

Priorities towards a Digital Single Market in the Baltic Sea Region

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| Foreword

This report is a result of collaboration between The Baltic Development Forum (BDF) and the Baltic Chambers of Commerce Association (BCCA) around the idea that the Baltic Sea region has a unique chance to spearhead a new digital single market in Europe.

As a society, we simply must attempt to fully exploit the wealth potential of one of humanities greatest inventions, the networking of information technology.

Many have contributed to this work, which has been done in the form of seminars and comments on notes from different participants. This intense work would not have been so fruitful without the crucial contributions from the Policy Advisory Group (chaired by Kaj Juul-Pedersen). The members have given generously of their time and we are very grateful for this.

Besides BDF and BCCA, the project has been funded by Tillväxtverket, the Swedish Agency for Economic and Regional Growth. But far beyond contributing with funds, the agency has proven to be a very resourceful partner in terms of feedback.

Copenhagen Economics, a consultancy, has contributed with useful analytic input and had the task of attempting to dress the value of specific measures in economic terms.

Two people need special mentioning as they have been instrumental both in terms of handling the process and with intellectual and creative input from our own humble offices; Mr. Torben Aaberg (BDF) and Mr. Joakim Lundblad (Chamber of Commerce of Southern Sweden/BCCA). Torben has managed the whole process behind the scenes and Joakim has been key in terms of input and the actual penning of this report.

We intend to make sure that these issues keep getting attention from policy makers. But for now we hope this report will inspire to further ideas, and most of all – to action.

Baltic Development Forum

Hans Brask

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| Executive Summary

The Baltic Development Forum (BDF) and the Baltic Chambers of Commerce Association (BCCA) initiated this project to compile a comprehensive overview of the obstacles to a digital single market within the Baltic Sea region. The initiative is inspired by an idea introduced by Estonia's Prime Minister Andrus Ansip during the BDF Summit 2010.

Besides BDF and BCCA, the project has been funded by Tillväxtverket, the Swedish Agency for Economic and Regional Growth.

Representatives at leading positions within both public sector and private enterprise in the Baltic Sea region have been invited to join a Policy Advisory Group. The group contributed with their joint expertise to identify and prioritize barriers and to formulate policy approaches to advance the digital market in the region.

The Policy Advisory Group emphasized the need to associate barriers to economic drivers. In the first phase a more detailed overview of the issues were discussed. Based on this and the testaments of the Policy Advisory Group, BDF and BCCA have plotted the different barriers with regard to their potential economic impact and the scope of a regional policy solution within the Baltic Sea region. A number of important issues were discussed and considered:

- Trust
- Privacy and Data Protection
- Cybercrime and Security
- Digital Content and Copyright
- Interoperability and Standards
- e-Payments
- Electronic Contracting, Tendering and Invoicing
- e-Government
- Digital Infrastructure

Four issues were identified as key drivers for initiatives within the Baltic Sea region. These issues were further investigated and the scope of their potential economic impact was examined. The four key issues are:

- e-Procurement
- Public Sector Information and Open Data
- Roaming, and
- Online intermediaries

e-Procurement

Copenhagen Economics, who was asked to quantify the impact of this area, has made a conservative estimate of the economic impact of the use of electronic processes summing up to 3.85 billion euros for the Baltic Sea region

The Policy Advisory Group calls for a more efficient, cross-border common platform for e-procurement to improve the procurement process and to stimulate business in the Baltic Sea region. This includes benchmark procurement procedures, a common platform for e-procurement, the promotion of cross-border e-procurement targeting small and medium-sized enterprises with specific procurements and the use of specific test cases to promote e-procurement and raise awareness within the Baltic Sea region. The group saw the PEPPOL project as an important inspiration in this work (www.peppol.eu).

Public Sector Information and Open Data

Information is a basic resource and an increasingly valuable asset in the digital economy. The public sector has terabytes of it, but it is far from always readily available to the public. Copenhagen Economics has estimated the total value of direct and indirect economic impact of PSI and open data re-use to 1.14 percent of the total GDP in the Baltic Sea region, corresponding to 41 billion euros.

Policy recommendations include benchmark initiatives both regionally, nationally and transnationally to publish public sector information and to work with open data. Furthermore the implementation of the EU's PSI-directive and the marginal-cost charges in the Baltic Sea region should be harmonized in the region. Baltic Sea region licensing market should be established to enable the cross-border use of data regulated by licenses.

Roaming

Roaming fees are additional charges to mobile data communication made from abroad. The entire idea of roaming fees is based on national borders, meaning that it is relevant in which country the subscriber is located when communicating and which country the subscription was started in. As long as that relation is relevant, it is hard to talk about a single digital market where cross-border interactions are as simple as domestic ones. The effect of roaming fees become increasingly important as more and more people access the internet, communicate and buy goods and services from their mobile devices. Copenhagen Economics has estimated that the total amount of roaming services within the Baltic Sea region corresponds to roughly 30 percent of the total amount of roaming services within the entire EU (6,030 billion euros), totaling 1,819 billion euros

Policy recommendations include coordination of national telecom licenses and procedures for these to promote cross-border, roaming-free communication, and in order to incentivize lower roaming prices, the pricing of licenses should also be lowered. Importantly operators should not be allowed to discriminate between bits of data traffic, meaning that VoIP and e-mail should be billed in the same way.

Online intermediaries

A large part of the digital market consists of some kind of intermediary services. Customer relies on online services to gather and sort vast amounts of information or goods to make it easier to find what they're looking for. However, it is not clear to what extent these intermediaries are liable for what they are mediating. This in turn effects both businesses (intermediaries and those using intermediaries to reach customers) and customers.

According to Copenhagen Economics estimations, GDP contribution in EU from online intermediaries equals roughly 160 billion euro per year. Productivity contribution is estimated to 150 billion euro annually. The contribution beyond what is included in GDP is roughly estimated to 600 billion euro per year.

Policy recommendations: The Baltic Sea region should provide open networks and internet access so that all its citizens can reach the internet on equal terms. Rules and regulations for the liability of online intermediaries within the region should be harmonized. There should be clearly defined and harmonized procedures to dispute censorship in each country in the region.

1 | A lot of History in a Very Short Time

The internet as we know it – as a platform for private, public and commercial communication and transaction – is roughly 17 years old. Unlike prior platforms for electronic commerce, the internet was open and supported a variety of different systems and uses from the beginning. In effect, this meant that the barriers to entry were significantly lowered, more actors could meet in the digital market place and it became available to ordinary households in a completely new way.

The digital market holds a great, largely untapped potential for consumers within the EU. It makes it easier to reach a greater range of suppliers both domestically and internationally, to browse products and gather information from other consumers in order to make informed decisions and to switch from one supplier to another if goods or services are not satisfactory.

Internet has also transformed the conditions for businesses and business models. Chris Anderson, editor-in-chief at Wired Magazine, popularized the term *long tail* to describe how businesses are increasingly going from providing one standard product for the masses to providing a wide variety of individually customizable alternatives. Reversely, the long tail also illustrates how niche products find new markets. When demand is geographically constrained, businesses will only cover the part of the demand that can aggregate a critical mass to support a business model for providing it. Online, customers can aggregate to form a critical mass irrespective of geographical boundaries. This means that micro-cultures demand and niche products find new market traction online.

The digital market not only changes what is being sold and bought, but also the business doing the selling. Hal Varian, chief economist at Google, has coined the term *Micro Multinationals* to describe small businesses acting on multinational markets. Historically, a company's market has been strongly correlated to its size, meaning that in order to reach new markets the company had to grow and expand. This is not necessarily so anymore. In a digital market, a small business providing a niche product can access several national markets right from the start. In fact, it might be necessary for its business model to do so. Other businesses are entirely digital, providing social network services, online games or even digital clothes for a digital avatar in a game or online community.

A lot has happened since the internet started spreading in 1995. Yet, there are many questions posed by policy makers, academics and business leaders in the second half of the 1990's that still remain unanswered. How do legal systems need to be reformed and harmonized to apply to cross-border commerce in a single digital market? Does it matter if we are online or offline - can we even tell the difference anymore? Should we be able to access the same online content even when we are abroad? As the EU intensifies its efforts to establish a Digital Single Market (DSM), it will be necessary to address and to provide answers to many of these questions. This report proposes an approach to begin answering these questions and realizing the true potential of a digital single market in the Baltic Sea region.

The Digital Agenda is one of the flagship initiatives of the EU 2020 strategy to create growth and jobs in Europe. One of the top priorities in the strategy is the creation of a digital single market, whereby barriers between Member States in the digital area are reduced or removed.

A digital single market is of great importance to the economies in the Baltic Sea Region (BSR). As front-runners in many areas of the digital economy, these countries have an interest and possibility to go ahead and show practical results in terms of providing a better integrated legal framework in the digital arena, and thereby allowing innovative companies in their home yard to grow and prosper from a larger and better integrated home market. And in the longer-term to benefit from an integrated market at European scale. There are large benefits at stake for growth and employment in the region, but little is known about the practical steps to be taken to achieve these benefits.

This is the background of the Baltic Digital Single Market Initiative. A process to unify business and policy makers around a common strategy for reducing barriers to an internal market in the digital sphere, and identify the most urgent decisions where the BSR countries in the EU can take concrete actions to be implemented in a short to medium term. The EU strategy for the BSR provides a good framework for promoting such a proposal.

2 | Project and Process

The Baltic Development Forum (BDF) and the Baltic Chambers of Commerce Association (BCCA) initiated this project to compile a comprehensive overview and a priority of policy issues associated with promoting a digital single market in the Baltic Sea region.

The BDF and the BCCA commissioned Copenhagen Economics to research the issue of barriers to the digital single market within the EU in general and in the Baltic Sea region in particular. The research was funded by the Swedish Agency for Economic and Regional Growth (Tillväxtverket).

The research was completed in two steps. First a general overview of known barriers and their characteristics was presented at the initial phase of the project. Second, an in-depth report on a selection of barriers was presented as background material for discussions on policy recommendations.

The BDF and BCCA invited representatives at leading positions within public sector and private enterprise in the Baltic Sea region to join a Policy Advisory Group. The group contributed with their joint expertise to identify and prioritize barriers and to formulate policy approaches to advance the digital market in the region.

The group was chaired by Kaj Juul Pedersen, president at Sitella.¹ The Policy Advisory Group has been regularly consulted throughout the working process but cannot be held responsible for the final policy recommendations as these are put forward by BDF and BCCA. Also it should be noticed that the Policy Advisory Group's views quoted in this report do not necessarily express the views of all members of the group.

The group convened at two meetings in 2012, one at IBM's offices in Copenhagen in March and one at Ericsson's offices in Tallinn in April, hosted by respectively Kim Østrup and Seth Lackman.

At the first meeting in January, Copenhagen Economics presented their general research on barriers in the digital single market to the advisory group members. The participants then worked in parallel workshops to discuss the prioritization and potential of the different barriers and their associated policy issues.

The Policy Advisory Group emphasized the need to associate barriers to economic drivers. A barrier describes an institutional obstacle to cross-border digital markets and trade, whereas a driver describes a catalyst that will promote economic growth once the barrier is sufficiently removed. Dealing simultaneously with barriers and drivers allows for a more holistic policy approach. More precisely, barriers need to be understood in terms of the drivers they inhibit.

¹ For a list of members of the Policy Advisory Group, see Appendix A.

However, it should be noted that drivers cannot substitute barriers. Barriers are mostly related to legal frameworks and public policy, whereas drivers are associated both with private enterprise, market forces and some parts of public administration. Consequently, public policy initiatives need primarily to be aimed at promoting drivers of change by removing institutional barriers.

At a high-level conference in February 2012 hosted by the Danish EU-presidency four such main drivers for growth in the digital market were identified. The Policy Advisory Group recommended to take these into account in the work:

- **Connectivity**
- **Trust**
- **Digital Mindset**
- **Big Data**

During the working process, it has also been taken into consideration that policy recommendations should reflect and contribute to the three targets formulated at the Copenhagen competitiveness council in February 2012 for the EU27:

- **Online sales to double by 2015**
- **E-procurement to reach 100% in 2016**
- **Majority of invoices are electronic by 2020**

Finally, the policy recommendations herein are also based on the digital single market priorities for the Danish EU Presidency: Roaming, connecting Europe facility, Public Sector Information Directive, and e-signatures.

Following the first meeting, Copenhagen Economics compiled a more detailed overview of the issues discussed at the meeting. Based on this and the testaments of the Policy Advisory Group, BDF and BCCA have plotted the different barriers with regard to their potential economic impact and the scope of a regional policy solution within the Baltic Sea region (see figure 1). Each of the barriers is discussed and its position motivated in chapter 3.

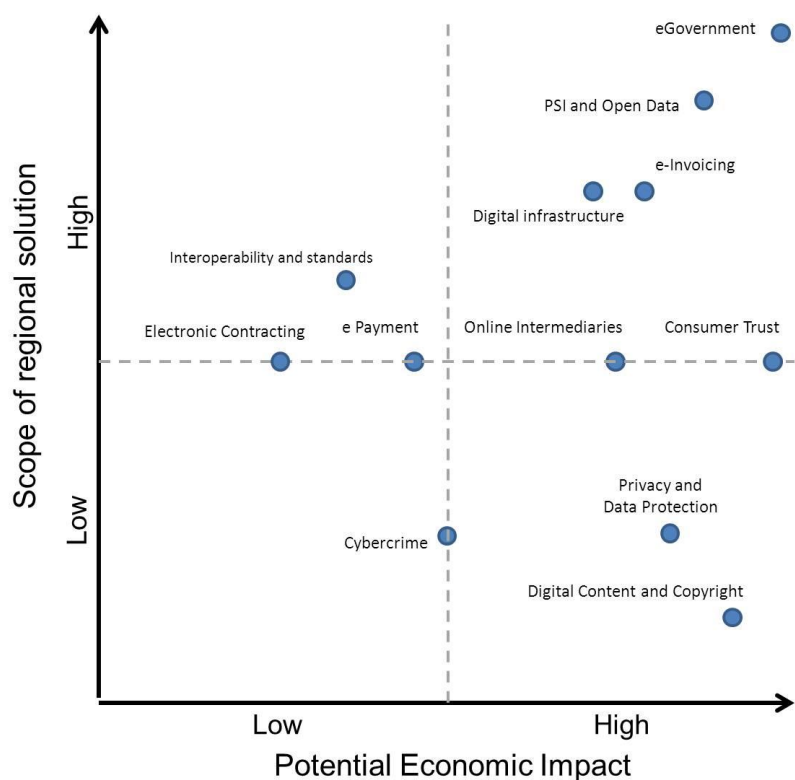


Figure 1A plot of barriers to a digital single market in the Baltic Sea region with respect to their potential economic impact and the scope of regional policy approaches

The policy issues with the highest priority were primarily focused on the areas of *Connectivity* and *Big Data* among the drivers defined by the Danish EU-presidency. However, all of these topics also implicitly have effects on *consumer trust*. In addition, there is reason to believe there are strong synergies to be found within these two areas. Connectivity increases access and demand for access increases with increased amounts of data and services online.

Together with the Policy Advisory Group, the BDF and the BCCA decided to conduct an in-depth analysis of four identified barriers: e-procurement, public sector information (PSI), roaming and intermediary liability.

Copenhagen Economics conducted the investigation. Their findings were presented to the Policy Advisory Group at the second meeting in April. At this meeting, members of the group discussed policy recommendations to address the four barriers covered in the investigation.

3 | Mapping the Barriers

This chapter covers the barriers identified by the Policy Advisory Group in the initial part of the project. Each barrier is described and its associated policy issues are briefly outlined.

The Policy Advisory Group has identified four priority areas – e-Procurement, Public Sector Information, Roaming and Online Intermediaries – that will be further investigated in chapter 4. These topics have been selected by the group based on their potential economic impact and the scope for regional policy approaches to promote competitive advantages within the Baltic Sea region.

The issues described in this chapter are believed to be fundamental to furthering a digital single market. Therefore, the priority topics discussed in the next chapter should be understood in terms of how they relate to the topics in this chapter and how they can act as drivers to promote wider change and development.

3.1 Trust

Trust is a fundamental building block of any market. It is hard to build trust but easy to demolish it. However, trust in the digital market is not a policy issue in itself. Rather, it is an aggregated measure of how policies manage to enable and empower producers and consumers.

Trust is closely related to reputation. That is, in order to build trust among actors, they must be able to identify and recognize each other from time to time. In a cross-border context this introduces new challenges when it comes to identification and authentication online. For instance, most electronic identifications are associated with nationality, sometimes rendering them confusing or insufficient to build trust between consumers in one country and producers in another country.

One of the greatest threats to trust in the digital market place is uncertainty. When institutional rules and regulations differ between actors from different countries meeting in the same market, it is not evident what rules will apply to their exchange. The lack of common coordination of rules and institutions for trade creates and feeds a common uncertainty. This is a prominent barrier to a digital single market.

The issues related to trust in the digital market can be broadly divided into two groups: harmonization of rules and need for a digital mindset.

Harmonization of consumer laws within the Baltic Sea region would allow consumers to buy goods and services domestically and transnationally on equal terms. Any difference in rules and legislation will create and add to uncertainty that requires the consumer to determine what rules apply to the transaction in question.

However, although harmonization is necessary, it is not evident that it is sufficient to promote trust in a single digital market. There is also an uncertainty that arises from the relation to technology and the digital market as such. The Policy Advisory Group emphasized the need for a broad and educational promotion of a digital mindset within the region. This would complement harmonization of rules and connectivity - both of which enable cross-border e-commerce - and empower consumers to take part of the advantages offered by a single digital market.

One important stepping-stone in this work is the EU classification of trust-levels and qualifications, which aids the harmonization of e-validation services and electronic certificates.

From a user perspective, trust is in many ways a question of transparency and simplicity. Clear and simple rules, combined with transparency, promote trust by enabling people to make informed decisions.

Policy Approaches

- Harmonize consumer laws and rights.
- Promote a digital mindset to eliminate uncertainty related to technology.
- Coordinate and harmonize the legal framework and incentive models to promote trust services across the Baltic Sea Region. For instance, use open, international standards for securely validating e-signatures and e-certificates.
- Use trust to measure impact and functionality in other policy areas. If policies aimed at promoting the digital market are successful, this should be reflected in the level of trust in the market.

3.2 Privacy and Data Protection

Data privacy rules have a wide range of implications on actors in the digital market place. First of all, variations in data privacy and data protection regulation may have effects on how users can access content and services in different countries, which in turn has effects on businesses' ability to access new markets.

The more regulation differs between two countries, the more a specific data-based service will need to be adapted in order to access both markets. This might also limit synergies and combinations between different data sets and/or users in different countries.

Data privacy protection is essential to promoting consumer trust. If privacy regulation differs too much between countries, users will feel less secure when submitting their personal data to make transactions or to access services. Hence differences in data privacy regulation might risk reinforcing national borders in the digital market place.

Furthermore, it is important to distinguish between an individual's personal data (information the individual supplies about herself) and personal information about an individual (information that others have about the individual or information that is produced as a residue when that individual uses online services, metadata). It cannot be expected that these two types of data can always be treated in the same way when it comes to data privacy and data protection.

Harmonized rules and implementation of rules for using, protecting, sharing and deleting data – personal and otherwise – is believed to promote a better cross-border environment for digital innovations. There are many initiatives to gather best practices from, for instance UK's HMG IA standards.

The Policy Advisory Group deemed this issue very important but assesses the scope of solution within the Baltic Sea Region to be low. This is primarily due to the many regulations and other policies that touch upon data privacy and data protection, which cannot easily be changed on a country-by-country or regional level. However, harmonization of data treatment regulation is in high demand and should be pursued on an EU-wide level.

Policy Approaches

- Harmonize data protection and privacy regulation.
- Investigate and structure the meaning and demarcation of privacy and the relation between personal data and data about a person.
- Adopt open international standards for information security management systems (ISMS) and technical penetration testing in order to harmonize a best practice in information security within the Baltic Sea Region.
- Investigate what rules and regulations would be affected by the above definition and how to best harmonize them.

3.3 Cybercrime and Security

Combating Cybercrime is considered important in order to build and maintain consumer trust. Cybercrime also incurs costs for consumers and businesses who feel the need to protect themselves. It is evident that cybercrime causes overall barriers-to-entry in the digital market.

One way to address cybercrime would be to coordinate law enforcement agencies within the Baltic Sea Region. However, this would primarily effect crimes committed by individuals or groups within that region. It would do little to combat crimes committed by individuals or groups outside the Baltic Sea Region. Consequently, the Policy Advisory Group stated that the conditions for a successful regional solution within the Baltic Sea Region are at best moderate.

Rather than focusing on cybercrime specifically in the Baltic Sea Region, it might be a regional advantage to promote security as part of the digital mindset in the region. That is to say, it seems more effective to focus on preventing crime by promoting security awareness. In this way, consumers in the region might increase their protection against cybercrime originating both within and outside the Baltic Sea Region. It is not evident that the need for the necessary skills and talents to promote such security awareness is met within the region, which in itself presents an important challenge. The CLAS certification for information security consultants in the UK is an important example of such skills and knowledge.

Many of the issues associated with cybercrime can be broadly approached within information security and information security management systems (ISMS). Such approaches should aim at establishing and implementing international, open standards and requirements rather than having each member state implementing its own nation-specific set of standards and rules. International agreements on these issues could help to prevent cyber-attacks and threats irrespective of their geographical origin.

An ISMS approach would have to consider, among other things, confidentiality, integrity and availability of data. For some services confidentiality is more important, whereas integrity is a higher priority in others. This effort could be further advanced with open international agreements on open technical standards for penetration testing.

Policy Approaches

- Map the intensity and origin of cybercrime in order to estimate the regional nature of the problem. There is already a lot of mapping of cybercrime, making it easy to compare and to benchmark issues, priorities and solutions.
- Promote open international standards for information security and information security management systems (ISMS).
- Promote open, international standards for and implementation of technical penetration testing of key services.
- Coordinate and promote educational efforts to raise awareness and increase security. This also includes promoting the necessary information security skills and skill certifications.
- Coordinate law enforcement to battle cybercrime that originates within the region.

3.4 Digital Content and Copyright

The use and flow of digital content is crucial to the information economy, but it is also one of the most prominent sources of friction in the digital market. Due to different licenses and differences in copyright legislation, it may turn out to be cumbersome to provide digital content across borders and in new markets.

Vodder, a Swedish company that provides streaming video content online, has testified that in order to provide their services in a new country, it needs to clear the rights with all the rights holders of the content in question, including both movies and every single track on the movie soundtrack. As an unintended consequence, the barriers to the digital market are higher for rare or old content than it is for current mainstream content.

For instance, the rights holders of old European movies are not as readily organized or as easily contacted as those associated with modern movie productions. This means that a lot of historical and cultural content is de facto made unavailable because it is too complex to acquire the necessary licenses from the rights holders. All in all, the preconditions for handling intellectual property are fundamentally different in the digital market.

The Policy Advisory Group voiced that copyright and the regulation of digital content should be considered very important to the development of a digital single market. Copyright regulation needs to be harmonized so as to allow digital content to be produced, propagated and used under equal conditions in the entire market.

It is not evident that it is sufficient to harmonize copyright simply by including all the specific regulations from each legal system into one set of rules. That may only consolidate the friction that is derived from the implementation of pre-digital regulation in a digital market. To sum up, this calls for a EU-wide copyright reform. The Advisory Group deemed that there is little or no scope for a specific policy solution in the Baltic Sea region.

However, there might be issues related to copyright licensing practices that can readily be harmonized within the region. A first crucial step would be to harmonize licensing for copyrighted material so that it is associated to a person or device and is not geographically limited. Thereby, access to copyrighted material would not be constrained by the national borders within the Baltic Sea Region. This would in turn increase the potential for businesses to provide border-crossing content services.

Policy Approaches

- Investigate how the terms of copyright can be adapted to the digital market in the Baltic Sea Region (terms and length of protection and the structure of licensing agreements for instance).
- Harmonize licensing procedures and agreements within the Baltic Sea Region.
- Harmonize copyright between the countries in the region with regard to optimizing innovation of new digital services and products as well as promoting the digital market in general. This needs to be a part of a larger EU-wide initiative.

3.5 Interoperability and Standards

Interoperability and standards coordinate the underlying technology of the digital market place in much the same way as harmonization of consumer rules coordinate actors in that market.

There are several levels to the impact of standards and interoperability in the digital market. On the one hand it is a question of coordinating technology to connect actors in the market. On the other hand it is a central question in the further development of the technology itself.

In general, where future regulations will demand adoption of certain standards, the Baltic Sea Region countries together could take the lead in mandating certain requirements ahead of time. This is especially relevant in sectors where BSR-based companies would benefit internationally from being compliant with new standards ahead of time.

For example code of conduct compliance regarding energy savings for any infrastructure hosting is likely to be generally required in EU from January 2014 (and later outside also). Authorities in BSR could require compliance ahead of time, thus making hosting providers in BSR more adapt to future global requirements, and hence making them more competitive. Eventually they would have to comply anyway. If requirements are not imposed, perhaps BSR could as a minimum promote future expected requirements in a way that businesses can better plan for them (“Future Expected Requirements Catalogue”).

Standardization in business areas such as e-health and e-government are believed to enable and increase cross-border innovation within the region. This is also closely connected to the need for open standards. Proprietary standards risk creating barriers to entry and lock-in effects, making it harder for new businesses and actors to innovate and compete based on the current technology platforms. Part of the potential in a digital market is to create an even better, even more efficient digital market and evolve the market place itself.

Policy Approaches

- Coordinate the use of open, international standards for technology and information in the public sector between the countries in the region. Identify priority or pilot areas to promote interoperability in, for instance health, transportation or energy.
- Promote open standards in public procurement to promote flexibility, maintain low barriers to entry and stimulate innovation based on the current technology platform.
- Identify future standards and requirements that BSR could implement ahead of time. Also, list such future expected requirements and standards and make the information freely available to promote innovation and adaption ahead of time.

3.6 e-Payments

The Single European Payment Area (SEPA) is an important milestone in the ambition towards a joint, cross-border system for payments. The Policy Advisory Group identified the need for well-function cross-border e-payments, but also notes that there is a further need to identify the actual barriers associated to such a system.

Customers and cardholders might be limited by their own choice of bank and credit card dealer, meaning that their card only supports national transactions. However, there are credit card issuers that provide international services. It is relevant to determine to what extent customers are limited by their own mindset and to what extent it is a general policy issue.

The Policy Advisory Group also noted that several banks appear to be addressing this problem. Thus, it is uncertain what specific policy recommendations would be aimed at. In short, policy makers in the Baltic Sea region should follow current developments and prioritize the emergence of functional cross-border e-payment structures. This should be approached as a constraint to policy making, not as a policy area of its own.

Policy Approaches

- Coordinate the participation in SEPA between the countries in the region
- Investigate what options customers in the different countries in the region have to make e-payments.
- Promote open standards for mobile payments.
- Promote a digital mindset and educational efforts to increase awareness of international services.

3.7 Electronic Contracting, Tendering and Invoicing

A central part of and a potential forerunner in electronic contracting is Pan-European Public Procurement Online (PEPPOL)². Among other things, PEPPOL proposes a standard for validation of e-signatures and e-certificates and a dossier to which businesses can submit standardized company data.

Providing a common platform and infrastructure for public procurement would spur firm growth and innovation within the entire region. However, the Policy Advisory Group raised concerns that not all countries in the Baltic Sea Region are part of PEPPOL. Therefore the initiative might not have been implemented in a coordinated fashion.

²www.peppol.eu

However, there are also good examples. For instance, Polish Unizeto provides certificate validation services under PEPPOL, used by Swedish, Danish and Lithuanian authorities to validate certificates used for contracting via EU-Supply.

It is of importance that the implementation of PEPPOL and the potential of cross-border public procurement are thoroughly considered in the promotion of a single digital market. Because of this, one of the key issues further investigated in the next chapter is e-procurement in the Baltic Sea Region.

E-commerce and electronic contracting hold a great potential to improve and increase cross-border trade and market expansion, but they are both dependent on a functional structure for invoicing. Electronic invoicing is a natural and necessary consequence of how commerce and contracting is transforming into a digital market. Not only would it save time and money, it could also increase trust in the digital market place if it allows people to use the same system to receive and pay their electricity bill as when they make purchases online.

Policy Approaches

- Coordinate the participation in Open PEPPOL between the countries in the region. The Baltic Sea Region could very well take a lead role in setting a standard for validation services within the EU. This could also be extended to consumer market needs and uses.
- Establish common, open standards for e-invoicing in the Baltic Sea Region.
- Establish a common platform for e-procurement in the Baltic Sea Region based on open standards.

3.8 e-Government

The Policy Advisory Group considered e-government a fundamental core driver to developing and promoting a digital single market in the Baltic Sea Region. Through the different branches of e-government, the public actors are able to promote cross-border entrepreneurship, firm growth and economic growth in the digital market place.

The Advisory Group identified three essential policy issues associated to e-government that are especially important in the Baltic Sea Region context. These areas of interest were pan-BSR electronic ID and validation of e-certificates, digitalization of public procurement and common standards for data and infrastructure in prioritized business areas such as e-health and services based on geographical positioning and data.

A general concern with the development of electronic ID:s and validation of any type of e-certificates is that they unnecessarily transfer the limitations of nationalities to the digital market. Electronic certificates have to be used to tie two things together at a certain time, for instance a user or a user account and a bank account.

There is no need to construct one single type of ID that has to work for every single individual or need. Rather, there is a need for an open standard for validation of e-certificates and e-signatures on which several actors can innovate and provide a variety of identity and authentication services.

As previously stated, e-procurement is one of the issues further investigated in the following chapter in this report.

The issues concerning the need for open standards have been raised in a previous subsection dealing with standards and interoperability.

Policy Approaches

- Investigate and determine the basic requirements for a common open standard for validating e-certificates and e-signatures in the Baltic Sea Region.
- Digitize and coordinate public procurement in each country in the region.
- Establish common technological platforms based on open standards for cross-border innovation in prioritized areas – for instance identity and authentication services, energy, urban development or public management.

3.9 Digital Infrastructure

The Policy Advisory Group approached the issues concerning digital infrastructure by dividing it into three different groups: broadband, mobile connectivity and software infrastructure.

Software infrastructure is further covered by the previous section on interoperability and standards.

The development of a fiber-based broadband network is a precondition to connectivity and thus to the digital market. However, the group recognized that the physical infrastructure and the development of broadband networks are not primarily a cross-border concern. Rather, it should lie in each country's interest to increase its broadband coverage in order to provide its citizens and businesses access to the digital market.

It lies in the Baltic Sea Region's interest to come together to benchmark and improve broadband penetration in order to share good national or regional policy recommendations. In Sweden, much of the broadband network is built through regional initiatives and especially the STOKAB project concerning the broadband network in and around Stockholm provides and ample case for regional broadband policy.

It is, on the other hand, a cross-border concern to stimulate the production of online content so as to increase demand for connectivity and thereby promote the expansion of broadband penetration.

Mobile connectivity is dependent on broadband coverage, and more specifically 4G transmitter towers require fiber connections. This means that broadband policies need to implement strategies to provide mobile transmission coverage as well.

Mobile connectivity also poses relevant cross-border issues. When Swedish or Danish smart phones cross the border passing the Öresund Bridge into the adjacent country, an additional roaming fee is added to their billing because they access the network from abroad.

Roaming fees are a remnant of national communication infrastructures and they inhibit the transnational access and connectivity within the Baltic Sea Region and the EU. People and businesses should not be billed more for accessing the same digital market from different countries in the region.

Roaming and roaming fees is one of the four topics further investigated in the nextchapter.

Policy Approaches

- Benchmark broadband strategies to promote, spread and adopt good examples.
- Correlate mobile connectivity to broadband strategies.
- Eliminate cross-border roaming fees and promote business models that are associated to users and not to their nationalities.
- Identify expected future standards and requirements that can be implemented ahead of time to give the region and its businesses a competitive edge internationally.

4 | Key Issues

This chapter covers the barriers and policy areas that were investigated in the in-depth analysis during the second part of the project. Each barrier is presented and its associated policy issues are briefly outlined. In addition, the economic impact of removing each barrier is estimated in a Baltic Sea Region context. The economic estimations in this chapter have been gathered and processed by Copenhagen Economics.

4.1 e-Procurement

The Pan-European Public Procurement Online initiative (PEPPOL) has the ambition of establishing a fundamental platform for public procurement online. However, as mentioned previously, the countries in the Baltic Sea Region should use this initiative to further coordinate and promote cross-border e-procurement in the region.

According to Eurostat a mere 15 percent of the public expenditure in the Baltic Sea Region consists of openly advertised public procurement (see figure 2). Public procurement in the Baltic Sea Region exceeds 700 billion EUR annually and equals roughly 19 percent of total GDP.

Public procurement is a substantial part of the BSR economy and there is room for efficiency improvements

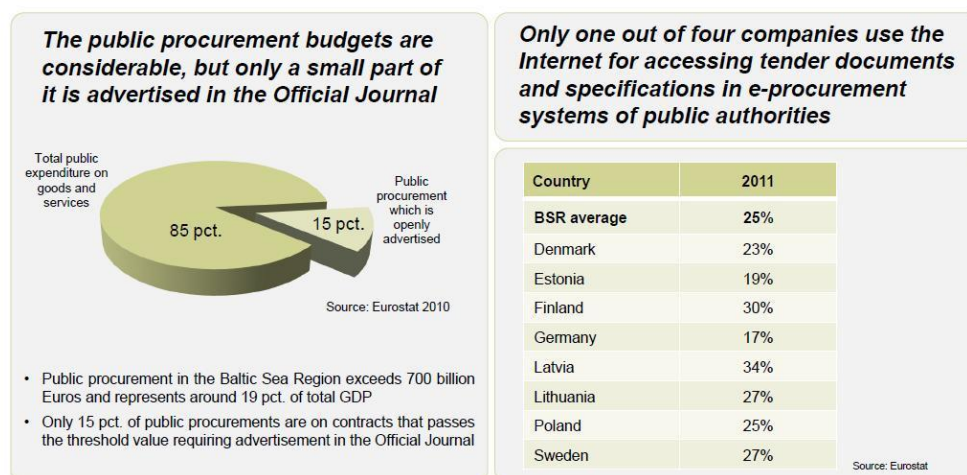


Figure 2 An overview of public procurement as part of total public expenditure and the use of internet in procurement processes.

Eurostat also reports that only one out of four companies in the Baltic Sea Region report having used internet to enter public procurements and access tender specifications through the

authorities' e-procurement systems. Latvia and Finland stand out with 34 percent and 30 percent of business accessing public procurement processes online. In Germany, only 17 percent of businesses have accessed e-procurement systems. This emphasizes two important policy issues: to increase public procurement in order to stimulate growth and innovation and to increase the share of public procurement which is openly advertised on a common market.

There is an additional opportunity to use e-Procurement platforms as means to coordinate the use of standards and other requirements. The Baltic Sea Region could create a joint requirements catalogue, with "mandatory" and "optional" requirements listed by general category of procurement, for authorities to consider including in their tender requirements when they procure services, goods and works. Some good examples of this exist in Holland (NIC) and the UK (NHS). A joint work group in BSR could populate and keep this requirements repository up to date with best practices and future regulations, perhaps starting with "mandatory requirements" according to regulations promoted by all BSR member states.

There are several strengths and advantages linked to functional cross-border e-procurement. Copenhagen Economics have primarily identified three groups of positive effects: competitive effects, operational savings and transparency.

First of all, procurement contributes competitive effects to the public sector, enhancing the value attained in relation to costs. Furthermore, cross-border e-procurement would increase accessibility to the procurement process, thereby increasing competitive effects. Also, e-procurement lowers the barrier to entry for small and medium-sized enterprises, thereby promoting and spurring firm growth.

Second, a common, cross-border platform for e-procurement could improve work efficiency by streamlining the procurement process, reduce disputed in procurement processes and improve enforcement of regulations. This would ideally create operational savings both in the procurement process and in public sector in general.

Third, a common and open platform for e-procurement would allow for an unprecedented degree of transparency and traceability in public procurement processes. This has advantages from both a scientific and a democratic point of view. However, it is hard to put an economic price on transparency. Hence, it is not included in the following estimate of economic impact.

In 2011, Deutsche Bank Research estimated the annual savings associated with EU-wide adoption of a common platform for e-procurement to 10-15 billion EUR in operational savings and an additional 40-60 billion EUR in competitive effects. In total, that equals 50-75 billion EUR in savings gained from successful cross-border e-procurement. That would benefit the public sector, but also business and the European economy at large.

Rambøll Management made a similar estimation in 2002, stating that based on a 25 percent uptake of EU-wide public procurements, e-procurement would be associated with 18.75 billion EUR in operational savings and an additional 8.3 billion EUR from competitive effects.

Copenhagen Economics has made a conservative estimate of the economic impact of functional cross-border e-procurement within the Baltic Sea Region at a take-up level of 25 percent (see figure 3). The use of electronic processes for 25 percent of the public

procurement in the Baltic Sea Region is estimated to a value of 3.5 billion EUR annually. In addition, competitive effects are estimated at 0.35 billion EUR annually, summing up to 3.85 billion EUR.

A conservative estimate of the BSR potential of e-procurement



Martin Hviid Thelle and Katrine Ellersgaard Nielsen | Copenhagen | 20-04-2012

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Figure 3 An overview of competitive effects and operational costs associated to the potential of pan-BSR system for electronic procurement.

The Policy Advisory Group called for a more efficient, cross-border common platform for e-procurement to improve the procurement process and to stimulate business in the Baltic Sea Region.

Policy recommendations

- Evaluate and benchmark procurement procedures within the Baltic Sea Region in order to identify good examples to incorporate into a common procurement process.
- Establish a common platform for e-procurement within the Baltic Sea Region based on open standards.
- Promote cross-border e-procurement and target small and medium-sized enterprises with specific procurements.
- Use specific test cases to promote e-procurement and raise awareness within the Baltic Sea Region. Use PEPPOL as inspiration and identify test cases that are specific to the region.

4.2 Public Sector Information and Open Data

Information is a basic resource and an increasingly valuable asset in the digital economy. The public sector has terabytes of it but it is far from always readily available to the public. The European Commission has issued a directive to promote the re-use of public sector information (PSI) to spur innovation and firm growth. However, there are several problems associated to making the data available.

Different countries have implemented the PSI-directive in their own different manners, creating a need such data. The MEPSIR report also points out that the cross-border use of open public data in 2006 ranged roughly between 2 and 20 percent, leaving a lot of potential unfulfilled.

There is a need for dialogue between data holders and potential re-users of that data. Data holders can visualize the available data and improve the response time for data inquires, but they could also add important knowledge and contribute to formulating challenges which can be overcome by innovating based on the data. For this reason, public sector information and open data initiatives should be coordinated with public procurement and in particular innovation-driven procurement. There are other good examples. The Swedish capital Stockholm recently arranged a competition based on public data being made available. The competition is one good way to initially draw attention to the opportunities in open data.

There has been some dispute as to if open data needs to be free of charge. In the latest update of the EU's PSI-directive, it is stated that public sector information should be made available at no charge or at a marginal cost. According to The Research Institute of the Finnish Economy, marginal cost pricing of public sector information spurs firm growth. Even so, Sweden among others has chosen not to implement the part of the directive that includes marginal cost pricing.

In 2006, the MEPSIR study estimated that the PSI re-use market in the EU and Norway was worth 27 billion EUR. Another report from the European Commission (*Review of recent studies on PSI re-use and related market developments*), has summarized estimates of the direct value of PSI re-use in conservative, "business as usual" scenarios from around 27 billion EUR in 2006 to 28 billion EUR in 2008 and 32 billion EUR in 2010. According to the report, "if PSI policies were open, with easy access for free or marginal cost of distribution, direct PSI use and re-use activities could increase by up to EUR 40 billion for the EU27". In a best case scenario, the report states, aggregate direct and indirect economic benefits for the whole EU27 could have been of the order of 200 billion EUR in 2008, corresponding to 1.7 percent of GDP. Judging from these estimates, it is evident that the value of PSI re-use is growing steadily, and that it is strongly underutilized.

Copenhagen Economics has estimated the total value of direct and indirect economic impact of PSI and open data re-use to 1.14 percent of the total GDP in the Baltic Sea Region, corresponding to 41 billion EUR (see figure 4).

Public Sector Information re-use and related market developments

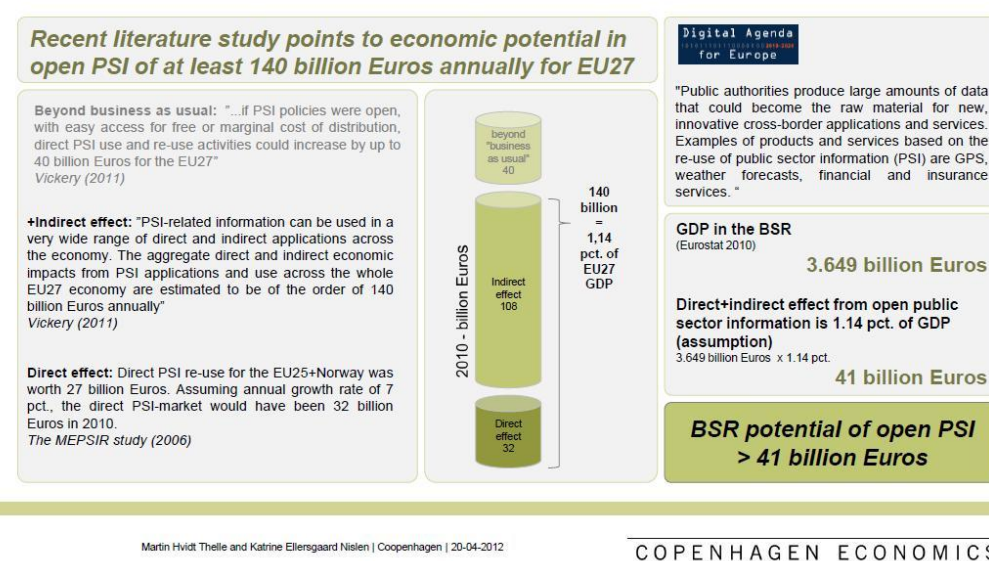


Figure 4 A summary of the PSI re-use market in the Baltic Sea region.

The Policy Advisory Group emphasized the need to coordinate and harmonize initiatives to open access to public sector information and to work with open data in the public sector. Differences in implementation of the PSI-directive and data regulations might risk fragmenting the digital market and inhibit innovation that draws on data from several countries.

Also, differing rules and frameworks for accessing public data in different countries fragments the market for this data in at least two apparent ways. First, it is harder to gather data from different countries if regulations and procedures are not the same. Second, it is more complicated to provide services across borders when different regulations apply to access and use of data in the different countries.

One major issue with public sector information is that it is associated with high barriers to entry. First, an entrepreneur will need to identify the data she requires and the responsible authority that can provide access to it. Second, she will have to ask the authority for the data, which often requires the authority to make its own investigation into the possibility of providing access to the data. This might incur a cost for the entrepreneur, but it will not guarantee her access to the data. If the responsible authority decides to provide the data in question to the entrepreneur, this is by no means a guarantee that the same data will be more readily available to next entrepreneur asking for it.

According to a study from the European Commission (*Measuring European Public Sector Information Resources*, MEPSIR) the accessibility of different sets of public data ranged between 20 and 60 percent in 2006. The report also illustrates strong differences in accessibility between EU member countries, ranging between 40 and 80 percent with Finland in a clear lead. Taken together, this results in uncertainty as to what data can actually be accessed, which in turn further inhibits innovation based on public sector information.

Policy recommendations

- Coordinate and benchmark initiatives both regionally, nationally and transnationally to publish public sector information and to work with open data. For instance, focus on shortening response times for inquires for data and improving visualization of available data to raise awareness.
- Harmonize the implementation of the EU's PSI-directive and the marginal-cost charges in the Baltic Sea Region.
- Set a plan to increase the scope and amount of data being made available beyond the minimum limits of the PSI-directive. Set a series of deadline and progressively increase the amount of open data.
- Establish a Baltic Sea Region licensing market to enable the cross-border use of data regulated by licenses.
- Establish profile test cases for the Baltic Sea Region to work with and promote the re-use of public sector information. Suggested areas to prioritize are geographical information systems (GIS), tourism, building permission procedures, city planning and school performance data.

4.3 Roaming

Roaming fees are additional charges to mobile data communication made from abroad. The entire idea of roaming fees is based on national borders, meaning that it is relevant which country the subscriber is located in when communicating and which country the subscription was started in. As long as that relation is relevant, it is hard to talk about a single digital market where cross-border interactions are as simple as domestic ones. The effect of roaming fees become increasingly important as more and more people access the internet, communicate and buy goods and services from their mobile devices.

According to a report composed on behalf of the European Commission, prior to the Commission's roaming regulation in 2007 and 2009, roaming charges were felt to be excessive and many Europeans avoided using the mobile devices when abroad. Since then, prices have declined, and the report states that the current regulation should be retained. However, there is reason to believe that the Baltic Sea Region could benefit from regional improvements to the current market setting.

Roaming also discriminates against the use of Voice over IP services (VoIP) compared to ordinary voice services. Skype, a provider of online communication services, state in response to the EU's recent review of the Roaming Regulation (No 544/2009) that EU citizens are subjected to unjustified restrictions and high prices through roaming fees. It should also be noted that many of the issues associated with roaming are effected by national regulation and national telecom licenses (3G for instance). This means that policy issues

associated to roaming can, to different degrees, be addressed nationally, transnationally and EU-wide.

There are no apparent underlying technological costs that justify the level of the current roaming fees. The telecom operators Telia, Phoneria and 3 offer different kinds of subscriptions or additional services to subscriptions that allow roaming-free communication in Denmark and Sweden. This goes to show that it is far from impossible, and yet it is still all too rare.

However, the business models for mobile communication are shifting fundamentally as an increasing load is moved from voice to data and data-based services. This shift effects and is effected by the EU's roaming regulation, meaning that policy makers have an important say in what conditions the market will adapt to.

In the short term, eliminating excess roaming fees will reduce the profit of telecom operators but increase the consumers online access level the field between domestic and transnational use. However, in the longer perspective policy makers must consider both the current actors on the market and the potential for innovation. This is not only a matter of the actual roaming fees, but also of enabling and promoting new businesses and business models that use data traffic to provide communications services.

The issue of roaming will of course differ depending on which two countries are compared. Between Denmark and Sweden roaming is a clear and present problem for all those who live on one side of the Öresundbridge and work on the other side. The problem might not be as evident between, say, Sweden and Lithuania. However, as mobile internet access becomes increasingly popular and as business relations and trade eastward in the Baltic Sea Region increases, so too will the demand for easy and equal mobile internet access.

Taken the other way around, travelers abroad face a great disadvantage compared to domestic users if they cannot as easily access e-mail, geographical positioning services and news. It is certainly not a single digital market as long as access to information is differently priced depending on which country you are in and which country you are from. Lower roaming fees will in turn increase the potential for cross-border mobile applications and services.

According to Eurostat, the Baltic Sea Region of mobile subscriptions in 2012 was about 30 percent. Based on this, Copenhagen Economics has estimated that the total amount of roaming services within the Baltic Sea Region corresponds to roughly 30 percent of the total amount of roaming services within the entire EU (6,030 billion EUR), totaling 1,819 billion EUR

The actual and direct gain of lowering roaming fees will primarily depend on how much the cross-border data traffic increases. This will, as mentioned before, differ between different countries. However, given the current development, mobile internet access will continue to grow and it should be desirable that cross-border data traffic grows with it.

The Policy Advisory Group finds that it is desirable to achieve a single market for telecommunication in the Baltic Sea Region, where there is no difference between roaming fees and national tariffs.

Policy Recommendations

- Coordinate national telecom licenses and procedures for these to promote cross-border, roaming-free communication.
- In order to incentivize lower roaming prices, the pricing of licenses should also be lowered.
- Measure the cross-border data traffic in the Baltic Sea Region and identify bottle neck policy issues in each country to enable harmonization of policies and promote cross-border communication.
- Operators should not be allowed to discriminate between bits of data traffic, meaning that VoIP and e-mail should be billed in the same way.

4.4 Online intermediaries

A large part of the digital market consists of some kind of intermediary services. Customer relies on online services to gather and sort vast amounts of information or goods to make it easier to find what they're looking for. However, it is not clear to what extent these intermediaries are liable for what they are mediating. This in turn affects both businesses (intermediaries and those using intermediaries to reach customers) and customers.

A functional market for online intermediaries lowers search costs and transaction costs, simplifies communication and improves competition. This can in turn result in indirect benefits such as increased commerce, increased employment and overall increased growth in the digital market place. However, the very concept of online intermediaries is international. If the rules for and liability of online intermediaries differ too much between countries, the barriers to entry will rise. Although this might not be the case yet, there is a great uncertainty as to how to define an online intermediary, how they are regulated and, consequently, what are their outlooks in the Baltic Sea Region.

When a government decides to censor or block access to a specific online intermediary X for whatever reason, it mostly prevents users with IP addresses originating within its national borders to retrieve information from X. Given that different countries use different policies for blocking or censoring content, this could quickly lead to a fragmented market for intermediaries. A prominent example of such fragmentation is online gambling, but also file-sharing services where copyright infringement is suspected.

In many cases, it is hard or even impossible to retrieve information on what is being censored or blocked by governments in different countries. To further complicate things, it is still possible for technologically savvy people to reach X by masking their origin in the network. So all in all, this means that the censoring government ends up discriminating against users' access to the internet based on their level of technological knowledge.

It is also hard to distinguish between intermediaries and retailers. Amazon, originally an online book store, is admittedly one of the most famous and successful online intermediaries,

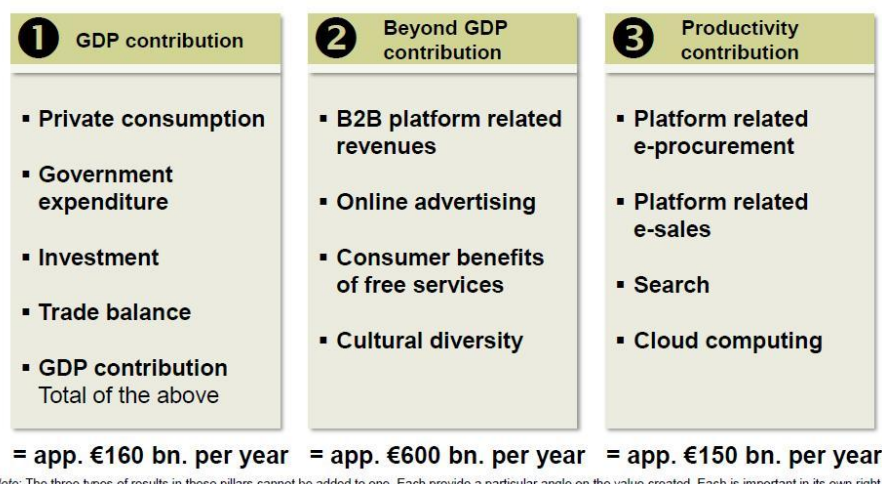
but the company has also started providing – among other things – cloud services, making it more of a retailer or service provider.

Intermediaries are not only important to aid the matching between supply and demand, they also pose a great potential for innovation and new businesses. However, it is overly risky to invest in new online intermediary services if it is uncertain if people will have access to them.

The Baltic Sea Region can achieve a lot by promoting a functional regional market for online intermediary services. It would also be a competitive advantage for the Baltic Sea countries to offer a single framework for such services on a joint digital market.

In the beginning of 2012, Copenhagen Economics compiled a report on online intermediaries (*Online Intermediaries – Assessing the economic impact of the EU’s online liability regime*). The report distinguishes between three forms of economic contribution: GDP contribution, Productivity contribution and Beyond GDP contribution (see figure 5).

EU-27: Economic Contribution of Online Intermediaries



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Figure 5 A summary of economic contributions associated with online intermediaries.

According to Copenhagen Economics estimations, GDP contribution in EU from online intermediaries equals roughly 160 billion EUR per year. Productivity contribution is estimated to 150 billion EUR annually. The contribution beyond what is included in GDP is roughly estimated to 600 billion EUR per year Copenhagen Economics have also estimated online intermediaries’ contribution to GDP in each of the Baltic Sea countries (see figure 6).

BSR estimates of online intermediaries contribution

Country	BCG estimate Internet economy as % share of GDP	CE estimate online intermediary % share of GDP	GDP (million Euros)	Estimated contribution to GDP (million Euros)
Sweden	6.6%	3.0%	346,667	10,400
Denmark	5.8%	3.3%	234,005	7,722
Germany	3.4%	2.2%*	2,498,800	54,974
Poland	2.7%	1.5%*	354,316	5,315
Lithuania	n.a.	1.5%*	2,741	41
Latvia	n.a.	1.5%*	17,971	270
Estonia	n.a.	1.5%*	14,501	218
Finland	n.a.	3.0%*	180,253	5,408
Total BSR			3,649,254	84,346

Source: CE analysis on online intermediaries for EDIMA, Jan. 2012. BCG "connected world" studies, 2011-2012.
Notes: Online intermediary share for Germany estimated from NL-data. For Poland and the Baltic's, the Czech share is assumed to apply. Finland assumed similar to Sweden.

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Figure 6 A country-by-country comparison of potential economic impact of online intermediaries.

There are many unknowns as to how different policy areas affect online intermediaries in different countries. However, intermediaries are a vital part of a digital single market.

Policy Recommendations

- The Baltic Sea Region should provide open networks and internet access so that all its citizens can reach the internet on equal terms.
- Formulate quality classifications for online intermediaries to promote trust in the digital market.
- Harmonize rules and regulations for the liability of online intermediaries within the region. From a business point of view, the Baltic Sea Region should be one single digital market for intermediary services.
- If content is censored, each country should promote transparency by annually report of what is censored and why. Rules for censorship should be clearly stated to allow businesses to adapt their services in accordance.
- There should be clearly defined and harmonized procedures to dispute censorship in each country in the region.

5 | Towards Being Digital and Permeable

Joel Reidenberg, a professor of law, argued in 1999 that the internet would make national borders more permeable to communication and commerce and that, eventually, they would be complemented and challenged by network borders. This report has attempted to illustrate the opportunities and challenges associated with realizing a digital single market in the Baltic Sea Region. In a way, this work aims to make national borders a bit more permeable to the flow of good ideas, innovation, entrepreneurship and growth to and from both sides of each border.

A digital single market in the Baltic Sea Region would not only provide a more efficient market place for both consumers and businesses. It would also provide the perfect soil for growing future businesses and business models, giving the region an important competitive edge and making it a thought leader globally.

A recurring theme in the workshops and dialogues during this project has been the relation between individual, geographical position and digital content. One of the biggest challenges in promoting a functional digital market is to shift the relation from being between content and geographical position to being between content and individual. Each individual should be able to access the same digital content irrespective of where they are.

However, this is a complicated complex of questions concerning, to name a few, costs and roaming fees, legal frameworks for digital content, the publishing public sector information and the liability of online intermediaries. In order to make this shift and to promote a seamless digital market for everyone in the Baltic Sea Region, policy makers must address these issues and formulate reforms that take the new conditions of the digital market into account. This might appear to be a huge challenge, but the reward for overcoming the hurdles is even bigger.

It is our ambition that this report should be used as a stepping stone in the important work to further cross-border electronic commerce, innovation and entrepreneurship in the Baltic Sea Region in the near future. It is also our hope that the experiences gained from this work and the efforts to promote a digital single market in the Baltic Sea Region will provide insights to and inspire the larger project of establishing a European Digital Single Market.

Appendix A – Policy Advisory Group

This is a list of the members of the Policy Advisory Group that has worked with BDF and BCCA to give valuable inputs on challenges, opportunities and policy recommendations. The work of the Group is coordinated by Hans Brask and Torben Aaberg, (BDF), Per Tryding and Joakim Lundblad (Chamber of Industry and Commerce in Southern Sweden).

Anders Sjöman, Vice President Communication, Vodder, Sweden

Anders Thomsen, Government Affairs Manager, Microsoft, Denmark

Anri Leimanis, Corporate Affairs Director, Lattelecom, Latvia

Antanas Juozas Zabulis, President, Omnitel, Lithuania

Bengt Stavenow, Region Skaane Business Development, CTO Mobile Heights, Sweden

Christian Wernberg-Tougaard, President, Danish Council for Greater IT Security, Denmark

David Mothander, Nordic Policy Counsel, Google, Sweden

Egils Boitmanis, Board Member, Latvian Digital Marketing Association, Latvia

Gatis Ozols, Head of e-Services Unit, Ministry of Environmental Protection & Regional Development, Latvia

Jarkko Heinonen, Economist, Turku Chamber of Commerce, Finland

Jørgen Abild Andersen, Director General Telecom, Danish Business Authority, Denmark

Kaj Juul-Pedersen, President, Sitella, Denmark (*Chairman*)

Karin Hallerby, Head of Dept, Agency for Economic and Regional Growth, Sweden

Kim Østrup, Vice President, IBM, Denmark

Linnar Viik, Associate Professor and Member of Board, Estonian IT College, Estonia

Māra Jākobsone, Vice President, Latvian ICT Association (LIKTA), Latvia

Morten Bangsgaard, CEO, Danish IT Industry Association, Denmark

Rimantas Gatautis, Director, Electronic Business Research Centre, Kaunas Univ. of Technology, Lithuania

Robert Czarnecki, Vice President, Ericsson, Poland

Seth Lackman, CEO Ericsson Eesti, Estonia

Tom Togsverd, Director General, Conf. of Danish Industry, Federation of ICT and Electronics, Denmark

Tony Meurke, Programme Manager, Agency for Economic and Regional Growth, Sweden

Priorities towards a Digital Single Market in the Baltic Sea Region

**Paper for the Baltic Development Forum
June 2012**

When the European internal market opened in 1992, the IT industry was already well established. As this common market celebrates twenty years, there is however no functioning single European market for digital business.

This proposal outlines some realistic avenues towards such a digital single market. But apart from substance, process is also important. The Baltic Sea Region is a perfect forerunner to a wider single market. Therefore the proposals have been tailored to fit the context of being implemented in this region first, to inspire further European initiatives.

The project has been lead in a joint venture between the BCCA and the Baltic Development Forum. But the work and the deliberations are supervised and qualified by a policy advisory group selected among leading business people and public stakeholders in the region.

Our proposals are thus well founded in terms of problems identified as well as business priorities. It deserves both action and further attention from policy makers.

