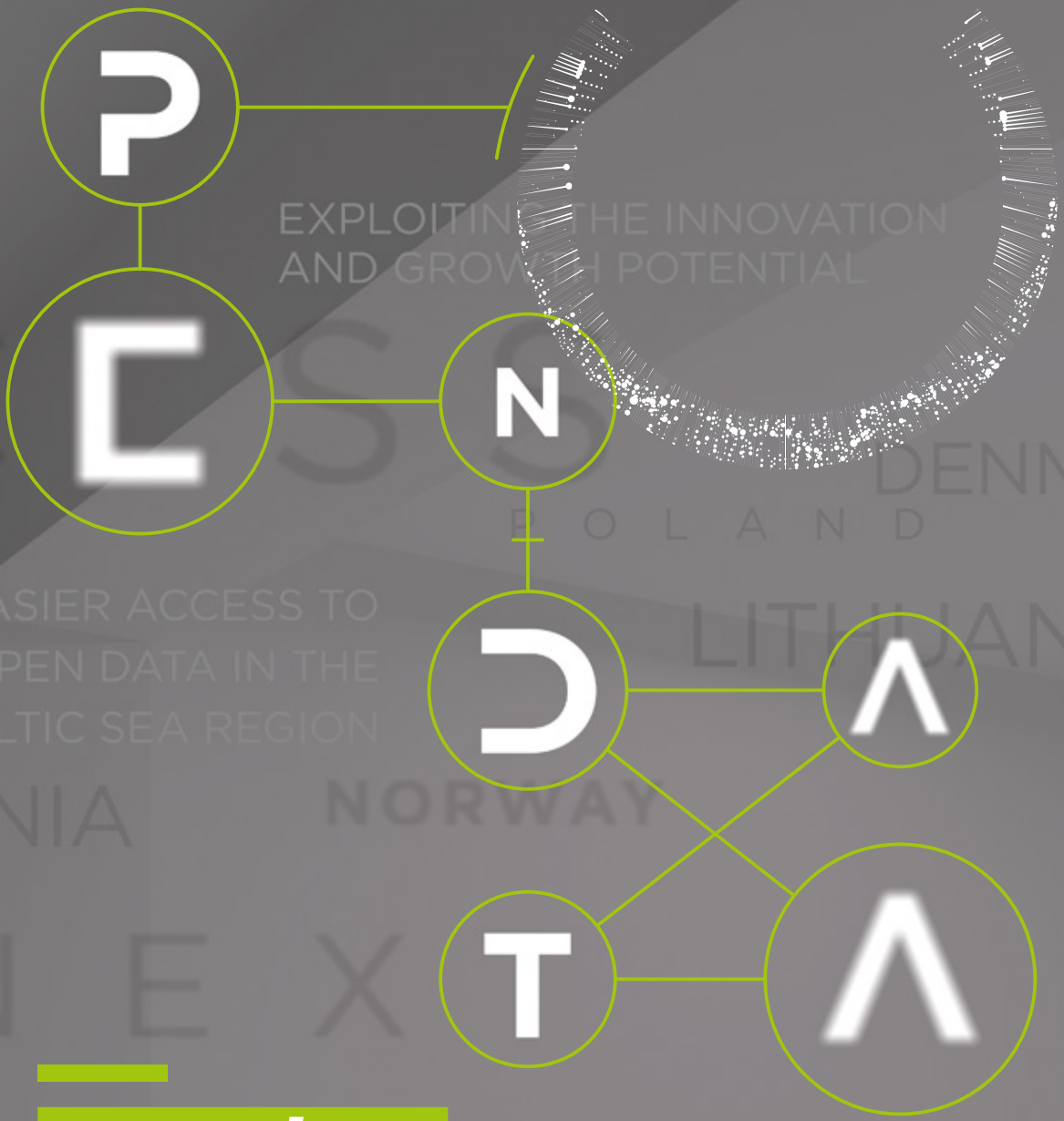


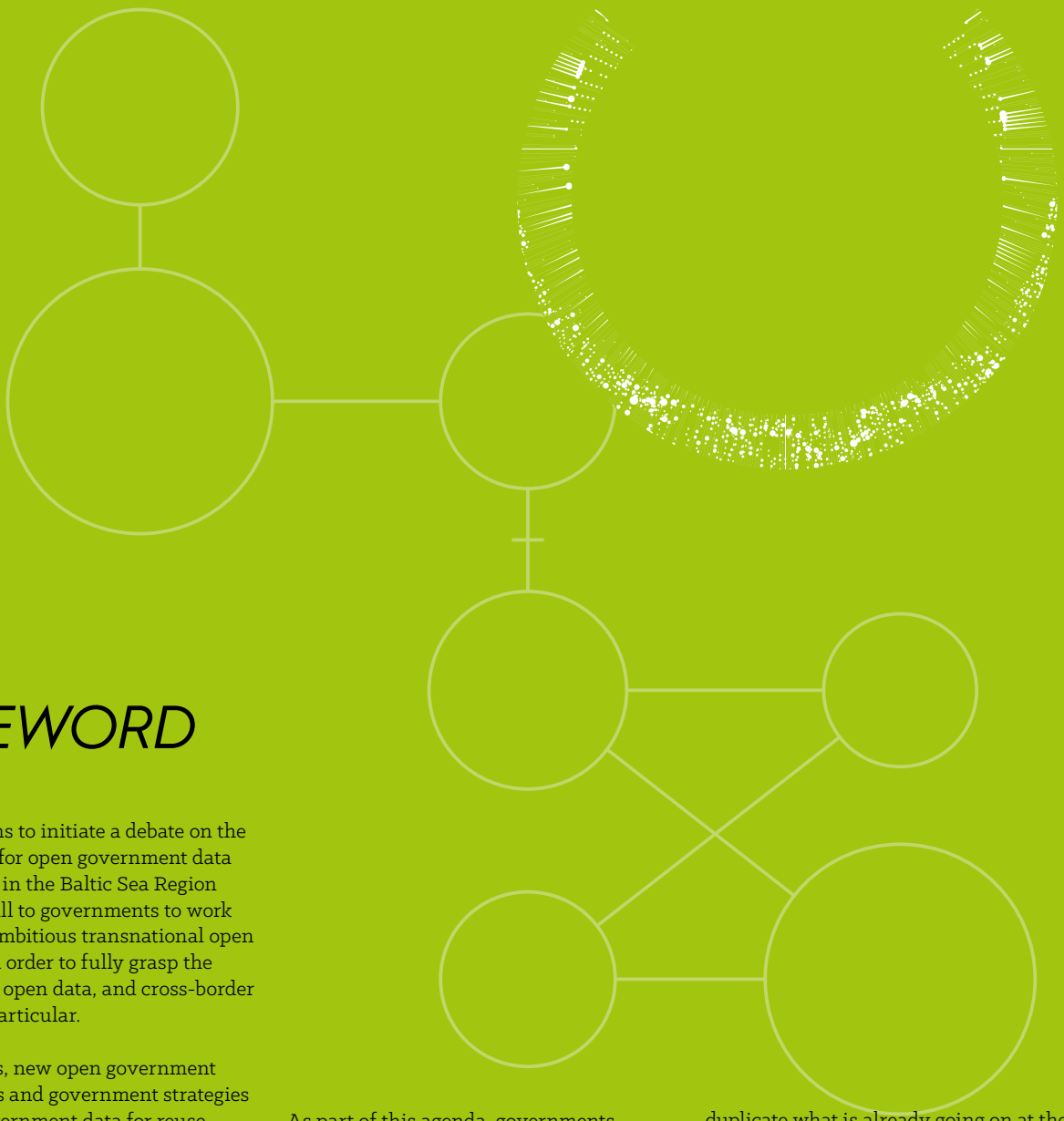
Towards a Cross-border Open Data Agenda

A case for a macro-regional agenda on open government data in the Baltic Sea Region

sustainable growth innovation competitiveness
Baltic Development Forum

Microsoft

top of digital Europe



FOREWORD

This paper aims to initiate a debate on the vast potential for open government data across borders in the Baltic Sea Region (BSR). It is a call to governments to work jointly on an ambitious transnational open data agenda in order to fully grasp the potential from open data, and cross-border open data in particular.

In recent years, new open government data initiatives and government strategies promoting government data for reuse, innovation and transparency have been launched in all the countries in the Baltic Sea Region, locally and nationally.

However, other countries in Europe and globally are also moving fast and some have taken the lead when it comes to setting an ambitious open government data agenda.

As leaders in information and communications technology (ICT) and the digital economy, the BSR countries are well placed to set new standards for open data-driven innovation. This is why we suggest governments in the BSR commit themselves to a macro-regional approach to open government data to enable the region to fully exploit the economic potential in terms of job creation, cost savings and new market opportunities.

As part of this agenda, governments should set a clear target to become the most advanced region in the world with regard to the use of open government data *across borders*. This would enable the Baltic Sea Region to fully exploit the economic potential as open government data is not a purely national matter. Innovation, reuse and transparency does not stop at the border, but so far very little has happened across borders where barriers still seem to prevent the use of open government data from creating additional value for companies and citizens.

This paper puts forward a number of proposals for transnational pilots and initiatives to build awareness, enhance coordination and collaboration, exchange best practices, and take pilot steps towards harmonisation of data and cross-border data flows. Such regional efforts should not duplicate what is already going on at the EU level, but rather inspire and support the EU process on Open Data.

Top of Digital Europe, Baltic Development Forum and Microsoft are committed to bringing this agenda forward, thus promoting the BSR as a global frontrunner in ICT and a first mover in implementing the EU digital single market.

Top of Digital Europe
Baltic Development Forum
Microsoft

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EXECUTIVE SUMMARY

Open data and open government initiatives have been around for several years, but with the rise of data-driven innovation, these issues are gaining new traction in governments across the world. Public sector data is a catalyst to commercial and civic innovation, but also to data-driven analytics in public administration.

The value of open government data does not stop at the border. Quite the other way around, the ability to recombine and reuse data in innovative ways is likely to grow with the amount of available data and the size of the market where that data can be reused. This goes both for commercial entrepreneurship and the development of new data-driven public and welfare services. That is, the whole is likely to be larger than just the sum of its parts. Consequently, the value of open government data has a 'glocal' character, i.e. both local and global. It is highly localised but its value increases if it is globally interoperable with similar data from other sources. However, in order to realise this potential, it must become easier to combine and utilise data across borders which in turn requires things like shared practises, harmonised regulation and common open standards.

Cross-border open data also promotes trust in two important ways: within countries through transparency and accountability, and between countries through the seamless access to applications and services that people are familiar with, regardless of where they are.

The Baltic Sea Region (BSR) stands out on digitisation issues as a potential forerunner, and therefore an interesting venue for piloting new initiatives. The Nordic countries have long track records as digital leaders, while the Baltic countries with Estonia in the lead are accelerating to catch up. Poland may still be lagging behind in terms of percentages, but in absolute numbers it has a significant digital potential. This makes the BSR an interesting case for a macro-regional approach to open government data and cross-border data use. However, the current state of affairs is quite uneven between the different countries. This discussion paper is aimed at exploring this case.

On behalf of the Baltic Development Forum (BDF), Oxford Research conducted a small interview poll with policy experts from each country to estimate the challenges, opportunities and scope for a macro-regional BSR agenda on open government data. The results indicate that such an agenda should focus on creating awareness among stakeholders, the exchange of experiences and skills, and networking initiatives. Oxford Research has also compiled a desktop overview of ongoing policy initiatives in each of the BSR countries. Policy overview and outcome of interviews are summarised in this paper.

Three approaches are suggested to building a BSR agenda on open government data:

Cross-border city collaboration on data-driven innovation. Local urban data, together with smart city initiatives and the UN's Global Goal for sustainable cities, provide an important platform for learning, sharing and experimenting. This highlights the need for common standards, regulations and practices.

Open data and data-driven tools in education. Getting data into the classroom builds important skills for the future, but teachers are the key to digitising education.

Piloting a macro-regional harmonisation initiative. The BSR is a good candidate for a macro-regional study on cross-border data flows and applications with the ambition of finding scalable solutions that could be applied to the rest of EU as well. The focus of such an initiative could include privacy, joint open standards, overcoming language barriers and raising demand and utilisation of open data.

1 INTRODUCTION:
Open Data Across Borders?

Open government data has been around for many years, but now it is increasingly becoming a high priority for governments at all levels around the world, and for good reason.

Data has become a basic resource in an expanding economy of information. Start-ups are producing a wealth of new data-driven services. People routinely rely on data for navigation, weather, finding a restaurant, receiving news or getting a ride regardless of where they are. With digitisation comes datafication, and data is becoming an integral layer in everyday economic, social and political life.

Consider two friends meeting for a coffee. Before the cell phone they would have to either meet or call each other on a landline to set a time and place to meet. Once the date was set, they had to stick to the agreed time and place, or risk missing each other. With cell phones, people can spontaneously and instantly coordinate to meet for a coffee. They can inform each other of delays or even change their plans entirely by exchanging small snippets of information on the spot. Accordingly, it could be argued that the cost of setting up a date, as well as the cost of being late for said date, have dropped significantly. This is because, behavioural changes aside, even something as simple as meeting a friend for a coffee has become more information intensive. This does not imply that people use more data to do the same things (although some certainly do), but rather that by using more detailed, timely and continuous data transactions, people are able to spend their time more efficiently. This is equally true, on a larger scale, for the wider economy and society.

"Although a lot of the data is by nature highly localised in its original format, it can be linked with other data and modified to provide new highly globalized applications"

Open government data plays a key role in this datafication of things. The public sector has a lot of high-value data sets that could be made available, reused and innovated upon to promote economic growth, government transparency and the digitisation of public service delivery.

Yet, the role of open government data doesn't stop at the border. While much of the data is by nature highly localised in its original format, it can be linked with other data and modified to provide new highly globalised applications. That is, the value of open government data is often 'glocal'. It is highly localised on its own, but its potential application value grows significantly if it is connected to similar datasets globally.

This combination and recombination of data lies at the heart of data-driven innovation. The more data there is to combine, the greater the potential for innovation, both across national and institutional borders. In addition, working with open government data is no easy one-time technological fix, but rather a new way of organising public information and in the long run government itself. This requires new ways to identify problems as well as new ways of finding solutions to those problems. It implies a wealth of opportunities, but also challenges for governments and public servants. Reinventing the wheel in isolation in each government simply does not make any sense. Rather, what is needed is joint open standards, regulations and practices for working with open data and data-driven processes. Together with the potential for free data flows and data-driven innovation across borders, this provides the framing for a macro-regional approach to open government data.

The Baltic Sea Region[1] stands out as a potential forerunner when it comes to digitisation and the digital economy, although competition is hard. On their own, several of the countries certainly perform well in different aspects with regards to their size, but together they stand the chance of becoming more than the sum of their parts. However, when it comes to open data, their current state of affairs is uneven, highlighting the need and potential for collaboration. This makes them a relevant case for a macro-regional approach to open government initiatives.

This discussion paper provides an overview of open government data in the Baltic Sea Region and the potential for future cross-border open data initiatives. This is by no means an exhaustive account of the subject of open government, or ongoing policy initiatives within this area. The scope of the paper is to frame open government data issues in a macro-regional setting and to propose channels for cross-border collaboration to promote data-driven innovation both within the public sector and in the market.

The rest of the paper is structured as follows. Section Two contains a brief introduction to open government data. Section Three provides an overview of open government data initiatives with a focus on Europe, zooming in on the Baltic Sea Region. This section ends with a series of open data country profiles and a summary of findings of a short interview poll conducted with experts and policy makers in the field. Section Four introduces three broad policy approaches to cross-border collaboration on open government data between the BSR countries.

[1] *The framing of this report focuses on the following BSR countries: Sweden, Denmark, Norway, Finland, Estonia, Lithuania, Latvia and Poland*

2 THE ROLE AND VALUE of Open Government Data

> *"data is to the digital economy what coal was to the industrialisation – a catalyst and a fuel"*

The ongoing digital shift in society and the economy is not only a matter of adding digital tools to business as usual. It also entails a rapidly expanding economy of data and information that are collected and utilised in new ways. As an increasingly larger portion of our activities – market as well as non-market interactions – become digital and mobile, people both produce and use more data on a daily basis. In past years, it has recurrently been claimed that data is the new oil because of its key role in areas such as business intelligence, predictive analytics and artificial intelligence.[2] The comparison with oil however, may be quite misleading. Data is not necessarily a scarce resource, nor is it by default subject to exclusive consumption. On the contrary, digitised information can easily be copied, distributed, used and reused. In fact, one of the challenges with data, especially personal data, is to find ways to both promote its reuse and to protect individual privacy. It would perhaps be more fitting to say that data is to the digital economy what coal was to industrialisation – a catalyst and a fuel.

In fact, what sets data apart from coal or oil is by far more interesting than what they have in common. With digitisation comes datafication, meaning both increased amounts of data and improved tools to analyse and utilise this data.[3]

> *"open government data initiatives provide important motivations for building good public administration fit for an information society"*

Open government data plays a key role in the information society for at least two different, but related reasons. First, governments and public authorities have access to a wealth of high-value data which is often unique in its detail and coverage. Databases, registers and historical archives have essentially been transformed from a residue of public administration to a basic resource in the information society.[4] If made available, it could facilitate all sorts of new data-driven innovations, both commercial and non-profit.

Second, the task of managing and publishing open data brings into focus how government bodies work with data and information flows and how they could – indeed need to – reorganise to fully realise the potential of a digital shift in public administration and governance. The potential for improvement ranges from increased efficiency by reduced paperwork and a better service for citizens, to collaboration between departments and agencies, automation and better procurement processes.[5] Put differently: open government data initiatives, although often focused on how data can be utilised outside of the government itself, provide important motivations for building good public administration fit for an information society. Internal reorganisation, civic hackers and innovators play key roles in this development.

At this point it may be helpful to take a step back and simply ask: what is open data? Open Knowledge International defines an *open work* as being open-licensed or in the public domain, accessible in whole at no more than a reasonable one-time reproduction cost, machine-readable and modifiable, and provided in an open non-proprietary format.[6] What this essentially means is that data should be made available in a way that makes it easy not just to access one data set one time, but to gather, mix and analyse any number of such data sets from different providers over time.

This implies two things: first, all government data is not open, nor should it be. Conversely, open data includes much more than just government databases and a key feature of open data is the ability to modify and link various different data sources. This puts heavy emphasis on the need not only for accessibility but also for common open standards and interoperability. Second, open government data is not a one-time technological fix in public administration. On the contrary, the biggest challenges related to working with open government data are likely to be organisational and institutional (see Figure 1). [7]

Another emerging issue is the lack of demand-side considerations in open government data initiatives.[8] It is not enough to make data sets open if no one utilises them. This raises questions of awareness and interest but also of user interface and technical accessibility. For data sets to truly be accessible, the process of making them open must include a dialogue with demand-side stakeholders, something that has been considerably overlooked in many cases. A macro-regional or cross-border perspective on open government data adds some new dimensions to how data can be utilised and recombined, but even more so it provides policymakers with an opportunity to share experiences on how to engage and promote communities around open data and data-driven innovation.

Providing open government data is a continuous commitment, and one that needs to evolve to improve over time. It is, strictly speaking, a new way of organising work in the public sector. Public service (broadcasting) provides an interesting example of a government function working with and distribution

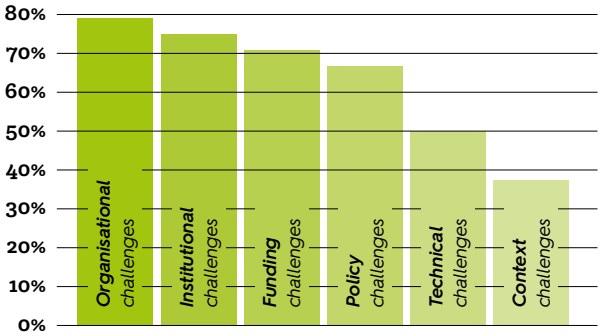
[2] *http://fortune.com/2016/07/11/data-oil-brainstorm-tech/, http://www.forbes.com/sites/perryrotella/2012/04/02/is-data-the-new-oil/#772b5d3377a9*
[3] *Mayer-Schönberger and Cukier 2013; Lundblad and Nygren 2014*
[4] *Lundblad et al 2013*
[5] *OECD 2016*
[6] *http://opendefinition.org/od/2.0/en/*
[7] *OECD 2016; Lundblad et al 2013*
[8] *Olausson 2016*

of information, and yet in many European countries it is still not included in open data initiatives.[9] A lot, if not most, government bodies are organised with respect to monetary flows and budgets, but it becomes increasingly important to also organise with respect to information flows, especially if some of those flows are to be made open to the public. This resonates strongly with O´Reilly's (2011) concept of government as a platform.

FIGURE 1

Principal challenges to further development of OGD initiatives

% OF RESPONDING COUNTRIES



SOURCE: OECD 2013 OGD SURVEY

There have been three broad themes for promoting open government data initiatives so far: Innovation (including academic research) and economic growth, democratic transparency and participation, and improved public service delivery. The economic motivations have received the most attention by far, together with principle arguments for increased openness and transparency[10]. For instance, the access to open government data has been shown to promote entrepreneurship.[11] The consultancy McKinsey estimated that open data, especially government data, could contribute $3 trillion annually to the world economy.[12] Similarly, a report from the European Commission estimates that open data will create a direct market size corresponding to €325 billion in the 28 EU member states between 2016 and 2020, as well as €1.7 billion in government cost savings.[13] Considerably less is said about what public office and administration is actually expected to look like after adapting to working with open data and how this may affect transparency and participatory democracy in tangible ways, although this is likely to be a big challenge ahead. This also includes ethical and principal questions concerning data and data governance that include, but also go beyond issues like privacy and data security. The Organisation for Economic Co-operation and Development (OECD) summarises potential benefits of open government data initiatives on public service delivery, for instance linking open data to evidence-based policy.[14]

A lot – if not most – of the open government data is highly localised in form, but also highly globalised in its potential applications. That is, data on public utilities, maps, weather or public transit timetables are strictly geographically bound in the way they are collected and used by public agencies. When that same data is being reused to provide a service or application by an entrepreneur however, there are often strong incentives for expanding the geographical coverage, i.e. to expand its potential user base and impact.

Open government data has a strong 'glocal' value. It is at the same time both global and local. That is, the immediate value of the data is very locally bound, but it rises significantly if it can be combined and expanded with other similar data sets covering other areas. This value is held back by for instance limited accessibility, lack of interoperability, differences in standards or practices and language barriers. The same could essentially be said for data owned by departments within organisations or organisations within a country. Data sets are often organised solely for the purposes of their parent organisation, but they are likely to be put to more or better use if they can be combined across organisational as well as national borders.

This is one reason why cities are becoming focal points of open data and data-driven innovation.[15] Cities are characterised by density in both people and activities. This is what makes them engines of economic growth and innovation. For the same reasons however, cities also face challenges such as congestion, pollution and crime. Both of these aspects of the city, positive and negative agglomeration externalities, together with digitisation contribute to making them remarkably data-intensive. Put differently, because people live, work and interact close together in a built environment, it becomes a lot easier to measure and collect data on their activities.

Cities have, in a sense, a digital skin to them.[16] These data are highly localised, but they are also comparable and similar across cities and countries. This forms the basis for a growing number of smart cities initiatives.[17] It also lays the ground for what I refer to as urban digital markets, i.e. markets for very localised and data-driven transactions.[18] Service applications like Uber and Airbnb thrive in dense environments where the local demand becomes large enough to gather sufficient supply, but they can also spread easily (not taking institutional barriers or regulations into account) between cities that fulfil these conditions. In addition, when people can use the same applications or data-driven services seamlessly across cities or countries, it adds to their sense of trust and safety not just in a digital market but between geographical places as well. Accordingly, if open government data is used in more cross-border accessible applications, it could contribute to building trust within the region. It is also, in the words of Goldstein and Dyson (2013) "at the city level that government most directly impacts the lives of residents"[19], providing a fantastic venue for open government data.

> *"open data will create a direct market size corresponding to € 325 billion in the 28 EU member states between 2016 and 2020, as well as € 1,7 billion in government cost savings"*

[9] *Rene Summer 2016*
[10] *OECD 2016*
[11] *Lakomaa and Kallberg (2013)*
[12] *McKinsey (2013)*
[13] *European Commission (2015a)*
[14] *OECD (2016)*
[15] *Goldstein and Dyson 2013*
[16] *Rabari and Storper 2013*
[17] *Townsend 2013*
[18] *Wernberg and Dexe 2016*
[19] *Goldstein and Dyson (2013, p. IX)*

3 STATE OF OPEN GOVERNMENTS

This section compiles an overview of open data frameworks and initiatives, starting at EU-level and zooming in on the Baltic Sea Region. The section is concluded with a series of open data country profiles and an interview poll, both conducted by Oxford Research on behalf of BDF.

3.1 SETTING THE STAGE FOR OPEN DATA

Since the introduction of the Digital Agenda for Europe, open government data has been a priority within the EU. In 2015, member states were to transpose the amended PSI-directive (Directive 2013/37/EU), which among other things encourages marginal or no cost for accessing open government data. The same year, the European Commission presented the Digital Single Market (DSM) Strategy, underlining the need for free flow of data between member states to promote innovation.[20] Also, a free flow data initiative under the DSM Strategy has been launched with the aim to encourage further access to public data, specifically related to issues of ownership and data location restrictions. [21]

The Commission have also launched several specific initiatives such as the Legal Aspects of Public Sector Information (LAPSI) network for legal issues concerning open data, a public sector information (PSI) expert group for exchanging best practises between member states, the Open Data Incubator for Europe (ODINE), and the European Data Portal. The data portal was launched in 2016 and is currently reported to contain more than 639,000 data sets from 34 countries.[22] Several member countries have their own open data initiatives related to national digital agendas.

In addition, a strategic initiative known as HOMER (Harmonising Open data in the Mediterranean through better access to and Reuse of public sector information), financed by the European Regional Development Fund was conducted in Spain, Italy, France, Malta, Greece, Slovenia, Cyprus and Montenegro between 2012 and 2015.[23] The initiative addressed harmonisation of legal, cultural and technological challenges pertaining to open data in these countries.

The United Kingdom has been one of the forerunners on open government in Europe and globally. In 2009, then Prime Minister Gordon Brown appointed Tim Berners-Lee, inventor of the World Wide Web, and Nigel Shabolt as special advisors to advance open data initiatives and data.gov.uk, which in August 2016 was reported to contain more than 35,000 data sets.[24] Interestingly, the catalogue also includes records of data sets that are not published openly.

Another notable example of open data policy initiatives is provided by US President Barack Obama, who in 2009 issued a memorandum leading to a directive stating that all executive departments and agencies were to publish at least three sets of high-value data within 45 days.[25] Furthermore, in 2013 President Obama signed an executive order making all government information open and machine-readable by default.[26]

On a global level, G8 leaders in 2013 signed the G8 Open Data Charter, which outlined a set of core open data principles. The principles provide governments with a common foundation upon which to realise the full potential of open data and provide guidance as well as political support for the release of open data.[27]

3.2 THE BALTIC SEA REGION

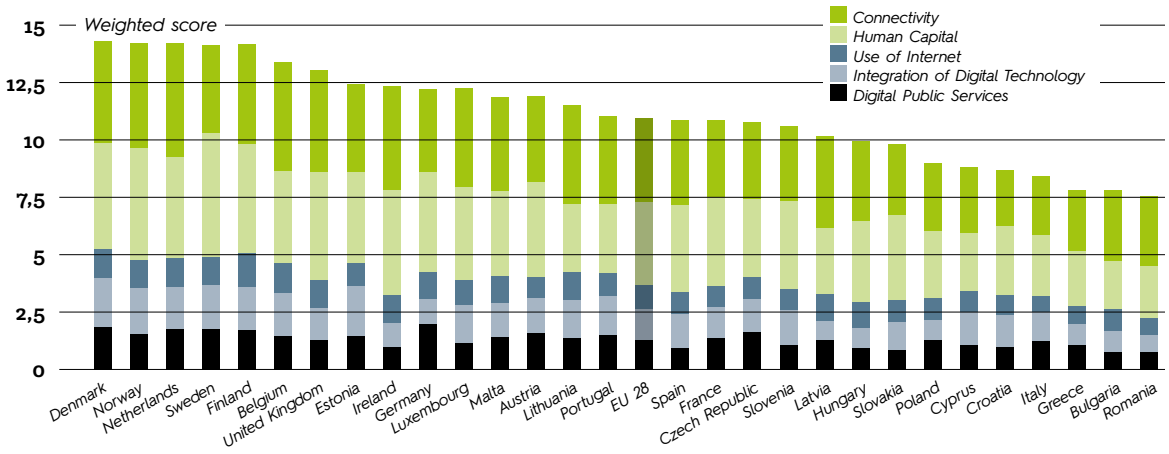
The Baltic Sea Region (BSR) countries stand out in the digital economy as potential forerunners. The Nordics have a long track record of high internet penetration and technology-driven innovation. The Baltics are proving to be fast movers, with Estonia surpassing the Nordics in several aspects, for instance pertaining to e-government. Poland may still be lagging behind in relative terms due to its size, but in absolute numbers it is by far the biggest provider of digital skills as well as total number of mobile phone and broadband subscriptions in the region. In the European Commission's Digital Economy and Society index (DESI) from 2016, six out of eight countries rank above the EU28+ average (see Figure 2). However, the competition for a lead in the global digital economy is tight. If the BSR countries do not keep up and accelerate, they are sure to be overtaken by others and left behind.

"If the BSR countries will not keep moving forward, they are sure to be overtaken by others"

[20] *European Commission 2015b*
[21] *https://ec.europa.eu/digital-single-market/en/news/digital-single-market-free-flow-data-initiative*
[22] *http://www.europeandataportal.eu/data/en/dataset*
[23] *http://www.csipiemonte.it/web/en/documentazione/documentation-en/international-activities/578-homer/file*
[24] *https://data.gov.uk/data/search*
[25] *https://www.whitehouse.gov/open/documents/open-government-directive*
[26] *https://www.whitehouse.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government-*
[27] *http://opendatacharter.net/history/*

FIGURE 2

Digital Economy and Society Index

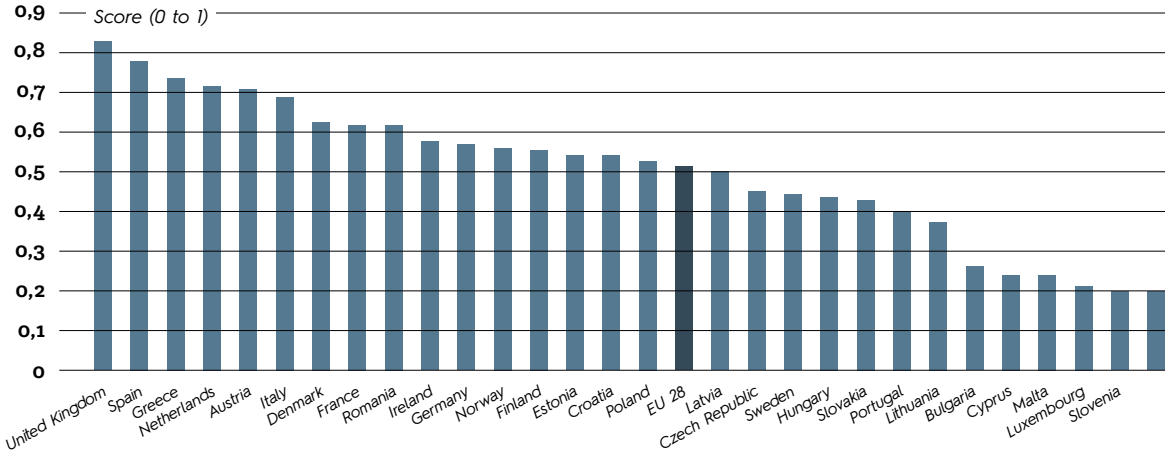


SOURCE: EUROPEAN COMMISSION 2016, DIGITAL SCOREBOARD

FIGURE 3

Open Data,

BY AGGREGATE SCORES

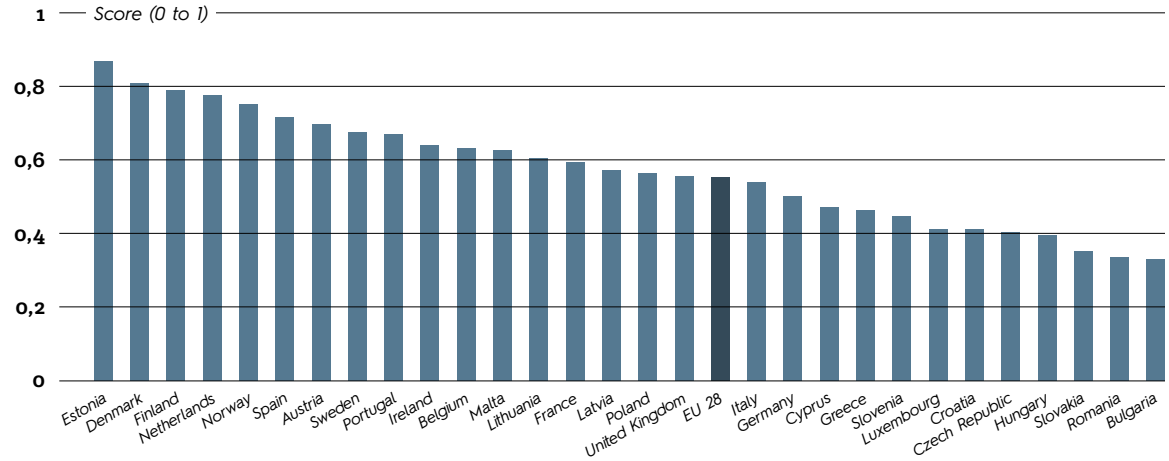


SOURCE: EUROPEAN COMMISSION 2016, DIGITAL SCOREBOARD

FIGURE 4

eGovernment,

BY AGGREGATE SCORES

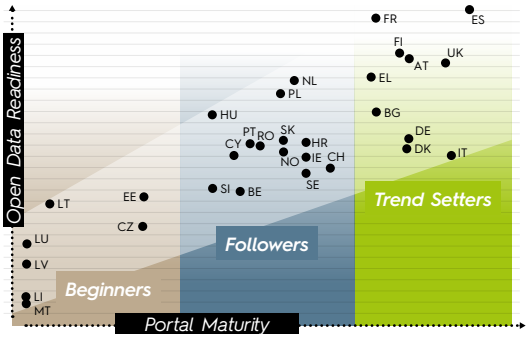


SOURCE: EUROPEAN COMMISSION 2016, DIGITAL SCOREBOARD

Taking a closer look at open data indicators in DESI 2016, Denmark, Norway, Finland, Estonia and Poland rank above the EU 28+ average on an aggregate PSI scoreboard while Latvia, Sweden and Lithuania are falling behind (see Figure 3). The score is based upon the status of open data as well as reuse of public sector information. On the other hand, all of the BSR countries rank above the EU28+ average on the aggregate e-government score (see Figure 4). This suggests at least some favourable conditions for further open government data initiatives. It should be noted that rankings of this kind will only provide a partial indication of the state of open data affairs in each country. That is, it says little about what is going on inside a single country, but gives a good indication of where to start collaborating and exchanging best practises.

The state of affairs with respect to open government data is further elaborated upon in another report from the European Commission measuring the maturity of open data in Europe.[28] In this report, countries are divided into beginners, followers and trend setters (see Figure 5) based on the maturity of their open data portals. Finland and Denmark are all categorised as trend setters in open data maturity, meaning that they "have solid open data portals with elaborate functionalities and coordination mechanisms across domains". Poland, Sweden and Norway are considered followers, meaning that "the approach to the release of data is very much in silo and remains limited". Estonia, Latvia and Lithuania are labelled beginners, meaning they "still struggle with basics around availability and accessibility". Yet, remembering that Estonia outrank all of the Nordic countries with respect to e-government, they are likely to have some advantage in rolling out open data policies. It should also be noted that even if open data is high on the agenda in the BSR countries, they are falling behind countries like the Spain, United Kingdom, France and Austria in this categorisation.

FIGURE 5



SOURCE: BASED ON EUROPEAN DATA PORTAL 2015

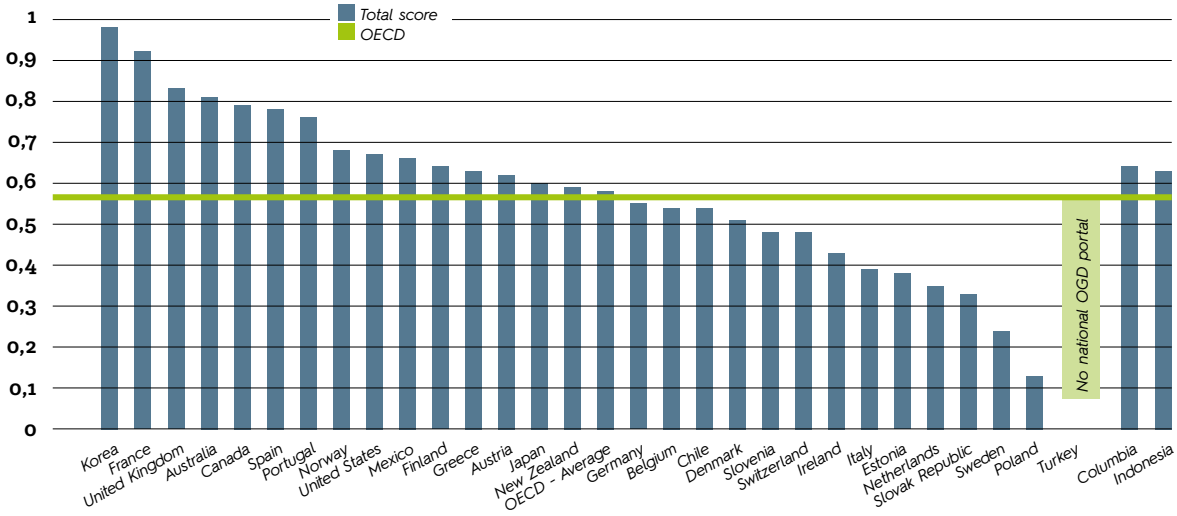
The OURdata Index from the OECD assesses governments' efforts to implement open data in three critical areas - Openness, Usefulness and Re-usability of government data indicates that countries such as Korea, France and the UK are in the lead, whereas Norway and Finland are paving the way to other BSR countries (see Figure 6).[29]

Other international studies and indexes such as the Open Data Barometer and the Global Open Data Index also seem to indicate that the Nordic

FIGURE 6

OURdata Index (OECD)

2014



SOURCE: OCED (2015), GOVERNMENT AT A GLANCE 2015

[28] *European Data Portal Project 2015*

[29] *http://www.oecd.org/gov/digital-government/open-government-data.htm*

countries are well placed to embrace data-driven innovation through open government data initiatives. In the Open Data Barometer, Denmark and Sweden are in the global top 10 with Finland right after in 11th place, although still behind leaders such as the UK.[30] In the Global Open Data Index, Denmark and Finland are in the top five, and Norway in 10th place, while Sweden dropped significantly in 2015.[31] As pointed out above, one should be careful not to put too much into each of these rankings, but taken together they do suggest a potential for open data-driven innovation in the region, particular among the Nordic countries.

From a regional perspective, there is still an intuitive impression that the Nordic countries are leading while the others are lagging behind. However, this fails to take two things into account. First, when looking at the BSR countries across a wide variety of indicator categories, it is clear that each country has comparative strengths and weaknesses.[32] Accordingly, each country could potentially benefit by learning from the others and thereby harmonising their digital markets to the level of the leader in each category.[33] Second, every country does not follow the same trajectory to develop open government data policies. That is, their position in a ranking is not an indicator of how far they have come on a linear process in time. Catching up to the leader in a category could potentially be a lot quicker than the time it took for the leader to first reach that position, particularly if countries manage to cooperate and exchange best practices in an efficient way. Having said that, the state of affairs on open government data varies considerably between the countries. Together, they could be more than the sum of their parts, but it will require some work.

3.3 CREATING VALUE FOR THE BSR

The BSR countries, as well as others across the EU, have good reasons to cooperate when it comes to open government data and open government within the scope of a digital single market.

Economically, the potential for innovation and value-creation does not stop at the border. On the contrary, if data can be recombined and reused freely between countries, this means that innovations and applications built on these data become scalable to a larger market. In other words, applications made in one country become instantly exportable to others, while applications developed elsewhere can be imported seamlessly and instantly. This would, however, require joint practices, common open standards and harmonised regulation within the region. The alternative to this would be for each country to reinvent a whole lot of wheels in their own national digital service silos.

With a larger harmonised data market, the scope and potential for successful innovation increases in two ways. First, with a larger variety of data, the number of possible recombinations grow, increasing the potential for data-driven innovation. Second, in a larger marketplace, both the supply of specific types of data and the potential demand for a specific new application is greater. Accordingly, an integrated market for open government data within the BSR could potentially help boost the demand-side user community by increasing the potential gains or impact that could be achieved by re-using and utilising data from several countries rather than just one. Furthermore, it also means that some applications that may not attract sufficient demand in a single country could reach a critical mass of customers on a cross-border market . Conversely, some type of data, e.g. may be limited in a single country, but could be aggregated over several countries.

> *"some applications that may not attract sufficient demand in a single country could reach a critical mass of customers on a cross-border market"*

Tourism provides a good example of this cross-border potential. Consider, as a thought experiment, a tourist app that covers bed and breakfasts in Sweden to one that covers the entirety of northern Europe. The second one will be able to reach a larger audience of tourists, even if each user only visits one country. Additionally, the second application could potentially build more value over time, for instance by carrying users' ratings across borders and providing suggestions based on previous trips. This scalability does not stop at the European border either, as evidences by the several global applications for finding hotels, restaurants, bars and other amenities that already exist today.

It is vital that data is easily accessible within and between countries even for SMEs or entrepreneurs and citizens with limited resources. This requires simple, transparent and joint practices and standards. This example also highlights another important reminder: data-driven innovation is already in full motion across the world and the question every government needs to ask itself is if they want to contribute to it and learn from it, or remain a passive passenger for the ride. Opting out is not an option.

> *"Data-driven innovation is already in full motion across the world and opting out is not an option"*

Nor does the value of open government data stop at the border from public sector or welfare perspective. It is not merely a question of providing marginally better public service delivery at lower cost, but about building the public sector of an information society. This includes efficient ways for businesses and citizens to interact with their government, but also regulations and procedures that reflect new ways of doing business and day-to-day transactions. It also includes future challenges such as those facing health care and elderly care, and finding new ways and tools to deal with these issues. Harmonised markets for open government data also entail a larger pool to draw from when procuring and developing new data-driven public and welfare services. Consider another experiment; the challenge of building a successful digital service for compiling and sharing patient records in cross-disciplinary healthcare teams in Swedish cancer treatment. First, healthcare officials could publish relevant, anonymised data in an open format to provide an

[30] *http://opendatabarometer.org/data-explorer/?_year=2015&indicator=ODB*
[31] *http://index.okfn.org/place/*
[32] *Top of Digital Europe 2015a*
[33] *Top of Digital Europe 2015b*

evidence-based background of the problem to be solved. Second, developers may draw on data from healthcare in several countries to find a solution that builds on several best practises. Third, once the service has proven to be successful, it can be scaled and exported to other countries with greater ease provided that data and data formats and standards are harmonised.

In addition, cross-border open government data with respect to governance should be considered a cornerstone of modern, stable democracies. It promotes greater overall government transparency that can increase governments accountability and peoples' trust in their governments, as well as the opportunity to audit specific government actions. Moreover, open government data enables public participation and engagement in designing different public services i.e. mobile apps that correspond directly to public needs. Opening public sector data such as school data, crime rates, CO_2 emissions would promote informed personal choices and awareness that in the end improves overall quality of life.[34] All in all, such transparency can contribute to building trust both within and between countries in a digitised world .

[34] *Ubaldi 2013 OECD*

3.4

BSR OPEN DATA PROFILES

This section provides an introductory overview of current open data initiatives in the BSR countries. These accounts are by no means exhaustive, but rather meant to provide a snapshot of the current state of policy initiatives in the different countries.

3.4.1 DENMARK

The Danish Government has launched several initiatives to support the digitisation of the economy and society, one of which is the eGovernment strategy for 2016-2020 published in May 2016. It focuses on the following three themes:

1) High quality public eServices
2) Public sector digitisation as a driver of growth, including open data as a driver of growth
3) Safety and trust

In addition to the new eGovernment strategy, the Danish Agency for Data Supply and Efficiency is developing a so called data distributor for fundamental open public data – a coordinating portal between government departments and agencies.[35]

A number of open data initiatives have been launched in Denmark, specifically:

- **Open Data DK:** a national partnership between five municipalities and one region aiming at providing access to data in harmonised formats.[36] It also collaborates with the national association of municipalities (KL), Danish Regions and the Danish Business Authority aiming at improving access to open data.
- **Virk Data:** The Danish Business Authority has launched this platform in order to focus on the business value of open data. The initiative holds a catalogue of open data with business potential, cases and articles on open data business use and events and talks on open data.
- **Smart Cities partnership** aims to promote the use of smart digital solutions and data in urban development.[37] A number of cities are providing access to data, one example is Aarhus[38]. Other initiatives include the City Open Data Portal - a platform for open data in the city of Copenhagen[39], and a smart city platform called Copenhagen Solutions.[40] Other municipalities and regions in Denmark are also engaged in making open data available.
- **Hackathons:** The Danish Business Authority, Open Data DK, Open Data Aarhus among others have organised and supported a number of hackathons for developers and entrepreneurs to create awareness of open data in Denmark. One of the examples is #Hack4DK.[41]
- **Denmark is part of Open Government Partnership.**[42]

[35] *http://datafordeler.dk*
[36] *http://www.opendata.dk*
[37] *http://www.digst.dk/Digitaliseringsstrategi/Strategi-2016-2020*
[38] *http://www.odaa.dk/*
[39] *www.data.kk.dk*
[40] *www.cphsolutionslab.dk.*
[41] *https://hack4.dk/*
[42] *http://www.opengovpartnership.org/country/denmark*

3.4.2 NORWAY

In May 2016, the Norwegian government presented a white paper on the future digital agenda for Norway.[43] In the document, the government identified the following five priorities:

1) A user-centric focus, including reusing data
2) Efficient use of ICT for innovation and productivity
3) Strengthened digital skills and inclusion
4) Effective digitisation of the public sector
5) Sound data protection and information security

A number of open data initiatives have been launched in Norway, including: :

- **Data.norge.no:** a national open data portal, which gathers all the open data in Norway.[44]
- **Hackathons**, including *#hack4no from* the 28th to the 29th of October 2016 have been arranged.[45]
- **Norway is also part of the Open Government Partnership.**[46]

[43] *https://www.regjeringen.no/no/dokumenter/digital-agenda-for-norway-in-brief/id2499897/*
[44] *http://data.norge.no/*
[45] *http://www.hack4.no*
[46] *http://www.opengovpartnership.org/country/norway*

3.4.3 SWEDEN

Following its national digital agenda, the Swedish government initiated a digitalisation commission in 2012 to analyse and monitor the progress of digitisation. In 2015, the Commission presented the report *Digital Transformation and Strategic Areas for Future Policy*[47]. The report highlights six strategic policy areas:

- Continuous central government engagement in promoting the digitisation of society
- Regulation that functions in and for the digital transformation
- Skills for the digital society
- Infrastructure that promotes digitisation
- Data-driven innovation for growth
- Security and integrity in a digital age

Within the scope of data-driven innovation, the commission proposes a national strategy for data-driven innovation and a national centre of excellence for big data.

Various open data initiatives focusing on innovation or transparency have been launched in Sweden, including:

- **Opengov.se:** A collaborative project on open data resources in Sweden.[48]
- **Open Stockholm:** Open data provided by the City of Stockholm, which has also arranged app competitions.[49]
- **Opendata.se:** A portal that gathers information on Swedish APIs and open data sources.[50]
- **Oppnadata.se**: a national open data platform with an aim to become an innovation portal that makes it easier for those who want to build products and services, such as apps, based on the open government data. [51]
- **Open North:** Collaboration between Luleå technical University, Skellefteå municipality, Umeå municipality and Umeå University.[52]
- **Hackathons**, including Hack for Sweden in 2016[53] and Open Stockholm Award.[54]
- **Sweden is part of Open Government Partnership.**[55]

[47] *https://digitaliseringskommissionen.se/wp-content/uploads/2014/06/Presentation-report-Dec-2015.pdf*
[48] *http://www.opengov.se/om.html*
[49] *http://open.stockholm.se/*
[50] *http://www.opendata.seß*
[51] *https://joinup.ec.europa.eu/news/sweden-announces-its-open-data-portal-%C3%83%C2%B6ppnadatase*
[52] *http://www.opennorth.se/?page_id=11*
[53] *http://hackforsweden.se/*
[54] *http://hackforsweden.se*
[55] *http://www.opengovpartnership.org/country/sweden*

3.4.4 FINLAND

Finland's national digital agenda, *Productive and inventive Finland 2011-2020*, states that Finland will continue making the digital service market a new pillar for competitiveness, growth and welfare. A key focus area is developing and delivering digital services, including services based on public and open data, commercial services, and infrastructure services.[56]

A number of open data initiatives have been launched in Finland, including:

- **6AIKA:** The Six City Strategy for the six largest cities in Finland: Helsinki, Espoo, Vantaa, Tampere, Turku and Oulu. The strategy will be carried out between 2014 and 2020 with the aim of creating new know-how, business and jobs in Finland. The strategy is a part of the implementation of Finland's structural fund programme for sustainable growth and jobs 2014–2020.[57]
- **Helsinki Region Infoshare:** A platform that gathers the open data of the Helsinki Region.[58, 59]
- **Avoindata.fi**: A service for Finnish open data, interoperability standards and guidelines.[60]
- **Hackathons,** including the AEC Hackathon in November 2015[61] and #Hack4fi which was held in February 2016.[62]
- **Finland is part of Open Government Partnership.**[63]

[56] *http://www.oph.fi/download/135323_productive_and_inventive_finland.pdf*
[57] *http://6aika.fi/in-english/*
[58] *http://www.citylab.com/tech/2014/04/how-helsinki-mashed-open-data-regionalism/8994/*
[59] *http://www.hri.fi/en/*
[60] *https://www.avoindata.fi/en*
[61] *http://aechackathon.com/aec-hackathon-2-7-helsinki/*
[62] *http://hack4.fi/*
[63] *http://www.opengovpartnership.org/country/finland*

3.4.5 ESTONIA

Estonia is well known for being a digital frontrunner in a number of areas. In the national digital agenda for Estonia 2020 there are four priority areas:

- Better life for people
- Viable Estonian cultural space
- Higher employment
- Increased productivity

The agenda covers a wide range of priorities, including interoperability of public service infrastructure, increased use of data-driven analytics in public administration, linked open data to improve the use and analysis of large amounts of data from different sources, as well as the future advantages of the internet of things.[64]

[64] *https://e-estonia.com/wp-content/uploads/2014/04/Digital-Agenda-2020_Estonia_ENG.pdf*
[65] *http://www.opendata.ee*
[66] *http://www.eifl.net/eifl-in-action/open-access-and-open-data-estonia-project*
[67] *http://www.tehnopol.ee/sundmus/startupbus-estonia-hackathon/*
[68] *http://studyitin.ee/skype-university-hackathon*
[69] *http://garage48.ee/events/openbigdata*
[70] *https://e-estonia.com/component/x-road/*
[71] *http://www.opengovpartnership.org/country/estonia*

A number of open data initiatives have been launched in Estonia, including:

- **Open Data Estonia:** A platform that gathers all the open data in Estonia.[65]
- **Open access and open data in Estonia project:** Since 2009, the University of Tartu Library (UTL) has been leading open access (OA) initiatives in Estonia. In 2011 and 2013 EIFL supported (UTL) in a number of activities that led to more scholarly content and research being made available to the world.[66]
- **Hackathons**, including StartupBus Estonia hackathon in October 2015[67], Skype University hackathon in March 2016[68] and Garage48 Open and Big Data hackathon in October 2016.[69]
- **X-Road:** Described as the backbone of e-Estonia, X-Road is a common infrastructure for sharing data between public agencies and departments as well as interact with private actors.[70]
- **Estonia is part of Open Government Partnership.**[71]

3.4.6 LITHUANIA

The Information Society Development Programme 2014 – 2020: Digital Agenda for Lithuania lists six focus areas.[72]

- Enhancement of the Lithuanian residents' ability to use ICTs
- Development of the electronic content and services and promotion of use thereof
- Promotion of Lithuanian culture and Lithuanian language by ICT measures
- Encourage businesses to use ICT
- Development of the ICT infrastructure
- To ensure the development of safe, reliable and interactive ICT infrastructure

As part of the development of electronic services, the strategy emphasises the need to digitise as much as possible of public administrative services and to provide them through a single access point, as well as to develop e-health services.

[72] *https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment%20in%20Lithuania%20-%20February%202016%20-%2018_0%20-%20v2_00.pdf*
[73] *http://www.startuplithuania.lt/en/events/open-data-fest-2015*
[74] *http://hackathon.lt*
[75] *http://www.startuplithuania.lt/en/news/13-projects-created-at-the-first-lithuanian-vr-hackathon*
[76] *https://github.com/vilnius, http://www.sodra.lt/lt/paslaugos/informacijos-rinkmenos-1*
[77] *http://kurgyvenu.lt/*
[78] *http://www.opengovpartnership.org/country/lithuania*

A number of open data initiatives have been launched in Lithuania, including:

- **Open Data Fest 2015:** Engineers, programmers, designers, business developers and other active people met and discussed what could be done with open data.[73]
- **Hackathons**, including Hackathon.lt– Lithuanian Developer Days 2014 in July 2014 and VR Hack in April 2016.[74, 75]
- **Local initiatives:** At the moment there are few institutions (social insurance fund and Vilnius municipality) that share data in open formats free of charge via their websites. [76]
- **Kurgyvenu.lt:** A platform that collects and analyses all the relevant information about real estate and living environment (crime rates, noise level, school ranking, etc.) in major Lithuanian cities. [77]
- **A study on Open data infrastructure model** was conducted by independent experts. Based on the study results, a national open data portal model was approved. It is planned to launch in the Autumn of 2017.
- **Lithuania is part of Open Government Partnership.**[78]
- **Recommendations on Open data for public institutions** are already formulated and approved by the authorities.

3.4.7 LATVIA

In Latvia, The Information Society Development Guidelines for 2014 – 2020 were established to ensure continuity of existing policies and to determine the priorities in the area of Information and Communication Technology (ICT) for the European Union Structural Funds Programming period for 2014-2020.[79] In these guidelines, special attention is devoted to implementation of open data principle in the public administration.[80]

A number of open data initiatives have been launched in Latvia, including:

- **Open data Latvia:** Group for open data activists in Latvia, who are interested in promoting open data principles and providing easier access to Latvian government and other public data sources.[81]
- **Open data & public services 2015:** A gathering of developers, designers, visionaries, citizens, statisticians and mathematicians to write applications, liberate data, create visualisations and publish analyses using open public data to show support for and encourage the adoption of open data policies by the municipality of Riga.[82]
- **Hackathons**, including Baltic Open (Geo) Data Hackathon in March 2016[83] and Elixir of Truth Hackathon in September 2015.[84]
- **Latvia is part of Open Government Partnership**.[85]

[79] *https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment%20in%20Latvia%20-%20February%202016_18_00_v1_00.pdf*
[80] *http://www.varam.gov.lv/eng/darbibas_veidi/e_gov/?doc=13317*
[81] *http://www.meetup.com/opendata-latvia/*
[82] *http://garage48.org/events/riga-open-data*
[83] *http://sdi4apps.eu/baltic-open-geo-data-hackathon-2016/*
[84] *http://www.labsoflatvia.com/events/hackathon-elixir-of-truth*
[85] *http://www.opengovpartnership.org/country/latvia*

3.4.8 POLAND

Digitalisation and open data are high on political agenda in Poland and the Polish Government has launched several initiatives addressing the digital challenges in the recent years, with a focus on broadband infrastructure development, electronic services (cloud) development, e-skills and demand development, as well as cyber security.

Key initiatives include National Integrated Informatisation Programme (2014), the National Broadband Plan, and the Operational Programme Digital Poland 2014 -2020, which aims to create one point access for all eServices, increase transparency by exploiting the potential of public sector information and enabling citizens to be more involved in decision- making and public life.[86] These three documents define the activities and available funding for the development of digitisation in Poland up until 2020.

In an OECD review[87] Poland is recommended to create and leverage communities to stimulate development of a national open government data (ODG) culture, to develop an ambitious vision and common ownership across government, and to improve governance and co-ordination mechanisms to stimulate proactive data release across the government

A number of initiatives to enhance open data have been launched in Poland, including:

- **Danepubliczne.gov.pl:** An online central repository for Open Data in Poland.[88]
- **Open Gdansk:** a platform that gathers open data of city of Gdansk and promotes openness and potential of open data.[89] Municipalities in some of the other major cities are also engaged in open data activities.
- **Competition Apps4Warsaw:** A competition for the best city apps built upon City of Warsaw publically available open data, aiming to also set paths for the city of Warsaw to open data sets and becoming an open and innovative city.[90]
- **Koduj dla Polski:** A platform for building dialogue between private and public sectors, developing new applications based on open governmental data and involving civil society in public life.[91]
- **Hackathons** including Central Open Data hackathon in March 2014[92] and Public Data hackathon on 24 September 2016.[93]

[86] *https://joinup.ec.europa.eu/node/124151*
[87] *http://www.oecd.org/gov/digital-government/open-government-data-review-of-poland-9789264241787-en.htm*
[88] *https://danepubliczne.gov.pl*
[89] *http://otwartygdansk.pl/home/*
[90] *http://www.apps4warsaw.org/*
[91] *http://kodujdlapolski.pl/o-nas/*
[92] *https://ceehack.org/about/*
[93] *https://mc.gov.pl/aktualnosci/nie-musisz-czekac-na-przeciek-hackathon-danych-publicznych*

3.4.9 COMMON PRIORITIES FOR OPEN DATA

In addition to the compilation on open data initiatives in the BSR region, Oxford Research also conducted a short interview poll with key stakeholders, both inside and outside of government, from seven of the countries to get their views on the current barriers and opportunities of open government data. The results are consistent with the principal challenges presented in Figure 2, stating that organisational and institutional challenges (and opportunities) by far outweigh technological barriers. The interview input provides some venues of potential collaborations between the BSR countries. The compiled answers amount to 10 broad issues that need to be addressed, consisting of six barriers and four opportunities.

CHALLENGES

- Lack of awareness among potential stakeholders and reusers (i.e. demand-side considerations).
- Privacy issues and uncertainties, for instance related to health data.
- Data is only semi-open, due to limited access or associated costs. Increasing the market potential in the region requires equal access across borders.
- Public agencies need to provide better guidance to the data, not just publish it.
- Language and semantics differ across countries, making the access a challenge.
- Portal and data may be outdated, preventing timely and up-to-date data access. Better to provide APIs to primary data.

OPPORTUNITIES

- Collaboration between cities to further open data initiatives and reuse of data.
- Local data, for instance from municipalities, is becoming interesting.
- Collaboration between education and public agencies to introduce open data as a tool in education. Both educational institutions and businesses need to be more involved with open data initiatives.
- There is still a lot to be done to promote government transparency and economic growth.

In addition to this, the interviewees were asked what the scope for macro-regional initiatives in the BSR might be. Notably, several interviewees are sceptical of initiatives towards common data portals, especially given the newly launched European Data Portal. Rather, they emphasise the need for harmonisation of data and cross-border data-flows to improve access. Apart from this, the answers can be divided into three related categories: awareness, experience and networking:

AWARENESS

- Hackathons to promote awareness
- Community-building
- Exchanging reuse cases to see how data can be utilised
- A lot of initiatives going on, need for coordination and cooperation

EXPERIENCE AND SKILLS

- Exchanging best practices and experience from initiatives
- Joint open data schools for public servants
- Focus on improving public procurement
- Improving public procurement through collaboration

NETWORKING

- Establishing joint projects and funding applications across borders
- Including the other countries in the region into Nordic Open Data Week

Looking at the results from the country profiles and the interviews, it seems apparent that there is a potential for joint policy initiatives and collaborations in the Baltic Sea Region. However, it is also evident that providing value to such collaboration is at least as much about organisations, institutions and people as it is about technology. What is really needed to move open data forward are new ways to identify problems and equally new ways to find solutions to those problems.

4 POLICY PROPOSALS for BSR Open Data

In this section, the material and results from previous sections are combined and expanded upon to formulate three policy proposals for cross-border open data initiatives in the Baltic Sea Region. These proposals are intended as a starter kit to be elaborated on in further discussions and hopefully, future collaboration.

The case for a macro-regional approach to open government data is twofold: first, the more data there is to combine, across national borders as well as across institutional borders, the greater the potential for data-driven innovation is. This is particularly evident for smart city initiatives, digital tools for urban development and urban digital markets. Second, getting open government data right, both for internal and external use, requires a lot from governments and their public servants. It makes far more sense to work together and to harmonise open government data, than for each government to reinvent their own wheel and then try to get them to fit together.

4.1 SMART OPEN BALTIC SEA CITIES

Cities are focal points for open government data as well as for data-driven policy and the digital economy. They are at the intersection of urbanisation, globalisation and digitisation. They share common challenges and opportunities across national borders, and they potentially have the data to address these issues together.

Several countries already have open data initiatives aimed at smart cities or city networks, and the interviewees confirmed the interest in cities and local data. In short, cities are a good place to start. A Baltic Sea cross-border city collaboration on open government data and smart systems is beneficial because it is local and small-scale in nature, making room for experiments, while also being potentially far-reaching in impact. Platforms to work from are already in existence, such as the Union of the Baltic Cities, which has a working group on smart and attractive cities.[94] In addition, successful solutions and experiences made between cities across borders can more easily be spread on both sides of the border. Collaboration could include:

- Setting a joint agenda for UN's Global Goals, specifically Goal 11: Making cities inclusive, safe, resilient and sustainable.
- Establishing a working group of chief data officers and mayors to exchange best practises and experiences on open data and data-driven policy. These chief data officers should in turn work with a wide variety of stakeholders in their own cities.
- Arranging joint hackathons and innovation prizes (similar to the Nordic Innovation Prize or Hack4Norden challenge[95]) focusing on urban challenges and cross-border use of open data, thereby building cross-border networks and awareness of cross-border data access.
- Form a cross-border taskforce of data hunters (including demand-side stakeholders) to identify high-value data sets and promote harmonised accessibility from a cross-border perspective.
- Create a joint catalogue of successful reuse cases across cities and countries to promote awareness and inspire future reuse applications. This could also be a valuable tool for training public servants working with open data to highlight demand-side conditions.
- Establishing a joint open government training program for the next generation of public servants, focusing on open government data, data-driven analytics and public administration in cities.
- Setting up a multilateral working group of open government data users with the mission to benchmark demand-side conditions in open data initiatives and establish best practises.
- Including a special track on cities and the BSR in the Hack4Norden challenge.

4.2 BRINGING OPEN DATA INTO EDUCATION

Skills and education are recurring headlines in digital agendas. Yet, in most cases the object of attention seems to be adoption of new technology, such as tablets, in schools rather than the adaptation of education to new technological tools. The two are a world apart. The reason for making open data part of an educational toolbox is twofold. First, it contributes towards building digital skills, for instance by learning

[94] *http://www.ubc.net/*
[95] *http://nordicinnovation.org/en-GB/projects/datainnovation/*

to sort, analyse and visualise large data sets. These skills are valuable for future programming entrepreneurs as well as for future public servants. Second, getting to work with open government data raises awareness of what can be done, perhaps inspiring future applications, innovations and activities among students at all levels. Cross-border collaboration on open data in education could include:

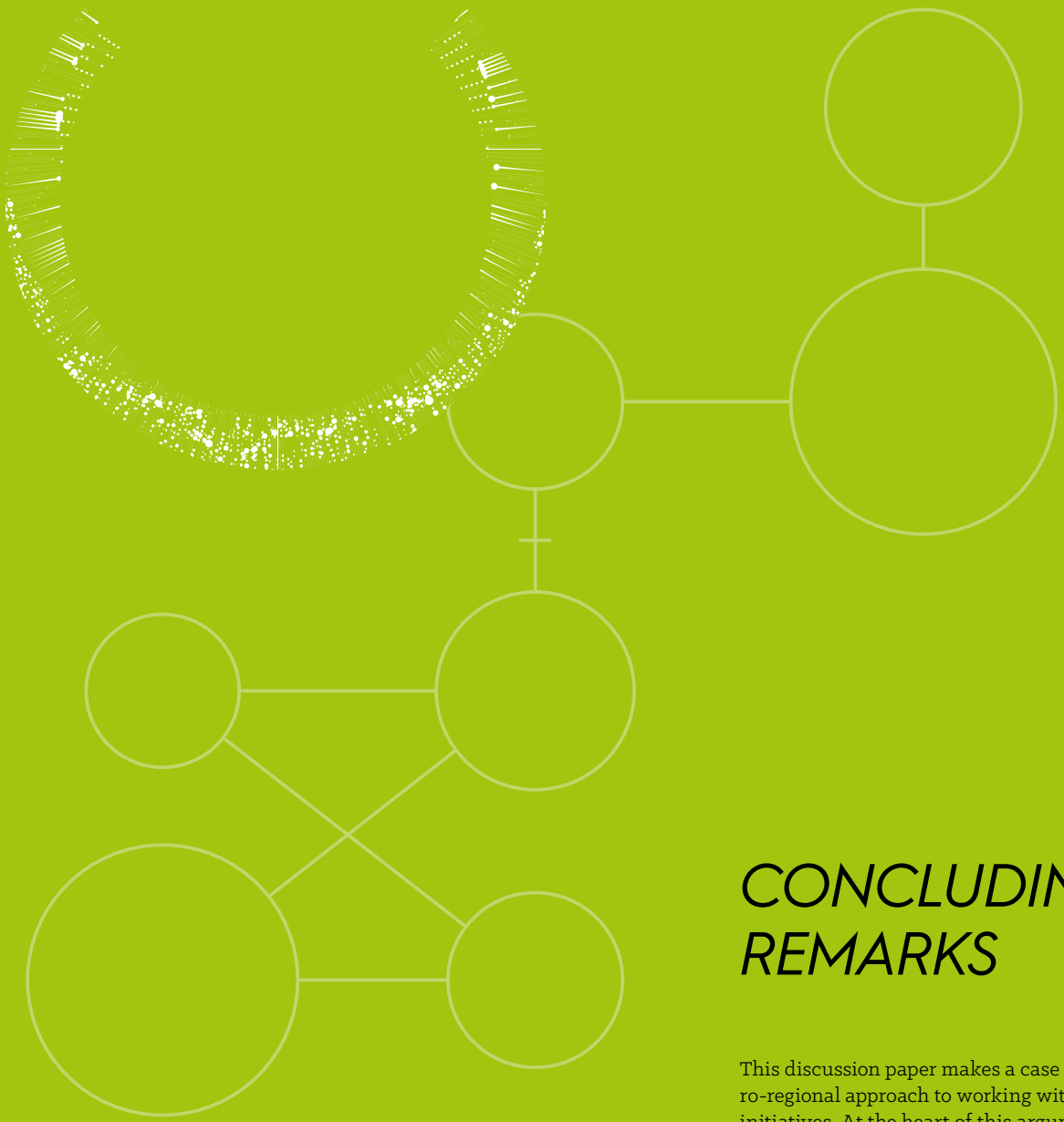
- Setting up a cross-border teacher training program for learning to work with open government data and exchange experiences. Programming is already a mandatory or electable subject in school in several countries and cities, providing a good setting for working with open data.
- Establishing a taskforce of teachers and open data specialists from each country with the mission to formulate a strategy for a digitised, data-driven education. The taskforce should also benchmark current experiences on working with open data in education.
- Arranging cross-border hackathons or innovation prizes to bring together high school students with the aim of building and improving data-driven tools based on open data. These activities could also be associated to the Hack4Norden challenge to attract students to attend.

4.3 HARMONISING OPEN DATA FLOWS IN THE BALTIC SEA REGION

The HOMER project (Harmonising Open data in the Mediterranean through better access to and Reuse of public sector information), financed by the European Regional Development Fund, was concluded in March 2015. It was aimed at legal, technological and cultural challenges associated to open government data and its reuse. This regional bottom-up approach constitutes an important complement to EU-wide and national initiatives, and the Baltic Sea Region provides an excellent setting for a sequel to the HOMER project.

The BSR stands out on digital progress, but there are significant differences between the countries in the region. They are further separated by language barriers similar to those in the Mediterranean countries. By continuing the HOMER approach in a new region, previous results can be tested in a new environment while new experiences are made. A Baltic open data harmonisation project could include:

- Facilitating free cross-border data flows, in accordance with the Digital Single Market Strategy, by identifying and countering barriers such as diverse regulations, practices and standards.
- Bridging the language barrier in data access across borders.
- Establishing joint open-by-default and digital-by-default policies for government data.
- Redefining public administration and public service delivery with the use of open government data.
- Digitising health care and working with harmonised open health data.
- Harmonising and simplifying cross-border public procurement.
- Building successful communities for cross-border open data reuse and data-driven innovation.



CONCLUDING REMARKS

This discussion paper makes a case for a macro-regional approach to working with open data initiatives. At the heart of this argument lies the 'glocal' value of open data. It is often highly localised in content, but its value grows with interoperability across sectoral and national borders. Put differently, the value of utilising open government data does not stop at the border, it grows.

Realizing the potential of open government data and data-driven innovation will be hard work. It entails a vibrant demand-side community for utilising open data as well as a considerable digital shift in public administration and government. And yet, opting out is not an alternative.

Just as the British and the American governments, along with several others, have in different ways claimed an edge in working with open data within their respective countries, so could the BSR countries become forerunners in mobilising open data flows across borders to push for data-driven innovation and development both in public administration and in the market. A first step in this direction would be to connect open data initiatives in cities within the region and in turn build closer collaborations with their demand-side communities.

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LIST OF ABBREVIATIONS

BDF: Baltic Development Forum

BSR: Baltic Sea Region

DESI: Digital Economy and Society Index

HOMER: Harmonising Open Data in the Mediterranean through Better Access and Reuse of Public Sector information

LAPSI: Legal Aspects of Public Sector Information

ODINE: Open Data Incubator for Europe

OECD: The Organization for Economic Co-operation and Development

PSI: Public Sector Information group

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