



BalticSeaagenda

Road Map to the New Growth Centre

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to the Information Society"

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"Strengths and Weaknesses
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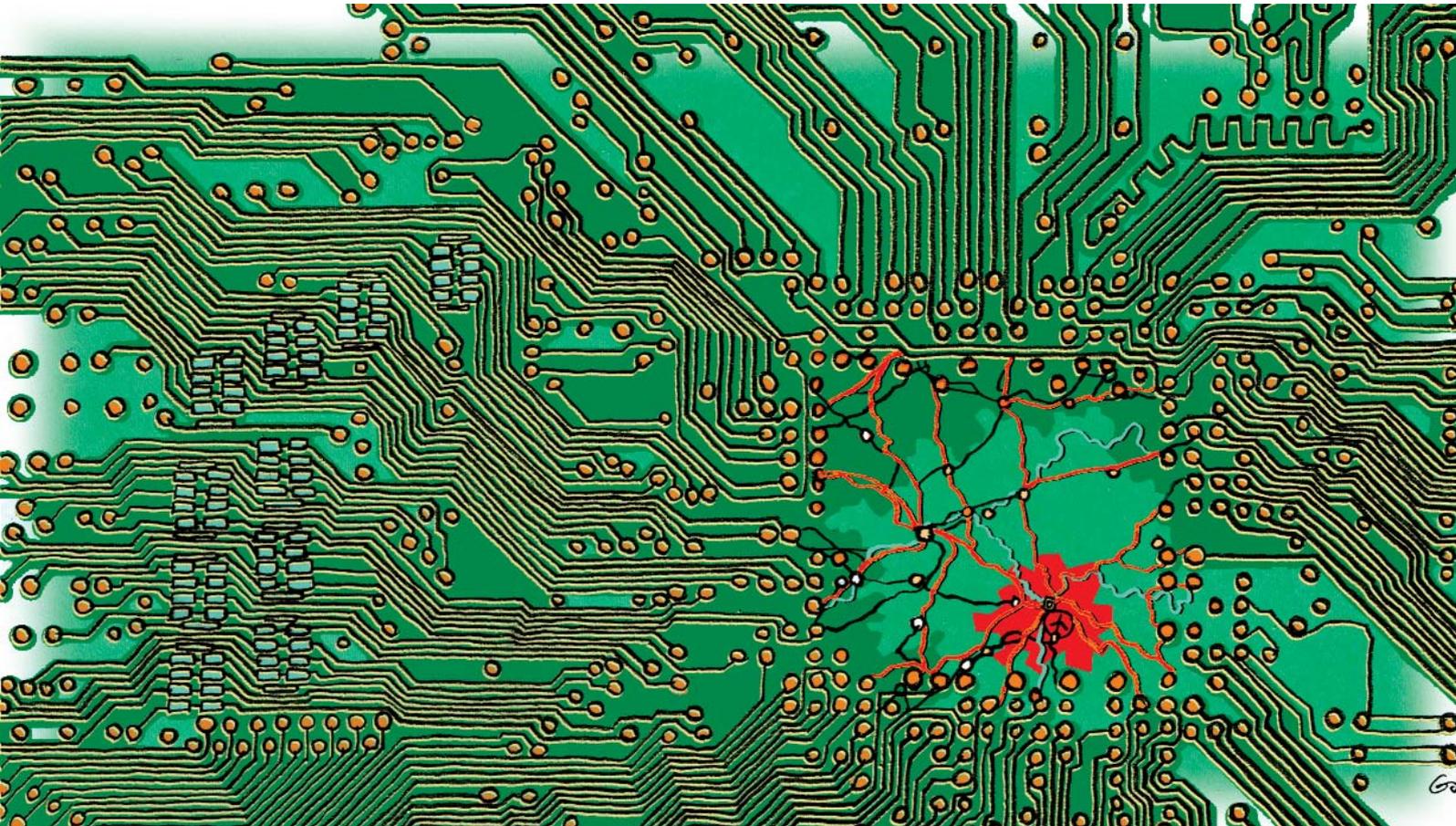
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**Special Issue on Information and
Communication Technology (ICT):**

The Baltic Sea Region - A New World Leader in ICT?



Mondaymorning

ThinkTank of News

Baltic  Development Forum

The Agenda

A Litmus Test for the Baltic Sea Region

By **Erik Rasmussen**

CEO and Chief Editor of Monday Morning
- Think Tank of News



The Baltic Sea region has been co-operating intensively on uniting within the EU for the last ten years. As this vision is becoming a reality, it is now time for the region to pass its next big test.

The Baltic Sea region is faced with a new paradigm within the EU. The region consists mainly of small countries. Together, they can gain influence in the European Union and develop mutual strengths. Yet if they split up and follow separate paths, there is a clear risk of being marginalised.

The problem is that the countries around the Baltic Sea currently appear to have very little in common in terms of the political issues at the top of the EU agenda. Their opinions differ on many issues covered by the convention for the future of Europe. Their interests are also expected to diverge when it comes to reforms of, among other things, the common agricultural policy and the EU budget. In other words, the days of uniting on political issues could soon be over. The Baltic Sea region needs to find new common visions and objectives.

Developing regional positions of strength for business and industry is one such objective. If they co-operate, the countries of the Baltic Sea region can achieve world-leading positions in the industry sectors where the regional potential is greatest. Co-operation is imperative to secure attention and attract investments on a global scale. This is, therefore, one of the most important issues facing the Baltic Sea region in the EU.

This special issue of the Baltic Sea Agenda focuses on the regional position in information and communication technology (ICT). In our special report, the Baltic Sea ICT cluster is assessed and analysed by prominent politicians, businessmen, researchers and journalists from the region.

Our focus on ICT is not coincidental. The report demonstrates that the Baltic Sea region has sectors with great potential in this field. The region is among the global leaders in mobile communication technology and home to Nokia and Ericsson. It has some of the world's most extensive online public services and it is rich in human capital with a highly skilled workforce.

In ICT – as in many other fields – the region has tremendous opportunities and synergies to take advantage of. The requirement from regional leaders in politics, business and society is that they co-operate on joint visions and actions. Unfortunately, as the articles in our special report also point out, this co-operation is by no means guaranteed. Too little is done in the field so far.

The Baltic Sea region has a lot to lose if it fails to co-operate on developing its ICT cluster. The sector is pivotal for the general development of the region. It provides a necessary platform for most industry sectors and for the attainment of a coherent information society and a strong regional position in the knowledge economy.

Yet if we succeed in co-operating, the Baltic Sea region can become a new world-leader in many aspects of ICT – or, as Uffe Ellemann-Jensen calls it, a “Smart Region” of excellence. Furthermore, the region could set a positive example of how the EU can integrate the east and the west in joint efforts to achieve the Lisbon strategy goal of becoming the world's leading knowledge driven economy by 2010.

The joint development of the Baltic Sea ICT cluster will therefore be an important regional litmus test. The next seven years will show if we can pass that test.

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EU Correspondent,
Monday Morning Weekly

An analysis of the old and new EU members around the Baltic Sea displays a remarkable lack of shared visions for Europe. In fact, enlargement does not seem to bring any particular allies to any specific group of countries. The EU members of the Baltic Sea region are divided on most key issues in the convention on the future of Europe. Furthermore, a clear east-west divide on important reform and policy issues is emerging between the “spenders” of the west and the “receivers” of the east. However, there is hope for people wishing to see more Baltic Sea co-operation in the agreement among the heads of state and government of the region to meet before big EU summits. This could become an important means for uniting on common visions and strategies for using the EU to develop the Baltic Sea region.

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Erkki Liikanen
European Commissioner
responsible for Enterprise
and Information Society

The shaping of an information society in the Baltic Sea region is well underway. The new EU member countries Estonia, Latvia and Lithuania have been on the forefront of information society developments. All three have developed ambitious national information society policies that are in concert with the priorities and targets set in the eEurope initiative. Also, despite the negative climate in the information and communication technology sector, the ICT market in the Baltic Sea region has been performing well. Yet a lot remains to be done. The challenge now is to devote the necessary resources to ensure the implementation of necessary policies in order to accelerate the process. This goes for all the ten Baltic Sea countries in order not to lose the competitive edge they have gained thus far.

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Baltic Sea Analysis Strengths and Weaknesses of the Baltic Sea ICT Cluster

Marja Nissinen
Senior Researcher,
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The ICT cluster in the Baltic Sea region as a whole finds its key strengths and opportunities in a highly skilled workforce, competitive ICT sectors, strong research traditions and the ongoing development of the information society throughout the region. Among the important weaknesses are the dominance of small countries and SMEs in the region, the lack of a uniform brand for the region and the existence of a digital divide both between and within countries. The lessons from the development of the Baltic Sea ICT cluster so far underlines the importance of diffusion policies and regional co-operation in promoting ICT. Furthermore, the Baltic Sea region has several interesting cases of public-private partnerships in ICT. However, the crucial trial of the Baltic Sea ICT cluster after the EU enlargement is whether business enterprises will begin to pursue regional strategies in any significant numbers.

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Baltic Sea Opportunities**High Potentials in the Well-Trained Workforce***Ylva Nilsson**European Reporter*

The new EU members around the Baltic Sea fall far behind the Nordic countries in terms of establishing an information society. However, Poland, Estonia, Latvia and Lithuania gain high scores in ICT potential, not least due to the countries' well-educated workforces, a large number of university graduates and many people in vocational training. Also, the Baltic countries have no problems – compared to their Nordic neighbours – convincing students to enrol in mathematical and technical courses. A strong regional mobility of IT specialists is exactly what the Nordic countries need to maintain their leading positions in ICT. Yet mobility is relatively low and while the business communities have asked the region's politicians for help in the matter, they have been left to find their own private solutions thus far. Page 26

Best Practices**The Quiet Leader in Online Public Services***Ylva Nilsson**European Reporter*

In spite of the performance gaps between the countries east and west of the Baltic sea in ICT, there is one area where they can all be seen as experts and leaders: e-government and online public services. In this field, the Baltic Sea region has an outstanding potential as a region of excellence in Europe and offers numerous examples of best practice. The development of e-government and online public services has taken place separately in each country with only a limited amount of regional co-operation. Perhaps this is a main reason why the position as “masters of e-government and online public services” remains an untold success story and an unused branding opportunity for the Baltic Sea region outside of the narrow professional ICT circles. Page 30

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The explosion of wireless Internet and other new computer related technologies are providing a variety of opportunities for people in their daily lives and for establishing new companies and achieving new scientific results. The key question is what to expect from the Baltic Sea region in what can be called a decade of reunification. The Baltic region has the IT potential to become a leader, not just in Europe, but in the world, in many aspects of the field. However, reaching a position as a world leader requires that trade, co-operation and knowledge move across borders as easily as technology does. Therefore, much more, and much closer, co-operation between business people and researchers across borders need to take place in the Baltic Sea region. The reunification of the Baltic Sea region requires that people get together and start defining a realistic way forward. Page 34

News from Baltic Development Forum**State of the Art Networking in the Baltic Sea Region***Ole Frijs-Madsen**Director,**Baltic Development Forum*

In view of the EU enlargement, Baltic Development Forum has strengthened its foundation and operational scope to present the best possible platform for business, politics, academia and media. During the last year, Baltic Development Forum has gathered together more than 1,000 high level players for several networking events and launched a Baltic Sea Research Network for researchers within the region. Now the planning of this year's Annual Summit is well underway. The Preliminary Programme for the Annual Summit has been published. From 5-7 October, more than 400 decision-makers will come to Riga and discuss the consequences of the EU enlargement for business and politics. Baltic Development Forum wants to make the best use of the encounter between “Old Europe” and “New Europe” and position the Baltic Sea region as a global frontrunner. Page 36

BalticSeaagenda

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After the EU Enlargement

A Region in the Top League of Excellence

By **Uffe Ellemann-Jensen**
Chairman of
Baltic Development Forum



COPENHAGEN The historic enlargement of the EU opens the possibility of setting new visions and goals for Europe - and for the Baltic Sea region in particular.

In the Baltic Sea region, it is important that we begin to lay the first building blocks for what must be our next goal: A free trade area within the Baltic Sea region that includes Russia. This is an ambitious goal, but sometimes one has to be ambitious in order not to lose momentum. And we shall make sure that our region takes its rightful place in the top league: By creating a Baltic Sea Free Trade Area, the Baltic Sea region can become a frontrunner in the global economy with several clusters of excellence. Not least the information and communication technology sector stands out as vital when developing a “Smart Region” with several clusters of excellence.

The European Council in Copenhagen last December changed the face of Europe. Estonia, Latvia, Lithuania and Poland have finally obtained their rightful place in Europe. The road that the candidate countries have taken is nothing less than revolutionary. Equally important is the development that has taken place in Russia since the 1990's. The Russian Federation has made remarkable progress in tackling crisis and

moving towards sustainable development. By most measures, Russia is now well positioned for further economic growth.

These achievements are outstanding and the Baltic Sea region today has an exceptional opportunity to build a prosperous future based on common priorities and shared fundamental values such as peace, democracy, the rule of law, human rights, the protection of minorities and also co-operation and free market economy.

” **The Baltic Sea region today has an exceptional opportunity to build a prosperous future**

History is in the making once again and only a few times in a lifetime does one experience this.

My then German colleague, Hans-Dietrich Genscher, and I were in no doubt about the significance of the moment when the process leading to the enlargement began more than ten years ago. Therefore, in 1992 we held a meeting in Copenhagen between the Foreign Ministers from all of the Baltic Sea countries in order to launch the Council of the Baltic Sea States. For the first time in 70 years, representatives from all of the Baltic Sea countries sat around the same table on equal terms.

A distant dream was realised. Not just because the moment was seized - but because a goal had been set - and realised.

The same was true with the enlargement process of the EU. While the enlargement too often was at risk because of petty national interests within the EU, the rest of Europe moved peacefully from dictatorship to democracy. The candidate countries had a dream, set a goal - and worked hard to realise it. Today, the enlargement of the EU is in place. What was just a distant dream in 1992 is reality today.

With the enlargement of the EU, we created one Europe. This process proves that we go where our dream is and that we should only let our fantasies define the limits to the tasks we give ourselves! That is also true today. When I look at the achievements that the Baltic Sea region has accomplished during the last 13 years, I recommend that we move forward together without hesitation. I fear that a growing “enlargement fatigue” might hinder us in dreaming new dreams and history will not forgive us if we lose momentum.

” **History will not forgive us if we lose momentum**

The enlargement of the EU goes hand in hand with the integration of the Baltic Sea region and that is why our next goal must be to develop a free trading area between the EU and Russia. By doing this we will create the most fertile ground for developing various clusters of excellence within the Baltic Sea region.

The participants at the 4th annual Baltic Development Forum summit identified three potential major clusters that must be prioritised: the information and communication technology cluster, the biotech and health care cluster and the energy cluster.

Information and communication technology is crucial when developing clusters in general. Fortunately, the region has a strong international standing in this field – in spite

of the present risk of global recession and doubts towards investments in the sector. Most notably, the Baltic Sea region has the world’s highest penetration of mobile and Internet communication and it is already a global leader in mobile communication.

” **We must use these opportunities in the Baltic Sea region to develop and position the region as a “Smart Region”**

Therefore, the information and communication technology sector should be further developed as one of the Baltic Sea region’s main growth engines. One obvious way is to develop new and user-friendly communication services for the citizens, businessmen and tourists in our region. The information and communication technology sector represents a sector of opportunities. We must use these opportunities in the Baltic Sea region to develop and position the region as a “Smart Region”. Let us - in a public-private partnership - combine state-of-the-art information technology with day-to-day life services.

I believe that the Baltic Sea region can become Europe’s frontrunner in the global economy through brain circulation and private-public partnership innovation. Our achievements call for new visions and goals set by the new leaders within politics, business and academia.

Uffe Ellemann-Jensen was Minister for Foreign Affairs of Denmark 1982-1993. Besides being Chairman and Co-founder of Baltic Development Forum, Uffe Ellemann-Jensen is an author of several best-selling books on politics and member of several boards of international companies. He is also a member of the International Crisis Group and of the International Commission on Missing Persons.

Baltic Sea Politics

Welcome to the Ring – Please Fight Your Own Corner

By **Ole Vigant Ryborg**
EU Correspondent,
Monday Morning Weekly



BRUSSELS When the historic NATO and EU summits ended in Prague and Copenhagen last year the mood across the European continent was one of euphoria. But now – six months after these epoch making events – reality is slowly entering into the minds and moods of the architects behind the summits. Europe is now united, but along the way the people involved in the process have apparently been so engaged in making it a success that they forgot to ask the obvious question: What do we want to do with a united Europe?

The driving force behind the enlargement of both NATO and the European Union seems to have been the wish to bring an end to the divisions that have separated the whole European continent since the end of World War Two. It does not appear to have been the idea that through unity it will be easier to achieve a common vision. To put it into corporate language – the intention behind the merger of east and west was not to create a stronger company but only to limit competition.

Now country after country is realising that the 25 members of the enlarged European

Union still have to define a new common mission, a vision with shared, achievable goals. The need for such a vision is urgent, not least in the Baltic Sea region. Here, foreign ministries and their diplomatic missions have been busy during the last few months analysing the possible effects of enlargement – especially on the ongoing work in the European Union. And the preliminary results show that enlargement does not bring any particular allies to any specific group of countries. On the contrary, enlargement seems to be similar to letting another 10 boxers into the ring, all with the same objective: to fight their own corner.

United by Rules

- in Need of a Common Vision

An in-depth analysis of the countries around the Baltic Sea region now united inside the European Union shows that until now they have appeared to have very little in common. In fact, diplomats around the Baltic Sea region privately recognise that there will be practically no single issue where countries surrounding the Baltic Sea – or even just the group of Nordic and Baltic countries – would unite on any specific issue of EU business.

Today, the one thing that brings the EU members in the Baltic Sea region together is a set of common EU rules governing policies like the single market, competition, environment, transport, etc. This is an enorm-

ous advantage - not least for businesses - because of the security provided by having the European Court in Luxembourg and the European Commission in Brussels pursuing an effective implementation of common rules, which will mean decreased investment risks. But apart from these common rules it looks like the countries surrounding the Baltic Sea region right now are going to have very little in common when they meet around the negotiation tables in Brussels.

This could be changed if the countries unite on common visions for developing the region and clear strategies for using the European Union as a framework to realise these visions. For example, the region could make a difference inside the EU through the European initiative to create an EU policy for the northern dimension of the Union. And the EU's INTERREG programme, which supports neighbouring regions in different countries to co-operate in different areas, is one instrument that could be used to increase co-operation between the Baltic States – for example on issues that could be part of a common vision for the region.

” The dominant picture of the Baltic Sea region members of the European Union is of a fairly divided group

Yet until such a vision has been created and agreed upon, the dominant picture of the Baltic Sea region members of the European Union is of a fairly divided group. According to the interviewed diplomats, the shared common interest around the region in key EU policy areas is presently not greater than the common interest the region's countries share with other members of the European Union like Ireland, Portugal or Slovenia.

Different Visions for Europe

Among the many different subjects expected to dominate the EU agenda during the

coming years is an issue where the new member states have already had the possibility to make their own national mark. That is the work of the convention on the future of Europe, which has been working for more than a year under the leadership of the former French president, Valéry Giscard d'Estaing.

An analysis of the roles of the Baltic Sea countries in the convention shows that they have very different visions for the European Union.

Six of the Baltic Sea countries - Lithuania, Latvia, Estonia, Finland, Sweden and Denmark - actually have one important thing in common when it comes to the convention: they are all small member states. Yet even that does not mean that these six countries speak with one voice in the convention. The only unity heard among the Baltic Sea countries at the convention on the future of Europe was the rejection of an idea that not all countries should be allowed to appoint a member of the future commission. Besides this common rejection, the Baltic Sea countries have been divided.

First of all, their levels of activity have varied: the government representatives of Denmark, Finland, Estonia and Lithuania have been very active in and around the convention, while government representatives of Sweden and Latvia have been less visible.

” The countries surrounding the Baltic Sea region are divided on issues such as how to change present voting rules

Secondly, it has been apparent that the countries have differing viewpoints on the future setup for European co-operation. For example, the three Baltic countries have demonstrated a strong reluctance to any changes. Or as the Estonian government representative, Hendrik Hololei, put it du-

ring a press conference in Brussels, “Give Nice a chance” – referring to the Nice treaty that has not even entered into force even though some delegates to the convention are already trying to alter it. And while countries like Denmark and Sweden have actively been supporting a Franco-British idea that parts of EU business in the future should be conducted by an appointed EU president, this idea has been strongly rejected by Finland. Similarly, the countries surrounding the Baltic Sea region are divided on issues such as how to change present voting rules from unanimity to qualified majority (social affairs, taxation, etc) and the future roles of the commission, the national parliaments, the European Parliament and so forth.

Spenders versus Receivers

Other issues that are expected to divide the countries around the Baltic Sea in the months and years to come include the reform of the common agricultural policy (CAP), the reform of EU regional policy, its cohesion policy and the financing of these policies through the EU budget.

When it comes to these policies and their financing, the European Union is very different from all other forms of international cooperation. First of all, the EU has its own resources and is therefore not fully dependent on direct contributions from its member states. However, these resources are not sufficient if all present expensive policies like the CAP and the regional policy remain unchanged. Therefore, net contributors to the EU budget like Sweden, Denmark and Finland are arguing for a reform of these policies. Yet even these three countries that share the common goal of paying less are split on how to achieve this goal.

For example, Sweden has until now pursued a national policy of trying to negotiate a special rebate on the Swedish contribution to the budget. Denmark for its part wants to reduce the regional policy. Officially, Denmark is also in favour of scrapping the common agricultural policy. However, a closer

look shows that the Danish policy is only to be pursued under a number of different conditions that are all designed to assure that it will have no effect on Denmark’s enormous agro business. The big unknown in all this is how the three Baltic States and especially Poland are going to react when reforms of these policies and the budget develops into the number one priority on the EU agenda from the second half of 2004.

Diplomats around the Baltic Sea region generally expect the new member states to see the expensive EU-policies as one of few means to get compensation for the wide range of costs imposed by the implementation of all present EU legislation and directives. Implementing EU directives has not only been a complicated administrative affair, it has also turned out to be very expensive. Demands from the EU place a wide range of burdens on the new member states ranging from a requirement to produce statistics to the need educate civil servants, judges, etc.

” There is going to be a clear east-west divide among the EU countries around the Baltic Sea when it comes to many concrete policy discussions

For the same reason, the general understanding is that there is going to be a clear east-west divide among the EU countries around the Baltic Sea when it comes to many concrete policy discussions inside the EU. While countries like Sweden, Denmark and Finland have ambitions of improving environmental standards and introducing more EU regulation on the labour market and businesses for social reasons, the three Baltic States and Poland are expected to have a much more cynical view of new initiatives from Brussels in this area. Their general attitude to such questions is expected to be that if an initiative generates extra costs it can only be accepted if the EU is wil-

ling to cover these costs. In other words, future EU discussions are likely to be accompanied by finance discussions that will divide the Baltic Sea region and that could even sour relations between the region's countries.

Russia Divides

There is one area where the need for a common vision and policy for the EU members around the Baltic Sea is particularly obvious and relevant. That is the question of the relationship between the European Union and the Russian Federation. With the enlargement, the European Union finally includes a number of member states that - for better and for worse - understand Russia. These are countries that are familiar with Russian negotiation tactics, but at the same time do not have the same kind of prejudice about Russia and its people as do many in the west. For example, new member countries like Estonia, Latvia and Lithuania have a very realistic picture of business opportunities in Russia, whereas western countries often tend to have unreasonably high expectations or, due to exaggerated fears, to stay away altogether.

Yet enlargement does not only bring the advantage of new member countries that

understand Russia. It also places old bilateral problems onto the EU agenda, where they suddenly become common EU problems. One example that several diplomats of the region point to is the system of double duties that Russia has imposed on Estonia. A system that now has to end. Yet while the EU sees the extension of its present partnership and co-operation agreement with Russia to cover the ten new member states as a mere issue of protocol, Russia sees this process as a way to get compensation from enlargement.

” Another new problem for the European Union will be

Kaliningrad

With Russian speaking minorities in both Estonia and Latvia, a large number of Russian speakers will become EU citizens and their rights might become an EU problem. Moscow will no doubt use the opportunity to raise this question with EU institutions, instead of dealing with it bilaterally with the countries concerned.

Another new problem for the European Union will be Kaliningrad. The Russian en-



The Council of the Baltic Sea States (CBSS) - consisting of the Ministers for Foreign Affairs of Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden and a member of the European Commission - met in Pori on 10-11 June 2003 for its 12th Ministerial Session.

clave surrounded by Poland and Lithuania has a grey economy that to a large extent is based on illegal but tolerated cross border trade. The European Commission is expected to crack down on this and to force the authorities of both Poland and Lithuania to deal with the problem. Seen from an EU perspective this is logical. However, it will create new problems for the already extremely poor Russian region at the same time.

Finding a common strategy towards Russia inside the framework of the European Union would be the logical move for the countries surrounding the Baltic Sea. It would give the Baltic States a stronger voice and a more powerful say in Moscow than they ever had. But the general assessment at present is that it looks as though ambitions are being lowered, and that the first goal will be merely avoiding that the new member states use their membership of the EU and NATO - and the security this brings - to start "pay-back policies" towards Russia.

Growing Hopes

Like rest of the European Union, the countries in the Baltic Sea region have failed to discuss and agree on common visions for what they want to use a united EU. The wish for peace, prosperity and growth is obviously shared by all. But when it comes to the question of how to achieve these goals, an analysis of present policies and behaviour displays a remarkable lack of shared vision.

The most recent meeting between heads of state and governments from the Baltic Sea countries, held in Stockholm before the EU-summit in Greece, was one example hereof. The prime ministers of Sweden, Denmark, Finland, Estonia, Latvia and the Lithuanian

foreign minister all agreed that they would start holding more regular meetings before important events like the quarterly EU summits. Yet results from the Stockholm meeting in the form of common positions or common visions to be presented at the EU summit in the Greek city of Thessalonica were meagre.

” To meet before big EU summits could turn out to be an important means for discussing and agreeing upon common visions

However, there is growing hope for people wishing to see more Baltic Sea co-operation. The fact that the heads of state and government of the region have agreed to meet before big EU summits could turn out to be an important means for discussing and agreeing upon common visions for the region.

The many important issues dividing the Baltic Sea countries inside the European Union shows that such visions are indeed needed, if the region is to benefit from joint collaboration and profiling within the EU. Developing the joint visions and programmes to build up regional strength in information and communication technology might be a good place to start.

Ole Vigant Ryborg is the EU correspondent of Monday Morning Weekly. He has covered European affairs since 1988 and has been based in Brussels working for different Danish media since 1991. Ole Vigant Ryborg has written several books on European affairs.

The European Perspective

New EU Members on the Way to the Information Society

By Erkki Liikanen
European Commissioner
responsible for Enterprise
and Information Society



BRUSSELS On April 16th this year, the Heads of States and Governments of the European Union met in Athens with their counterparts from the ten accession countries and signed the **Accession Treaty** at the historic *Stoa of Attalos*. As a result, the number of EU member states will increase from 15 to 25 from May 1st 2004. This is a historic event in the process of European integration and in reshaping our continent, and the Baltic Sea region is part of this.

With their entry into the EU, the accession countries are offered the opportunity to benefit from a process that has been going on in Europe for more than fifty years and has resulted in economic growth, increased employment and improved social cohesion.

At the same time, the new member states will have to rise to the challenge of improving the competitiveness of their economies, so as to promote sustainable economic, social and environmental development.

One of the key factors for achieving this is the take-up of information and communication technologies (ICT), and the develop-

ment of the information society in general. The information society is reshaping most of the basic aspects of our economy and society.

” The information society is reshaping most of the basic aspects of our economy and society

In the global world in which we live in today, innovation and technology are the main factors behind the productivity and competitiveness of businesses and economies. Information and communication technologies in particular represent vital tools that form the driving force behind economic growth, and they are an engine of change in many spheres of life. Promoting the information society has therefore become a top priority for economic, social and political players.

In the Athens Declaration of April 16th, the twenty-five Heads of States and Governments affirmed their commitment to “*work for a more open and equitable global economy and a truly shared global information society, to the benefit of all, especially people in less favoured parts of the world.*”

Policy Background

The conditions for an economically sustainable and socially inclusive information

society in Europe are set by the **eEurope** initiative, which is part of the Lisbon Strategy “to make the EU the most competitive and dynamic knowledge-based economy with improved employment and social cohesion by 2010”.

By 2005, Europe should have modern online public services, i.e. e-government, e-learning, e-health, and a dynamic e-business environment. These should be supported by the widespread availability of broadband Internet access at competitive prices based on a secure information infrastructure.

eEurope is complemented by the **eEurope+** initiative, which was launched by the candidate countries in reply to an invitation from the Barcelona European Council to implement the Lisbon strategy.

In this context, I am happy to point out that especially Estonia, Latvia and Lithuania have been at the forefront of information society developments and have enjoyed fast economic growth among accession and candidate countries.

” Especially Estonia, Latvia and Lithuania have been at the forefront of information society developments

All three have adopted national information society policies that are in concert with the priorities and targets set in the eEurope initiative. Estonia with the **Principles of Information Policy**, Latvia with the **National Programme “Informatics”** and the **Socio-economic Concept eLatvia**, and finally, Lithuania with the **National Concept of Information Society Development**, are pressing ahead with the creation of an information society as part of their integration into the EU.

The common elements of these policies are that they all support the modernisation of public administration through the use of

ICT, the provision of public online services to citizens, the promotion and improvement of ICT skills, the creation of favourable conditions for e-business, the fight against the ‘digital divide’ through the development of broadband infrastructures, and the promotion of the cultural and linguistic heritage of the individual countries concerned.

These policies are proof of the firm determination of the countries to successfully comply with global challenges, bridge existing gaps and keep up with the pace of development.

The Regional ICT Market

Last year, for the first time after a decade of strong growth, the ICT sector experienced a severe slowdown and stagnation as a result of an unprecedented combination of adverse factors, including a global economic slowdown, uncertainty in the financial markets and over-investment.

Despite this negative climate, the ICT market in the Baltic Sea region has been performing well, yielding even some outstanding results, thanks to the boost afforded by the national information society policies. All ten countries of the Baltic Sea area are attaining a competitive edge on their way towards the information society.

” All ten countries of the Baltic Sea area are attaining a competitive edge on their way towards the information society

The shaping of an information society must also be accompanied by a restructuring of the economic base into a knowledge economy. This is especially well reflected in the economic strategies of Estonia, Latvia and Lithuania, which prioritise active use of knowledge and high technologies. The aim is to shift the emphasis from labour intensive industries to knowledge intensive, high value added activities. As a result, the Baltic

States favour with their industrial policies the development of technology and research intensive branches of the industry that present the best development potential in terms of international competitiveness and the existing science base.

Industry and service sectors presenting growth prospects in Estonia, Latvia and Lithuania today include mobile communications and related services, ISP, e- and m-business applications, ASP, call centres and telemarketing, IT and system integration services, software development and consulting.

The Digital Divide

However, the full picture in terms of socio-economic development is not completely positive. The **2nd Progress Report on Eco-**

nomie and Social Cohesion, which was adopted by the Commission last January, confirms that some regions in the EU are progressing much faster than others and that the gap is widening considerably. This effect will be even greater in 2004 when the uptake of accession countries will raise the percentage of people in the Union with an average income per capita below 75% of the Union's average from 18% to 26%.

” **The digital divide challenge becomes more complex in the accession and candidate countries**

Avoiding a 'digital divide' is a challenge we have to face up to actively. The term 'digital

Facts on the Information Society in Estonia, Latvia and Lithuania

According to EITO¹, the total ICT market in the three countries reached a value of 2.8 billion euro in 2002. Estonia, the smallest but most advanced of the three ICT markets, accounted for 804 million euro, while Latvia and Lithuania represented 951 million euro and 1.1 billion euro respectively. At the forefront of this satisfactory performance is mobile telephony.

EITO's estimates until 2004 show that the ICT market will continue to grow by an average of 6.9% in Estonia, 9.9% in Latvia and 12.8% in Lithuania.

A recent study of VTT² revealed that the Lithuanian ICT market expanded nearly five times between 1994 and 2000. The telecommunications sector grew almost six-fold and the information technology sector doubled. In 2001, the telecommunications sector alone accounted for 4.5% of the Lithuanian GDP, representing thus one of the fastest growing sectors in the Lithuanian economy.

In 2002, regular users of the Internet (i.e. at least once a week) in Lithuania accounted for 13.4% of the total population, whereas only about 6% of households had Internet access. In the business sector in 2001, 38% of all companies used the Internet.

In Latvia in 2001, the growth of the ICT market equalled 4.6% of GDP. It is approximated that the telecommunications sector in the country grew by 100% from 1997 to 2000. The Latvia Internet Association reported that in 2001 the Internet users reached 6.1% of total population, whereas only 3% of households had Internet access. According to a survey conducted by the Central Statistical Bureau in 2002, about 21% of all Latvian enterprises had Internet access.

Estonia's IT expenditure in 2001 amounted to 223.7 million euro accounting for about 4% of GDP. In 2002, the IT market grew by 10% compared to 2001. A prominent example of a successful IT company is Estonian Microlink, which is the largest IT company in the Baltics with activities spread all over the Baltic region and over five divisions (systems, data, computers and services, new media and microwave).

In the field of telecommunications, Estonia has the highest share of GDP spent on telecommunications services among the candidate countries, almost 5%, ranking the country today among the top 20 world-wide for teledensity. Finally, the share of population in Estonia that was connected to the Internet in 2000 amounted to 41%.

1 European Information Technology Observatory: www.eito.com

2 Nissinen, Marja (2002): "The Baltics as a Business Location for Information Technology and Electronics Industries", VTT Research Notes 2169

divide' refers to the gap between individuals, households, businesses and geographical areas at different socio-economic levels with respect to their access to ICT and the Internet.

The main reason behind the disparities is that the different pace of economic growth and the policy of national governments in the information society field have introduced large differences in Internet penetration and the availability of advanced services to the general public and businesses.

Moreover, the digital divide challenge becomes more complex in the accession and candidate countries. In these countries, not only is there the traditional divide between urban and rural, rich and poor, old and young, central and remote or less favoured, but there is also a divide between small and large cities and between enterprises.

Next Steps

Undoubtedly, the shaping of an information society in the Baltic Sea region is well underway. Yet a lot remains to be done.

The Baltic Sea countries have indeed adopted ambitious information society policies. The danger of a 'digital divide', however, remains. For this reason, not even the Baltic Sea region can rest assured. On the contrary, the region should stay on the alert.

” The challenge now is to devote the necessary resources to ensure the implementation of the necessary policies

The challenge now is to devote the necessary resources to ensure the implementa-

tion of the necessary policies in order to accelerate the process. This goes for all of the ten Baltic Sea countries. Otherwise, the engine will run out of steam and they will lose the competitive edge they have gained thus far.

With this in mind, the European Commission has asked both the new and old EU member countries to pay particular attention to the eEurope objectives when elaborating and implementing their national and regional development programmes.

Investments through the EU's Structural Funds for the period 2004-2006 should also concentrate on meeting the eEurope objectives with respect to the characteristics and specific needs of these countries.

This is a unique opportunity that the Baltic Sea countries should not let slip by if they want to make eEurope a success and enjoy the benefits of participating fully in the information society.

Erkki Liikanen is European Commissioner responsible for Enterprise and Information Society. Erkki Liikanen was elected to the Finnish Parliament in 1972. From 1976-1979 he was a Member of the Supervisory Board of Televisa corporation. He then chaired the Supervisory Board of Outokumpu Corporation from 1983-1988. From 1987-1990 he was Minister of Finance of Finland. In 1990, Erkki Liikanen was appointed the Ambassador Extraordinary and Plenipotentiary from Finland to the European Union. During that period Finland negotiated the Accession to the European Union. Prior to his current appointment, Erkki Liikanen served as Member of the European Commission, responsible for budget issues, personnel and internal administration.

Baltic Sea Analysis

Strengths and Weaknesses of the Baltic Sea ICT Cluster

By *Marja Nissinen*
Senior Researcher,
VTT Technology Studies



HELSINKI After the fall of the Iron Curtain, concerns emerged as to whether a digital divide – inequalities in access to and use of information and communication technology (ICT) – would replace the political East-West confrontation in the Baltic Sea region. The Nordic Countries are in the forefront within the OECD in terms of penetration of ICT, whereas their neighbours Latvia, Lithuania and Estonia, as well as Poland and north-western Russia, initially lagged far behind.

However, the countries surrounding the Baltic Sea have risen to the challenge of the digital divide by setting an ambitious goal: the entire region should be transformed into an information society with ICT as a facilitator of productivity growth. In relation to regional co-operation initiatives in the field, it has even been stated that the Baltic Sea region should become a global frontrunner in ICT.

This analysis provides an assessment of the present state of the ICT sectors and the information society in the Baltic Sea region. It finds that the key strengths of the region as a whole lie in a highly skilled workforce,

competitive ICT clusters, including the presence of global companies such as Nokia and Ericsson, and a stable political environment (see insert below). Furthermore, strong research traditions in relevant technology fields, advanced mobile technologies and fast growing transition economies with developing ICT sectors provide opportunities for further development of the Baltic Sea ICT cluster.

Yet the Baltic Sea region still has substantial weaknesses and threats to face in its quest to develop the ICT sectors and the information society. These include weaknesses in the regional composition of small countries with ageing populations, a dominance of small and medium sized enterprises in the ICT field, sharp differences between the countries in terms of economic development and no common identity or uniform brand for the region. Other threats include strong competition from populous low-cost countries, the risk of brain drain and a digital divide both between and within countries that still exists.

In the following, these characteristics of the Baltic Sea region in ICT will be elaborated:

Firstly, the performance of the ICT industry in the Baltic Sea region is explored, and the development of an information society is briefly touched upon. The analysis covers three different areas: the Nordic countries

SWOT-Analysis of the Baltic Sea Region in ICT

Strengths

- + Highly skilled workforce based on good quality education
- + Existing ICT clusters; the presence of global companies, such as Nokia and Ericsson
- + The shaping of the information society well underway
- + Modern telecommunications infrastructure at least in the major cities
- + Political stability, cultural harmony (though not homogeneity)

Opportunities

- + Broad science base, research traditions in the fields of technology that have industrial relevance
- + Favourable preconditions for becoming a frontrunner in mobile technologies
- + Software and R&D outsourcing potential
- + Fast growing transition economies with developing ICT sectors
- + The EU will embrace almost the whole Baltic Sea area

Weaknesses

- Most countries are small with ageing populations
- International marketing of software products is hard for local SMEs, which dominate the business in numbers
- Sharp differences in the economic development between the countries of the region
- Neither common identity nor uniform brand for the region

Threats

- Competition from populous low-cost countries; withdrawal of the domestic industry and loss of jobs
- Brain drain
- Insufficient investment in R&D
- Unbalanced regional development within individual countries, digital divide

of Denmark, Sweden and Finland; the Baltic States Estonia, Latvia and Lithuania; as well as the situation in the St. Petersburg area of the Russian Federation. The strongholds of Germany and Poland's ICT industries are located elsewhere than in their northern coastal counties. Therefore these two important countries are not covered at length in this article.

Secondly, the subsequent sections assess the policy lessons for regional co-operation and government initiatives in promoting the ICT industry of the Baltic Sea region. In particular, the analysis explores the role of public-private partnerships in ICT, and focuses on cases from Denmark and the Baltic States.

The Strong Nordic ICT Cluster

There seems to be a clear tendency of ICT related production and innovation to

cluster geographically. Europe's ICT businesses are concentrated around major urban centres. One can talk about a great central "banana" cluster beginning in Greater London, proceeding via Randstad through Germany's industrial heartland and ending in Northern Italy. Similarly, a somewhat smaller Nordic ICT cluster in the shape of a "potato" covers the metropolitan areas of Stockholm and Helsinki. A lesser concentration of ICT related production and innovation is located around the Sound.¹

The difference between the two major blocs is that the industrial activities in the central "banana" are more focused on information technology, whereas the Nordic "potato" is more active in communication technology, not least thanks to Finnish Nokia and Swedish Ericsson.

¹ Koski, Heli & Rouvinen, Petri & Ylä-Anttila, Pekka (2002): "ICT Clusters in Europe: The Great Central Banana and Small Nordic Potato" *Information Economics and Policy* 14(2): 145-165

When the Nordic countries are compared to one another, differences in their productional orientation are evident. The ICT manufacturing is concentrated very much in Sweden and Finland, where manufacture of telecommunications equipment is dominant. In Denmark and Norway such a dominating industry is missing while the employment is more evenly distributed between the subsectors. In Finland and Sweden, the turnover in the ICT manufacturing industry was 24% and 16%, respectively, of the total manufacturing industry – compared to less than 6% in Denmark (see figure 1). Noticeably, Finland and Sweden are two of only three European countries – the third being Ireland – that are consistently specialised in ICT production, technology and trade.

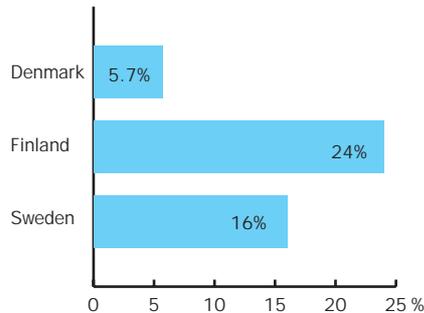
In Denmark, the manufacture of television and radio receivers is the strongest segment in electronics. Finland and Sweden's industrial structure stems from the presence of the huge telecommunications equipment manufacturers Nokia and Ericsson. They are surrounded by an array of subcontractors that all work for the same supply chain. In Sweden, the ICT manufacturing sector is the largest in terms of employees, but Finland is more dependent on it, because it generates a higher share of the private sector turnover.

Finland experienced the fastest growth in the ICT manufacturing industry between 1995 and 2000, followed by Sweden. In Finland the turnover grew four-fold; in Sweden it more than doubled. These two countries also invest heaviest in research and development in ICT.

Furthermore, the turnover of the ICT services grew noticeably after the mid-1990s, exceeding the growth rate in the total private sector. The service sector is largest in Sweden, where its turnover in 2000 accounted for almost 13% of the total service activities of the private sector (see figure 1).

Turnover in ICT

Turnover in ICT Manufacturing Industry as Proportion of Total Manufacturing Industry:



Turnover in ICT Service Activities as Proportion of Total Service Activities:



Figure 1

Note: Percentage, 2000

Source: Nordic Information Society Statistics 2002

Besides, services constitute the major part of the ICT sector in Denmark, where its relative importance is thus greater than in Sweden or Finland. Consultancy forms the largest and fastest growing segment within the ICT services almost everywhere.

The Growing Information Technology Industry in the Baltics

Reflecting their information society and knowledge economy strategies, the Baltic States Estonia, Lithuania and Latvia prioritise technology intensive branches of industry. They hold ambitions to become strong international players in the IT market. Latvia, for instance, wants to become a leading software service exporter in Eastern Europe by 2010. It wishes to export IT services worth over 500 million euros by then. In 2002, the exports of nine major IT com-

panies in Latvia amounted to more than 27 million euros.

The contribution of the IT sector to the national economy is still relatively modest in the Baltics. In 2001, the IT sector's value added ratio of GDP accounted for around 4-5% in each country, but this share is growing gradually. The annual growth rates of the IT market have increased to 20-30% in recent years.

The Baltic industrial associations assess that national ICT sectors employ around 10,000 people in each country. The number of software specialists, who can be acknowledged as programming professionals, is smaller. According to a bold estimate, there might be 12,000 competent software developers in the Baltics altogether, but some consider this estimation too high.

Small companies, employing less than ten or twenty people, dominate the Baltic IT industry, which weakens the capacity to receive large-scale projects. A narrow spearhead of large firms competes for major contracts in each country. The leading IT companies by country are the Estonian Microlink (680 employees), the Latvian Dati (430 employees), and the Lithuanian Alna (over 200 employees) – see figure 2.

Baltic IT companies mainly provide customised solutions or outsource their services rather than develop “green” software products of their own. The IT industries in the three countries have differentiated profiles within their specific strongholds. Estonia is most advanced in mobile technologies and wireless solutions; Latvia possesses the biggest outsourcing capacity; Lithuania offers the best availability of programmers as well as some interesting software products.

Companies focusing on system development and integration have been the most successful ones in the past few years.

The Largest IT Service Firms in the Baltics

| | Country | Total Revenue (thousand euros) | Growth 02/01 |
|----------------------------|---------|-----------------------------------|-----------------|
| Microlink Group | EE | 61,200 | 4 % |
| Dati Group | LV | 14,918 | 38 % |
| Exigen Latvia | LV | 8,800 | 8 % |
| Alna Group | LT | 22,675 | -9 % |
| IT Alise | LV | 6,880 | 46 % |
| Informacines technologijos | LT | 6,699 | 11 % |

Figure 2

Note: 2002 figures

Source: Prime Investment, May 2003

The emphasis placed on e-government and e-business, especially e-banking, has created opportunities for developers of major infrastructure systems and innovative mobile technologies in Estonia. Latvia advertises the following competence areas: software re-engineering, implementation services for enterprise resource planning, advanced B2B Internet solutions, CASE tools, payment card systems and localisation software. Lithuania's largest IT exporters are specialised in programming services, banking and telecommunications solutions, and business management system installation.

Widely used technologies in the Baltic countries are based on relational database systems that involve client-server architecture or on the Internet environment. Typical service lines include accounting and financial management, and data warehousing. The major domestic customers come from financing, telecommunications and public administration, but increasingly from manufacturing as well. The main export markets of the IT industry are located in Western industrialised countries, especially in the Nordic countries, Germany and the United States. In addition, the Baltic neighbours and Russia are among the target regions.

In the future, the Baltic IT industry should focus more on research and development, but first the companies need to build up capital. A threatening shortage of the highest level specialists with postgraduate degrees constitutes another challenge.²

The Potentials of St. Petersburg

North-western Russia has generated increasing interest as a source for software services in recent years. St. Petersburg is one of the main centres for ICT in Russia alongside Moscow and Novosibirsk. The Neva metropolitan area with close to five million inhabitants offers special advantages. These include a number of renowned universities and research institutes, which have led to an abundant availability of qualified manpower; industrial traditions in telecommunications, dating back to the 19th and 20th century; and lower salaries and living costs than in Moscow (or in the Western countries). Furthermore, St. Petersburg is historically Russia's window to Europe.

The availability of qualified manpower is the key to the potential of north-western Russia in ICT: St. Petersburg has more than a hundred higher education establishments and the number of graduates in ICT-related study fields in St. Petersburg is nearly 6,000 annually. The supply is growing, as the number of new enrollees exceeded that of graduates in 2000. The pool of ICT specialists is even higher than the official figures show, since ICT firms employ other technical students too.

Despite the favourable fundamentals and the spectacular growth rates in the ICT sector, Russia has remained a minor player in the international market for offshore outsourcing. The competitiveness of its north-western ICT cluster is currently a matter of

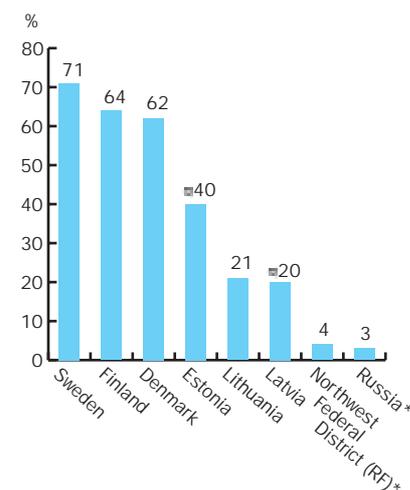
potential rather than of reality. Even this potential may be lost without adequate investments in the existing infrastructure and the system of higher education and research. Furthermore, it is essential to create a modern legislative environment, encourage competition, support international integration and facilitate networking with the supporting industries. The unfriendly investment climate in Russia is regarded as a flaw. Complicated, unpredictable and vague customs procedures are mentioned particularly in this connection.³

Highlights of the Baltic Sea

Information Society⁴

The different states of development are evident when it comes to the impact of ICT on society – the spread of the information society within the Baltic Sea region. The Nordic countries rank very high in terms of ICT user rates in the population. For example, over 70% of the Swedish population used the Internet in 2002 – compared to

Internet Users by Country, 2002



*Data from the year 2001

Figure 3

Sources: Averin & Dudarev 2003; Esto2 data sheet; Nordic Council of Ministers et al. 2002; Žilioniën 2003

² Nissinen, Marja (2002): "The Baltics as a Business Location for Information Technology and Electronics Industries," VTT Research Notes 2169, Espoo: Technical Research Centre of Finland

³ Averin, Andrey & Dudarev, Grigory (2003): "Busy Lines, Hectic Programming: A Competitive Analysis of the North-west Russian ICT Cluster," ETLA Series Nr. 199, Helsinki: The Research Institute of the Finnish Economy

⁴ The data is collected from various statistical sources, which may be mutually incompatible. Moreover, different source sometimes provide contradictory information.

some 40% in Estonia and around 20% in Latvia or Lithuania, respectively (see figure 3 above).

An overwhelming majority of the home computers in the Nordic countries are equipped with Internet access. Norway, Sweden and Denmark are leading countries in Europe in terms of households connected to the Internet with penetration rates from 50-60% in 2002. In Germany, the corresponding share was 38%. In the transition economies, the Internet is more often used in workplaces and public Internet access points than at home.⁵ As such, the number of households with Internet connections in Latvia, Lithuania, Estonia and Poland range from 3-12% - see figure 4.

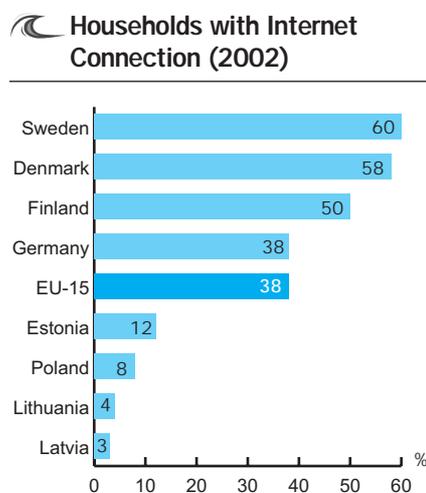


Figure 4

Sources: European Commission: eEurope+ Progress Report 2003

Policy-Lessons for the Baltic Sea ICT Cluster

The overview of the ICT sectors in the Nordic and Baltic countries carries several important policy implications for the future development of a strong Baltic Sea ICT cluster.

First of all, the development patterns for the European ICT clusters – the Central European “banana” and the Nordic “potato” – indicate that countries with strong ICT sectors tend to strengthen their positions, whereas leapfrogging is difficult. However, even though it may be hard to catch up the vanguard in the ICT provision, it is possible to make the most of ICT use. Being a large producer of ICT is not a necessary condition for being an advanced user of it. This emphasises the role of diffusion policies.

Secondly, the countries with high ICT manufacturing intensities have chosen divergent strategies in developing their ICT sectors. Ireland has attracted foreign investors, whereas domestic companies mainly create the added value in Finland and Sweden.

Thirdly, the development patterns also indicate that clustering does not follow national borders. This condition underscores the importance of regional policies in promoting ICT. Up to the present, technology has driven developments in the production and use of ICT. The question of the future is how the convergence of information technologies, communication technologies, consumer electronics and the content industry will change the spatial patterns.⁶

Because the area is mixed in terms of its economic development, research and development intensity, regulatory framework, social cohesion and cultural background, joint efforts are needed to complement national actions. ICT co-operation is recognised in various regional and European Union initiatives as one of the priority areas to be promoted in the region. Some of the most prominent initiatives in this field include:

- eEurope and eEurope+ Action Plans, launched by the European Commission;

⁵ Nordic Council of Ministers & Statistics Denmark & Statistics Finland & Statistics Iceland & Statistics Norway & Statistics Sweden (2002): “Nordic Information Society Statistics 2002.” Helsinki: Yliopistopaino, pp. 12-13

⁶ Koski, Heli & Rouvinen, Petri & Ylä-Anttila, Pekka (2002): “ICT Clusters in Europe: The Great Central Banana and Small Nordic Potato.” *Information Economics and Policy* 14(2): 145-165

The Case of Nokia

Finland's rapid recovery from a deep economic recession in the early 1990s attracted widespread international attention. The fast expansion of ICT industries, the country's extensive R&D spending and, above all, the appearance of Nokia as one of the world's leading telecommunications companies gained similar visibility. Although Nokia occupied a predominating position in the Finnish telecommunications industry, it was by no means a lone star. The Finnish ICT cluster connected a complete value chain of production.

The robust economic growth of Finland in the later 1990s, to which Nokia contributed significantly, is to some extent claimed to result from the supportive role of the government. This argument refers to active science and technology policies pursued by Finland from the late 1960s. From the early 1980s, these policies became increasingly focused on financing and managing national programmes in promising technologies, like in Japan. In the execution of the technology programmes, co-operation between firms, universities and research institutes was intensified. In the 1990s, emphasis was shifted from national to international co-operation. Moreover, a nation-wide network of technology parks and centres of expertise was built up to accelerate technology transfer and commercialisation.

All these arrangements created positive systemic interdependencies among the actors, which in turn boosted the expansion of the ICT cluster. Investments in education and R&D, and the competitive environment of the ICT cluster – telecommunications were decentralised and liberalised – had the same effect. However, the development of the Finnish ICT cluster did not obey a uniform declaration of intent. It was an organic process, involving a number of inter-linked public and private actors. Even the government measures comprised various decentralised activities without a consistent plan. Therefore Nokia cannot be regarded as an outcome of a French-style national champion policy.

Source: Lemola, Tarmo (2001): "Innovation and the New Technologies: The Finnish Telecommunication Industry." A draft paper to be published as an article at a later date.

- The Northern eDimension Action Plan, adopted by the Council of the Baltic Sea States and co-ordinated by its group of Senior Officials on Information Society;
- Action group "Information Society – eGovernance", hosted by the sub-regional Baltic Palette Co-operation Network, which is partly financed by Interreg III B, Phare and Tacis programmes.
- Bilateral projects under the auspices of the individual countries' neighbouring area co-operation.

Furthermore, many governments have assumed an active role in championing the information society and enhancing the ICT cluster nationally. The resulting question is what impact the governments' measures can make. The role of the government has often been analysed in the case of Finland in order to explain the success story of Nokia. One such analysis is summarised in the insert above. It offers the key lesson that the Finnish innovation, science and technology policies

created a favourable environment for the rise of the ICT industry. But the government was no primus motor in developing companies. The process was not a centralised one.

Partnerships between the Public and the Private Sector

While governments cannot be primus motors for developing companies, they can engage in public-private partnerships to alleviate resource shortage and speed up the implementation of grand projects. Public-private partnerships are nowadays fashionable in the ICT field and many people advocate them. The Baltic Sea region can demonstrate several interesting cases in this regard:

In Denmark, one example is the efforts currently underway to establish an international centre for the networking society called Crossroads Copenhagen. The idea is that this network will combine education, scientific research and innovative business

in the fields of culture, media and communications technology. It will bring together twelve professional partners from the public and the private sector.⁷

In the Baltics, the establishment of public Internet access points and the computerisation of schools has involved both business and government parties. In Lithuania, for instance, local governments provide the premises for Internet access points, handle their administration and pay half of the monthly subscription fees for servers. The private Window to the Future Alliance installs the Internet connections, donates computers and provides technical services. The Alliance consists of Lithuania's largest banks and IT and telecommunications companies.

Similarly, government information society projects create demand for services of software and system developers, which form an important business opportunity for IT firms in the transition economies. In the Baltics, unified state registers, ID cards, the digital signature and public portals can be cited as examples of e-government projects with positive incentives. Furthermore, there are cases in which the public sector even acts as a key market driver, such as in mobile Internet applications in Denmark - including e-healthcare: mobile measurement of heart beat and blood pressure; e-traffic: a SMS alert for a bus delay; e-tourism: localised tourism information on a mobile phone, etc.

At the turn of the millennium, the Latvian government adopted a cluster approach for restructuring the economy. One of the main objectives was to ensure export growth on the basis of a shared vision. After the launch phase, the management of the information systems cluster was delegated to the non-governmental Latvian Information Technology and Telecommunications Association (LITTA). Currently the cluster fosters

linkages between its participants to overcome the "small country" problem through a resource sharing. Joint marketing efforts, harmonisation of human resource policies as well as common R&D and testing facilities are supposed to enable the attraction of large-scale projects. The Latvian cluster is comprised of seventeen companies and educational institutions. Lithuania joined the project this year so that the two countries now aspire to build a pan-Baltic IT cluster.

These cases demonstrate the Baltic governments' dedication to pressing ahead with the shaping of an information society and a knowledge economy. These issues are prioritised on their political agenda as part of their EU integration. Still the critics point to a gap between talk and action, which manifests itself in the insufficient funds allocated to the cause. Too little is done in proportion to plans made. Sometimes the private sector activity may correct omissions if the government fails to forge ahead.

Two examples are found in Lithuania and Latvia. The non-governmental Lithuanian Infobalt Association and the Latvian LITTA have been pro-active in putting forth public initiatives to promote ICT. Their resolution has often paved the way for official measures. In Latvia, the pertinent industrial association, headed by LITTA, participated in creating the professional programme for IT education and setting up professional standards. In Lithuania, Infobalt has been among the founding members of the Knowledge Economy Forum, which aims at enhancing co-operation between universities and business.

Conclusion: Regional Business Strategies the Crucial Test

Baltic Sea co-operation is presently very much associated with governmental and sub-regional cross-border co-operation as well as contacts among non-governmental

⁷ www.crossroadscopenhagen.com

organisations. Paradoxically, a politico-bureaucratic complex of collaborative networks is seeking to steer the direction of the technology-driven ICT field.

However, the crucial trial of the Baltic Sea ICT cluster is whether business enterprises will pursue a regional strategy in any significant numbers. Will they define the whole of the Baltic Sea area as their home market? Will they seek to spread systematically throughout the Baltic Sea countries? In the banking, energy and retail sectors, among others, truly regional companies can already be depicted.

Some positive signs for a similar development within the ICT sector can be spotted. For example, the strategy of the Swedish-Finnish telecommunications group Telia-Sonera focuses on the entire Baltic Sea region in a consistent and distinct way. TeliaSonera states that its home market is comprised of the Nordic and the Baltic

countries. Its long-term goal is to include Russia in its extended home market.

In the three Baltic States of Latvia, Lithuania and Estonia, the number of region wide IT firms has so far remained low. But this may change soon. It is expected that the EU membership of the Baltic States will lead to cross border mergers among the leading IT companies. This will be an important step in the further development of the Baltic Sea ICT cluster.

Dr. Marja Nissinen is employed as Senior Researcher and Project Manager at VTT Technology Studies. She is specialised in Baltic studies and innovation marketing. Her recent project dealt with the ICT industry in the Baltics. Prior to joining VTT Technology Studies, Dr. Marja Nissinen has worked at the Latvian Development Agency in Riga, the Latvian Embassy in Helsinki and the Ministry for Foreign Affairs of Finland.

Baltic Sea Opportunities

High Potentials in the Well-Trained Workforce

By *Ylva Nilsson*
European Reporter



STOCKHOLM If you put the countries around the Baltic Sea together and statistically compare their achievements in establishing an information society, you will inevitably find that the East-West divide leaps out at you. The Nordic countries are world leaders and the Eastern Baltic States are far, far behind.

But this is not the full story. A closer look at what is behind the numbers will show an astonishing potential for growth in the eastern part of the Baltic Sea region, based on a much sought after resource: a highly trained workforce. The western side of the Baltic Sea lacks IT experts, yet the very same resource exists on the other shore amongst the new EU member states. The problem is that while the potential in a close collaboration is obvious, it has not yet led to any large-scale action or co-operation between the governments involved. And so the problem is more or less left up to the individual companies in the region to solve for themselves.

New EU Members Fall Far Behind

The goal of creating a competitive knowledge based economy in Europe is one of the

main priorities of the EU Lisbon strategy, which aims to make Europe the world's most competitive and fastest growing economy by 2010. A midterm review undertaken at the end of 2002 shows remarkable progress in making eEurope happen.

Industry is noticing the effects. An international organisation for software companies, Business Software Alliance, claims that the Western European software industry, worth 56.7 billion euros in 2000 and responsible for 1.1 million jobs, will grow to twice as big in volume as well as in number of jobs between 2001 and 2005. Three countries stand out for excellent performance in every benchmarking and they are all in the Baltic Sea region: Denmark, Finland and Sweden. Germany also has a good ranking, but is nevertheless firmly behind the Nordic countries. The biggest country in the Baltic Sea region surpasses the three frontrunners in one respect only, e-commerce. Germany ranks higher both in terms of the number of companies selling products on the Internet and in terms of the number of Internet users that often or sometimes buy goods or services on the net.

With such neighbours, the eastern countries of the Baltic Sea region obviously fall far behind. In 1997 the candidates to EU membership decided to emulate the EU goal of introducing the Information Society as a top political priority. In many regards,

they had to start out from a very low base. Their very first task was to ensure basic services, starting with offering all citizens a fixed phone line. Legislation also needed to be updated and telecommunication markets had to be opened to competition.

Thus, at present, the Internet penetration in the Baltic countries remains under 25%, while the EU average is at least twice as much. Mobile phone registrations cover less than a third of the population, except for Estonia where 46% of the population have a mobile phone. The EU average is close to 80%. Not surprisingly, the three Baltic States and Poland also rank far below the Nordic countries and Germany when it comes to access to a computer and to an Internet connection at school.¹ Altogether, the statistics paint a picture of a still existing digital divide in the Baltic Sea region between new and present members of the EU. The previous article by Marja Nissinen also details this problem.

Focused Efforts from Poland and the Baltic States

The statistics, however, do not tell the full story of the information society in the Baltic Sea region. Poland, Estonia, Latvia and Lithuania have focused a great deal of effort on achieving an information society for a number of years.

Poland implemented a comprehensive information society policy three years ago and has since come quite a long way in introducing information technology in government. It is one of very few candidate countries to have reached the level where it has been able to sign up to IDA, the vast EU interchange of data between administrations. Poland has the second largest IT sector in Eastern Europe worth over 3.1 billion dollars a year and with an addition of 27,000 new jobs since 1996.

Lithuania laid down its information society policy in 2000 as well, and the government spends around 15 million dollars annually on IT. The four biggest companies in the country (two banks and two telecom companies) have entered a joint venture with the goal of reaching the EU average Internet penetration in Lithuania over the next three years. Latvia implemented a national 6-year information society plan in 1999, introduced vital legislation early and started building up national access points to the Internet in lesser populated areas in 1999.

The shining example, however, is Estonia, which has 20% of the population of the Baltic states, but represents 40-60% of the IT sector in the three countries. Estonia liberalised its telecom market early on. This led to a leap in the number of Internet users, from 25% to more than 40% of the population when the costs of connecting fell sharply. The "Tiger Leap" project has introduced computers on a large scale in schools and most computers offer a connection to the Internet.

High Innovation Potentials

The Estonian efforts seem to be paying off, if not yet in actual European IT ranking, then at least in gaining a top score in potential. Slavo Ravosevic of the School of Slavonic and East European Studies in London recently made a comprehensive analysis of what makes knowledge economies grow. In a paper published in May 2003, he assesses and compares the "National Innovation Capacity" (NIC) of the European countries. High NIC's indicate high potential for economic growth.

Mr. Ravosevic concludes that there is no East-West divide in this respect. On the contrary, some of the old communist countries score higher than the Western countries in innovative potential. In his paper, Mr. Ravosevic argues that even if the level of research and development investment in a

¹ European Commission: eEurope + Progress Report 2003

National Innovation Capacities of the Baltic Sea Countries

| |
|----------------|
| Sweden (1) |
| Finland (2) |
| Denmark (5) |
| Germany (8) |
| Estonia (11) |
| Lithuania (17) |
| Poland (18) |
| Latvia (19) |

Figure 1

Note: Ranking in index with a total of 24 European countries
 Source: Slavo Ravosevic: Working Paper no. 31, May 2003, School of Slavonic and Eastern Studies

country is strongly connected to its productivity, the spill-over of new technology is in no way automatic. To grasp the potential of a country, you need to look further. You need to study the capacity of diffusion, namely the capacity to reap economic benefits of new technology. You need to know the capacity to absorb and adapt new technology and not least, to take account of the capacity for demand, the market pull that can make an economy grow.

In an index over National Innovation Capacity (NIC), Mr. Ravosevic identifies three main groupings of European countries (see figure 1). The **top scoring countries** include the three Nordic countries of Sweden, Finland and Denmark with the UK and the Netherlands following closely. In the **second group** we find Germany with a number of other current EU member countries, but also Estonia, together with three other central and east European countries. In the **third and lowest ranking group**, we find the Southern European countries alongside most candidate countries, including Poland, Latvia and Lithuania.

Well-Trained Workforce the Key Strength

For all the countries, the educational level of the workforce is a key element in their innovative capacities. And in general, the Baltic Sea region has very good prospects in this

15-24 Year Olds in Education

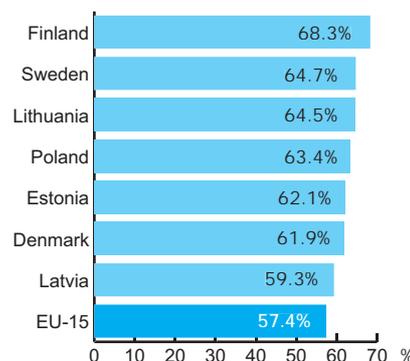


Figure 2

Note: Proportion of all 15-24 year olds participating in education at ISCED levels 1-6
 Source: Eurostat: Statistics in Focus, Theme 3 - 13/2003

regard. In both the three Nordic countries Denmark, Finland and Sweden and in the Baltic States, the percentage of 15-24 year olds in education is well above the EU average (see figure 2).

Latvia's score is pulled down by weak R&D capacities, where it ranks at the very bottom except for Romania. This indicates a low national income and therefore insufficient investment resources, in addition to a weakness in attracting foreign investment. Latvia does however score relatively highly on diffusion capacity, thanks to its highly educated workforce, which makes the potential for spreading new technology very strong.

Its neighbour Lithuania is also weak on demand (low Internet penetration), scores high on absorption, but is pulled down by diffusion capacities. Lithuania does have an extremely high-level educated workforce (45% graduates from university which compares to 13% in Sweden), but also has a very low level of its workforce in vocational training, only 0.8%.

Poland scores higher on R&D capacities than on other points thanks to strong foreign investment. Poland is not however considered strong enough at diffusion, having a lower general level of education in its labour force. This could change rapidly, be-

cause Poland has doubled its number of students over the last five years.

Once again, Estonia scores highest among the Eastern Baltic Sea countries. Mr. Ravosevic concludes that the potential for growth is so strong in Estonia that it has a good chance of catching up the income levels of EU member countries such as Greece, Spain and Portugal in the not so distant future. Estonia ranks high on demand, because the country has a well-developed stock market, a well functioning banking system and a high level of foreign investment.

The good score on diffusion is due to Estonia's well-educated workforce, a high number of which have a university degree, and also to the large number of people in vocational training. Public spending on education as part of total public spending is even above EU average: 7.3% in 1999.

A Perfect Match

To a large extent, Estonia, Latvia, Lithuania and Poland thus seem to have what the Nordic countries - and Europe as a whole - lacks. They have a highly trained workforce, a large number of IT specialists and no problems convincing students to enrol in mathematical and technical courses, lured by the IT sector's high salaries and good working conditions.

As such, it looks as if the two sides of the Baltic Sea could constitute a beneficial match for each other. At present, the European countries already lack of 1.7 million IT experts, according to the market research

institute International Data Corporation. In Sweden, the business community considers this a main concern. To maintain its position as one of the leading IT countries in the world, Sweden needs 10,000 more students a year to start training in IT and engineering, etc. Instead, just as in Denmark, the number is falling sharply.

Any hope of an automatic flow of young experts from the East longing for the glamorous West, however, is dwindling fast. People seem to be quite content to stay and help build the fast growing IT sectors of their home countries.

Based on this, the business communities of the Baltic Sea region united to ask for a common vision on co-operation after the EU enlargement, at the Baltic Development Forum in October 2002. Yet, so far, none has come from the politicians. Instead, individual companies have been left to find their own private solutions, either by raising salaries to extreme levels or moving businesses to the countries where the workers can be found. It is, therefore, once again time to restate the request. Collaborative action is needed if the Baltic Sea region is to seize the great opportunities in the ICT sector.

Ylva Nilsson is a Swedish based freelance journalist and author specialised in European affairs. She has had many years of experience as a Brussels correspondent working for the Swedish newspapers Dagens Industri and Svensk Dagbladet. Ylva Nilsson has also written several books on European affairs.

Best Practices

The Quiet Leader in Online Public Services

By *Ylva Nilsson*
European Reporter



STOCKHOLM A close look at issues like wealth, economic growth and welfare state development reveals that there are still considerable performance gaps between the countries east and west of the Baltic Sea. But there is one area where all the countries of the region can be seen as experts and leaders: e-government and online public services.

In fact, this is one area where the Baltic Sea region has outstanding potential as a region of excellence in Europe. It offers numerous examples of best practice, thanks to the impressive efforts by the local and national governments.

Being masters of e-government and online public services provides a unique branding opportunity for the Baltic Sea region, but so far the success story has remained largely untold. Few people outside of the professional circles that deal with information and communication technology in the Baltic Sea region seem to know about it.

One reason might be that the development of e-government and public services has taken place separately in each country and

with only a limited amount of co-operation. In this area – as in many others – large-scale regional co-operation is rare. Instead, so far, the countries have pursued different strategies to reach their leading positions.

Different Paths of Development

All of the countries around the Baltic Sea can claim to be European leaders in some areas when it comes to letting citizens deal with state and government online. But each country has its own combination of various and completely different causes for achieving that lead.

In the case of the western Baltic Sea countries of Sweden and Finland, being home to the mobile technology giants Ericsson and Nokia was an important contributor to that lead. This spurred governments to increase the use of technology both internally between the different branches of government and in the governments' various forms of communication with their citizens.

On the other side of the Baltic Sea, Estonia, Latvia and Lithuania have introduced various forms of e-government for completely different reasons. One explanation is the enormous concentration of technological knowledge in these three countries. Parts of the old Soviet space-program were developed there and both science and technology attract great interest amongst university students in all three countries.

At the same time, the Baltic countries have had another extremely important advantage in the development of e-government in what could be called their “blank screen” approach. After gaining independence, the three countries had to rebuild new national administrations and only parts of the old Soviet system could be used as base to build on. This meant that Estonia, Latvia and Lithuania – although with very limited funds – could start establishing a modern administration based on modern technology, an administration that from its very beginning was aware of the possibilities brought by new technology.

One example of the advantages of starting with a blank screen can be found in the Steenbok House – the home of the Estonian government – where practically everything is run on computer networks. This “computerisation” would be relatively easy to achieve in countries like Sweden or Denmark. However, a sudden change inspired by the eastern neighbours seems very unlikely, not for technical reasons, but simply because tradition seems to put a brake on the development.

A Regional Tour-de-Force

Despite their differences, all of the countries around the Baltic Sea have already come very far in developing e-government and online public services. Take your PC with you on a boat trip round the Baltic Sea, and if you stop at any port, you will find yourself in a country where, as a citizen, you can get answers to most of your questions and do most of your dealings with government online.

Any goods to declare? Obviously you will want to do that as simply as possible, which means filing your declaration before you arrive. The German version of such a system has received high marks for simplicity and user-friendliness, but the possibilities are readily available in other countries around the Baltic Sea too.

You may chose to take advantage of the Single Market and buy a cheaper car in Germany to take back with you to Sweden. Fear not, you can register it online with the Swedish National Road Administration and drive it perfectly legally on Swedish roads. This is another system that has received a thumbs up from the jury that selects “Best practices in e-government in Europe”.

Best Practice Examples in Online Public Services

Database for stolen vehicles Lithuania:
www.vrm.lt

IT Crime in Denmark:
www.anmeldelse.politi.dk

Swedish National Road Administration:
www.vv.se

Moving in Finland:
www.vaestorekisterikeskus.fi

Studying in Sweden:
www.studera.nu

And while online with the Swedish National Road Administration, you might as well find out about the latest road and the weather conditions before leaving.

What if you come across web pages with illegal content while surfing around? If your next port is in Denmark, you can report any IT crime directly to the police online. File your police declaration here and they will deal with your problem.

It is no surprise that Denmark, Finland and Sweden, who rank among the world’s leading information societies, excel in the area of e-government and online public services. According to a report by Cap Gemini Ernst & Young, the number and the sophistication of public services online is outstanding in these three countries.¹ Not only can citizens find relevant information online, they can also perform their necessary tasks electronically.

¹ Cap Gemini Ernst & Young: “Online Availability of Public Services: How does Europe Progress?”, January 2003

You will find the Finnish system among the best practices in Europe for notifying your intention to move. Filling in a form on the right web page will automatically report your moving to all authorities concerned, such as the tax office. It will also find its way to most of the big banks, insurance companies, etc.

Anyone wanting to study at a university in Sweden can start at the web page “Studera Nu” and not only find out everything they want to know about different degrees, but also enrol online.

The Cap Gemini Ernst & Young study analyses 10,500 public service providers in Europe. It shows that in Sweden 80% of all public services aimed at citizens are available online while the number in Denmark is 74% with Finland at a close 68%. That ranks the three countries in top places in the European league.

Denmark is even more outstanding when it comes to public services for business performed online. 98% can be performed online. Sweden and Finland follow closely with an impressive 92% and 88%, respectively.

Your boat is now approaching the eastern shores of the Baltic Sea. You might not expect the same high standards of online public services there, but you will be pleasantly surprised. The three Baltic States and Poland focused on developing their information societies early – starting with the government.

For example, your neighbour back home had his new Mercedes stolen a couple of months ago and he suspects it ended up somewhere east. Try the Lithuanian web page where you can search online for any stolen vehicle, passport or missing person.

In Lithuania and Estonia, you can also exercise your democratic rights online by logging in and going over the minutes of

government meetings and other important public documents. Freedom of information is taken very seriously here. Estonia has even impressed its neighbours with the highly sophisticated system that allows government members to take part in government meetings online, when they cannot physically be present. It is a very modern way to conduct important meetings when forced to be away by other pressing business.

Just like in Scandinavia, you can file your annual tax return online for maximum convenience in the Baltic States. In Latvia, a special effort has been made to launch a one-stop shop for everything about its capital. The city council began its eRiga project a year ago and has already come a long way. Poland can boast of its web page for custom duties and tax system, included as one of the European public service sites considered for the eEurope Award of the year (see insert).

2003 eEurope Awards for Best Public Services Online Nominees from the Baltic Sea region:

Denmark: ETHICS - electronic tendering; Danmarksdebatten; Open digital government of Northern Jutland

Estonia: Special citizens' web portal with standard DB-services

Finland: Tyoelake - Finnish pension services; Lomake.fi - one-stop shop for citizens

Germany: www.destatis.de - filing and processing statistics online; Bremen online services

Latvia: eVentspils - citizens' news, discussion and voting in Kurzeme region

Poland: Integrated customs duty and tax system

Sweden: The virtual customs office; eProcurement; Wilma - immigration authorities connected

Sources: eEurope Awards 2003: www.e-europe-awards.org

Everyone on their own

After this impressive tour around the Baltic Sea, you would be forgiven for thinking that close co-operation is the key to the countries' outstanding performance in e-government and online public services. But so far, the development of e-government by public authorities in the Baltic region has taken place in each country separately.

There has been a certain amount of co-operation, such as the Baltic IT Fund through which the Swedish government finances a number of IT projects in the Baltic States, but these are mainly commercial projects. Each spring for the past seven years, business leaders have met in Riga for the annual eBaltic Forum and e-government is one of many subjects of discussion. But co-operation on the government level, which, for example, aims at letting the "brains of the east" meet the "technology of the west", has not quite taken off yet.

A Northern eDimension action plan was shaped already in 2001, but results are still to be proven. Fortunately, this looks due to change soon. Chances are that the region could form a comprehensive plan for moving ahead because the European "Northern Dimension" program is launching its own e-action plan. The guidelines for the Northern Dimension action plan 2004-2006, which are presently being drafted, indicates a very clear focus on the information society, building on the idea that the Baltic Sea region is a strong candidate for becoming a world leader in ICT.

Since the Lisbon summit in 2000, the European Commission has been working on creating strategies that ideally would make the whole of Europe the world's leading knowledge-based economy by 2010. But the economic slowdown of the recent years has put a brake on that development. Apparently, the heads of state and government of the EU member countries have to some extent lost their interest in the project.

The European Commission is trying hard to get the process back on track now. The hope is that the so-called Lisbon process will be given a new boost when ten new countries, mainly from Central- and Eastern Europe, join the European Union by next year. The countries already participate in all EU-meetings and, according to diplomats in Brussels, it is becoming clear that the new members are active and very eager to perform when it comes to the Lisbon process. One reason is that participation in the process and benchmarking is an important means to demonstrate the technological improvements made in the former communist countries to the outside world.

Tell the World

On a Baltic Sea level, the question of showing the outside world the improvements in e-government and online public services is important not just for the new EU members, but for the entire region. The region has undergone vast developments and has demonstrated enormous progress in the field. This has been illustrated and documented in independent research and in several reports. But until now, it seems to have remained a "secret" to everyone except regional information and communication technology professionals.

Silicon Valley is still the talk of the town when it comes to regions and ICT. The Nordic Countries are traditionally known for having the world's most developed welfare systems. Now these systems are online as well. In fact, according to EU surveys, only one country exceeds the three Nordics when it comes to e-government, and that is Ireland. The Nordic Countries and the whole Baltic region therefore could be known as the masters of e-government and online public services.

The potential for the whole region is a fact. Developing it and branding it still remains to be done. The lack of common institutions and co-operation is clearly a main reason why development is lacking.

The Business Perspective

Decade of Reunification

By **Klaus Holse Andersen**
General Manager,
Microsoft Nordic



COPENHAGEN As the general manager of Microsoft Nordic, I co-operate closely with the Baltic countries and see the great IT potential in the region every day. The Nordic region is considered a global leader in mobile technologies, as well as being a world leader in the use of IT by businesses and individuals.

The end of the cold war and the recent EU enlargement to the East has removed the last political barriers to establishing closer economic and scientific ties with the Baltic Sea countries. The level of welfare varies between the countries, but the market potential is big, and in all of the countries we see high investments in a modern IT and communications infrastructure. Another common denominator is a highly educated workforce, which makes the countries interesting to existing as well as young IT companies.

Shortcut across Oresund

I believe that the development of the Oresund region will in many ways contribute to breaking down borders, and as such pave the way for the Baltic Sea region.

The Oresund Region is one of the most fascinating areas of growth in Europe, and boasts a unique concentration of research, businesses and educational institutions. The region is not called 'The Human Capital' for nothing. With more than 90,000 people employed in the IT and

telecom sectors, it has the highest concentration of IT companies in the entire Baltic Sea region. The region also includes a large number of universities and science parks of international standard as well as 35,000 students. Traditionally in Denmark and Sweden, industry, educational institutions and research environments co-operate closely. But why not extend this co-operation to include the rest of the Baltic Sea region?

It is easy to agree that the Baltic Sea region should be a frontrunner in IT. However, if we really want to reach this goal, an important step must be taken: business people and researchers must get together to share knowledge and discuss opportunities across geographical borders. The next challenge consists in choosing where to focus. There are no easy answers here, but a few general trends emerge. I believe that the discussion about the future of the region and the stake in IT must consider the possibilities offered by technology.

Wind of Opportunity

Wireless Internet and other new computer related technologies are providing a variety of new opportunities for people in their daily lives. These new solutions are among the most important technological trends at the moment, and are currently areas of intense innovation. And these trends look set to continue for many years to come, which will result in a series of unique opportunities for establishing new companies and achieving new scientific results.

Computers solve a wide variety of tasks, and in many ways they have brought about a revolution of business life. Yet we have not

” It is easy to agree that the Baltic Sea region should be a frontrunner in IT.

really let computers into all areas of our homes. We have begun to use them for more and more purposes, but we primarily still use them sitting down at our desk to perform specific functions such as home banking, games and correspondence. I expect this to change within this decade.

The first example – which is also the fastest moving technology at the moment – is called WI-FI. It is a wireless technology with which users can, at a low cost, set up receivers in their home, company or in public places, to provide them with access to the Internet. These wireless zones already exist in Copenhagen Airport and in several hotels. The global coffee shop Starbucks as well as several other retail chains already provide their customers with wireless access. The next few years will see an explosion of wireless zones, from where people can access the Internet. For the Nordic and the Baltic regions, developing this wireless infrastructure is a challenge, but it also provides opportunities for the development of new solutions that would benefit from the fact that the wireless infrastructure would be gradually growing.

Intelligence Everywhere

Another global trend in technology is the use of computer intelligence in mechanical devices and other products that have not yet been computerised.

By 2002, one billion PCs had been sold globally. This number is expected to double within six years. I believe that the next billion computers will be notably different from the first billion, which largely consisted of desktop and laptop computers.

I believe that in 2010 we will be almost totally surrounded by computers. Yet we may not notice it. Today, processors are already a major part of how we live and this role will undoubtedly increase. The trend is clearly for more and more computerisation, and for technology to become more integrated into our daily lives.

Mobile phones are a prime example. Only five years ago, all a mobile phone could do was to make or receive calls. Today, mobile phones are more advanced than a PC was ten years ago. They have colour display, Internet access, e-mail facilities and time manager functions. Often, they are also equipped with tiny cameras, which allow us to share our visual experiences with other people.

This technological macro trend of adding more and more functions and new intelligence to existing devices influences practically all aspects of business life. It opens up opportunities for companies, researchers and other products and services. I do not necessarily think that the Baltic region can take the lead in *all* aspects of this very complex field. But if we build on the existing strengths – the knowledge and infrastructure and the continuous development of these – and pursue clear objectives, the opportunities are there.

Reunification of a Region

The technological tendencies outlined above pose a challenge and an opportunity for researchers and companies in the individual countries. The remaining question is what to expect for the region in what may optimistically be called the decade of reunification. For the Baltic Sea region dream to become a reality, much more, and much closer, co-operation across borders is needed here and now. This reunification requires that people get together and start defining a realistic way forward.

Klaus Holse Andersen is the General Manager of Microsoft in Northern Europe. Before joining Microsoft he worked as Chief Executive Officer of Internet Ventures and as Senior Vice President of Oracle. Klaus Holse Andersen has a master's degree in Computer Science from the University of Copenhagen and holds a Graduate Diploma in Business Administration.

“ For the Baltic Sea region dream to become a reality, much more, and much closer, co-operation across borders is needed

News from Baltic Development Forum

State of the Art Networking in the Baltic Sea Region

By Ole Frijs-Madsen
Director,
Baltic Development Forum



Dear Reader,

In times of change you need firm foundations. After successful referenda in Poland and Lithuania followed by expected positive outcomes in Estonia and Latvia in September, the Baltic Sea region will shortly be adding another 50 million people to the EU. What are the implications for the EU and the Baltic Sea region with its approx. 100 million citizens?

Baltic Development Forum has strengthened its foundation and operational scope to present the best possible platform for business, politics, academia and the media in view of the EU enlargement. As the leading networking forum in the Baltic Sea region we have extended our high level contacts in Poland, Germany, the Nordic countries, Russia, the Baltic countries as well as within the European Commission. The Baltic Development Forum High Level Network now consists of more than 2,000 decision-makers from all sectors within the Baltic Sea region.

Added Value for Participants, Members and Partners

First and foremost the main mission of our work should be kept in mind. Through Baltic Development Forum's broad platform all participants are working towards the same goal: To create a prosperous, stable and dynamic region focusing on its potential to become a global frontrunner.

It is a win-win situation for everybody: Investors, citizens, exporters, researchers, visitors, etc. The Baltic Sea region is in a unique position to make itself heard and respected, and the Baltic Development Forum is the obvious vehicle to carry this out.

During the last year, the Baltic Development Forum has gathered together more than 1,000 high level players for various networking events. Following our 2002 Copenhagen Summit in October with more than 400 participants, the Baltic Development Forum has held a number of seminars, round tables, etc. A Baltic Sea Research Network has been launched and a successful meeting was held this spring. At a recent meeting in Stockholm for our members the highly relevant topic of business ethics and corruption was addressed by ministers, business representatives, officials and leading academics.

The Upcoming Baltic Development Forum Summit

The planning for this year's Annual Summit is well under way. From the 5-7 October, more than 400 decision-makers will come to Riga at a crucial time only a few weeks after the last referendum on the enlargement of the EU. The consequences for business and politics will be in the forefront of discussions. We want to make the best use of the encounter between "Old Europe" and "New Europe". And we want to position the Baltic Sea region as a global frontrunner.

Among the themes for this year's summit are:

- The Baltic Sea Region compared to other leading regions in the world
- The media's view on the region as a global frontrunner
- Political challenges and opportunities from the encounter between "New Europe" and "Old Europe"
- The Impact of EU Membership on SME's
- Human resource management for companies located in the Baltic Sea region
- Expert analysis of market opportunities and economic growth
- Improving the health care sector through Public-Private Partnerships
- Creating a global ICT-cluster in the Baltic Sea region to ensure growth and improved day-to-day life

- Transport infrastructure from a business perspective
- Developing a joint strategy for Kaliningrad

Baltic Development Forum's Members and Partners

We are proud that more than 50 companies, organisations, cities and governments are supporting our work financially and intellectually. This is a precondition to consolidate and promote the region and its business activities. But we need more partners in this crucial work. Please consult our website (www.bdforum.org) to see how your organisation or company could support our work and thus increase your influence on the agenda for the coming decade.

The 2003 Summit in Riga is an obvious opportunity for the members and partners of the Baltic Development Forum to be updated and actively participate in the discussions on investments, human resources, development of globally competitive clusters within ICT and health, establishing an intelligent transport infrastructure, more dynamic SME's, etc.



Uffe Ellemann-Jensen and Latvia's Deputy Prime Minister Ainars Slesers during the Members' Meeting in Stockholm on "Business Ethics in the Baltic Sea Region - from Corruption to Transparency".

Photo: Hanne Paludan Kristensen

Partners



Members

