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OPEN GOVERNANCE IN THE SMART CITY

OPEN GOVERNANCE IN THE SMART CITY

A SCOPING REPORT



EXECUTIVE SUMMARY



BACKGROUND

"Open Governance in the Smart City" was developed in the framework of the EU funded Horizon 2020 research project smarticipate.



SCOPE AND OBJECTIVE

Through eleven cases – 9 European and 2 non-European cities – the report provides an overview of the variety of approaches local governments and communities can take to ICT enabled open governance. In addition to describing the different approaches, the report also discusses risks and challenges, concluding with a number of recommendations.

FINDINGS AND RECOMMENDATIONS

This report identifies four approaches to ICT enabled open governance at the local level. These are:

- 1. Data and information**
- 2. Crowdsourcing**
- 3. Co-creation**
- 4. Collective decision making**



By analysing the case cities and these four approaches, the report suggests eight recommendations. These do not constitute a check list, but can rather be used as guidelines when applying ICT to governance in a local context. In short, the recommendations are:

- › Look for real problems to solve
- › Go where your users are
- › Set aside sufficient resources
- › Prepare to change
- › Keep your processes open and accessible
- › Be transparent about your own role
- › Build in future innovation



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A photograph of three people, two women and one man, smiling and looking at a device together. The woman on the left has short brown hair and is wearing a dark top. The woman in the middle has blonde hair and is wearing a patterned scarf. The man on the right has short brown hair and is wearing a light-colored shirt. The word 'PREFACE' is overlaid in large white letters on the left side of the image.

PREFACE

While coal and steel powered the industrial 19th century, and petrol drove developments in the 20th century, the 21st century runs on data and information. The lingua franca of our time is based on 0s and 1s, and innovations in the field of ICT are changing the way we live and work together across the globe.

While coal and steel powered the industrial 19th century, and petrol drove developments in the 20th century, the 21st century runs on data and information. The lingua franca of our time is based on 0s and 1s, and innovations in the field of ICT are changing the way we live and work together across the globe. Cities, as hubs of the economy, culture and civic life are at the centre of this digital transformation. The modern world in which information can travel across the globe in split seconds is also an urban world in which more than 50% of the global population lives in cities. As a term to describe the increasing use of ICT in cities, as well as a vision for future development, the term Smart City has been coined.

The European Commission defines that „in Smart Cities, digital technologies translate into better public services for citizens, better use of resources and less impact on the environment.”¹ In doing so, a Smart City not only provides innovative solutions for urban infrastructure but also offers new possibilities for how we govern and make decisions in cities. The constraints of time and space that, in the past, have often limited the ways we organize political life have lost some of their weight. At the same time, changes in society and political culture demand more open forms of governance that are today possible through the use of ICT.

Yet the changes in urban governance triggered by ICT also pose new questions. By increasingly shifting our interactions online, are we excluding parts of the population that are less computer literate or lack access to the Internet? What is required of a local government internally to adapt and make use of these changes? How does the relationship between administration and civil society change?

Through nine cases from Europe, complemented by two examples from outside Europe, this report will give a glimpse of the variety of ways through which local governments and local communities make use of ICT to create more open forms of governance in their cities. The selection of cases followed concerns over geographic balance, size of the cities, diversity of approaches and excellence of the cases. The report will highlight some of the questions and challenges that arise through the use of ICT in local governance and will offer recommendations for dealing with them.

¹ <https://ec.europa.eu/digital-single-market/en/smart-cities>

WHAT IS OPEN GOVERNANCE IN THE SMART CITY?



"ALL OF PROCESSES OF GOVERNING, WHETHER UNDERTAKEN BY A GOVERNMENT, MARKET OR NETWORK, WHETHER OVER A FAMILY, TRIBE, FORMAL OR INFORMAL ORGANIZATION OR TERRITORY AND WHETHER THROUGH THE LAWS, NORMS, POWER OR LANGUAGE."

Mark Bevir

FROM GOVERNMENT TO GOVERNANCE

Traditional top down approaches to governing and policy making, which formed the basis of our understanding of states and politics in the 20th century, are increasingly questioned. The idea of a sovereign nation state as the primary body representing the interests of its citizens to the outside world, internally delegating tasks down to the regional and local level, has lost both normative and descriptive power. It is today neither a desirable vision of policy making, nor can it explain how policy is made today. Increasingly the focus has shifted away from government towards governance, as both a vision and a model to describe actual developments.

WHAT IS GOVERNANCE?

Governance is a very broad concept, and as much as it is used today, there is no one-fits-all definition. However, a definition that captures many widely accepted aspects of governance can serve as a starting point: "[Governance refers to] all of processes of governing, whether undertaken by a government, market or network, whether over a family, tribe, formal or informal organization or territory and whether through the laws, norms, power or language."²

This process of making rules within a certain context, through the collaboration and competition of different actors, takes place at and across different levels of government. Governance can be observed in international relations, in the forum of national politics, or at the local level. Especially at the local level in cities and towns, governance processes become tangible phenomena. We can observe the emergence of many different ideas of how cities should be managed and how decisions in cities should be made.

WHAT IS NEW IN URBAN GOVERNANCE?

Changes in society and political culture in the last decades have led to demands for increasingly open governance, also in cities. Societies have become more diverse in terms of culture and religion; biographies are more mobile and people less attached to

² Bevir, Mark (2013). *Governance: A very short introduction*. Oxford, UK: Oxford University Press



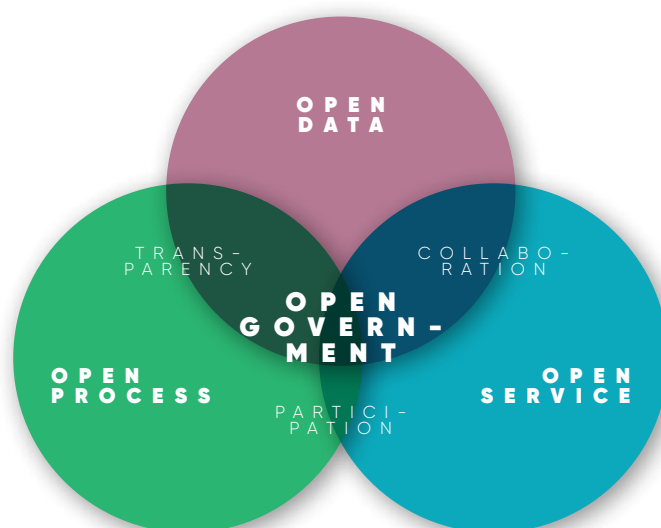
Image: flickr | Mehr Demokratie e.V.

places; a new understanding of the relation between individuals and society has emerged. These trends go hand in hand with more horizontally organized societies and demands for more participation in public decision making.

At the same time, cities have become more complex systems. Global trends like climate change, or influxes of refugees seeking relief from warfare, persecution and poverty, demand integrated approaches. Few of the challenges cities face today can be dealt with in only one policy field or by a single actor. Both a horizontal integration across policy fields and a vertical integration of different groups of actors are required to address modern governance issues.

WHICH ROLE DOES ICT PLAY?

Innovations in ICT add to the complexity cities are facing, but also offer solutions for dealing with this complexity by enabling more open governance. Next to changing practices of everyday life, like social media or online services, ICT has also increased the capacity of civil society and non-state actors to organize, make demands and offer solutions. Contributing to these changes is the amount of and access to available data, which has increased significantly with digitalization. The speed of these trends is staggering. World Bank statistics show that in the



year 2000 the share of Internet users in the EU was about 20,5% of the population. In 2015 already it was 79,6%.³ In only 15 years, the share of the EU population using the Internet has quadrupled.

The European Commission looks at some of these dynamics under the heading of "ICT enabled public sector innovation". In their understanding, open government takes place at the intersection of open data, open process and open service. It includes elements of transparency, collaboration and participation. Open governance, as understood in this report, takes this a step further by embedding government in a wider context of actors and processes.

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³ <http://data.worldbank.org/indicator/IT.NET.USER.P2>

» WHAT MAKES GOVERNANCE IN THE SMART CITY OPEN?

Complementary to the European Commission's approach to open government, there are a few more elements that make up open governance. Two key documents, each supported and endorsed by a broad coalition of actors, form the basis of this understanding: the European Innovation Partnership on Smart Cities and Communities' "Citizen Manifesto"⁴ and "The Basque Declaration: New Pathways for European Cities and Towns to create productive, sustainable and resilient cities".⁵ The principles of smart city open governance taken from these documents are:

Inclusiveness: smart city open governance should strive to include everyone, especially vulnerable populations and groups that are

difficult to reach. Furthermore, gender balance should be an aim in all processes. ICT enabled open governance should always take into account the digital divide in societies.

Privacy: The large amounts of data that are collected today in cities offer great opportunities for better management and services. At the same time they also pose risks for individual freedom and the right to privacy. ICT enabled open governance solutions need to respect privacy and build it into their process and service design.

Democratic responsibility: Open governance approaches are always embedded in a legal and formal framework. They do not replace but complement established democratic processes. Finding the right balance between established

4 APPROACHES

1



DATA AND INFORMATION

Data and information are at the very heart of the digital transformation. Improvements in technology have increased the capacity for collecting data and have generally expanded the amount of data available. Many local governments are choosing to share the data available to them more openly with the world. This can increase transparency and accountability of government actions, and also invites citizens and other stakeholders to use this data for policy and service design, thus directly contributing to the sustainable development of their city. However, the increasing amounts of data also pose questions. Are we really effectively using all the data collected, and are people aware of how much data they are actually giving away?

2



CROWDSOURCING

Next to the information routinely gathered by local governments, there is another large pool of untapped information and knowledge that can be used to improve a city: the knowledge of the crowd. For example, residents often have a better and deeper, or at least different, understanding of what is happening in their local area than elected politicians or municipal staff. This knowledge can range from real time information about damaged benches and street lights to the need for social services. Policy makers can take advantage of this by collecting and using this vast source of information in order to make more informed decisions.

⁴ <https://eu-smartcities.eu/content/inclusive-smart-cities-european-manifesto-citizen-engagement>

⁵ www.sustainablecities.eu/endorse-the-basque-declaration

governance models and new, open forms of governance is crucial. This is especially important when considering which issues remain exclusively with elected public authorities and why.

HOW TO OPERATIONALIZE OPEN GOVERNANCE IN THE SMART CITY?

At the city level this report identifies four approaches, described below, for how cities can make use of ICT enabled open governance. The efforts of the majority of cities in Europe and abroad in the field of ICT enabled open governance fall into one or more of these categories. In most cases though, a city will not limit itself to only one of these approaches but freely combine them according to local needs and capacity. As a guide for the reader, the cases presented in this report will be structured and clustered according to these four approaches.



Image: flickr | Wayne Egers

3



CO-CREATION

How can one best design a policy or a service? By involving the actors affected by that policy and the users of a service from the beginning of the design process. This is what co-creation is all about: not just listening to the demands and wishes of citizens and stakeholders, but making them part of the solution. Doing so often leads to outcomes better tailored to the local context, which increases effectiveness and acceptance. However, it also requires trust among all parties involved and cooperation on a level playing field.

4



COLLECTIVE DECISION MAKING

Voting is probably the most direct and most symbolic expression of democracy. It allows us to exercise our sovereign right as citizens. Increasingly, citizens are demanding to exercise this right not only every few years on election day, but to have a bigger say in concrete decisions between major elections. Many local governments are responding to this call for more direct democracy, for example through referenda or participatory budgeting. ICT can reduce the transaction costs of these more direct forms of democracy, as no polling booths are required when people can vote from any place with Internet access. But this opens up new questions. Does direct democracy always lead to best possible outcomes, especially when it comes to complex problems and their long-term implications? Who decides which issues get voted on?

_CITY AMSTER DAM

_CASE DATAPUNT AMSTERDAM



DATA & INFORMATION



CROWDSOURCING



CO-CREATION



COLLECTIVE
DECISION MAKING

_Amsterdam has always been a frontrunner in improving the city through open data. That includes its “open, unless” policy, meaning that data is presumed to be open unless there is a good reason it shouldn’t be. However, the city has found that simply being open is not enough. Even when data and information is available, city staff don’t always use it, citizens sometimes can’t find their way through it and external partners don’t always trust it. To tackle this, the city has built a platform called Datapunt Amsterdam. The goal of Datapunt (Datapoint) is not open data; it’s about sharing and using data (both internal data and open data) in a smart way to help the city be more innovative and achieve its objectives.

WHY DATAPUNT AMSTERDAM?

Amsterdam’s long tradition of data collection and mapping already began in the 1920s, when they made the world’s first master plan based on statistics (the General Expansion Plan of Amsterdam). From there, the city has continuously evolved in terms of data. Today, each city department individually manages its own data. This isn’t a problem technically, as data is stored in compatible formats and can be accessed with open source software. But how do you know which data the other departments have and how that data can help you to achieve your goals? External consultants couldn’t solve this problem, so the city worked with dedicated individuals to

develop a flexible, bespoke solution called Datapunt.

The Datapunt approach tries opening up the city as an organisation and stimulating collaboration inside and outside it. The Datapunt platform operates on three levels: internal, shared and open data. *Internal* data is *shared* within the municipality. Shared data is shared with partners, under conditions established in case-specific agreements. *Open* data is shared with everyone without conditions. A checklist is used to determine which data should be opened. Each department remains in control of their data, while Datapunt operates as a facilitator.



HOW DOES DATAPUNT AMSTERDAM WORK WITH THE CITY'S DATALAB?

Datapunt's activities are focused around the city's DataLab, a data-centred workspace, knowledge centre and open podium for civil servants, citizens and partners of the city. DataLab reaches out to the rest of the city through Demo Donderdag (Demo Thursday). During these two-hour weekly meetups, civil servants and developers demonstrate applications and data analyses that the city has developed. As opposed to simply dumping datasets on the Internet, these demos give people the chance to meet, share and discuss how to practically apply the data in their work. Everybody is invited to Demo Donderdag. Many city staff participate, along with a range of citizens and small businesses depending on the topic. To reach a wide audience, the events are organised through the popular and publicly available platform Meetup.com, and are also publicised through internal mailing lists, the Amsterdam website, Twitter and Facebook.

Ideas coming out of Demo Donderdag can be elaborated by small coalitions of stakeholders that see potential. This takes place during weekly Monday Meetings. In some cases the city takes the lead and in some cases business takes the lead – but always in partnership. An example is the Energy Atlas project. Here, the city's data was combined with data from energy companies, based on groupings of five households. The overlap between datasets made it immediately clear which groups consumed the highest amounts of (fossil fuel) energy and thus where in the city the highest potential for energy efficiency

measures on a household level was. The results have shown that this kind of sharing is an effective way to achieve sustainability goals.

WHO COLLABORATES WITH DATAPUNT AMSTERDAM?

Amsterdam wants to multiply this kind of collaboration because it can bring financial and social returns on its investments. This includes encouraging other cities to freely use their solutions, applications and software. Similarly, the city is on the lookout for outside solutions to apply in Amsterdam. Potential national and international partners are invited to present these during one of the Thursday Datalabs.



<https://data.amsterdam.nl/dataset/datapunt-apis>

**THE DATAPUNT
APPROACH TRIES
OPENING UP THE
CITY AS AN
ORGANISATION
AND STIMULATING
COLLABORATION
INSIDE AND
OUTSIDE IT.**

_CITY ATHENS

_CASE SYNATHINA

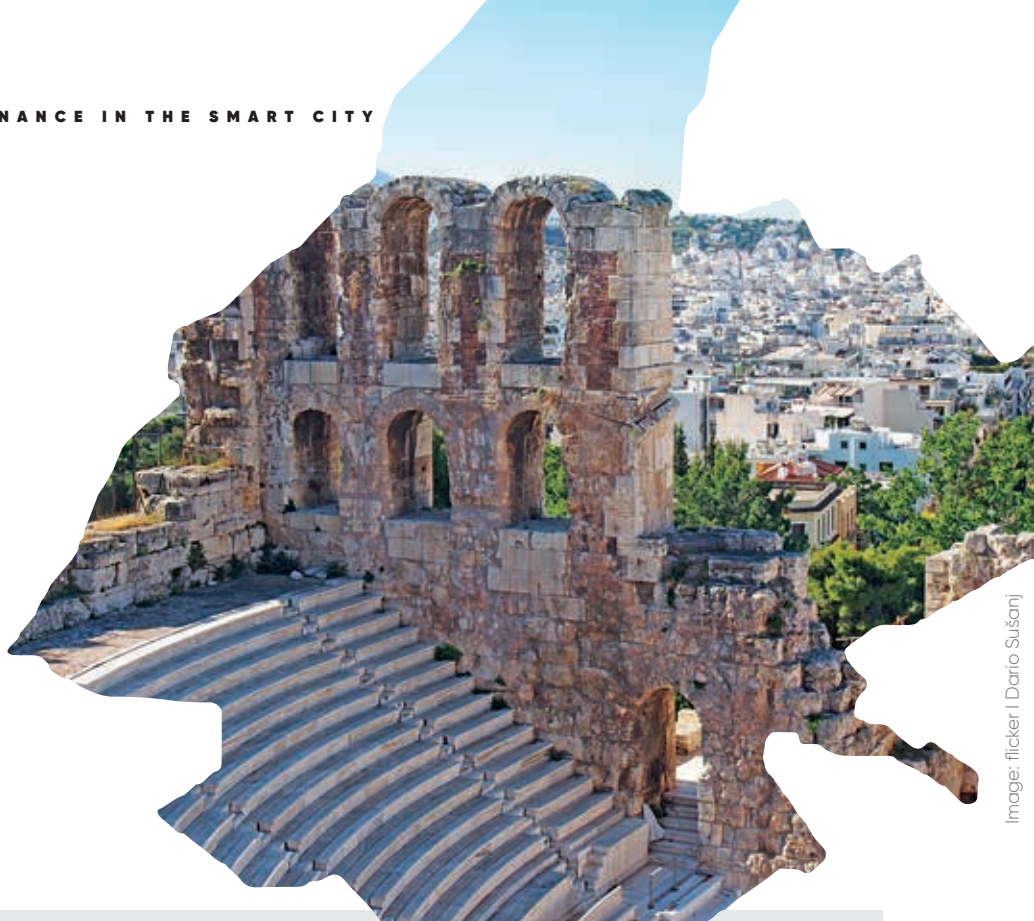


Image: flicker | Dario Sušanj



DATA & INFORMATION



CROWDSOURCING



CO-CREATION

COLLECTIVE
DECISION MAKING

Synathina was founded in 2013 by Amalia Zepou, the current Vice Mayor for Civil Society, before taking office. It was planned as a platform to facilitate the exchange of ideas and resources among volunteers, civil society and local authorities. Against the backdrop of Greece's economic collapse and the resulting austerity measures, SynAthina is building trust between the local government and society in order to revive the city from the ground up. In 2014 SynAthina won the Bloomberg Mayors Challenge.

HOW CAN CIVIL SOCIETY USE SYNATHINA?

The core of SynAthina is a website that connects people with ideas and sponsors. A sponsor could be anybody that offers support for the implementation of an idea. Volunteers, initiatives and individuals can register on the website. When a group or an individual with an idea makes a proposal on the platform, an email asking for support is automatically sent to all sponsors. This support could be in the form of money, volunteers, expert advice, or a venue for events. This way SynAthina matches the bottom-up supply of ideas with resources for their implementation.

Any group, company or individual that wants to do socially beneficial work can register at SynAthina. Besides bringing together people, the

program also provides a support infrastructure; a meeting space in the city center can be booked by registered members of SynAthina free of charge, and an Athens-based NGO provides training and capacity building for those who need support developing their ideas. Generally speaking, SynAthina is used more by small groups or groups that are just getting started with their work. Established civil society players tend to be capable of implementing their ideas without the support of SynAthina. In this way, the program works as a kick-starter and incubator for new initiatives in the city.

HOW DOES THE LOCAL GOVERNMENT GET INVOLVED?

The office of SynAthina is located in the office of the Vice Mayor for Civil Society. This ensures high-



"A TRADITIONAL PROBLEM IS THAT IN THIS CITY THERE WAS NO POINT OF CONTACT BETWEEN THE ADMINISTRATION OF THE MUNICIPALITY, THE CITY SERVICES AND THE SOCIETY."

Giorgos Kaminis



Image: flicker | inmtheu

level support and the integration of the program in the local administration. When someone posts an idea on the website, both registered sponsors and the city hall receive a notification. From here the request is transferred to the relevant city departments that check which existing services and resources of the municipality can be mobilized to support the idea. This integration of city services and civil society is also fostered on "Open Mondays" that take place every week. Here citizens and stakeholders can talk to city officials directly about their ideas and the challenges they face. Athens Mayor Giorgos Kaminis has recognized this issue directly: "A traditional problem is that in this city there was no point of contact between the administration of the municipality, the city services and the society."⁶ SynAthena helps to bridge this gap.

But SynAthena takes the support of civil society groups a step further. Whether on the online platform or during Open Mondays, when a municipal regulation is identified that hinders a group from implementing a socially beneficial idea, the city hall will review it and potentially change the regulation. To this end, the vice mayor's office works closely with the legal department of the municipality. Eventually, of course, any change in regulation needs to be approved by the city council. An example of a

successful change of regulation is the case of a non-profit street paper sold by homeless persons in Athens. The paper and its homeless vendors were facing legal problems for selling papers in public space without a permit. Through SynAthena, the city changed the regulation, exempting socially beneficial non-profits from acquiring a costly vendors' license.

HOW IS SYNATHINA INTEGRATED INTO THE CITY?

SynAthena also attempts to link its members with the district council of the area in which they are active, therefore trying to close the gap between citizens and policy makers also in the neighbourhoods. This is important because, even though activities take place in the entire city, the demands from citizens vary noticeably between the districts depending on local context. A symbolic integration into the city as a whole is the "Kiosk", a free meeting space for SynAthena members visibly located in the heart of the city. This combination of online and offline elements generally works in favour of reaching out to different actors. However, there is also a risk of fragmentation of work for SynAthena, as some initiatives work offline without first going through the central web platform. Keeping the right balance between a central platform and flexible grassroots initiatives will remain a task in the future.



www.synathina.gr/en

⁶ <https://vimeo.com/164433119>

_CITY BOLOGNA

_CASE COLLABORARE È BOLOGNA



Image: flicker | Gordon Webster



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CO-CREATION

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In 2014 the Bologna City Council adopted the ground breaking “Regulation on Collaboration between Citizens and the Administration for the Care and Regeneration of Urban Commons.” The regulation provides the framework for local authorities, companies and citizens to co-create their city in an easy and reliable manner. Collaborare è Bologna is the public policy based on this regulation. ICT plays a part in this not only as a tool to facilitate the co-creation of urban commons, but also as an urban common itself.

WHAT IS THE URBAN COMMONS APPROACH IN BOLOGNA?

Before the adoption of the regulation on the commons, Bologna, like many other cities, had no process in place to cooperate with residents in the development of the city. For example, it was simply not permitted for neighbours to take charge of a public square in front of their house and refurbish the park benches. The municipality faced too many bureaucratic hurdles to allow this: What if someone got injured? Would the city be liable? The new regulation on the commons did away with these obstacles and introduced “patti di collaborazione” (collaboration agreements) that form the basis of a collaboration between citizens and the municipality. The urban common policy of Bologna is based on a research and experimentation project by Fondazione del Monte

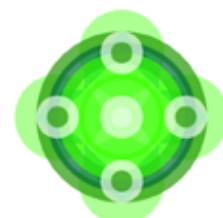
di Bologna e Ravenna, the City of Bologna and supported by the LABoratory for the GOVernance of Commons (“LabGov”).

A citizen, a group of people, or companies that want to contribute to the common good of the city can submit a request for a collaboration agreement online. The city will evaluate the proposal and also check which in-kind resources it can contribute to the successful implementation of the idea. Before coming into effect, each collaboration agreement is made public to allow for comments by those that might be affected by the project. Collaboration agreements are usually around five pages long and often deal with upgrading, cleaning or repairing items in public space, like removing graffiti or planting green areas. But there are also examples of social



Image: flicker | Francesco Pierantoni

An online logo generator allows anybody to create their own customized Bologna logo at: <http://ebologna.it/>



**Open Governance
è Bologna**

initiatives like teaching computer skills to senior citizens or giving Italian lessons to migrants. Contributions from the municipality can range from providing equipment or a space for activities to technical advice from municipal experts.

WHICH ROLE DOES ICT PLAY IN THIS PROCESS?

The co-creation process is supported by two online tools. A map helps track all the collaboration agreements in the city and gives basic information about each project. A social network called *Comunità* serves as an online platform and meeting place for initiatives. *Comunità* has been described by users as a city square. It allows them to present themselves to others, get in contact with one another and also to access resources of the municipality and submit requests. There are currently more than 3000 individual citizens and more than 1700 organisations and associations registered on *Comunità*. The platform is hosted on the official website of the municipality. This is in line with the regulation on the commons: *"The City shares data, spaces, infrastructures and digital platforms[...]with the individuals who participate[...]"*⁷

The municipality not only gives citizens access to its platform, it partially hands the management over to the users as well. In an attempt to create a digital commons, the *Comunità* platform is managed and developed by the users in cooperation with the municipality. When joining the platform users sign a charter agreeing to share the responsibility of maintaining and

growing the online meeting space. They are not limited to creating and publishing content on this part of the municipality's website, but are also frequently invited by the administrators of the website to online and offline meetings to develop and improve it.

HOW DOES THE RELATIONSHIP BETWEEN CIVIL SERVANTS AND CIVIL SOCIETY CHANGE?

In a co-creation process, the traditional roles of the municipality and of civil servants change. Not only do city and citizens cooperate as equal partners, often it also requires municipal staff to work as mediators and facilitators between different groups in the city. Apart from initiatives and ideas put forward by citizens, the co-creation process in Bologna also enables the municipality to share tasks and burdens with the users of a service, like in the case of the web platform *Comunità*. In such a case, however, it is not a given that users will engage and become active in this role. It requires efforts by the city to gather the support and encourage users to share this task. Furthermore, not every initiative in Bologna might be keen on collaborating with the city. Some groups might feel that entering into a formal collaboration agreement with the city reduces their independence and flexibility. For those that do participate, the urban commons policy in Bologna has opened a new world of possibilities for civic engagement.



www.comune.bologna.it/collaborarebologna/

⁷ Bologna. Regolamento sulla collaborazione tra cittadini e amministrazione per la cura e la rigenerazione dei beni comuni urbani. Capo I. Art. 9 Innovazione digitale

_CITY CHICAGO

_CASE SMART CHICAGO COLLABORATIVE



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The Smart Chicago Collaborative is a non-profit organization dedicated to civic tech and using technology to improve the lives of people in Chicago. It works to empower people to use the opportunities offered by technology and contributes tools and content for them to use. It was founded by the City of Chicago, the MacArthur Foundation and the Chicago Community Trust, and works with donors, public authorities and community actors to close the digital divide in Chicago.

WHAT IS BEHIND SMART CHICAGO?

Smart Chicago was founded in 2010 by the City of Chicago, the John D. and Catherine T. MacArthur Foundation, and the Chicago Community Trust. The idea was first formulated in a 2007 report by the City of Chicago Mayor's Advisory Council on Closing the Digital Divide, titled "The City that NetWorks: Transforming Society and Economy Through Digital Excellence". The report identified the need for a new civic organization to ensure that all of Chicago can take advantage of digital technology.

Smart Chicago is mainly funded by the MacArthur Foundation, a large private foundation based in Chicago. Smart Chicago is hosted at the Chicago Community Trust, which also serves as the administrative office. The City of Chicago does

not directly fund Smart Chicago but is a crucial policy partner and ensures close cooperation between the collaborative and city services. Smart Chicago welcomes contributions from corporate actors. The set-up of Smart Chicago, based on public initiative and private donations, allows it to connect to all relevant actors in the city. However, it is unclear if and how far Smart Chicago, as an outsourced non-profit, can affect policies of the city. Also, funding for Smart Chicago is independent from democratic processes and accountability.

HOW DOES SMART CHICAGO WORK?

Smart Chicago focuses their work on three areas of work: 1. Enabling access to technology and the Internet, 2. Fostering digital skills for all, and 3. Creating meaningful products from data. In the

Images: Daniel X. O'Neil



Smart Chicago at the Bud Billiken Parade 2015

field of enabling access to technology, Smart Chicago supports actors to spread technology in communities, for example through computer centres across the city. They foster digital skills for all by working with actors that provide computer skills trainings in libraries, schools or summer programs. Building on their work to enable access and foster skills, Smart Chicago aims to create meaningful content for people to work with. For example, Smart Chicago is supporting Cook County, in which Chicago is the largest city, to create and publish open data. But the collaborative does not only open up the data, it also develops apps that allow normal citizens to make use of this data. It therefore makes data more accessible. The tools and apps created by Smart Chicago are all open source.

HOW DOES SMART CHICAGO CONTRIBUTE TO OPEN GOVERNANCE IN THE CITY?

Smart Chicago follows a coherent approach to make the smart city inclusive. First, they make sure that people in Chicago have access to a computer and the Internet. Together with the city of Chicago they have created and expanded a network of 250 locations in the city that offer free computer use. Second, after providing people with access to computers, they teach them how to use them. In most of the locations with free computer access, Chicagoans can receive free computer training. Third, they create content that is relevant for normal citizens and encourage them to engage in open governance processes. Through these steps Smart Chicago tries to make the smart city accessible for everybody, including low-income groups, elderly, and youths.

Smart Chicago was also involved in the development of OpenGrid, a search engine and interface that uses open data to provide users with easily accessible and relevant data about their current location, neighbourhood, or any other area in the city. The service, which can be accessed on mobile devices or desktop computers, was created by the City of Chicago and is open source to encourage further innovation and development by others. Users can browse a large variety of data about their city. Commonly used queries include results of health inspections in restaurants, potholes, or filming locations in the city. Other available datasets are related to crime statistics, environmental data, and other topics. Layers can be combined to explore and visualize relationships and correlations between different data. Because OpenGrid is open source, communities are encouraged to contribute their own data and programmers are invited to add new features. OpenGrid is an example of how to create meaningful content. It is not only open data, but open data presented in a way that allows people to easily access it, understand it and relate to it.


www.smartchicagocollaborative.org

**SMART CHICAGO
SUPPORTS ACTORS
TO SPREAD
TECHNOLOGY IN
COMMUNITIES.**

_CITY HAMBURG

_CASE NEXTHAMBURG



Image: www.mediaserver.hamburg.de | Jörg Modrow



DATA & INFORMATION



CROWDSOURCING



CO-CREATION

COLLECTIVE
DECISION MAKING

_ Founded and developed in 2009 by the Hamburg based planning office Urbanista, Nexthamburg was one of the first large-scale ICT enabled participation projects in Germany. Its aim was to be a citizen think tank, an incubator for ideas and, a testing ground for the possibilities of ICT for participation. As a pilot project it was funded from 2009 to 2011 by the Federal Ministry of Transport, Building and Urban Development. The result of the three year participation process was the Bürgervision Hamburg 2030 (citizens' vision for Hamburg 2030) which was published in 2012. The City of Hamburg participated in the project but was not an official project partner.

HOW DOES NEXTHAMBURG WORK?

In Nexthamburg, citizens' ideas for projects are collected on an online platform. An editorial team clusters the submissions (e.g. ideas for climate mitigation) and users can comment and discuss the ideas, or express their support by becoming a fan. While the project still received federal funding, large offline citizens' workshops took place every 6 months. At the workshops the community selected the best ideas to take forward for further discussion. In 2012, at the end of the three year process, Nexthamburg published the results as Bürgervision Hamburg 2030.

HOW TO BE INCLUSIVE?

As a pilot project, Nexthamburg sought to test how ICT tools can be used for citizen participation in the city. While taking advantage of online tools, the process also included important offline elements like workshops. The experience in Hamburg has shown that ICT can be very useful in organizing citizen participation, but that it also has its limits. Rates of online participation usually peaked immediately after an offline event, indicating that inspiration and motivation are easier to foster in-person.

Generally, Nexthamburg tends to attract a rather educated crowd of participants. The average



Image: LGV | Gerd Hachmann



Image: flickr | Beni Rupp

PARTICIPATORY PROCESSES CANNOT TAKE PLACE IN A VACUUM.

workshop participant was slightly older than the average online user. While more suggestions were submitted by men online, women were more active at the face to face meetings. Furthermore, groups that are usually hard to include in participation processes, like children and people with low incomes or a migration background, tended to respond better to offers for face to face participation. This underlines the importance of keeping ICT enabled governance easy to use and accessible, and of combining it with offline elements in a meaningful way.

HOW TO ANCHOR THE PROCESS IN THE CITY?

From the beginning, Nexthamburg was a privately coordinated initiative without direct involvement from the local government. The team behind Nexthamburg believed that this was necessary in order to steer clear of political agendas and act as a neutral facilitator in the city. However, participatory processes cannot take place in a vacuum. In order to promote the project and attract participants, Nexthamburg needed the support and endorsement of relevant actors in the city who naturally had their own political goals. A key challenge for Nexthamburg was keeping a delicate balance between gathering the support of stakeholders while remaining neutral.

The intended neutrality and independence of Nexthamburg also meant that crucial actors in the city, including the local government, did not have ownership of the results. The City of Hamburg closely cooperated with Urbanista on a case-by-case basis, for example by contracting them in the context of the Internationale Bauausstellung,

and to some extent participated in the Nexthamburg debates. The Bürgervision Hamburg however, as the main outcome of the process, is not an official document adopted or implemented by the city. This non-binding character of the discussions partially affected the relevance for some participants. On the other hand, being independent from the local government meant that Nexthamburg was unaffected from certain changes in the city, such as local election results.

WHAT WAS NEXT AT NEXTHAMBURG?

Under the umbrella of the Next Network, the methodology of citizen participation was expanded to other cities around the world, such as Zürich, Bangalore and Lisbon. In some local contexts however, the ICT-supported elements had to be reduced to a minimum. This was in some cases due to low internet literacy and access rates and in other cases due to a lack of funds available to set up and maintain a dedicated online platform. Though ICT can be an efficient tool to reach large numbers of people, the resources required for proper development and maintenance should not be underestimated.

The end of federal funding also meant reduced capacity for the Nexthamburg project. The platform is still operational and citizens continue to use it to upload and discuss ideas. However, an intensive, citywide process like before is currently not possible. Still, the team behind Nexthamburg has not been idle. One of their current projects is "Stadtmacher" (city maker), a project that supports citizens' ideas with technical advice for implementation as well as finding supporters and financing.



www.nexthamburg.de/en

_CITY HEL SINKI

_CASE HELSINKI REGION INFOSHARE



Image: flickr | Jori Samonen



DATA & INFORMATION



CROWDSOURCING



CO-CREATION

COLLECTIVE
DECISION MAKING

_ Opening up data in a city is useful to a variety of actors: citizens, companies, NGOs and public administration all benefit from open data in many ways. While many cities are beginning to offer open city data, their own datasets do not extend past the municipal borders. To counter this shortcoming, the city of Helsinki in cooperation with the cities of Espoo, Vantaa and Kauniainen started the Helsinki Region Infoshare in 2011 to provide open data for the Helsinki metropolitan region. In 2013 the initiative received the “European Prize for Innovation in Public Administration” award from the European Commission.

WHAT IS HELSINKI REGION INFOSHARE?

Helsinki Region Infoshare (HRI) is a central contact point and clearing house for open data in the metropolitan region of Helsinki. While the cooperating cities are still responsible for collecting and publishing their data, HRI provides training, support and technical expertise to the cities and publishes the data in accessible formats for citizens, software developers and anyone else who is interested in using it. The service is hosted and mainly administered by the City of Helsinki Urban Facts office. It is active in four operational areas: producing data, opening data, sharing data and utilizing data.

For producing data, the HRI supports the cooperating municipalities and other data producers in creating data that is comparable, accessible and useable. Harmonizing the different datasets is an essential part of this work. In terms of opening data, HRI functions as a clearing house that coordinates between data users and data producers, for example by prioritizing the kinds of data being published. For sharing data, the service mainly functions as a central contact point for end users with a data search engine. This allows users to find data sets and also provides a possibility give direct feedback on the applicability of the available data. For utilizing data, HRI is in touch with other offers and services in the region that engage more closely with, for example, the developer community.



Image: flickr | Juha Huuskonen

HOW DOES THE REGIONAL OPEN DATA COOPERATION WORK?

The Helsinki Region Infoshare service is operated by the city of Helsinki Urban Facts department. HRI has a close cooperation with Forum Virium Helsinki, a private-public partnership of the City of Helsinki, which is active in new digital services and urban innovation. The service is funded proportional to population by the four cooperating municipalities, and in the beginning also received federal funding to initiate the service. The remaining ten municipalities in the Greater Helsinki Area decided to opt out of the initiative. Still, Helsinki, Espoo and Vantaa (as the three largest cities in the region) along with Kauniainen make up over two thirds of the metropolitan population. HRI is governed by a board of directors consisting of the mayors of the cities and is managed by a steering committee consisting of experts from the funding and operating partners.

HOW IS THE OPEN DATA USED IN THE METROPOLITAN REGION?

Anybody can use the open data provided by HRI. Developers, companies, NGOs or citizens can make use of the data based on their needs. Usage statistics show that the most sought after data of all time are the procurement data files of the city of Helsinki. This indicates that transparency of government actions is one of the most relevant issues for users of open data in Helsinki. Another data set in high demand is the boundaries of the postal code districts of the metropolitan region, which can be used, among other things, for location based web services.

Many useful applications have already been created in Helsinki with the use of open data. Among them is the app "BlindSquare", which uses public transport information, location data and other information to empower people with visual impairment to move through the city more independently. But Helsinki does not only leave the development of apps and web services to chance. Based on the open data provided by Helsinki Region Infoshare, the city also engages with the developer community in various ways. For example, the project Helsinki Loves Developers, a cooperation between the city and Forum Virium Helsinki, provides a platform for open dialogue and co-creation between local authorities and developers. HRI and the open data it provides lay the groundwork for innovation in the city and the region.



www.hri.fi/en

**HELSINKI REGION
INFOSHARE SUPPORTS
THE COOPERATING
MUNICIPALITIES
AND OTHER DATA
PRODUCERS IN
CREATING DATA
THAT IS
COMPARABLE,
ACCESSIBLE AND
USEABLE.**

_CITY MADRID

_CASE DECIDE



Image: flickr / Andres Rueda



DATA & INFORMATION



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_Decide Madrid, fully established in 2016, is the official open governance website of the Madrid City Council. It works as a one stop shop for all official open governance processes in the municipality, including issues of transparency, open data and participation. Within the participation branch citizens have the possibility to debate issues, initiate referenda, and to take part in a citywide participatory budgeting process. In 2016 one full round of participatory budgeting was undertaken for the 2017 budget. In this first round 60 million Euros were directly distributed through public vote. The platform is based on open source code and can be freely used by other cities around the globe.

HOW DOES THE PARTICIPATORY BUDGETING OF DECIDE MADRID WORK?

The process is split into two phases: a proposal phase and a voting phase. During the proposal phase, citizens suggest, discuss and rank ideas. Top ranked proposals are checked for viability and costs, and if they meet the viability criteria moved to the voting phase. If a proposal does not meet the viability criteria (e.g. legality, within the competence of the city etc.) a report is published with an explanation as to why it was excluded from voting. A cost report gives an estimate of the expected cost for implementation. In the subsequent voting phase, proposals chosen by

the citizens are automatically included in the budget of the following year. In the 2016 round, of 5,184 initial proposals, 623 entered the final voting round (1,658 were unviable), and 225 projects were chosen for funding by the citizens.

In 2016 a total sum of 60 million Euros was set aside for participatory budgeting. It was split into 22 separate budgets: one for each of the 21 districts of Madrid and one for city wide proposals. The amount for each district is proportional to the amount of residents and inversely proportional to average income. Hence, low income areas get a larger share of the total budget. Citizens can vote for the citywide proposals and for the proposals



Image: flickr | Acido Zitrico

Citizens yarn bombing a public square in Madrid during the Fiestas de Malasaña 2014.



Image: flickr | Marta Nimeva

in one district of their choice. There is no limit to the number of proposals someone votes for, provided that the combined sum of these proposals does not exceed the maximum sum available for this area. This gives voters the freedom to freely combine small projects with large and resource intensive proposals.

WHO CAN PARTICIPATE?

Any person around the globe with internet access can propose ideas and discuss during the proposal phase. A simple, anonymous user account suffices. The voting, however, is limited to registered inhabitants of Madrid who are at least 16 years of age. This extends the right to vote to a larger electorate compared to municipal or national elections in which the minimum voting age is 18. In addition, foreign nationals registered in the municipality of Madrid are allowed to participate in Decide Madrid. This is a step towards more urban citizenship.

Residents without internet access or with other barriers to online participation can take part in the proposal phase at offline meetings. For the proposal phase as well as the voting phase, they can receive assistance with using the online platform at citizen service offices located in every district. The statistics of the first round indicate that Decide Madrid does reach a large and balanced share of the population. Neither age, nor gender, nor residence in a certain district seems to have a significant effect on levels of participation. Of the 45,522 participants, 49.12% were women (the total population of Madrid is close to 3.2 million). The representation of different age groups closely follows the age distribution in

the total population of Madrid, with those between the ages of 35 – 39 making up the largest group. However, offline discussion meetings tended to attract more institutionalized actors like NGOs as opposed to typical citizens.

WHAT IS REQUIRED OF CITY COUNCIL IN THIS PROCESS?

Participatory budgeting, as implemented in Madrid, is a rather labour intensive process. Especially the cost and viability checks for hundreds of proposals take up time in the technical departments. However, in Madrid a conscious decision was made to engage in this intense process. An alternative scheme can be found in the Spanish city A Coruña, which uses the same open source platform for a participatory budgeting scheme, but decided to have fewer proposals admitted to the voting phase, which consequently reduces the amount of work for viability checks.

In Madrid, city hall tries to inform citizens about the viability of proposals before the official check as much as possible. The website gives different examples of what is allowed and what not, and offline workshops with citizens provide an opportunity to discuss ideas and explain limitations. If during the online discussion a proposal is identified as not meeting viability criteria, the submitter is informed and encouraged to submit a new, valid proposal before the deadline. Moderators and editors for the online discussion have so far not been necessary in Madrid. Despite the anonymity of the online forum, discussions on Decide Madrid have for the most part been respectful and constructive.



<https://decide.madrid.es>

_CITY REYKJAVIK

_CASE BETRI REYKJAVIK



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_Betri Reykjavik (Better Reykjavik) is an e-petition and open innovation website that enables citizens to submit, debate, and prioritize policy proposals and ideas. The platform was launched in 2010 by the grassroots initiative Citizens Foundation, which developed and maintains it. Currently Betri Reykjavik is officially recognized and used by the City of Reykjavik as an online consultation forum.

HOW IS BETRI REYKJAVIK USED BY THE CITY OF REYKJAVIK?

Betri Reykjavik runs on the free and open source platform Your Priorities, which was developed by the Citizen Foundation already in 2008. In 2010, around the time of the local elections in Reykjavik, Your Priorities was adapted and launched as Betri Reykjavik. Citizens can use the platform to present ideas, view the ideas of others, debate different proposals and show their support for an idea by rating it. The Reykjavik City Council pledged to discuss the top rated proposals from the platform.

Every month the top five ideas overall are referred to the appropriate city council committee. Additionally, the top rated idea in each of the thematic areas (e.g. tourism, education, transportation, etc.) is also transferred to the

appropriate committee. The city council aims to process each proposal within one month of receiving it. As of 2016 about 3,000 ideas have been submitted to the platform, of which close to 700 have been submitted as proposals to the city council. Of those submitted to the council, 40% have been approved, 22% declined, 11% referred to another decision making body (for example a district council) and 27% are still waiting for an answer. In a city of approximately 120,000 inhabitants, Betri Reykjavik has about 14,000 registered users.

WHAT CONTRIBUTES TO THE SUCCESS OF BETRI REYKJAVIK?

Betri Reykjavik was developed and is maintained by a grassroots organization using open source code, which makes it both affordable and transparent. By the time Betri Reykjavik was



Images: flickr | Graham van der Wielen

launched, the Citizen Foundation already had two years of experience with the open source platform, therefore reducing problems in the beginning. The platform was designed to be easily integrated into social media platforms already used by citizens (namely Facebook and Twitter). Next to the advantages on the technical side, the strong and visible commitment of the city council to discuss and implement citizens' ideas is certainly a motivating factor. However, the city also found that levels of participation dwindle without active promotion of the platform by the city – even after a successful run of more than five years. Betri Reykjavik has not gone unchanged in the six years since its launch. An external review found that the platform was too complicated to use, which led to changes to improve the user friendliness. Furthermore, in May 2016, the city introduced a minimum threshold of votes that proposals need to pass before being presented to city council, which increases the relevance of the ideas dealt with directly by the council.

WHAT WERE THE CIRCUMSTANCES IN WHICH BETRI REYKJAVIK WAS LAUNCHED?

At the time Betri Reykjavik was launched, Iceland had rather special circumstances that need to be considered. First, Iceland is generally a very internet savvy country in which 90% of Icelandic households had a broadband Internet subscription in 2014, compared to a 72% EU average. Secondly, Betri Reykjavik was launched during times of fundamental changes in the political landscape that followed the Icelandic financial crisis, which started in 2008. In this context, a tool for citizen participation that had been developed and was run by a grassroots initiative was a trusted alternative and could

rapidly achieve significant buy-in from citizens, policy-makers, and public administrators. Six years later, these dynamics play less of a role as the country has recovered from the economic crash and Betri Reykjavik has become an integral part of local politics in the city.

HOW WILL BETRI REYKJAVIK CONTINUE IN THE FUTURE?

After local elections in 2014 a new government was formed which renewed the commitment to using the Betri Reykjavik platform for another four years. At the end of 2016 the city will overhaul the platform based on the extensive experience gathered over the past years. In 2011, Reykjavik also introduced a participatory budgeting scheme at the neighbourhood level called Betri hverfi (Better Neighbourhood). The open source platform Your Priorities, which forms the basis of Betri Reykjavik and Betri hverfi, has been used and adopted in other places, such as Estonia, the UK and the US.



<https://betrireykjavik.is>

**AS OF 2016 ABOUT
3,000 IDEAS
HAVE BEEN
SUBMITTED TO
THE PLATFORM,
OF WHICH CLOSE
TO 700
HAVE BEEN
SUBMITTED AS
PROPOSALS TO
THE CITY COUNCIL.**

_CITY SE OUL

_CASE OPEN DATA PLAZA



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_Seoul is one of the pioneers of e-government in Asia and worldwide. It has topped the Rutgers University Digital Governance Ranking for six consecutive rounds since 2003. In 2012 the Metropolitan Government of Seoul strengthened the open data aspect of its services by launching the Open Data Plaza, an online channel for sharing Seoul's public data with citizens and the private sector. Seoul is also seeking to share its experiences with other cities by founding and leading WeGO, a network of cities dedicated to e-government.

WHAT IS THE SEOUL OPEN DATA PLAZA?

The Seoul Open Data Plaza is a central website where citizens, businesses and any other interested parties can access all open data available in Seoul. The local government has the ambition to open up all public data, unless there are legal barriers, for example due to privacy issues. The platform provides data in a large variety of formats, including excel sheets, maps or open API. The Open Data Plaza not only provides citywide data, but also on the level of the 25 districts of Seoul Metropolitan Government. Each district, based on its own priorities, runs its own open data platform under the umbrella of the citywide portal. In a separate portal, the Open Information Plaza, the local government also shares all information regarding policy and administrative processes,

such as policy proposals in progress, minutes of meetings, or conference videos.

Shortly after its launch, the Open Data Plaza turned out to be a highly sought after service. Within one year after its launch in 2012 the site was accessed over 5 million times a month. And the city has managed to meet this high demand for data. As of June 2015, Seoul had opened up 4,093 datasets in 440 categories. To increase user friendliness, the information is structured and clustered into 10 topics such as environment, traffic, education or culture and tourism. The topics are further divided into categories. Users can also browse the data by data format (spreadsheet, API, etc.) A customer service team aids users with navigating the site and finding the right information.



Image: flickr | Zicarlo van Aalderen



Image: flickr | Mack Male

Seoul's open data policy takes place in the framework of Sharing City Seoul, an effort headed by the Seoul Metropolitan Government since 2012. Sharing City Seoul tries to mitigate social challenges, improve the city, boost civic engagement, and support local businesses by sharing public resources. The kinds of resources the city is actively sharing are space, skills/experience/time, goods and content. Seoul Open Data Plaza makes the sharing of content in the city concrete.

HOW ARE USER DEMANDS TAKEN INTO ACCOUNT?

The high demand for Seoul's open data services is matched with a dedicated effort by the local government to take user demands further into account. There are multiple direct channels for users to interact with the local government in order to communicate their demands for open data. Users can, for example, suggest ideas for the website or request the opening of previously closed public data. In addition to considering user responses, the local government also actively seeks to improve the platform in these ways itself.

Discussions and interactions with the developer community provide in-depth feedback on the types of data and formats needed by developers. Yearly events and competitions sponsored by the city, such as the "Seoul Smart App Competition" provide input based on the direct application of Seoul's open data. Additionally, more in-depth analyses are conducted by the Seoul Open Data Plaza, for example through surveys of users and providers of public data in Seoul. Furthermore, the Seoul Open Data Plaza analyses online behaviour outside the platform for indications regarding the

type of data most sought after by users. For example, they look for key words related to public data in Seoul on Twitter. Combining these different sources of information gives Seoul a comprehensive overview of the public data relevant to citizens and companies in the city.

HOW IS SEOUL CONTRIBUTING TO OPEN DATA AROUND THE GLOBE?

Seoul not only pushes the boundaries of e-governance and open data at home, but also takes a leading role in promoting these concepts around the globe. In 2010 WeGO (World e-Governments Organization of Cities and Local Governments) was founded in Seoul and the city has since held the organisation's presidency. Seoul also hosts the secretariat of this global city network. WeGo provides training to local governments, technical advice and consultancy, and facilitates the exchange of best practices. As of 2016, the network has 97 full members and a number of international partners and associate members such as the World Bank and the United Nations Department of Economic and Social Affairs.



<http://english.seoul.go.kr/policy-information/key-policies/informatization/seoul-open-data-plaza>

SHARING CITY SEOUL TRIES TO MITIGATE SOCIAL CHALLENGES, IMPROVE THE CITY, BOOST CIVIC ENGAGEMENT, AND SUPPORT LOCAL BUSINESSES BY SHARING PUBLIC RESOURCES.

_CITY TIRANA

_CASE TIRANE IME



Image: flickr | Marco Fieber



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_Tirana, the capital of Albania, is a city that has experienced a great transformation in the past decades. With a revitalisation beginning in the early 1990s, the city is hoping to improve living standards and the quality of life to rival nearby European cities. One of the city's strategies is to leverage the high number of smartphone users to open a real-time channel of communication with its citizens. To this end, the Tirana Ime (My Tirana) app was developed and launched in spring 2016. Already in the first year of operation Tirana won the Ljubljana Forum Future of Cities Award for the development of Tirana Ime.

WHAT DOES TIRANA IME OFFER?

Among its various features, Tirana Ime provides real time information to users about traffic, public transportation, pollution, tourism activities, as well as other emergency information and reports. Apart from receiving information from the city, users can also interact with the municipality by using the app to report issues to the municipality. The app allows users to report issues in their urban area, for example related to cleaning, infrastructure, or illegal constructions. A citizen that notices a pot hole or a broken street light can take a picture of it, add details about the location or a description, and send it to the city administration. The report will be followed up and the user will automatically be informed about the

status: has it been solved; is it currently being dealt with; or is the issue not in the competence of the municipality. The app can even be used to report misconduct by municipal staff. Citizens have the option of filing reports anonymously.

HOW IS TIRANA IME EMBEDDED IN THE ADMINISTRATION?

The app was developed and is technically maintained by Vodafone on behalf of the city. The content provided on Tirana Ime is information that was already available to the administration, however not always in the right format. Next to the technical development of the app, the local government initially had to put effort into creating the content, sometimes by digitalizing information



Image: wikipedia | Albinfo



Image: flickr | Andreas Lehner

that was previously only available on paper. To add new information and process the reports by citizens a new administrative structure was created in the form of a back office.

The backbone of Tirana Ime is the operating centre created by the city especially for this app. The approximately 25 person team accesses Tirana Ime through an interface where it can upload information and manage reports received from citizens. Reports are first evaluated by the operating centre and then transferred to a contact point in the department responsible for the specific issue. The contact point will then assign the report to a staff member who will process the request. Information about the work in progress is provided by the departmental contact point to the operating centre, who will then inform the citizen. The traditional phone service for receiving requests and complaints by citizens, which is still offered as an alternative contact point for citizens, is integrated into the operating centre's processes.

Tirana Ime is just one building block in the open governance of the city. On the report side the app is mostly envisaged to make the local government aware of small scale issues that can ideally be dealt with immediately, like fixing streets or cleaning public space. For larger and more strategic issues the local government holds public hearings in all 24 districts of the municipality to discuss the budget priorities for the following year. By combining these different online and offline building blocks of open governance the city aims to collect the opinions and wishes of citizens, from small issues that are part of their

everyday life experience, to more fundamental and long-term discussions about the direction the development of the city should take.

HOW IS TIRANA IME BEING USED?

Launched on 5 February 2016, the app has already garnered quite some attention. Between the launch of the application and October 2016 the application has been downloaded about 15,000 times in a city with approximately 600,000 inhabitants. Thus, in slightly over half a year approximately 2.5% of the population of Tirana have downloaded Tirana Ime onto their smartphones. In total, 7,330 reports have been filed since its launch, out of which 2,486 have been solved and 2,072 are not in the competence of the municipality. The remaining reports are currently in the process of being dealt with. Generally positive user reviews suggest that the app does provide a useful service to the citizens. As the city continues to change rapidly, the administration hopes that this tool will help citizens decide where the efforts of the municipality should be focused.



www.tirana.al/aplikacioni-tirana-ime

AS THE CITY CONTINUES TO CHANGE RAPIDLY, THE ADMINISTRATION HOPES THAT THIS TOOL WILL HELP CITIZENS DECIDE WHERE THE EFFORTS OF THE MUNICIPALITY SHOULD BE FOCUSED.

_CITY VIE NNA

_CASE DIGITALE AGENDA WIEN



Image: flickr | Azra Abertish



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In response to the rapid digitization of our society, Vienna, like many other cities, recognised both the opportunity and the necessity of embracing smart technologies in city services. In 2014, the city began the development of a new Information and Communication Strategy to properly address technological advancements under one cohesive strategy, the Digitale Agenda Wien (Digital Agenda Vienna). As opposed to designing a 5 or 10-year strategic plan, the Digitale Agenda is a working document that invites all those who are interested to continuously propose new guidelines, ideas, projects and define accountability.

HOW WAS THE DIGITALE AGENDA CREATED?

From the outset, the active participation of citizens, stakeholders, and different departments in the city was encouraged. Some 600 individuals contributed to over 170 ideas that would form the first draft of the document. In this first round a handful of guiding questions about the opportunities and risks led the discussion. In the next phase, the ideas were put online to be discussed and voted on. Working groups of citizens, officials and experts from city IT departments then met in-person to continue hammering out the details of the document. Finally, the text of the Digitale Agenda was made available online for final comments by the public.

The process was open for anyone and the announcement was widely promoted through various newsletters and networks to which city officials had access to. However, despite having a mixed group of users ranging from students to ICT businesses, participation also had its limits. Especially the offline workshops could not attract certain groups that are usually hard to involve in participatory processes – for example single parents. This was not for a lack of effort by city officials, as they specifically tried to target these groups, for example through social media channels.



SEVERAL KEY ISSUES EMERGED FROM THE DISCUSSIONS BETWEEN CITIZENS AND STAKEHOLDERS, WHICH BECAME ANCHORED IN THE DOCUMENT AS THE VIENNESE PRINCIPLES.

WHAT IS OUTLINED IN THE DIGITALE AGENDA?

The result of this months-long process is a framework that describes the strategic planning process of Information and Communication Technologies in Vienna. Several key issues emerged from the discussions between citizens and stakeholders, which became anchored in the document as the Viennese Principles. These nine principles serve as the backbone for future discussion and implementation of smart-city solutions: transparency, trust and security, inclusion, gender equality, citizen-focus, strengthening of local businesses, consolidation, and willingness to change and learn (flexibility). Furthermore, the Digitale Agenda outlines five thematic areas for action (trust and security, citizen services, education and research, ICT and innovation, digital infrastructure and technology), each with one or more lighthouse projects that will be developed within five years.

HOW IS THE DIGITALE AGENDA IMPLEMENTED?

The first idea implemented, as a lighthouse in the thematic area citizen services, was an App for citizens to get requests to the municipality in an easier way. Like the Digitale Agenda itself, the idea for this app and its functions were created in a bottom up process. On an online platform citizens could propose and vote for their favourite ideas. In Open-Space Workshops the top ranking ideas were developed into mock-up Apps with city IT experts. Of those mock-ups created, the idea "Sag's Wien" (tell it to Vienna) was selected and developed into a fully functional App, which became available about 8 months later.

At the same time the Digitale Agenda should also function as a guiding document for the use of ICT across the city. To that end the city administration is trying to promote the document through dialogue with relevant stakeholders. The fact that it was created in a bottom up process contributes to the identification of stakeholders with the document. Still, the document remains a strategic document of the administration. As such, it is not foreseen that the city council will officially endorse this document. Also it remains to be seen in how far the Digitale Agenda will manage to become instrumental for public utilities and city agencies. No monitoring or review process has been set up for the Digitale Agenda. Yet, the process is centrally organized by the city's Chief Innovation Officer, who is part of the executive bureau of the administration.

HOW CAN THE DIGITALE AGENDA STAY UP TO DATE?

The process of co-creation which was used to create the Digitale Agenda will be repeated regularly, with a new cycle beginning at the end of 2016. As new technologies and ideas arise, the Digitale Agenda should serve to contextualize them in the broader interests of citizens, local business, city officials, and other stakeholders. The following update and review cycle will specifically deal with the Internet of Things. According to city officials, this topic has not yet received sufficient attention in previous discussions. Still, it is a technology that is approaching rapidly and the city wants to strategically prepare for its use. By anticipating future developments and preparing for them together with citizens and stakeholders, the City of Vienna hopes that it will continue to develop dynamically over the coming years.



www.digitaleagenda.wien/de

A CLOSER LOOK

Image: flickr / Lisa Vanovitch

The eleven cases presented in this report give a glimpse of the diversity of how local governments and local communities make use of ICT for open governance processes. Although not a comprehensive collection of all experiences and local contexts, they nevertheless show a broad variety: diversity of approaches from top down data provision to bottom up co-creation; diversity of size, with cities ranging from just over 100,000 to multiple millions of inhabitants; diversity of location, including European cities within and outside the EU, and also two examples from other parts of the world. Despite their differing circumstances and approaches, many of these cities are dealing with similar questions. Here we will look at some of the underlying issues that connect them

ACCESSIBILITY AND THE ANONYMITY OF THE INTERNET

The internet is often a world of anonymity. Online chat rooms, social media channels or comment sections in online newspapers allow users to easily contribute and participate under anonymous aliases. Also many ICT enabled open governance platforms and websites provide this kind of easy anonymous access. Open data platforms, like in Helsinki or in Seoul, usually do not require any

registration – and why should they, if the data is truly open. But it is not only a matter of convenience. Tirana Ime allows citizens to report misconduct of municipal staff, which some might feel more comfortable doing anonymously. Thus, anonymity can also create a safe environment for people to express their ideas and concerns in public.

But where do the benefits of anonymity, and does the need for accountable and



Image: flickr / justgrimes



Image: ICLEI

Citizens co-designing the smarticipate open governance platform during a smartathon in Hamburg 2016.

identifiable contributions start? Certainly in the case of participatory budgeting where binding decisions are to be made. To vote in Decide Madrid, citizens need to register with their ID number and official address. Reykjavik, in their participatory budgeting, does the same. For Betri Reykjavik, which identifies issues to be dealt with by city council based on the amount of “likes”, anonymous user accounts suffice. In Bologna on the other hand, the city requires users of its own social network Comunità to register with their full name. In addition, collaboration agreements (patti di collaborazione) between the city and citizens are published online with the full name and address of the applicant. Where to draw the line between anonymity, which provides for easy access and a safe space for expressing opinions, and the accountability of contributions is something every city needs to consider when organizing ICT enabled open governance processes – especially when decisions concern public spending and affect the lives of others.

USER FRIENDLINESS IN LOCAL DEMOCRACY

Open governance in cities contributes to local democracy and therefore has an ethical value in itself. This does not, however, relieve open governance processes from the need to be user friendly at the same time. Using ICT in open governance can certainly help, but only if implemented appropriately. Betri Reykjavik, a project that is deeply rooted in democratic values, learned some lessons along the way and

had to change some functions because it was perceived as too complicated. The Datapunt Amsterdam and Seoul Open Data Plaza also take this consideration into account. It is not enough to open up city data if users are not equipped with the tools to find the data they are looking for. But user friendliness is not only a matter of functions of a website. It is also about the attractiveness of the offer and its visual appeal. Therefore, local governments should from the beginning include feedback loops and be prepared to regularly overhaul their ICT open governance tools. For this, simple questions like the ownership of a website matter.

PRIVACY AND THE USE OF SOCIAL MEDIA

Social media is today an integral part of everyday life for many people. Local governments make use of the potential of social media to reach out to and connect with citizens. Cities and communities also make use of social media for their open governance processes. Nexthamburg, as one example, uses Facebook to promote its activities and connect with its users. However, social media also raises questions about privacy and data protection, which is why some people consciously decide not to use certain social media channels. This puts the organizers of open governance processes in a difficult spot. Should they use social media to reach large parts of the population while excluding others in the process? There is no easy answer to this question, but it is worth considering. Are there ways to include those that consciously decide not to use Facebook and other platforms through

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- » complementary offers? Which competing social media channels offer the best privacy policy? Is it an option, as the city of Bologna did, to set up an independent system?

ONLINE AND OFFLINE

When organizing open governance processes, a basic question is whether to go online, stay offline, or combine the two in a meaningful way. The use of ICT certainly has many advantages, including the possibilities of reduced costs in the long run and reduced environmental impact due to fewer travels. Another obvious advantage is the great reach. Collecting over 5,000 proposals for participatory budgeting and having people vote on them, as done in Madrid, would pose quite a logistical challenge offline. What's more, the provision of open data like in Helsinki is simply unimaginable without ICT. Nonetheless, ICT does also have its limitations. First, putting something online is no guarantee for large numbers of participants or users if the issue is not relevant to them and if it is not promoted well. Second, going online certainly excludes parts of the population. Many of the cases in this report give good examples of how to counter the digital exclusion, for example by adding offline elements. Third, use of ICT may in a long run contribute to weakening of social capital for example as physical meeting places can be closed down.

Even with good promotion, there are also other limitations to online open governance processes.

On Betri Reykjavik, for example, most suggestions submitted are about tangible investments and changes in the built environment. Less ideas concern themselves with more general or strategic changes in the city's policies. In Vienna, important milestones in the development of its Digital Agenda came out of offline workshops rather than from online participation. The cases in this report suggest that for the development of more complex policies and strategies, online discussions might not always be the best medium. Certainly the design and setup of online crowdsourcing and co-creation has an impact on the kind of ideas developed. Nevertheless, depending on the aim of an open governance process, one should consider to which degree and what kind of online tools can be instrumental.

HORIZONTAL AND VERTICAL INTEGRATION THROUGH OPEN GOVERNANCE PROCESSES

Local governments operate through administrative units and interact with different levels of government, each with their own duties and responsibilities. Yet citizens, civil society groups and companies that engage in open governance processes with administrations do not always think in these terms. Successful examples of open governance manage to vertically integrate levels of government and to horizontally integrate policy fields. The Seoul Open Data Plaza is not just an open data portal of the Seoul Metropolitan Government, but it also

integrates open data priorities of its 25 districts. Tirana Ime and SynAthina both provide one access point through which citizens can deal with the local government without first finding out which department is responsible in a certain case. Integration is a precondition for openness.

CITIZEN PARTICIPATION AND STAKEHOLDER ENGAGEMENT

Open governance has many different aims. The goals can be increased transparency and accountability of government actions, more and better participation, or more collaboration, for example in the design and provision of better services. To reach these different aims, different formats, such as the ones described in this report, are necessary. Furthermore, different groups of actors need to be involved. This process often proves rather challenging, as many of the cases described here show. Vienna, despite trying, could not manage to achieve the desired diversity of population at its workshops for the Digital Agenda. Also Nexthamburg attracted a comparatively educated crowd to the process.

The same challenges also apply when trying to engage with an expert crowd, as experienced in Bologna when trying to involve the local programmer community for the Comunità network. There does not seem to be a one size fits all solution, but there are some indications that going the extra mile might be worth it. Smart Chicago, in its Foodborne project, does not wait for potential users but actively approaches them by scouring Twitter data. The Seoul Open Data Platform does not just rely on dialogue with citizens and programmers, but also finds other creative means to complement this information, for example by screening Tweets relevant to open data in Seoul.

OWNERSHIP AND RESPONSIBILITY

Who is best suited to organize an open governance process? Local Governments certainly play central role. But they are neither the only actor, nor are they actually one unified actor. Within a local government there are different bodies and most likely different interests. The city council, the mayor's office and technical departments do not necessarily have the same goals. For an open governance process, however, it can be relevant that they feel a sense of common ownership. High level support and endorsement can be crucial for that. In SynAthina, for example, it is essential that the process is managed by the vice mayor's office. This helps facilitate changes in regulation by city council and the cooperation with other departments.



Image: flickr | Sebastiaan ter Burg

But the local government and the different actors within it are not the only ones that can organize an open governance process. The cases in this report also show non-state actors in central positions. In Chicago and Reykjavik it is non-profit organizations, and in Hamburg even a company, that are behind important processes. Also in these cases a crucial question is who feels a sense of ownership of the process and its results. In Chicago and Reykjavik, the local government is so closely involved that they can be considered part of the process. In Hamburg on the other hand, the deliberate distancing from the local government meant that the results of the three year citizen participation did not lead to concrete follow-up steps by official institutions.

Also on the side of civil society and other stakeholders there are questions of ownership. Just because there is a process does not mean that all non-state actors in the city will buy into it. In Athens there are many groups that participate in SynAthina, but also many that don't. The same goes for Bologna, where certain groups deliberately decide not to engage with the local government. There are several important questions for issues of process ownership. To what extent can actors give input to a process? To what extent can they decide on the direction of a process? Is the issue relevant to them? Does the process allow them to reach their own aims? Organizers of open governance processes need to keep these questions in mind.

THINGS TO BE CONSIDERED

Image: flickr / Alexander Svensson

Not every city is the same and not every approach to open governance is the same. Therefore, there is no checklist or blueprint for how to organize open governance in a city with the use of ICT. Local context matters and ICT tools need to be adapted accordingly. Still, the cases presented in this report point towards a number of guidelines that can help local governments, civil society groups and tech entrepreneurs active in this field.

LOOK FOR REAL PROBLEMS TO SOLVE

ICT can offer exciting new ways of organizing governance in a city. But despite our curiosity and desire to experiment with new technology, we should not forget that ICT is just a tool. Therefore, do not use ICT just for the sake of ICT. Look for real problems to solve in your city and then ask yourself if ICT can help you solve these problems. If the issues you want to tackle with the help of ICT are not relevant to the stakeholders and wider population in your city, the use of new technology alone will not motivate them to engage.

GO WHERE YOUR USERS ARE

The Internet is a vast and rapidly changing universe, and the attention of online users is limited. Creating enough buzz to attract your audience is difficult in any field, and open governance is no different. Therefore, if you set up a new platform or service, consider linking it up with already existing offers that your users know. If they are already discussing similar topics on certain social media channels, you do not

necessarily need to set up your own page. If you are a local government department, check if other departments have similar offers you can build on. Also, if you want to include groups that are not online, think about how to combine online and offline formats in a meaningful way.

SET ASIDE SUFFICIENT RESOURCES

ICT in governance processes can greatly increase efficiency. However, this only applies when offline offers are replaced with ICT, as is the case with e-voting as opposed to polling booths, for example. Often though, ICT does not only replace existing offers but leads to an expansion. Therefore, be prepared for additional work and plan in sufficient resources. It is not enough just to create an ICT solution. Discussions need to be moderated, technology maintained, proposals transferred to decision makers, requests answered, information prepared, and much more.

PREPARE TO CHANGE

Local governments that are moving towards more open forms of governance with the use of

ICT need to be prepared to change. Not only might these processes require different resources and staff capacity, but they also often make necessary changes in internal work flows, organizational culture and the self-conception of local governments. Increased transparency and real time information sharing with citizens might depend on better communication across administrative departments and a reduced fear of failure among municipal staff. Cooperating with citizens and stakeholders on an equal footing calls for local government to listen and communicate differently.

KEEP YOUR PROCESSES OPEN AND ACCESSIBLE

Open Governance needs to be inclusive. ICT can help in this, but it can also raise the barriers for participation, especially for people with low computer literacy or limited internet access. Furthermore, language barriers affect people with a migration background; illegibility due to small font size limits the participation of those with visual impairment; complex and technical language makes it difficult for children or people with cognitive deficits. These are just some examples how, often unintentionally, people are excluded from supposedly open governance processes. Be aware of these challenges and strive to design for all, also in ICT enabled open governance.

BE TRANSPARENT ABOUT YOUR OWN ROLE

Local governments are often constrained in their policies in many ways. National legislation or EU regulations, for example, affect many policy fields at the local level. Local governments might also be in possession of information that strongly favours a certain alternative over another. As a local government, be transparent about your aims and the underlying reasons. Furthermore, communicate clearly how far you are willing to commit, and how deeply you are willing to engage with an open governance process. Starting a process, creating expectations and later disregarding the input of citizens and stakeholders should be avoided under all circumstances as it undermines trust in and credibility of open governance processes.

ANTICIPATE FUTURE INNOVATION

The world of ICT is rapidly changing. The cutting edge innovation of today might already be outdated tomorrow. Together with the underlying technology, the options for open governance are also evolving. To stay up to date with these developments, anticipate change and build in innovation from the start. Open source and open code, as the backbone of your open governance ICT, can be part of this innovation. They allow for greater cooperation with others, flexibility for adaptations and help prevent technological lock-ins.

_The globalised world and information technologies are changing rapidly – this is one thing we can be sure of. The scope of experiences outlined in this report is a snapshot of the role ICT is currently playing in leading cities; but by no means can this be considered an exhaustive list, especially consider how quickly new ideas and solutions will be developed. Still, the lessons learned from those cities and organisations that have already tested the waters of using ICT to open governance processes are valuable. Both the challenges and successes of the cases discussed provide a broad basis upon which those considering similar approaches can build.

_With the speed of technological, social, economic and political change can often put pressure on local authorities to respond and adapt quickly, it is important to remember that only thoughtful applications of smart technology will be successful. The vast and growing pool of ICT solutions together with the unique needs of any city should be carefully considered at the outset. But with proper planning and preparation, ICT tools can be a great advantage of communities looking for sustainable, open and inclusive governance methods.

DISCLAIMER

TITLE

Open Governance in the Smart City –
a scoping report

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OPEN GOVERNANCE IN THE SMART CITY A SCOPING REPORT



_WHAT IS OPEN GOVERNANCE IN THE SMART CITY?

**_HOW DO CITIES MAKE USE OF INFORMATION AND
COMMUNICATION TECHNOLOGY FOR OPEN GOVERNANCE?**

**_WHAT ARE RISKS, OPPORTUNITIES AND LESSONS LEARNT
FOR THE USE OF ICT IN OPEN GOVERNANCE?**

These are the main questions dealt with in "Open Governance in the Smart City". Through nine cases from Europe, complemented by two examples from outside Europe, this report will give a glimpse of the variety of ways through which local governments and local communities make use of ICT to create more open forms of governance in their cities.

While highlighting the chances and opportunities of ICT enabled open governance, this report will also discuss the risks and challenges that come with it. By using more ICT in governance, are we excluding parts of the population that are less computer literate or lack access? What is required of a local government internally to adapt and make use of these changes? How does the relationship between administration and civil society change?



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