faster.
2. Discovering new information and perspectives when the diversity of participants increases.
3. Engaging citizens in policy-making.
4. Spreading awareness about the issues currently in decision-making process.
5. Potential citizen empowerment.

The transparency that crowdsourcing creates can increase trust in political institutions when there's democratic recession (Diamond, 2011) and citizens' trust in institutions is in decline (Beck, 2006; 2009). During democratic recession, the appeal of traditional ways for citizen participation, such as voting, declines. Citizens channel their activism through alternative means such as the global Occupy movement. When traditional political institutions apply the Open Government principles, they are building relationships with citizens using novel methods. These methods can function as bridges to traditional institutions, as the instances presented in this book demonstrate. Crowdsourcing and other means for digital citizen influence can also function as drastic counterforces to traditional policy-making. In those cases, civil society applies "crowdpower" to oppose and

transform the status quo. That phenomenon was evident during the Arab Spring in 2011, where online and offline power was applied to demonstrate citizens' power in against an oppressive regime.

Crowdsourcing can function as a method of applying the principles of direct democracy. In direct democracy, citizens can influence policy-making "directly," without the intermediary of the representative democracy (Fishkin, 2011). For instance, a binding national referendum can be perceived as a manifestation of direct democracy. Also, petitions, which are aimed at bill proposals, can be seen as direct democracy. The notion of deliberative democracy, instead, emphasizes the importance of rational agreement or consensus, which has been reached through deliberation and discussion (c.f. Bessette, 1994; Bohman & Rehg, 1997; Cohen 1989). That consensus should lead into the most reasonable solution. However, it is important to note that in crowdsourcing, a representative majority is not automatically formed, if for instance, deliberation is not arranged by using deliberative polling (Luskin, Fishkin & Jowell, 2002)<sup>1</sup>. Second, it is important to note, that deliberation, as defined in an Aristotelean way referring to exchange of arguments for or against something, is not always achieved by crowdsourcing. As evident in the cases presented in this book, crowdsourcing in policy-making is focused on gathering people's opinions and ideas, rather than establishing spaces for deliberation, or designing incentives for the participants to deliberate to achieve consensus. That is partially due to the nature of crowdsourcing as a method: it functions as a one-time-shot, singular act of participation. Co-creation, instead, emphasizes opening up the process, and thus, holds more promise to create spaces for fully-fledged deliberation. (About co-creation as a participatory method, c.f. Aitamurto, forthcoming). Crowdsourcing and co-creation can be defined as methods for realizing the ideals of participatory democracy (c.f. Roussopoulos and Benello, 2005).

<sup>1</sup> More about deliberative polling at Center for Deliberative Democracy at Stanford <http://cdd.stanford.edu/>

# Amateurs or experts?

**C**ROWDSOURCING is often seen as the opposite of expertise – rather, a method to make space for amateurs. Crowdsourcing brings in a mix of amateurs and experts, whoever happens to be in the crowd. In the instances of crowdsourcing in the United States government, which were introduced earlier in this book, there have been both technology experts and “regular” citizens among the participants. Listening to both of these groups has been useful. Because crowdsourcing is an open process, these “undiscovered” experts have a chance to participate and share their knowledge. The threshold to participate is low and the communicative transaction cost is small; the expert does not leave their desk and travel to Parliament to share their expertise, but can share their knowledge with a couple of mouse clicks. This knowledge can turn out to be very valuable, as we saw in the constitution reform process in Iceland earlier in this book.

Crowdsourcing, however, does not replace traditional expert hearings in legislative processes. Crowdsourcing is an informative, complementary process within traditional policy-making. The same mechanism is visible in other fields where crowdsourcing is used. In journalism, for example, crowdsourcing does not replace the work of professional journalists, but can function as a helpful method within the traditional workflow.

Furthermore, it is relevant to reconsider

the differences and similarities between amateurs and experts. Citizens, to whom we often refer as “amateurs,” are experts in every-day life and citizenship. They use public services daily, and therefore, their experiences, opinions, and insights are important. Citizens have had a chance to participate earlier too, before the novel digital participatory methods, by sending letters to Members of Parliament or discussing with their local representative in their municipality. The transformations in technology and culture have reshaped these influence channels, and now, more than ever before, people have a chance to participate online.

Openness also brings new features to communication between citizens, when participants in these open processes see each other’s opinions in real-time and potentially on a massive scale. This creates agency in the public sphere – a space in which citizens govern themselves. This can lead to new forces in society, such as the social movements we saw in Egypt during the uprisings in the Spring of 2011. The urge for change among the Egyptians burst out through social media and was channeled to both online and offline demonstrations. An important element in this movement was the visibility of peer-communication and participation: citizens saw via social media that their peers also wanted change. This encouraged more people to participate in the movement (Aitamurto and Sistek, 2011).



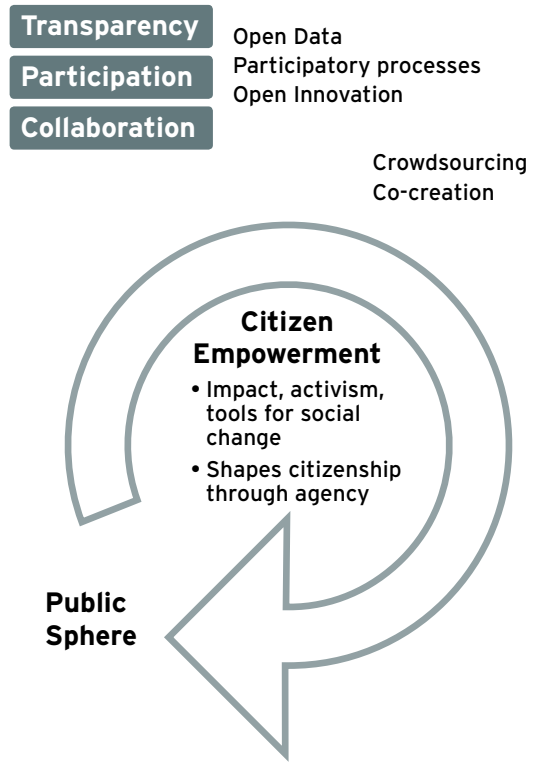
# Crowdsourcing in Open Government

**C**ROWDSOURCING can be used in combination with Open Government principles, by engaging citizens in political processes, one of the core principles in open government. As Figure 2 demonstrates, the other core principles are transparency and collaboration. Crowdsourcing can also be linked to open data through open innovation and ways to identify new ways on how to use open data, as presented earlier in Chapter 3.

The interest in the principles of open government is spreading globally. About 50 nations have joined a global network of governments called the Open Government Partnership (OGP).<sup>2</sup> This partnership network formally launched on September 20, 2011, when the founding governments<sup>3</sup> (Brazil, Indonesia, Mexico, Norway, Philippines, South Africa, the United Kingdom, and the United States) announced the Open Government Declaration and their national action plans to endorse the Open Government principles.<sup>4</sup>

The Open Government Partnership organized its first global meeting in April 2012 in Brazil. The meeting gathered around 1,200 representatives from over 70 countries. The meeting discussed trends in Open Government, those trends being the rise of participatory methods in policy-making, increased number of open data portals, legislation against corruption, transparency in development aid, and transparency in the use of natural resources, such as minerals.<sup>5</sup>

Governments that are applying Open Government principles are not 100 percent open – not nearly that much! – and never will be. The governments committed to the



**Figure 2.** The role and impact of crowdsourcing on democracy.

Open Government Declaration apply the principles only to a certain extent and certain areas. Obviously, governments make strategic and deliberate decisions about openness for instance, which processes are crowdsourced, and what kind of data is being published in the open data portals. The role of civil society is to require more openness and watch that the Open Government declaration and National Action Plans are being followed. It is becoming more and more difficult for governments to insist on keeping the processes closed, as openness and transparency are becoming easier to apply and citizens' awareness about these possibilities is growing.

<sup>2</sup> <http://www.opengovpartnership.org/>

<sup>3</sup> <http://www.opengovpartnership.org/open-government-declaration>

<sup>4</sup> Finland decided to join the Open Government Partnership in May 2012, and the National Action Plan is being prepared during the Fall of 2012. Apart from offline events, crowdsourcing was also used in the preparation process. More here: [www.suomijoukkoistaa.fi](http://www.suomijoukkoistaa.fi)

<sup>5</sup> <http://www.opengovpartnership.org/news/revealed-top-ten-commitments-open-government-representatives-73-countries-gather-brasilia>

# 5. Ingredients for successful crowdsourcing

THIS CHAPTER examines the factors for success in crowdsourcing. The chapter will demonstrate that success is a sum of several factors. Crowdsourcing requires sincere com-

mitment from the initiator of the process, willingness to succeed, and the capacity to react quickly to twists and turns during the process.

## I Defining the goal and sequencing the process

**C**ITIZENS HAVE TO BE the starting point when designing a crowdsourcing process: they are the main user group. A citizen-centric view in the design process makes the result, the crowdsourcing process, user-friendly for citizens.

Also, it is important to keep in mind what the desired outcomes of crowdsourcing are: ideas, knowledge, or experiences. The goal of the crowdsourcing process determines the length of the process and the number of se-

quences. The crowdsourcing process has to state clearly what the activity on the platform is that the users are desired to take part in, what the project is about, and what the consequences of it are. If the users are asked to share ideas or respond to questions, the questions have to be clear and the topic has to be narrowed down. Otherwise the responses will run in many directions. That can, of course, sometimes even be the desired outcome.

## II Communication

**C**ROWDSOURCING is not an automated process, which always takes off quickly when the process is launched on the Web. Moreover, awareness of the opportunity to participate has to be spread throughout the process. Participants are invited to several platforms from social media, blogs, events, mainstream media, and networks. Participants can be reached only by actively contacting groups and individuals in

a wide range of societal fields. Crowdsourcing is a new culture; therefore, the first crowdsourcing processes often don't get a massive volume of participation, especially in a small community. It takes a while before people find the project and get over the participation threshold. Newsletters can be sent to participants to give them updates about progress. That will make them more likely to return to the process.

### III Simple technological user-interface

**T**ECHNOLOGICAL SOLUTIONS for crowdsourcing have to stem from user-centricity. The technological realization has to be simple to use, particularly in pioneering crowdsourcing processes.

The users may not have previous experience of crowdsourcing. The technological applications have to be flexible so that changes can be made during the process.

### IV Managing crowdsourcing process

**S**UCCESSFUL CROWDSOURCING requires a strong online presence from the organizers. The community requires constant attention. The conversation has to be curated by responding to questions, removing inappropriate comments, and categorizing ideas and comments. This requires human resources. The community manager of the crowdsourcing community monitors the conversation to ensure that the Code of Communication is followed in the process. These

instructions are important, because they determine which kind of comments (for instance, those that are inappropriate and racist) are removed from the site. The crowdsourcing platform should have a feature which allows categorizing comments beyond the scope of the crowdsourcing process to the category of “off-topic,” so that the conversation and ideation do not drift too much, if that is not desired in the process – but sometimes, it is!

### V Duration

**C**ROWDSOURCING PROCESS should typically have a clear timeframe. That timeframe is communicated to the users on the crowdsourcing platform so that they know how long the participation will remain open. When the users are aware of the possibility to participate being open only for a restricted amount of time, it can attract more participation. If there are several stages in the crowdsourcing process, the duration of those stages should be communicated clearly. It is important to note that the methods in crowdsourcing have to be modified according to the goals and types

of crowdsourcing.

Crowdsourcing can be done as a short, intense campaign, which takes just a few weeks altogether. The nature of the web as a dynamic interactive channel supports the process. On the other hand, the process to gather signatures for petitions can be open online for several months. The crowdmaps on which information about problems in street maintenance, for instance, is gathered (see Chapter 2) are always open. If crowdsourcing continues for a long time, reports and summaries about the results should be published during the process.

## VI Events

**O**FFLINE EVENTS SUPPORT the crowdsourcing process. Events spread awareness about crowdsourcing, and similar tasks that are given on the online platform can be given to participants in the offline event. Offline events are

also a good opportunity for participants to meet the organizers and ask questions and give feedback about crowdsourcing. As noted in the EPA instance in the United States (Chapter 3.) offline events can activate participants.

## VII Analysis and monitoring the process

**D**URING CROWDSOURCING and after crowdsourcing the results have to be analyzed. When the crowdsourcing process is over, the results of the process should be gathered to a report, which is published online, so the results are public and participants can, with a quick glance, see what the crowd said. When the crowdsourcing process is over, the work of spreading information about the next steps continues. If parts of the

legislative process are crowdsourced, the participants are informed about how the process continues. When the law is ready, it is important to summarize the role of crowdsourcing in that process and to elucidate which lessons were learned. When these lessons are published online, that information benefits others. Thus, the whole feedback loop should be followed through in crowdsourcing, and this can motivate the participants for the next time.

## VIII Commitment to the process

**T**HE INITIATOR OF CROWDSOURCING has to sincerely commit to the process to make it successful. This commitment determines the execution of the process: the more sincere the intentions,

the more able one is to find solutions to the challenges the process brings with it. The challenges are examined in more detail in the following chapter.

# 6. Challenges of crowdsourcing

THIS CHAPTER examines challenges in crowdsourcing and how to approach them. The chapter is not intended to be an exhaus-

tive list of the challenges, but rather name the most common problems that occur when deploying crowdsourcing in practice.

## I Digital divide

**T**HIS BOOK FOCUSES on crowdsourcing online. That premise, of course, excludes those who do not have access to the internet. This digital divide is diminishing in Finland, where almost 80 percent have broadband internet. However, there is still a significant portion of those who can't use the internet and those who don't want to. This condition has to be taken into account

when the crowdsourcing process is designed. If possible, other means of participation can also be used, such as offline events, as elaborated in the previous chapter. In general, the rule of participation in democratic processes applies to crowdsourcing: even though everybody is invited to town hall meetings, only some people show up. Participation will never be 100 percent.

## II Crowdsourcing and citizens' voice

**W**E HAVE TO KEEP CLEAR in our minds what the role of crowdsourcing in democratic processes is. Crowdsourcing, as defined in this context, is not representative democracy and is not equivalent to national referendum. The participants' opinions, most likely, do not represent the majority's opinion. However, crowdsourcing can be used as a part of representative democracy, for instance, by using the method of deliberative polling. In deliberative polling, a representative sample of citizens is chosen and then that sample discusses the topics under deliberation. After the discussions, the participants express their opinions about the given topic. The core of this method is that the opinions are expressed only after the participants have received information about the topic, and the topic has been discussed. Thus, the opinions

should be more informed than before the deliberative process.<sup>1</sup>

Furthermore, crowdsourcing is very vulnerable to lobbying. That itself is not a novel feature, and it is not necessarily a bad thing either. Let's take an example. If securing the resources for health care in local neighborhood is important to the residents, there's nothing wrong with those residents being active in a crowdsourcing process where the matter is discussed. Indeed, isn't this exactly the kind of citizen activism desired, but often missing, in modern societies? It is about citizens organizing themselves by using new digital methods. The import of crowdsourcing for citizen activism is that with these open participatory methods, citizens beyond traditional activist and lobbying groups can now have a say.

<sup>1</sup> More about deliberative democracy in Chapter 4.

### III The crowd and experts

**L**ISTENING TO CITIZENS in crowdsourcing does not replace the hearing of experts. However, listening to citizens can be taken into account in several ways. Depending on the topic, the role of citizens can range from being equal to experts,

or be limited to informing and complementing the process. By using the same logic, as mentioned earlier in this book, crowdsourcing does not replace the role of politicians in democratic processes.

### IV Cost

**C**ROWDSOURCING REQUIRES technical and human resources. New technical solutions are not necessarily needed for crowdsourcing, since there is a wide range of existing software. Some of that software is sold on a software as service basis, so there is basically no maintenance cost in those solutions. Free tools like Facebook and Twitter can be very efficient in inform-

ing citizens about crowdsourcing. Designing the process and community management requires the most human resources in crowdsourcing. When assessing the cost of crowdsourcing, it is important also to assess what the cost would be if new participatory methods were not applied. Knowledge about new methods does not accumulate, and the nation falls behind in lessons learned.

### V Engaging participants

**C**ITIZENS do not automatically participate in crowdsourcing. As crowdsourcing is a part of a new culture and it is a new method for the majority in society, the threshold to participate can be high. Crowdsourcing is not an automated process,

which will attract participants just by launching the process online. To overcome this challenge, special attention has to be given to spreading information about the process and managing the community well. (See more instructions in the Chapter 6.)

### VI Hate speech and inappropriate comments

**C**ROWDSOURCING is an open process for anybody to participate in, and therefore, there is a big variety of participants. Participation often includes inappropriate comments. Inappropriate comments have to be removed and other unrelated comments have to be categorized as

“off-topic.” It is a good practice to publish the Code of Communication on the site. The code outlines the undesired modes of communication. If Facebook-integration is used, using Facebook-settings can restrict the visibility of inappropriate comments.

## VII Crowdsourcing for window dressing

**C**ROWDSOURCING as a participatory method creates the plausible promise of being heard and having impact. This plausible promise can be perceived as a challenge in decision-making: how to integrate citizens' opinions and knowledge in the final outcome, whether it is a national strategy or a bill proposal? There is a danger that crowdsourcing remains only a benign, but

meaningless, sign with which the politicians try to attract popular attention. In this undesired case, the project turns into "political window-dressing," and the potential contributions of crowdsourcing remain unused. Political window dressing can also decrease people's motivation to participate in the future, because the plausible promise of participation – impact, and being heard – isn't realized.

# 7. Policy recommendations

THIS CHAPTER suggests policy steps and approaches to advancing the Open Government principles in policy-making in Finland. The following five recommendations were writ-

ten in the initial report for the Parliament of Finland, which was published in the Spring 2012. Updates are indicated in footnotes.

**1** THE POTENTIAL of crowdsourcing in policy-making should be tested in pilot projects run by the Committee of the Future in the Finnish Parliament. The lessons learned from these projects need to be analyzed, and the procedures should be then improved for larger-scale follow-up projects. Thus the Committee for the Future serves as a testing laboratory for the Parliament of Finland, and also for the nation at large. These pilot projects should be related to matters which are close to people's everyday lives like housing or public services. Thus, the thresh-

old for participation remains low. The Committee for the Future needs to closely follow other crowdsourcing projects in Finland and examine possibilities for collaboration with those. For instance, initiatives from the citizen petition site Open Ministry could be processed in the Parliament, even when those initiatives don't reach the required signature limit of 50,000. (More about Open Ministry in Chapter 3.) Thus, the Parliament would acknowledge and encourage citizen participation.

**2** CROWDSOURCING initiatives should be launched accompanied with offline events. This can be done in collaboration with civil society organizations and other partners. In the Fall 2012, for instance, Finland hosts Open Knowledge Festival, which is an international event to discuss open access topics and present related advancements from all around the world. Crowdsourcing

projects could be launched at that event or similar events to maximize the publicity of these initiatives. Furthermore, to enhance the ecosystem around Open Government initiatives, crowdsourcing projects could be combined with open innovation challenges, for instance to promote the use of open data in Finland.

**3** THE PARLIAMENT of Finland needs to create a strategy for Open Government principles in the Parliament and in Finnish governance at large. Thus transparency and citizen participation would be encouraged throughout the layers of policy-making. The strategy should outline the deployment of Open Government principles in the Parliament and in the Government. It

would also set incentives for governance to deploy Open Government principles in practice. The success of these processes should be measured by metrics articulated in the strategy, and thus, the strategy would encourage designing and running successful projects. Crowdsourcing should be applied when creating the Open Government strategy for Finland.



**4** THE PARLIAMENT of Finland needs to examine the possibilities for updating its information and data system infrastructures. Could the Parliament and the Government transition into using open source code whenever possible? In that case, one vendor couldn't dominate digital development in public sector. When the source code is open, shifting the vendor is easier than with closed, proprietary code. Open source code also contributes to managing the development costs. The White House in the United States prefers open source code particularly in their Open Government development projects.

The Parliament should also recognize the challenges in information system management that several countries, including Finland, are facing. Digital development requires fast, iterative development processes. However, the skills for digital development and management rarely exist in the public sector. This challenge has been recognized in several countries. In the United States an organization called for Code For America<sup>1</sup> has been founded to address this challenge. Code for America trains change agents that are sent to work in local governance and run digital projects. The goal is to spread knowledge about digital development to local governance, as well as the ethos of doing and experimenting.<sup>2</sup>

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<sup>1</sup> <http://codeforamerica.org/>

<sup>2</sup> In the Fall 2012, Code4Europe <http://codeforeurope.net/> launched in Europe. It is an initiative similar to Code for America with six cities within the European Union. The capital of Finland, Helsinki, is one of those cities.

**5** THE PARLIAMENT of Finland should actively advance Finland's participation in net networks enhancing Open Government principles like the Open Government Partnership network. The neighboring countries of Sweden, Denmark and Esto-

nia already joined the network, but Finland hasn't.<sup>3</sup> Membership in the Open Government Partnership would keep Finland at the core of the latest developments in accountability, transparency and citizen participation.

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<sup>3</sup> Finland decided to join Open Government Partnership in Summer 2012. Finland prepares the National Action Plan for the membership during the Fall 2012. The author of this book is a member in the advisory board for the Government of Finland in the membership process. More information here: [www.opengov.fi](http://www.opengov.fi)

# 8. Conclusion

**W**ITH THE RISE of participatory culture and developed communication technologies, traditional institutions can apply transparency and openness with digital participatory methods. One of these is crowdsourcing. These methods still appear as new and exotic, yet they can to a certain extent become the norm. Based on the existing case studies about crowdsourcing in policy-making, it is evident that citizens want to influence policy-making, whether it is about constitution reform or prioritizing public services in budget making. They are willing to use digital means to express their opinions and share their knowledge about matters relevant to them.

Crowdsourcing, among other new participatory methods, creates new possibilities for citizen activism in established political processes. They give citizens new means to govern themselves. This can lead into citizen empowerment and more informed political

decisions. They also offer new possibilities to take the citizens' voice into account in traditional policy-making.

We do not yet know where these methods may take us. They are still merely complementary to traditional politics. It also remains unknown how they will be integrated into everyday political decision-making and how these methods might be reshaped in the future. We'll only learn by experimenting with these methods and learning from trials and errors. For that, we need modern policymakers – change makers who understand these new developments.

We also have to remember that crowdsourcing or other participatory methods are not ends in themselves, but are a means to reach a goal. This goal is a democratic, equal society in which citizens know they are being heard and they can create an impact even between the elections.

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The background of the page is a light gray color with a dense, repeating pattern of white icons. These icons include speech bubbles, arrows, thumbs up and thumbs down, hearts, and various social media logos such as Facebook (f), Twitter (bird), LinkedIn (in), and a person icon. The icons are scattered across the entire page, creating a textured, digital communication theme.

**B**Y DRAWING on several cases around the world, this book illuminates the role of crowdsourcing in policy-making. From crowdsourced constitution reform in Iceland and participatory budgeting in Canada, to open innovation for services and crowdsourced federal strategy process in the United States, the book analyzes the impact of crowdsourcing on citizen agency in the public sphere. It also serves as a handbook with practical advice for successful crowdsourcing in a variety of public domains.

THE AUTHOR, Tanja Aitamurto, is a visiting researcher at the Liberation Technology Program at Stanford University. She examines how collective intelligence, whether harvested by crowdsourcing, co-creation or open innovation, impacts processes in journalism, public policy-making and design. This book is based on a report she delivered to the Parliament of Finland about crowdsourcing for democratic processes.

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