LogOnBaltic

REGIONAL LOGISTICS & ICT PROFILE: MECKLENBURG-VORPOMMERN, GERMANY

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EXECUTIVE SUMMARY - ENGLISH

The Regional Logistics & ICT Profile (short form, Regional Profile) provides a comprehensive overview of the actual situation and development in the logistics and ICT industry of the region. In this Regional Profile we will try to summarize the actual situation and development of these sectors in the region of Mecklenburg-Vorpommern.

The main sources of information used to outline this report were the findings obtained from the different project activities – and their respective reports – and some research work

The Regional Profile consists of ten chapters.

Chapter 1 gives a short introduction to the LogOn Baltic project, the regional partners, and the Regional Profile.

Chapter 2 refers to the location of Mecklenburg-Vorpommern and its location factors, the regions administrative structure, and historical background.

The economic importance of the region and its main industries are described in **Chapter 3**.

Different public and/or private organisations that support enterprises in the region, and the different types of existing supports these enterprises have access to, are delineated in **Chapter 4**.

Chapter 5 describes the logistics infrastructure in Mecklenburg-Vorpommern, including the main findings obtained from the Logistics Survey conducted in the region while Chapter 6 describes the ICT infrastructure including the main findings obtained from the ICT Survey conducted in the region.

The skills of the local workforce, the future needs in qualifications, and the education and training possibilities in the region are reflected in **Chapter 7**.

Chapter 8 merges the findings obtained from the project activities with some information obtained through research activities. Logistics and ICT needs in Mecklenburg-Vorpommern according to the experts' point of view are also mentioned.

Initiatives originated from the LogOn Baltic project are briefly introduced in **Chapter 9**.

Chapter 10 list the different sources used to prepare this report.

EXECUTIVE SUMMARY - DEUTSCH

Der Regionale Logistik & IKT Profil (Kurzform in Englisch: Regional Profile) soll einen Überblick der aktuellen Situation und Entwicklung der Logistik und IKT-Industrie in Mecklenburg-Vorpommern schaffen.

Die Hauptquellen, die für diesen Bericht benutzt worden sind, sind die Ergebnisse von den verschiedenen Projektaktivitäten – und ihre jeweiligen Berichte – sowie verschiedene Recherchen.

Der Regional Profile besteht aus zehn Kapiteln.

In **Kapitel 1** werden das LogOn Baltic Projekt, die regionalen Partnern und der Regional Profile kurz beschrieben.

Kapitel 2 befasst sich mit der Region als Standort, mit den Standortfaktoren, die die Region attraktiv machen, mit der administrativen Struktur Mecklenburg-Vorpommerns und mit dem historischen Hintergrund.

Die wirtschaftliche Relevanz der Region und die Hauptindustrien werden in **Kapitel 3** beschrieben.

Unterschiedliche öffentliche- und/oder private Organisationen die den Unternehmen in der Region auf verschiedene Weisen unterstützen, werden in **Kapitel 4** kurz dargestellt.

Kapitel 5 beschreibt die Logistikinfrastruktur in Mecklenburg-Vorpommern, mit Einbezug von den Ergebnissen der Logistik-Umfrage, während **Kapitel 6** die IKT Infrastruktur - einschließlich die Ergebnissen der IKT-Umfrage - beschreibt.

Der aktuelle Bestand sowie der zukünftige Bedarf an Fachqualifikationen, die Ausbildung- und Trainingsmöglichkeiten in der Region werden in **Kapitel 7** kurz dargestellt.

Kapitel 8 fasst die Ergebnisse der verschiedenen Projektaktivitäten mit Recherchen zusammen. Bedürfnisse in den Bereichen Logistik und IKT, die von Experten erwähnt worden sind, werden auch zusammengefasst.

Die Initiativen, die vom LogOn Baltic Projekt entstanden sind, werden in **Kapitel 9** eingeführt.

In **Kapitel 10** werden die Referenzen gelistet.

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1   INTRODUCTION

1.1   Project introduction – LogOn Baltic

The LogOn Baltic project was approved within the Baltic Sea Region (BSR) INTERREG III B Neighbourhood Programme, which is sponsored by the European Regional Development Fund (ERDF), as part of the Structural Funds, and co-financed by national project partners.

The purpose of LogOn Baltic is to present solutions to improve the interplay between logistics and Information and Communication Technologies (ICT) competence and spatial planning and strengthening Small and Medium-sized Enterprises (SMEs) competitiveness in the BSR. This is primarily done by the production and dissemination of information for regional development agencies on how to support enterprises in the participating regions in the field of ICT and logistics, thus improving regional development.

The following regions are participating in the project:
- South-West Finland
- Östergötland (Sweden)
- Denmark
- Southern Metropolitan Region of Hamburg (Germany)
- West-Mecklenburg (Germany)
- North-East Poland
- Lithuania
- Latvia
- Estonia
- St. Petersburg (Russia)

LogOn Baltic provides an overview of logistics efficiency and logistics information systems and their exploitation, in order to improve the interaction between SMEs and other public/private actors.

On the one hand, the empirical activities of LogOn Baltic compare the existing logistics services and infrastructure with the logistics needs in the participating regions, making it possible to develop perspectives and action plans for strengthening the logistics competence in the

regions. On the other hand it describes the existing ICT infrastructure and services, revealing up to what extent they meet with the companies' needs for further development. In this way, LogOn Baltic focuses on:

    a.   identifying development agencies and evaluating their performance in each region

    b.   evaluating the level of logistics and ICT efficiency

    c.   suggesting concrete actions for regional and local public sector bodies

Data are gathered in each participating region using four tools: Development Measure Impact Analysis (DEMIA), Logistics survey, ICT survey and Expert Interviews; each of these is presented in a separate report. These results together with secondary data is presented in a regional report, that will describe the state of affairs in the region, with recommendations on what and how the region needs to develop. The regional reports are used as a basis for making an interregional comparison which is reported in an inter-regional report. All reports are available on the project homepage, www.logonbaltic.info.

1.2   Regional partner introduction

The German partners representing the region of Mecklenburg-Vorpommern in this project are the Business Association of Wismar (Wismarer Wirtschaftsgemeinschaft), the Federal Association of SME's (Bundesverband mittelständische Wirtschaft), the Ministry for Labour, Building and Regional Development Mecklenburg-Vorpommern (Ministerium für Arbeit, Bau und Landesentwicklung MV), and the Wismar University (Hochschule Wismar).

The **Business Association of Wismar** (WWG) is a non-profit organisation, and represents more than 250 members of different branches in the region. The Association promotes the economic and professional interests of its members, particularly in:

- keeping the appropriate authority informed about problems, concerns and wishes of the members;
- advising and supporting the legislative statutory corporation in Federation, county and local authority in elaborating and preparing appropriate legislative projects and any form of legal regulation;

- cultivating relations, as well as exchanging information and ideas with other economic societies, to give them support on demand and attend the interest of their members if necessary;
- supporting its members in professional concerns, in economic, legal and technical respects, especially by informative meetings etc;
- strengthening the economic region of Wismar by different measures and actions.

As a partner in some national projects in the field of maritime and wood related logistics and ICT, WWG will mainly contribute to the empiric part of the project covering the Mecklenburg area. The partner will furthermore integrate its experience and its economic expertise in logistics and ICT by developing concepts and action plans for the regional development based on the project results.

With these activities the Business Association aims at strengthening the economic position of the enterprises in Wismar, making them more competitive at an international level.

The **Federal Association of SME's** is the biggest German association of enterprises with sections all over Germany. The participating section represents enterprises in Hamburg, Schleswig-Holstein and Mecklenburg-Vorpommern. The partner will contribute a representative picture of the logistical and related ICT needs of their enterprises and will guarantee the full coverage of the empiric results of the project. The experience and the economic expertise of the partner will safeguard the development of applicable new concepts & action plans for the regional development based on the project results.

The **Ministry for Labour, Building and Regional Development Mecklenburg-Vorpommern** has a wide experience as a partner as well as a lead partner in several Interreg, Phare and TACIS projects focused on regional development and spatial planning; e.g. SuPortNet. The Ministry has been one of the driving forces behind the VASAB cooperation. Experience from the role as a spatial planning authority in M-V and from spatial planning cooperation in BSR will contribute to the project, safeguarding project's direction towards applicable results for daily practice in spatial planning and regional development around the BSR.

The **University of Wismar** stands on the educational pillars of technology, business and design. The university also organizes scientific conferences, which serve as a meeting point for specialists from all over. A constant exchange of students and professors has

been the norm for years. Partnerships and cooperation agreements exist with universities across the globe.

As an experienced partner in national and international projects, the Business Department of the university has been taking part in research projects focused mainly on entrepreneurship, development and internationalization of SME's, maritime logistics and regional development (e.g. Baltic Business Development Network, InterBaltic).

1.3   Regional Profile introduction

The Regional Logistics & ICT Profile (short form, Regional Profile) is one of the several support tools necessary for the analysis and description of the logistics and ICT competences in the region.

Information from different areas of interest (i.e. economy, human resources, logistics infrastructure, ICT infrastructure, public sector, among others) together with the findings of the other empirical activities carried out during the project life, converges into the Regional Logistics & ICT Profile, turning it into a reference document for the whole project.

All of the regions involved in the LogOn Baltic project are following the same content structure to help keep uniformity among the different Regional Profiles.
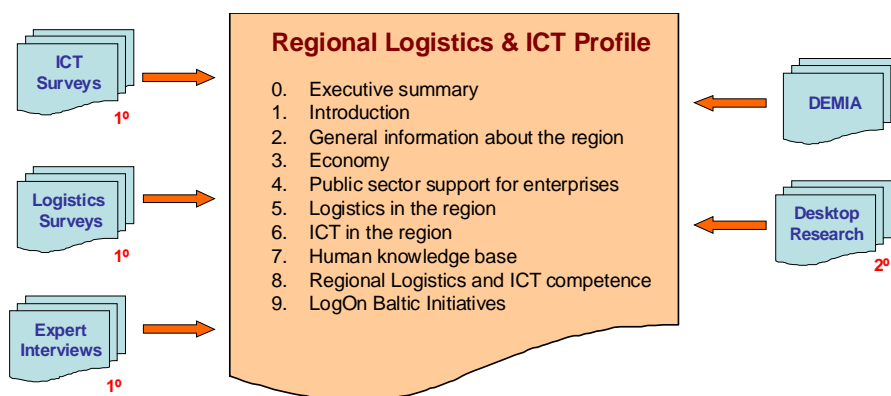
Figure 1   Original structure of the Regional Profile

This tool is to be considered the main tool for secondary data collection, providing a comprehensive overview of the actual situation and development in the logistics and ICT industry.

2 GENERAL INFORMATION ABOUT THE REGION

2.1 Mecklenburg-Vorpommern in the Baltic Sea Region

Figure 2   Mecklenburg-Vorpommern in Germany and in Europe[1]

Situated along the southern coast of the Baltic Sea in the Northeast of Germany, it borders in the east with Poland, in the south with the states of Brandenburg and Lower Saxony, and in the west with the

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[1] http://www.gfw-mv.de/de/mv/standortfaktoren.html, July 2007.

state of Schleswig Holstein. The Baltic Sea forms a natural border of nearly 400 km in length, in the north.

With a total area of 23,171 sqkm – which represents 6.7% of the total surface area of Germany – and a population of 1.7 Million inhabitants, Mecklenburg-Vorpommern is Germany's sixth largest state in area but only fourteenth in population among the sixteen states in the country.

The landscape is mostly characterised by broad, open plains; only in some areas - mainly towards the West and South - lakes and slightly more hilly areas can be found due to ground and terminal moraines. Expansive forests cover approximately one-fifth of the land – water claims about another 5% of the state.

2.2   Main location factors

Located in the heart of Europe, Mecklenburg-Vorpommern lies between the two largest German metropolitan areas of Hamburg and Berlin in the northern part of Germany.

Figure 3   Mecklenburg-Vorpommern in Germany

In addition, its advantageous location between Scandinavia and the European continent, as a gateway to the Baltic, also offers excellent chances to establish close contacts with the countries surrounding the

Baltic Sea. An excellent infrastructure and good development prospects are essential prerequisites for the settlement of foreign investments. Renowned companies from countries like Denmark, France, the United Kingdom, and the USA have benefited from their locating in the region.

Some reasons for coming and/or establishing in the region:

- there is a potential market of approximately 120 million people with high purchasing power within a radius of 500 km
- numerous ferry links to and from Scandinavia,
- well-developed and efficient transportation links to the German and European hinterland,
- moderate prices for property and real estate,
- modern telecommunications network,
- future oriented business development,
- low labour costs,
- innovative research and development climate,
- economic incentives covering up to 50% of investment costs.

Mecklenburg-Vorpommern is a great place for business and investment not only because of its geographical situation with connections to international goods and transport. It also offers attractive industrial real estate and a state-of-the-art telecommunications infrastructure.

2.3   General climate conditions

The climate is characterized by the transition from the maritime influence in coastal areas to a continental climate in the interior.

- Average annual air temperature: 11ºC
- Maximum: 33ºC (summer days with a high of at least 25ºC = 32)
- Minimum: -11ºC (days below 0ºC = 56)
- Annual total precipitation: 579.6 mm
- Number of days with precipitation: 171
- Relative humidity: 80%

2.4 Regional administrative divisions

Mecklenburg-Vorpommern is currently divided into twelve administrative districts (*Kreise*) and six independent, self-administrating cities (*kreisfreie Städte*). The smallest units of local government administration are the communities (*Gemeinden*). The state capital is Schwerin. The district parliament, the department committee and the municipal or town council, are the highest bodies for political decision-making and adoption of resolutions. District administrators, the department heads and mayors are the legal representatives of the bodies in question.

Figure 4   Administrative division in M-V

1. Bad Doberan
2. Demmin
3. Güstrow
4. Ludwigslust
5. Mecklenburg-Strelitz
6. Müritz

7. Nordvorpommern
8. Nordwestmecklenburg
9. Ostvorpommern
10. Parchim
11. Rügen
12. Uecker-Randow

And the six self-administrating cities are:

13. Greifswald
14. Neubrandenburg
15. Rostock

16. Schwerin
17. Stralsund
18. Wismar

Big part of the population lives dispersed among a large number of villages and small and medium-sized towns in the districts.

In December 2003 a second administrative reform was started, which will reorganize the region into five districts until 2008/2009. Not only will the districts become larger, but they will also gain some responsibilities from the central government.

2.5   Historical background

Slavic tribes established settlements in this region about 1,500 years ago. They took advantage of the favourable geographical conditions for fishing, hunting, and for the trade with their Scandinavian neighbours.

Michelenburg (Mecklenburg) was a centre of the empire of the Obotriten. It gave the name to the later land. In 1160 Henry the Lion defeats the Slavic prince and founds the town of Schwerin. Mecklenburg, to the west of Vorpommern became a duchy in 1348. The old Pomerania - consisting of Szczecin (Stettin) - and the land east of the Oder River (Hinterpommern), is now a part of Poland. Western Pomerania (Vorpommern) was under Swedish control from the Peace of Westphalia in 1648 until its annexation to Prussia in 1720 and 1815. The states of Mecklenburg-Schwerin and Mecklenburg-Strelitz became grand duchies in 1815 but republican government was established in 1918. They were briefly combined with Vorpommern in 1947–1952 and have been part of the present state since German reunification in 1990. Mecklenburg-Vorpommern was formed after World War II from the former Land of Mecklenburg and the western part of the former Prussian province of Pomerania. It was divided into the districts (Bezirke) of Schwerin, Rostock and Neubrandenburg – named after the district capitals under the highly-centralised government of the German Democratic Republic - as part of the administrative reforms of 1952, and was recreated in 1990 when the Federal States (Länder) structure was introduced in the eastern part of Germany.

2.6   Links to the BSR

Besides the current links with other regions around the BSR in form of partnerships, cooperation agreements, etc., the importance of Mecklenburg-Vorpommern in the BSR – in particular that of the port cities – has deep historic roots, and goes as far back as to the late

Middle Ages and the early Modern Period, between the 13th and 17th century. Almost all of today's ports of the region were important trading centres on the "Mare Balticum" during the glorious days of the Hanseatic League.

2.6.1 The Hanseatic League

Historians generally trace the origins of the League to the foundation of the Northern German town of Lübeck.

Lübeck became a base for merchants from Saxony and Westphalia to spread east and north. Well before the term "*Hanse*" appeared in a document (1267), merchants in a given city began to form guilds or *Hansa* with the intention of trading with towns overseas, especially in the less-developed eastern Baltic area, a source of timber, wax, amber, resins, furs, even rye and wheat brought down on barges from the hinterland to port markets. These guilds worked to acquire special trade privileges for their members.[2]

The expansion of the merchant guilds was traduced into alliances with other towns with access to the North and Baltic Sea, and the building of trading posts or *Kontor*.

With the first general Diet of the Hansa held in Lübeck in 1356, the Hanseatic League acquired an official structure, and could date its official founding. The Hanseatic League was a league of merchant associations in Northern Germany and the Baltic. Back in the middle Ages, trade was a dangerous and risky business, and the only way merchants had to protect themselves was by travelling together. This banding together of merchants on the road led to their alliances. In the case of the Hanseatic League the impetus for its formation was the trade along the Kiel "salt road" which actually ran between Hamburg and Lübeck, and was named after the town where the salt was mined.

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[2] http://en.wikipedia.org/wiki/Hanseatic_League, January 2008.
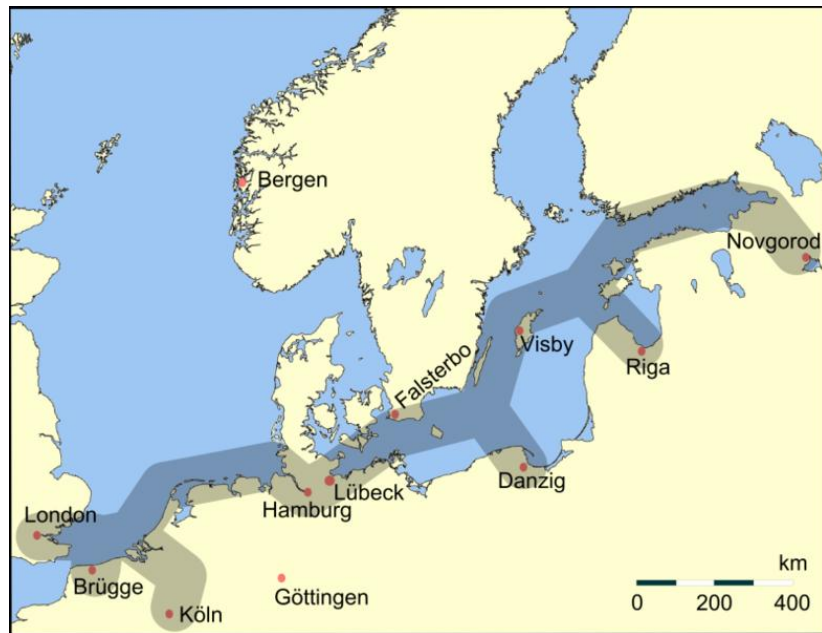
Figure 5   Main trading routes of the Hanseatic League[3]

2.6.2 Partnerships in the Baltic Sea Region[4]

The State of Mecklenburg-Vorpommern is currently in partnership with the following regions in the BSR:
- the West Pomeranian Region (Szczecin, Poland)
- the Pomeranian Region (Gdansk, Poland)
- Sydsam (Sweden)
- South-West Finland (Turku, Finland)
- District of Leningrad (Russian Federation)

Aim of these partnerships is to encourage and intensify regional cooperation at all levels.

West Pomeranian Region
After the administrative reforms in the Republic of Poland in 1999, the cross-border partnership cooperation with the new Polish West

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[3] http://en.wikipedia.org/wiki/Hanseatic_League, January 2008.
[4] http://www.mv-regierung.de/eng/stk/eu-abt/region_partner.htm, January 2008.

Pomeranian Region was put on a new footing with the signing in June 2000 of a new "Joint Declaration on Cross-Border Cooperation".

The spectrum of the cooperation between Mecklenburg-Vorpommern and West Pomerania extends from cooperation in the fields of economy and tourism, border crossings and transport infrastructure, employment policies, culture, school and youth exchanges via cooperation between police forces and cooperation in the areas of the environment and agriculture to contacts between the universities. Cross-border cooperation finds its expression in a closely woven network of contacts and meetings on different levels and in numerous projects and initiatives of many different kinds.

As part of this project numerous events in the areas of economy, culture and the Euroregion Pomerania have taken place on an annual basis since 1998.

Pomeranian Region

During the visit of the Minister-President to Gdansk in January 2001, the "Joint Declaration on Inter-regional Cooperation between the State Mecklenburg-Vorpommern and the Pomeranian Region" was signed.

Cooperation agreements already exist in areas such as economy and transport, employment and labour market policy, exchanges in the fields of culture and sciences, biotechnology, spatial development and spatial planning, joint EU projects, school and sports exchanges, agriculture and food production, as well as the environment, nature conservation and tourism.

Sydsam

The starting point for cooperation between Mecklenburg-Vorpommern and southern Sweden is that they are linked by a common geographical position in the BSR, which among other things can be seen in the direct ferry link between Sassnitz and Trelleborg. The contact on the Swedish side is SydSam, a network organisation of the provincial state parliaments, regional federations, associations of local authorities and communities in southern Sweden. Among other places SydSam includes the towns of Malmö, Helsingborg, Halmstad, Växjö, Kalmar and Kristianstadt.

During the visit of a delegation from SydSam to the State capital Schwerin in 1999, the "Joint Declaration on Regional Cooperation between the State Mecklenburg-Vorpommern and SydSam" was signed. This declaration proclaims the intention of both regions to develop cooperation in the areas of economy, labour, administration,

tourism, research, education, transport, the environment, culture, youth and other appropriate fields.

South-West Finland
Since 1998 contacts between Mecklenburg-Vorpommern and the Region of South-West Finland with its centre at Turku have intensified. This led in April 2000 to the signing of a "Joint Declaration on Regional Cooperation" between the two regions.

Cooperation in the areas of economy, tourism, technology, transport and harbours, culture, young people, education and the environment should be developed.

District of Leningrad
The District of Leningrad is an autonomous part of the Russian Federation, independent of the City of St Petersburg. In contrast to the city, the district was not re-named after 1990.

In January 2002, a "Joint Declaration on Regional Cooperation between Mecklenburg-Vorpommern and the Leningrad Region" was signed, strengthening cooperation in areas of economy and technology, transport and harbours, tourism, education, and culture.

2.6.3   Organizations dealing with cooperation in the BSR[5]

One of the competencies of the State of Mecklenburg-Vorpommern is to be involved in some of the major multilateral organizations for cooperation in the BSR. Among these organizations we find:
- Council of the Baltic Sea States (CBSS)
- Baltic Sea States Sub-regional Cooperation (BSSSC)
- Conference of the Peripheral Maritime Regions of Europe (CPMR)
- Baltic Sea Commission (BSC)

Council of the Baltic Sea States
The CBSS first met in March 1992 as the result of a German-Danish initiative, and is the council of the Foreign Ministers of the littoral states of the Baltic Sea on which Norway, Iceland and the European Union also have seats. The CBSS was set up in order to support cooperation and coordination of the activities of the littoral states of the Baltic Sea.

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[5] http://www.mv-regierung.de/eng/stk/eu-abt/kooperat.htm, January 2008.

Its aim is to strengthen the Baltic region politically, economically and culturally and to support the processes of democratic and economic transformation in the eastern littoral states of the Baltic Sea.

Baltic Sea States Sub-regional Cooperation
Founded in October 1993 in Stavanger, Norway, the BSSSC offers a forum for the exchange of information for the sub-regions (administration level placed directly below the nation-state level). It aims at coordinating cooperation between the many sub-regions throughout the Baltic Sea and developing regional strategies and policies in order to encourage development in the BSR as a whole.

Furthermore it regards itself as a spokesman for the sub-regions vis-à-vis the CBSS, the European Union and the nation-states.

Conference of the Peripheral Maritime Regions of Europe
The CPMR is an alliance of more than 150 regions from 28 countries across Europe, divided on a geographical basis into following Commissions:
1. North Sea
2. Atlantic Arc
3. Islands
4. Intermediterranean
5. Balkan and Black Sea
6. Baltic Sea

On joining the CPMR, Mecklenburg-Vorpommern became at the same time a member of the Baltic Sea Commission (BSC). The highest decision-making committee of the CPMR is its general assembly.

The focus of the CPMR's work consists of (among other things) topics concerned with transport, inter-regional cooperation, research, agriculture, rural development, spatial planning and regional policies, as well as questions of current interest at the European level, on which the CPMR regularly takes a stand.

2.6.4 Others

Other organizations or initiatives where the region of Mecklenburg-Vorpommern is vastly represented are:

Hanseatic Parliament[6]

Founded in 2004 in St. Petersburg, the Hanseatic Parliament is an association of representatives of more than 30 business organizations and other institutions of SME's from all Baltic Sea Countries.

The goal of the Hanseatic Parliament of SME's is to help make North-Eastern Europe an economic area of this kind and to orient this economic area especially to the concrete requirements of SME's and thus promote these businesses and the entire economic area as well as possible.

Baltic Sea Chambers of Commerce Association[7]

Established in 1992 in Rostock-Warnemünde to give the business community of the region a common voice for common concerns, the BCCA represents 50 Chambers of Commerce in Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland, Russia and Sweden.

The tasks of the BCCA are to protect and uphold the interests of private entrepreneurship by advising politics in business related affairs, offering services to the business community and providing facilities for contacts, debates and meetings in the region.

Baltic Cooperation Forum[8]

The Baltic Cooperation Forum is a free of charge Internet platform that assists SME's in finding business partners in the region.

Among others, companies are able to present their company, find suitable partners for cooperation, enter concrete cooperation offers, gather SME-relevant information from other countries in the region, access updated information regarding events, cooperation forums, seminars and funding opportunities, etc.

Baltic Development Forum[9]

The BDF is an independent non-profit networking organisation with members from large companies, major cities, institutional investors and business associations in the BS.

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[6] http://www.hanse-parlament.eu/UNIQ120100841221074/doc1A.html, January 2008.
[7] http://www.bcca.de/cm3a/default.asp, January 2008.
[8] http://www.baltic-cooperation.eu/UNIQ120108348720894/SES32689653/lang1/doc4143A.html, January 2008.
[9] http://www.bdforum.org/, January 2008.

Being the preferred platform for decision makers from business, politics and academia Baltic Development

Forum is a unique platform for innovative thinking, informal cross-sector/cross-border/cross-level encounters and concrete new business opportunities with a global perspective.

Further details on the activities of the State of Mecklenburg-Vorpommern in the BSR can be found in the "Annual Report of the Land Government on Cooperation in the Baltic Sea Region" (http://www.mv-regierung.de/eng/stk/eu-abt/kooperat.htm).

3 ECONOMY

3.1 Economic importance of the region

Mecklenburg-Vorpommern's economic structure underwent profound changes after the introduction of a market economy, bringing the region closer to the kind of structures found in western Germany. An exception is agriculture, where the large-scale structures inherited from the German Democratic Republic (GDR) have remained largely intact and have proved highly competitive. Two thirds of the business surface area is used for agriculture.

Many enterprises in the manufacturing sector proved to be uncompetitive, and the sector declined in comparison with western Germany.

The economic structure is dominated by small and medium-sized enterprises (SME's). The industrial landscape is dominated by traditional branches, and their output is therefore dominated by traditional products and hardly diversified. More technology-intensive branches are generally less important, meaning that the industrial structure creates relatively little wealth. The building industry expanded considerably thanks to the construction boom on the back of state subsidies in the first half of the 1990's, but subsequently descended into a crisis of adjustment. The service sector has grown significantly in importance. The boom in tourism and the renewed importance of the port economy have meant that trade, hotels and catering and transport have contributed to a bigger gross wealth creation. Finance, leasing and letting, and business services, which mainly depend on the region's structurally weak industrial sector, are less developed. On the other hand, the public and private services sectors are very much over-represented, due mainly to overstaffing in the public sector.[10] The port sector is of particular importance in the region's transport system.

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[10] http://forum.europa.eu.int/irc/dsis/regportraits/info/data/en/de8_eco.htm
http://forum.europa.eu.int/irc/dsis/regportraits/info/data/en/de8_geo.htm

Innovation, quality and tradition are three essential pillars of the economy in the region. Since German unification in 1990, an extensive change in the structure of the Land has been implemented.

Mecklenburg-Vorpommern's economic policy purposefully supports new growth poles and, at the same time, strengthens traditional business areas. Thereby synergy effects are endorsed and the formation of networks actively promoted.

The state's economy is dominated by the food industry, machinery manufacturing, telecommunications, modern shipyards and their suppliers, port-related and maritime industry, tourism, agriculture and the fishing industry. In addition numerous new branches of economic activity have developed in recent years. Among these future branches are biotechnology, the health industry, and the timber industry and information technology.

In recent years, many technology-oriented companies have settled in the region. Key technologies made in the region can be found in areas like environment technology, biotechnology and medical engineering, information technology. Within the state's plan to promote its location, technology-oriented companies are purposefully aided. Many technology and founding centres offer favourable start-up conditions in the founding phase. Companies receive additional support through networks and initiatives such as BioCon Valley or Scan Balt.

"When thinking about your health, you should think about Mecklenburg-Vorpommern." (Otto Ebnet, Minister for Economic Affairs) Mecklenburg-Vorpommern has more than 50 certified health and recreation resorts with a modern infrastructure. The region disposes of the ideal prerequisites to position itself among Germany's top health regions: clean air, many hours of sunshine, untouched nature, and a mild climate.

Mecklenburg-Vorpommern's agriculture of today is a modern and efficient line of business contributing more than 4% to the gross value added of the state (the average for the Federal Republic of Germany is just 1.1%). The productivity exceeds the federal average by far more than one third. Along with conventional agriculture, organic farming plays an increasingly important role.

Two core areas of life sciences are biotechnology and medical engineering. More than 85 companies in Mecklenburg-Vorpommern are working in the life sciences sector today. Since the beginning of the German wide BioRegio-Initiative in 1996 the number of people employed in this future oriented branch has more than tripled.

The State actively supports the sustainable use of natural sources, and the development and application of technologies that contribute to preserve the nature and environment, one of Mecklenburg's most important capitals. Nearly one third of the electric energy needed in the region is created in an environmentally-friendly way on a basis of wind, bio-mass, water and solar energy. The offshore wind energy branch is also considered to be a growing factor.

The maritime industry

The maritime industry deserves a special mention. After the food industry, the maritime industry belongs to the most important branches of the processing industry in Mecklenburg-Vorpommern. Around a third of all German ships have been produced in the region. Ship building has a long tradition in the State, creating a well-developed shipbuilding cluster.

Three large shipbuilding companies, using state-of-the-art technologies produce modern ships and offshore vessels in 4 different ship building yards: A) Aker Yards – Wismar; B) Aker Yards - Rostock; D) Volkswerft Stralsund GmbH; and E) Peene-Werft GmbH. A fourth company, the Neptun Reparatur GmbH (C), specializes only in river boat building.

Figure 6   Location of shipbuilding companies in M-V[11]

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[11] http://www.gfw-mv.de/en/branchenuebersicht/maritim/werften/, March 2007.

Maritime industry is not only ship building. It also comprises economic sectors whose added value is the sea, i.e. maritime technologies, maritime tourism, fishing industry, sea traffic, port business. The maritime supply industry also represents an enormous potential. Some highly specialised companies have an impressive export rate of up to 60%.

3.2   International Trade

The short distances to several ports and manufacturing operations facilitate export and import to and from Mecklenburg-Vorpommern.

During the last years the international trade has become more significant for the region. The value of the exported goods has more than doubled in the period 1995 - 2005. The export volume in 2005 amounted to about 2.8 billion euros[12]. While in 2005 the export rate of the manufacturing industry amounted only 20%, branches like mechanical engineering, electrical engineering/electronics, communications engineering, medicine, measuring and control technology, registered a considerable foreign trade increase (around 40%). The development of international trade reflects the structural changes of the region. Before the 90's, the main partners were the former Soviet Union and the CIS States, but after the collapse of the Soviet Union and the fall of the wall in Berlin, the trade partners have slowly been substituted. At the present nearly 60% of the export turnover is achieved in trade with the EU-States (Great Britain, the Netherlands and France played an important role). Fertilizers, plastic goods, engines, engine parts and vehicle accessories were among the dominating exported goods in 2005. The volume of imported goods has grown less than the volume of exported goods in the past decade, amounting 2.6 billion euros in 2005[13]. Petroleum products, wooden products and furniture parts were among the most imported goods. Russia, Denmark and the Netherlands were the main suppliers of these goods. The international adjustment of the economic policy of the region is part of a strategy to improve the global competitiveness of Mecklenburg-Vorpommern. Parallel to that, support measures will also be necessary during the subsequent years to further increase the export ability of the enterprises in the region.

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[12] http://www.statistik-mv.de/
[13] http://www.statistik-mv.de/

4 PUBLIC SECTOR SUPPORT FOR ENTERPRISES

4.1 Organisations

Investment projects and measures for improving the regional economic structure in Mecklenburg-Vorpommern are supported with a wide variety of financial assistance – such as loans, grants, subsidies, etc. - by different institutions and organizations responsible for regional planning and support that are situated at different political levels. The first political instance – or level - is the European Union; the second instance is the Federal Government, and the third one is the Regional Government. There is another level consisting of local institutions.

The competent partner to contact for all funding issues is the State Institute for Business Promotion (LFI)[14], who provides comprehensive information on the major types of government aid as well as advice during the application for the programmes falling under its care.

The technology promotion schemes are administered by the Technology Consulting Institute (TBI)[15].

The new federal government's Mittelstandsbank (SME Bank) also offers different kinds of financial support, which combines the programmes offered by the state-owned development banks Kreditanstalt für Wiederaufbau (KfW) and the Deutsche Ausgleichsbank (DtA) under one roof.[16]

The KfW Mittelstandsbank offers promotional loan financing of operating costs to business founders, self-employed professionals and established companies.

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[14] Landesförderinstitut Mecklenburg-Vorpommern; www.lfi-mv.de
[15] Technologie-Beratungs-Institut GmbH; www.tbi-mv.de
[16] www.mittelstandsbank.de

4.2 Types of support

4.2.1 Loans

Start-ups
Low-interest loans are granted for business start-ups with an investment total of up to 50,000 EUR; other forms of government funding and credit institute financing have priority and must be taken up first.

Consolidation
Loans are granted at usual market conditions to companies who "with fundamentally favourable chances for development" demonstrate an acute need for finance in the consolidation of their growth.

Patents
Loans from the Patent and Licence Fund serve to support SME's (less than 250 employees, annual turnover of up to 40 million euros or a balance-sheet total of up to 27 million euros), independent inventors and start-up entrepreneurs in acquiring and working with patents and licences.

4.2.2 Grants and subsidies

Regional assistance
Grants from the federal/state Joint Task (Gemeinschaftsaufgabe or GA) "Improvement of the Regional Economic Structure" (investment projects in manufacturing industry including tourism, investment projects in industry-related and tourist infrastructure) are granted to companies in manufacturing industry with chiefly supraregional sales and to tourism enterprises conducting their chief business in the tourism field. Municipalities and municipal federations can obtain investment grants for improving the public infrastructure insofar as this is necessary for the development of manufacturing industry. Investive and non-investive measures can be promoted.

Innovations

Companies, independent professionals, foundations and registered associations that serve the increased use of forward-looking energy technologies are sponsored by grants for initiating measures.

The programme for technology and innovation promotion assists in the execution of industrial research and pre-competitive development projects (as stipulated in the European Union's Community Framework for State Aid for Research and Development). Grants can be allocated to companies in the manufacturing sector with a registered location in Mecklenburg-Vorpommern as well as to non-profit-making, extra-university research institutes working close to industry, whereby a predominant part of the project must relate to fundamental research.

Trade fairs

SME's from the production sector with less than 250 employees, an annual turnover of up to 40 million euros or a balance-sheet total of up 27 million euros that participate in trade fairs and exhibitions in Germany and abroad receive grants for that purpose.

Training

Grants are also awarded to companies for the initial and additional creation of vocational training post in the region. Allowances are also granted for the provision of company traineeships within a training cooperative in specially targeted occupations.

Joint venture

The EU allocates grants for the establishment of joint ventures by at least two SME's (with less than 250 employees, an annual turnover of up to 40 million euros or a balance-sheet total of up 27 million euros) from different EU member states.

Consulting

SME's (with less than 250 employees, an annual turnover of up to 40 million euros or a balance-sheet total of up 27 million euros) are allocated grants for taking advantage of a business consultation to enhance their entrepreneurial efficiency, insofar as this serves as general counselling or promotes environmental management.

Quality

The objective of the schemes promoting quality management and accreditation is to improve the entrepreneurial efficiency and

performance of SME's (with less than 250 employees, an annual turnover of up to 40 million euros or a balance-sheet total of up 27 million euros) through external consultation, certification and accreditation, in-house further training, and the initial training of staff into quality agents. The eligible firms are SME's who have their seat and premises in Mecklenburg-Vorpommern and who come from the sectors of manufacturing, the skilled trades, commerce, industry-related services and tourism.

4.3 Logistics / ICT projects. Cooperation programs, partnerships

Due to the wide range of projects and initiatives in the fields of logistics and ICT at the different levels of administration (local, regional, national) it is hard to prepare a detailed list of them. Nevertheless, we will try to offer a short overview.

4.3.1 Maritime Cooperation Network (MariCoNet)

The Maritime Cooperation Network (MariCoNet) supports the supplier industry of the maritime economy. The main focus is on SME's that are increasingly unable to respond to increased demands for complex system products on the part of their clients, the shipyards. The network aims to help counteract this trend and enable the firms to offer their clients product-related and needs-oriented production, assembly and service. The goal is to strengthen the core competencies of the enterprise and generate new system products in an alliance of companies that lead to vertical or horizontal extensions of the products. The network's origin lies in the large number of maritime suppliers and service providers who act independently of one another, the small number of competitively operating system suppliers, and the lack of methods, tools and structures for the coordination of collaboration efforts.

   With its two components comprising network (support, collaboration, content and framework) and platform (communication, cooperation and information portal in the Internet), MariCoNet intends to present the following solutions to the problems outlined:

- creation of a maritime cooperation network comprising SMEs devoted to the product "ship",

- development of the organisational preconditions for collaboration,
- creation of an interactive Internet-based (inter)national cooperation platform.

The MariCoNet is being developed under the auspices of the Fraunhofer Institute for Manufacturing Engineering and Automation, Rostock (AGP Rostock) and with the support of the companies Caterpillar Motoren Rostock GmbH, MTE Meerestechnik Engineering GmbH, KGW Schweriner Maschinenbau GmbH, and Baltic Marine Consult GmbH.

4.3.2 Project InterBaltic

The main objective of InterBaltic is to promote shift of cargo transport from road to efficient intermodal sea/railway corridors.

InterBaltic is a pan-Baltic project covering the whole region (Interreg Baltic Sea area), and focusing on development of some common transport strategies for the region.

It focuses on intermodality and on interoperability across national borders, as well as on the shift of transport from road to sea and railway. Considering the global trends for the transport sector and their impact in the Baltic Sea area, special focus is set on future cargo flows to and from China and Russia. Some of the expected outcomes of the project are:

- a sustainable and well functioning network between private players, public authorities and research institutions in the transport sector
- business related spin-offs as a result of better transport solutions and interregional networks
- a common understanding of the mega trends and future strategic situation related to cargo flows as result of economic growth and increased transport within, to and from and through the BSR
- identification of cargo segments and volumes most eligible for modal shift from road to rail and sea
- identification of the most important intermodal transport corridors in a TEN-T / Pan-European perspective

4.3.3 Projects Baltic Gateway and Baltic Gateway PLUS

The aim of the project Baltic Gateway – implemented during the years 2003–2006 – was to promote a comprehensive system of high quality transport and transport-related services in the South Baltic Sea area (SBSa), aiming at regional development and sustainable growth.

Baltic Gateway PLUS was a follow-up project, lasting from January 2006 until December 2007. Following were the aims of this project:

- to develop an implementation Plan for priority investments in intermodal transport infrastructure and services in the South Baltic Sea area as identified in the Baltic Gateway project,
- to provide a base for capacity building among the actors involved in intermodal transport and sustainable spatial development in SBSa,
- to contribute to the development of implementation measures for trans-national projects,
- to strengthen the political transport co-operation in the SBSa,
- to facilitate the implementation of selected transport infrastructure investments and intermodal transport services.

The project LogOn Baltic also belongs to this group of logistic- and/or ICT-related projects with participation of partners from the Mecklenburg-Vorpommern region.

At a local level, following projects are to be mentioned:

4.3.4 Holoman

With the research offensive "Software Engineering 2006" the Federal Ministry of Education and Research supports co-operative, pre-competitive research projects for the reinforcement of the software engineering in Germany. Holoman is one of the 35 selected proposals out of 233 applications.

Development of methods for the interchange of structured digital information by an information platform (EIP) which is independent of system and location - Trial action: Data-Management-System for the European value-added chain - "Holz Logistik Management".

In the centre of this joint project is the conception and recognition condensation about procedures for the structured digital information interchange via XML-coupling modules. They are supposed to induce a prototypical development of a Process-Data-Management module

(DMS) for a unitized and standardized processing of any real logistic processes on the basis of a company spanned information platform (EIP).

In collaboration with several pilot partners, methods for a system- and location-spanned information interchange are demonstrated, with the example of the European value-added chain wood/ timber.

4.3.5 WISSLOG

With WISSLOG several concepts, methods, and tools are created that support an integrating combination of the focal points flexibility, knowledge, and resources within the highly volatile environments of logistics. The structuring of the research topics is strongly oriented towards the shortcomings and problems of current value creation networks.

The project targets at the creation of an integrated, process-oriented development and runtime environment in terms of a modular, knowledge-based logistics solution. The flexible integration of knowledge management and logistics components in the context of an integrated system supports and enables information access, controlling, and dynamic optimization within adaptive organization-overlapping logistic processes between companies, service providers and users.

5   LOGISTICS IN THE REGION

5.1   Transport, connections and infrastructure

The EU-enlargement towards East has placed Germany at the very centre of the European commercial map, turning it into an attractive country for locating Eastern Europe distribution centres.

If Germany can be considered the centre of the European commercial map, then Mecklenburg-Vorpommern can be considered the country's gateway to the Baltic countries and to Scandinavia. The improved and expanded traffic network as well as the modern seaports and airports allow quick delivery by road, rail, ship, and airplane.
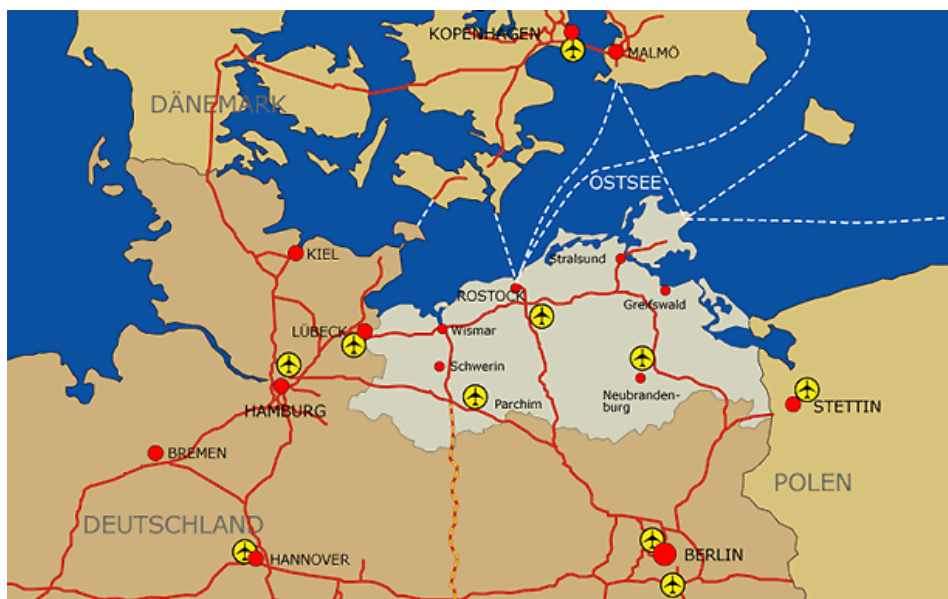
Figure 7   Mecklenburg-Vorpommern: A gateway to the BSR[17]

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[17] http://www.gfw-mv.de/en/mv/, January 2008.

Logistics – the third largest sector behind trade and automotive industry – is one of the key pillars of Germany's competitiveness, representing more than 7% of German gross domestic product (GDP). This statement is supported by the fact that:

- Germany's highways, railways and inland waterways cover a length of nearly 60,000 km.
- The density of the country's highway network is twice the EU average.
- The busiest cargo airport of Europe is in Frankfurt/Main.
- Three of Europe's most important inland waterways are in Germany: the Rhine, the Elbe and the Danube. Germany is also home of the second-largest in Europe and ninth-largest worldwide seaport, Hamburg harbour.
- Nearly 70% of all goods shipped in the country travel on the German "Autobahn" (superhighway/expressway).
- Germany's rail system is the longest in Europe.

Figure 8   Transport connections in Mecklenburg-Vorpommern

The distances to some of the most important European cities, and the average time required to reach them by different means of transportation help give a better picture of the importance of the region's location and the importance of the transport infrastructure for the economic growth and for co-operation of Mecklenburg-Vorpommern in the BSR.

Figure 9   Distance to some European cities[18]

[18] http://www.investorenportal-mv.de, February 2008.

Table 1   Travel time in hours from Mecklenburg-Vorpommern to selected European destinations.

Destination	Air route (h)	Road route (h)	Railroad (h)	Waterways (h)
Brussels	2.0	6.5		
Copenhagen	1.5			3.5
Helsinki	3.0			30.0
London	2.0			
Moscow	3.0	24.0		
Oslo	2.0	12.5		
Paris	2.0		13.5	
Riga	2.5	15.5		
Rome	3.5	13.5		
Szczecin		3.0	2.5	
Stockholm	2.0	12.5		
St. Petersburg	3.0	23.0		18.0
Tallin	2.5	16.0		14.0
Vilnius	2.5	15.0		
Warsaw	2.5	8.5		
Berlin		2.0	2.0	
Cologne	1.5	6.5	4.0	
Frankfurt/Main	1.5	7.0	5.0	
Hamburg	0.5	1.5	1.0	
Munich	2.0	8.0	7.0	
Stuttgart	2.5	8.5	7.0	

5.1.1   Roads and road transport

A well-meshed road network is a location factor of crucial significance. In Mecklenburg-Vorpommern, the road network has been renewed and expanded.

According to the State Spatial Planning Program, the road transport network should be developed in agreement with the existing and future planned spatial structure, in order to secure a good accessibility to the different towns, economic- and recreational centres.

Figure 9 shows the main *Autobahnen* (expressways) and *Bundesstraßen* (federal highways) in Mecklenburg-Vorpommern.
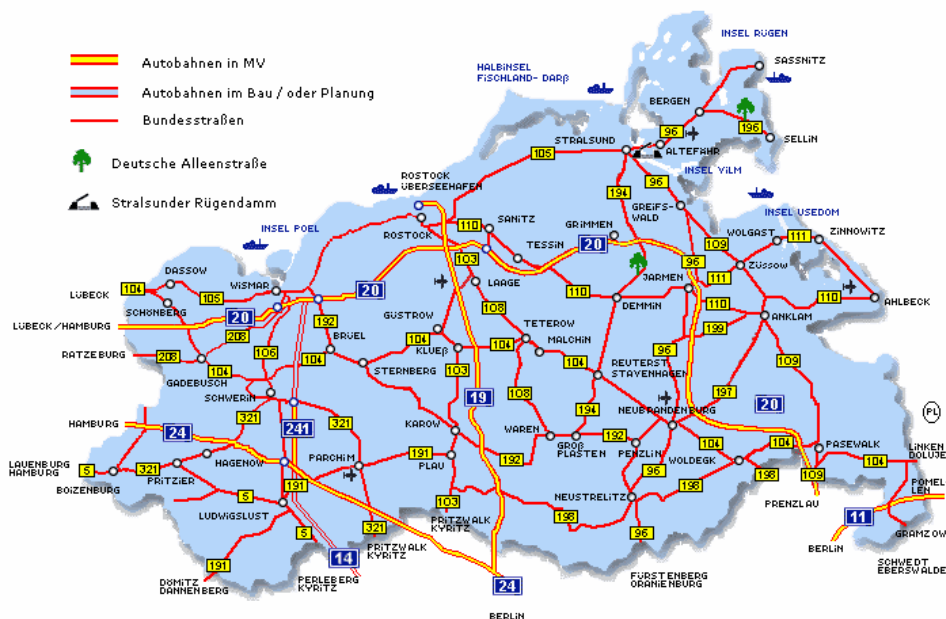
Figure 10   Expressways and federal highways in M-V[19]

The construction of the "Baltic Sea motorway" A20 – the greatest German highway project after 1945 - was finished in 2005 and ensures outstanding accessibility to all Baltic Sea harbours in the region, connecting them directly with the western European long distance road network. It is possible to connect the A1 near Lübeck with the A11 going to Szczecin, Poland.

A19 connects Rostock with the A24, which is connecting the highly populated centres of Berlin and Hamburg.

The A20 and A24 connect the region to the Trans European Transport Networks (TEN-T).

A future road construction project is the closing of the gap of A 241 between Schwerin and Wismar, creating another north-south connexion between A 20 and A 24. The extension of A 241 southwards is also planned in order to connect this motorway to A 2 and A 14 near Magdeburg. Better conditions of cooperation between the University, the shipyard, the seaport, and the companies in Wismar together with the state capital Schwerin are expected after completion of the A241. The necessary economic effect – the integration of Mecklenburg-Vorpommern with other economic centres - will however start once the

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[19] http://www.mvweb.de/verkehr/auto/strassenkarte.html, February 2008.

A24/A241 is connected to the A14 near Magdeburg. Only then, a continuous connection between the western German Baltic Sea Region with the central and south economic centres of Magdeburg / Halle / Leipzig until Dresden and the Czech Republic, as well as with Thuringia (A71), Bavaria (A9), and Baden Württemberg (A7 and A8) will be created.

The interstate- and district road network connect the different towns and municipalities, while the federal highways and -roads connect different regions with each other (trans-regional road network).

The road network density in Mecklenburg-Vorpommern is approximately one third smaller than the road network density in Schleswig Holstein or even the country's average. The reason for this is a rather thinner population density of this region compared to the other regions. In order to adjust the economic and living standards to those of the rest of the country, it is necessary to realize qualitative improvements to the trans-regional road network.

There are still a few considerable deficiencies in the actual road network. In general, upgrades have priority over the construction of new roads and highways. Intervention in nature and environment should be kept as low as possible, and done only if absolutely necessary.

5.1.2 Railways

The state of Mecklenburg-Vorpommern – as well as Germany - has a modern railway network offering efficient transportation links to the German and European hinterland. Connections to any bigger city are possible over a main line or over secondary lines.

Trains can reach speeds of up to 160 km/hour on the main lines.

Excellent North-South connections are supplemented by the Lübeck-Stralsund and Hagenow-Stralsund links in the West-East direction.

The transport of goods by train has a relative importance in the whole region. Exceptions to this statement are the seaports and surrounding industrial areas. The increasing freight handling capacity of the seaports, as well as the increasing production capacity of the industry, has led to an increasing demand of good transport services using the railway network. Therefore, the development of the railway infrastructure connecting the seaports is of high importance.

In this respect, Deutsche Bahn AG, the state government and the Port of Rostock introduced the 'Railway master plan port-hinterland

traffic' for the Baltic Sea ports of Wismar, Rostock and Sassnitz-Mukran. One of the reasons is that the ports in general expect an increase in cargo volume. Rostock for example expects in particular an increase in container handling of 60% or more by the year 2015.

Rostock is also a significant traffic hub on the Baltic Sea coast due to its railway-ferry connections.

Over the past years comprehensive investments in the modernization and expansion of the track system in Mecklenburg-Vorpommern have been carried out to handle the forecasted growth.

Although much has been done to improve the railway infrastructure, following are some measures that are on the agenda:

- increase of the average speed
- cutback of "slow" routes
- establishment of attractive, direct connections
- modernisation of some stations
- coordination with other public transport means

In December 2007, and as part of the 'Railway master plan port-hinterland traffic', the Minister for Transportation, Construction and Development of Mecklenburg-Vorpommern, the Mayor of the Hanseatic City of Rostock, the Managing Director of Hafen-Entwicklungsgesellschaft mbH, and the Executive Director of Infrastructure and Service of Deutsche Bahn AG (German Railway), officially inaugurated the 34-Million-Euro investment project initiated by the European Union, the federal government and the Deutsche Bahn AG. In total, 38 km of tracks were laid and 93 switches were renewed.

5.1.3 Seaports and waterways

Under the slogan "*When you say Baltic Sea, you mean us*", the ports in Mecklenburg-Vorpommern have worked hard to achieve their positioning in the international market, in particular the BSR, one of the most dynamic and economic growing regions.

With the political and economical changes occurred after the reunification of Germany in 1990, a process of fundamental restructuring of the regional ports began. The top priority was to set up a competitive transport system, in order to adapt the lagging infrastructure to the new requirements.

The EU-enlargement towards the East and the growing commerce with Russia and the Far East has increased the customer base and at

the same time altered the terms of competition for port and transport commerce in the northeast. Increasing cargo volumes and passenger traffic have transformed the Baltic Sea into the inland sea of the European community. As a result of this growth, the ports in Wismar, Rostock, Stralsund, Sassnitz, Greifswald, Wolgast and Ueckermünde have been integrated into international logistics transport networks.

Since port infrastructure is a key factor for competitiveness, the state government has been investing in optimizing the sea and land traffic connections by deepening navigation channels, constructing motorways and railway tracks, among others.

The development of efficient ports has promoted an excellent development of the hinterland, contributing to the "from road to sea" concept.

Seaport of Wismar

The seaport forms part of the Trans European Traffic Network (TEN-T). Thanks to extensive investment measures, the seaport has become one of the regions' outstanding ports.

Modern and high-performance transhipment technologies enable Wismar to cope with the different handling techniques used in the BSR. This guarantees a fast and efficient loading and unloading of sea-going ships. Weather and environmentally sensitive goods, peat, chemical products, and high tonnage general cargo such as sawn timber, forestry and agricultural products, iron, steel and construction materials are some of the goods handled in Wismar.

Wismar is an ideal hub for import and export goods between Central Europe and Scandinavia, the Baltic States and Russia.

Figure 11   Seaport of Wismar: an ideal hub for import and export[20]

"An efficient service free of red tape and geared towards customer satisfaction solves all the demanding task of transhipment, storage and transport, making the seaport of Wismar a logistical alternative on the Baltic Sea".[21]

The seaport has a good road and rail transport connection to the hinterland.

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[20] http://www.hafen-wismar.de/index.php?id=5&L=1, February 2008.
[21] http://www.hafen-wismar.de/englisch_wir_ueber_uns.html, March 2007.

Figure 12   Access to the Seaport of Wismar

Seaport of Rostock

Known as one of the most important ports in the southern Baltic Sea, Rostock Port has transformed into an important centre for tri-modal traffic. With the EU-enlargement towards East, it gained significance as a traffic hub. Currently, over 200 firms in and around the port handle, store, produce or offer services for shipping, transportation, handling, storage and goods processing.

Rostocks' historical importance goes as far back as from the 14th- 17th century. Back then, Rostock was an important location in the Hanseatic League, but with the fall of the League, Rostock also lost its importance. With the opening of a new port on the Warnow River in 1960, former East Germany made Rostock its "Gate to the World". Shortly after that, the so-called overseas port was expanded into an efficient and universal port. German unification started the transformation of the port into an efficient Baltic seaport with a completely changed appearance and range of services.

Ferry cargo, Ro-Ro cargo, combined cargo, bulk cargo, general cargo, liquid cargo, are some of the main cargoes handle at Rostock

Port. The evolution of these cargoes between the years 1989 – 2007 is shown in the graph below (expressed in million Tons).
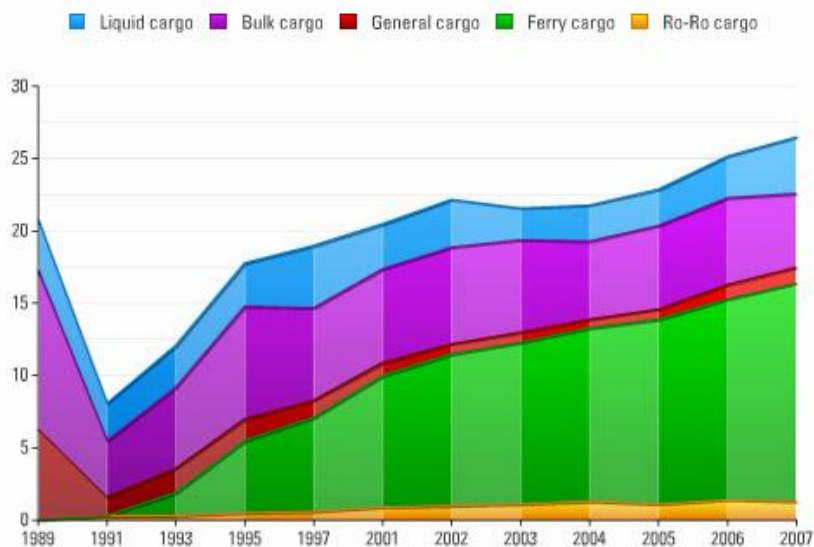
Figure 13   Cargo volumes in the Port of Rostock (1989-2007)[22]

In the past years, the ferry traffic has experienced a rapid growth. Modern ferries depart from the Warnow Ferry Terminal connecting Rostock with Gedser (Denmark), Trelleborg (Sweden), Helsinki (Finland), Tallinn (Estonia) and Ventspils (Latvia). Scandlines, TT-Line, Tallink/Silja Line are the companies operating these routes.

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[22] http://www.rostock-port.de/en/rostock_port/key_facts_figures/statistics.html, Feb. 2008.
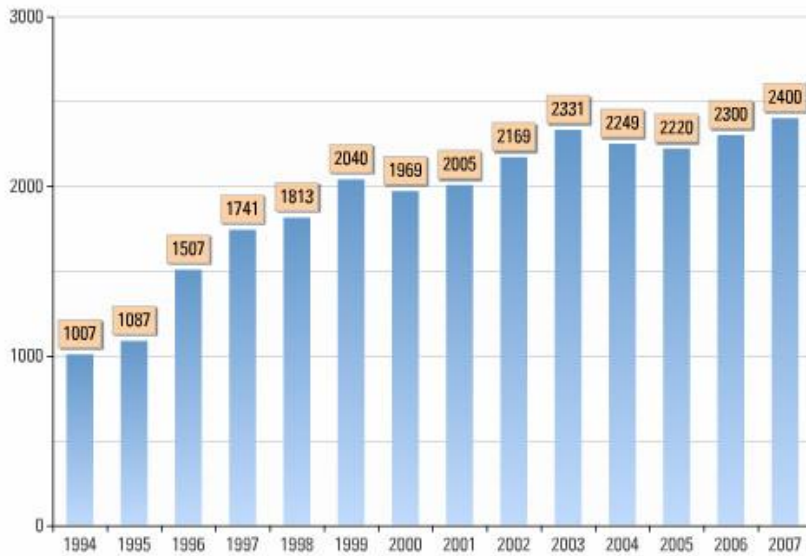
Figure 14   Number of ferry passengers 1994-2007 (in thousands)

Excellent road and rail connections provide fast and good access possibilities to the Port of Rostock.

Figure 15   Access to Rostock

The Federal State of Mecklenburg-Vorpommern and the Hanseatic City of Rostock are the owners of the Rostock Port. Their interests are

carried out by the Hafen-Entwicklungsgesellschaft Rostock, reflecting the will of the city and the state to develop the largest port in the state in such a way that it meets the rising demands of the cargo-handling industry and of tourism.

Seaport of Stralsund

The seaport of Stralsund, together with the industrial firms that have settled in the hinterland, has been transformed into a major economic factor in the region.

The port is divided into three port areas: 1) the city port; 2) the north port; and 3) the south port.

The north port is the logistics centre for loading and storage of long-term, contracted cargoes. Here there are also special loading systems and storage areas for handling plaster, limestone, and agricultural goods. Easy and uncomplicated connection to the railway network provides good connections to the hinterland.
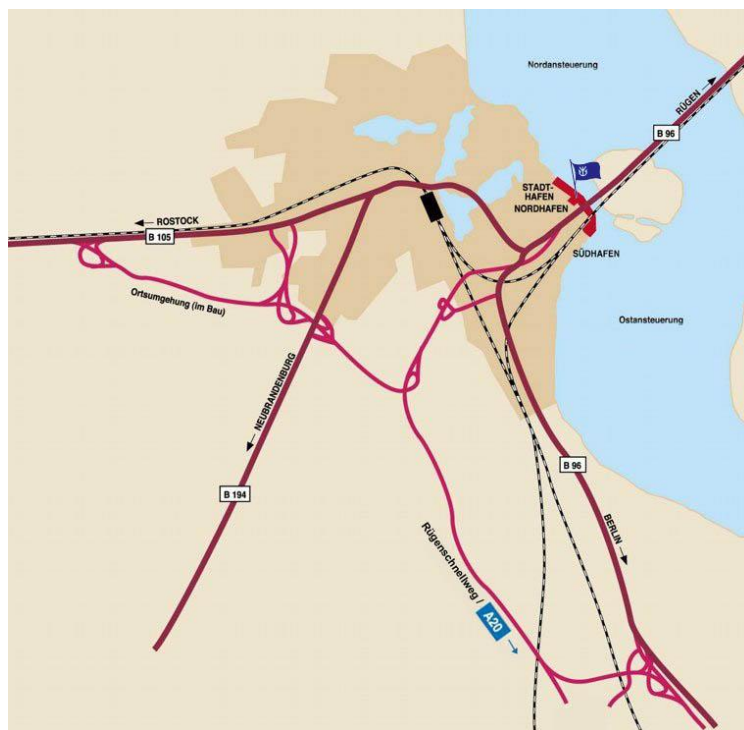
Figure 16   Access to the Seaport of Stralsund[23]

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[23] http://www.seehafen-stralsund.de/englisch/standort/standort_anst_eng.html, Feb. 2008.

The main activities of the south port include the handling of building materials, as well as exports and imports of agricultural goods.

The city port is used by river cruise companies as a base port.

Sassnitz ferry port and town harbour

Located at the northeast tip of the Rügen Island, it is the closest German port – geographically and nautically – to Scandinavia, Finland, the Baltic States and Russia. Presently, it's the largest rail ferry port in Germany. In addition to rail and Ro-Ro (roll-on/roll-off) traffic, other services offered include bulk cargo handling and the passenger clearance for cruise ships. There are regular ferry connections to Trelleborg (Sweden); Rønne (Denmark); Baltijsk, St. Petersburg (Russia); Klaipeda (Lithuania).

Due to Sassnitz's direct location on the open sea, time-consuming channel navigation is unnecessary. Furthermore, there is no obligation for pilot service.

An efficient, fully electrified, double-tracked line connects the port optimally to the German and European rail network. Sassnitz is well-known as the westernmost cargo terminal for the Russian railway because it is equipped with the Russian broad-gauge track system.

The main business of the town harbour is dominated by the catching, cold storage and trading of fish. Sassnitz is an intermediate destination for fresh fish from the Baltic Sea.

Figure 17   Access to the Port of Sassnitz

Greifswald Harbour

Greifswald has developed from an inland port of regional importance to an internationally recognised transhipment centre.

Building materials, agricultural products, commodities such as gas oil, forestry products and general cargo are among some of the goods handled in this port.

Wolgast Harbour

Wolgast is the easternmost seaport of Germany. The Peene and Oder rivers provide a direct link to Poland. It is also connected to the Greater Berlin region and Central and Western Europe through a direct inland waterway connection.

The main goods handled are cereals, building materials, foodstuffs, fertilisers and wood.

Ueckermünde industrial port

The port offers all the facilities and equipment for cargo handling, and is directly linked with the German inland waterway via the Oder and the Peene rivers.

The main goods handled are wood, bulk cargo and mixed cargo.

Other ports in the region

Smaller ports like the Port of Vierow (www.hafen-vierow.de) – primarily used for the transhipment of components for the agricultural and food industry – and the Anklam Harbour (www.binnenhafen-anklam.de) – the biggest inland harbour on the Peene River handling mainly cereals, cement, building materials, fertilisers and scrap – also form part of the region's logistic landscape.

5.1.4 Air transport

Mecklenburg-Vorpommern has five airports of regional importance and several smaller airfields. The five most important airports are:
1. Stralsund-Barth,
2. Heringsdorf,
3. Neubrandenburg,
4. Rostock-Laage,
5. Schwerin-Parchim.

Figure 18   Airports in Mecklenburg-Vorpommern[24]

Stralsund-Barth Baltic Airport

This commercial airfield lies just outside Barth, and is an ideal first destination for vacationers to the Baltic thanks to its proximity to the Fischland-Darss-Zingst   Peninsula   and   to   Stralsund. (www.ostseeflughafen-stralsund-barth.de)

Heringsdorf Airport

The commercial airport of Heringsdorf is located on the Isle of Usedom. Heringsdorf is an important tourist centre. Besides scheduled airline flights, sport aircraft and charter planes start and land on the runway. From May to October, Heringsdorf Airport is linked to the national and international networks of scheduled flight routes. (www.flughafen-heringsdorf.de)

Neubrandenburg-Trollenhagen Airport

The commercial airport Neubrandenburg-Trollenhagen is a good alternative to the overcrowded airports in northern Germany due to its good location. During the summer season, flight connections are provided to holiday destinations in Greece, Turkey, Spain and Bulgaria. The number of flight guests passing through the airport has

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[24] http://www.gfw-mv.de/de/branchenuebersicht/logistik/flughaefen/, January 2008.

continuously risen over the past few years. (www.flughafen-neubrandenburg.de)

Rostock-Laage Airport

Chartered and scheduled flights, as well as air cargo services are available at this commercial airport. All services offered at the airport are subject to a permanent quality management following Lufthansa standards. Rostock-Laage is linked to the international air traffic network by direct flights abroad or transfer flights to international hubs in Germany. The airport's air freight division is also being expanded as a core business sector in collaboration with cargo and logistics partners. The airport is the state's only customs airport and ensures a smooth and reliable flow of international freight traffic. The steady annual increase in passenger numbers and cargo volume justify an optimistic view of the future, and has already called for larger and more modern handling facilities. (www.rostock-airport.de)

Baltic Airport Schwerin-Parchim

Strategically located between Hamburg and Berlin, the Baltic Airport has one of the most up-to-date navigation infrastructures, meeting all requirements of a modern airport. Short transhipment times can be achieved due to the excellent link between the airport, the northern railway junction (Bahnkreuz Nord), the overseas seaport of Wismar and the highway connections between the A19, A20 and A24. Following the motto "cargo first", freight traffic is given priority. Short routes and a minimum of legal restrictions enable exact requirements to be met. Flexible freight solutions allow handling quickly and efficiently bulky and unwieldy goods outside of standard dimensions. General cargo, pallets and containers of all dimensions as well as non-standard freight can be handled at the Baltic Airport with speed and precision. The take-off and landing runways are counted among the largest in Germany with an overall length of 3,000 metres and a width of 55 metres. The 24x7 operating license enables the airport to deal with different classes of aircrafts. Available extensions for business premises, which often represent an obstacle in many parts of Germany, are not a problem in Parchim; the necessary authorisation from the planning authorities already exists. (www.baltic-airport.de)

Other smaller airfields in Mecklenburg-Vorpommern:

- Wismar-Müggenburg airfield (commercial airfield)

- Reerik-Zweedorf airfield (special airstrip)
- Pinnow airfield (special airstrip); www.fliegerclub-pinow.de
- Neustadt-Glewe airfield (commercial airfield); www.edan-info.de
- Purkshof airfield (special airstrip)
- Güstrow airfield (special airstrip); www.guestrow.de
- Waren-Vielist airfield (special airstrip); www.stadt-waren-mueritz.de
- Müritz airfield Rechlin-Lärz (commercial airfield); www.mueritzflughafen.de
- Stralsund airfield (special airstrip); www.flugplatz-stralsund.de
- Güttin-Rügen airfield (commercial airfield); www.flugplatz-ruegen.de
- Schmoldow airfield (special airstrip); www.sfc-greifswald.de
- Tutow airfield (commercial airfield); www.flugplatz-tutow.de
- Peenemünde airfield (special airstrip); www.peenemuende.de
- Anklam airfield (commercial airfield); www.flugplatz-anklam.de
- Pasewalk-Franzfelde airfield (special airstrip); www.ueckerfalken.de

5.2 Transport sector administration and industry associations

This section intends to introduce the reader into some of the main national and regional organisations, associations, institutes, etc. dealing with the transport sector. However, it is not an exhaustive list of all relevant organisations.

The **Ministry of Transport, Building and Regional Development Mecklenburg-Vorpommern** (Ministerium für Verkehr, Bau und Landesentwicklung M-V; www.vm.mv-regierung.de)

The **Federal Maritime and Hydrographic Agency** (Bundesamt für Seeschifffahrt und Hydrographie; BSH; http://www.bsh.de/de/index.jsp) is a central contact partner for navigation in Germany. Among others, they deal with issues related with financial support programs, flag rights, and qualification certifications of sailors.

The **Federal Waterways and Shipping Administration** (Wasser- und Schiffverwaltung des Bundes; WSV; http://www.wsv.de) is responsible for the administration of the federal waterways and for the regulation of the navigation.

The **Mecklenburg-Pomeranian Navigation Experts Association** (Verband Mecklenburgisch-Vorpommersche Schiffahrtsachverständige

e.V.; VMVS; http://www.vmvs.de) pursues the goal of creating an organisation of experts and surveyors in the fields of shipping, marine, transportation and port industries. The association serves to provide their members with further education and to keep their knowledge up to date as well as to maintain contacts to marine expert associations in Germany and Europe.

The **Maritime Alliance Association - BSR** (Verein Maritime Allianz Ostseeregion; www.mao-ev.de) is an open network representing enterprises of the maritime industry. The thematic focus lies on high-complexity maritime system products and the performance of systems, as well as their interfaces.

The **Shipbroker's Association Mecklenburg-Vorpommern** (Schiffsmaklerverband M-V e.V.; www.zvds.de) – member association of the German Shipbroker's Association (in German ZVDS) – promotes the joint professional interests of German ship brokers and agents. At a national level, it provides advisory services and represents the interests of ship brokers and agents vis-à-vis the Federal German authorities, institutions and professional associations.

Other organisations of interest:

- German Shipowners' Association (Verband Deutscher Reeder); www.reederverband.de
- German Institute of Navigation (Deutsche Gesellschaft für Ortung und Navigation e.V.); www.dgon.de
- Short Sea Shipping Inland Waterway Promotion Center; SPC; www.shortseashipping.de/
- Federal Ministry of Transport, Building and Urban Affairs (Bundesministerium für Verkehr, Bau und Stadtentwicklung); www.bmvbs.de
- German Railway (Deutsche Bahn); www.dbahn.de
- Traffic Information for Mecklenburg-Vorpommern; http://verkehrsinformation.mvnet.de/index.htm
- German Logistics Association (Bundesvereinigung Logistik); www.bvl.de/1_2
- German Maritime Competence Network (Deutsches Maritimes Kompetenz Netz); www.dmkn.de
- German Central Association for Seaport Companies (Zentralverband der deutschen Seehafenbetriebe); www.zds-seehaefen.de
- Institute of Railway Technology (Institut für Bahntechnik); www.bahntechnik.de
- BMT Transport Solutions; www.bmt-ts.com

5.3   Social and environmental issues in the transport sector

The rising mobility of persons and goods, especially in form of motorised traffic, has massive consequences on the quality of life and the health. To reduce these consequences to a tolerable level, many different measures are necessary. The existing transport infrastructure should be developed and reorganized into a modern, energy-efficient and customer-friendly transport system.

The transport of goods on roads has a particularly high share in environmental pollution and it is expected that this sector will have the highest increase rates in the next years. Therefore particularly effective incentives to increase energy efficiency in this sector are needed.

Shifting goods transport to more ecologically means of transport is one of the top priorities.

An optimal connection between transportation modes and the availability of a variety of options for mobilizing are important elements of a lasting traffic policy.

Planning of the public passenger transport, construction of bicycle paths, the truck road charge or „fuel-saving driving" campaigns are only some examples of measures which can contribute substantially to reduce environmental impact of the traffic.

Fossil fuels should be substituted step by step with alternative fuels.

Aerial pollutants like nitrogen oxide, fine dust and noise should be kept in tolerable levels as well.

The European transport policy creates the necessary prerequisites for a single market in which the free movement of persons, services and goods is possible. At the same time, it establishes the rules for competition among the different modes of transport in order to ensure a uniform market with fair and equal opportunities[25].

In order to maintain an efficient and competitive mobility economy as a basis for growth and employment, an efficient and innovative transport system and the economically and ecologically efficient and safe organization of transport processes is needed.

Transport policy must be regarded as sustainable economic policy and must therefore be oriented to the Lisbon Strategy in such a way that it promotes economic growth and employment without neglecting environmental concerns.

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[25]

http://www.eu2007.de/en/Policy_Areas/Transport_Telecommunications_and_Energy/Transport.html

At a national level, the Federal Environmental Agency (FEA)[26] is Germany's central environmental office. Among the key tasks of the agency – set up in Berlin in July 1974 – are the examination, description and assessment of the state of the environment, in order to discover any potential danger to humans and the environment. The different agency units spread all around Germany offer scientific support to the federal German Environment Ministry[27], other ministries and other state, regional and private bodies on environmental protection and health issues. They also collect and publish data on the environment, and inform the public in general about environmental issues.

The FEA, together with the Federal Radiation Protection and Nature Protection Agencies, provides the scientific basis for German environmental policy.

5.4   Logistics industry: characteristics

Within the framework of the LogOn Baltic project, a logistics survey – in three different versions for i) manufacturing & construction companies, ii) trading companies, and iii) logistics service providers – has been conducted in the participating regions around the BSR.

This is by far the largest survey conducted in the Baltic Sea Region in the field of logistics.

The obtained results are used to make a cross-regional analysis, focusing on differences and similarities between the regions. The cross-regional analysis is presented in a separate report available at the project homepage www.logonbaltic.info.

5.4.1 Manufacturing and construction industry

From the total population of respondents, 38% belong to the manufacturing and construction industry, represented in this analysis only by micro and small companies. The dominance of these companies is representative for the economic landscape of Mecklenburg-Vorpommern.

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[26] Umweltbundesamt, UBA (http://www.umweltbundesamt.de/index-e.htm)
[27] Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, BMU, (http://www.bmu.de/english/aktuell/4152.php)

For the purpose of this survey, and to obtain a simplified picture of the total logistic costs of the companies in the region, five types of costs have been identified: transportation, warehousing, inventory carrying, logistics administration, and others.

The total logistic costs for the small manufacturing and construction companies are slightly higher than those for the micro companies: 21.9% against 19.1%. Nevertheless, the incidence of the different types of costs is fairly the same: transportation costs are the most significant ones, followed by warehousing and inventory carrying costs. These three types of cost amount for more than 80% of the total costs for both, micro and small companies. The "Other logistics costs" are not analyzed in detail here.
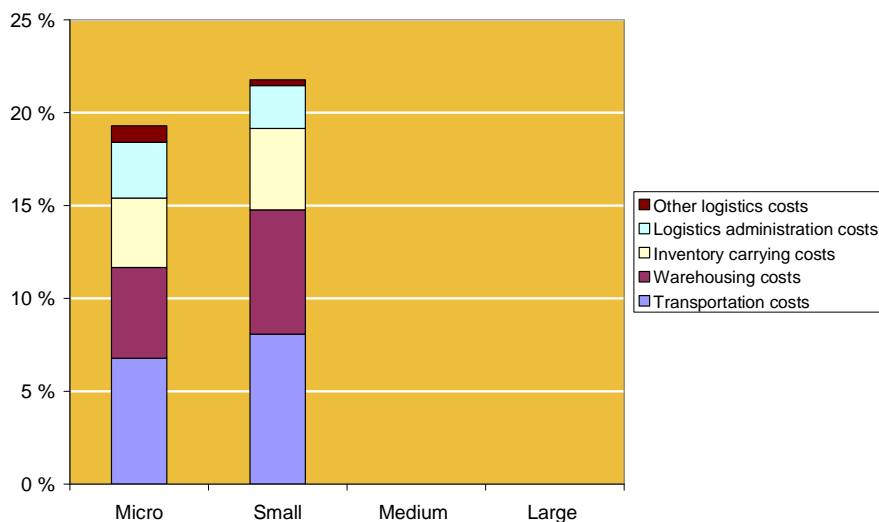
Figure 19   Total logistics costs as a percentage of the turnover
                   (manufacturing)

At least half of the surveyed manufacturing and construction companies believe that the abovementioned costs will increase in the next years. While 77% say that the transportation costs will increase, 61% believe the inventory carrying costs will develop in a similar way, and 59% think that the logistics administration costs and warehousing costs will increase.

This helps explain why the Senior- and Middle Managers think it is necessary for the personnel to develop their competences in the fields of inventory management, supply chain strategy and transport

management. This will help lower some logistic costs, if not, at least keep them at a reasonable level.

Except for the warehousing costs, where 6% allege these costs will sink in a near future, close to 5% or less have the hope that the different costs will sink in the next years.
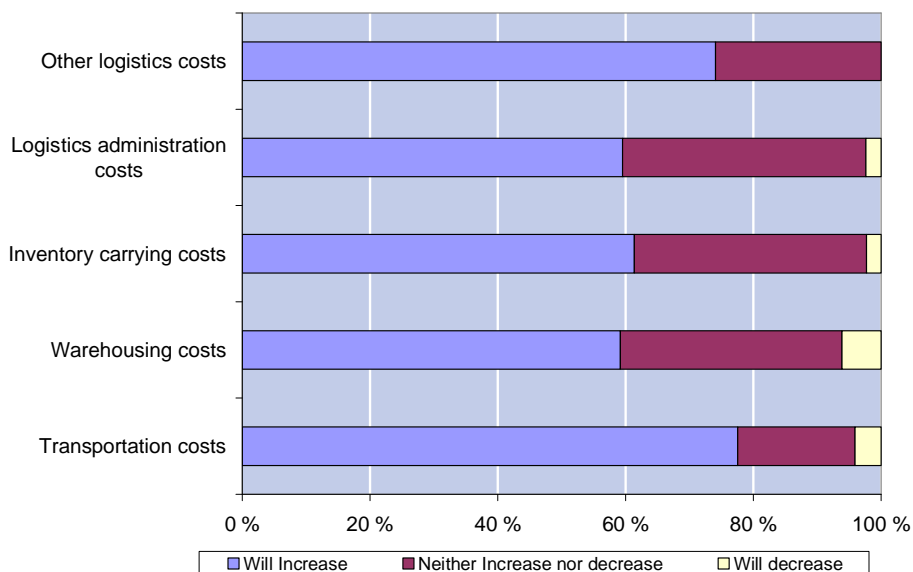
Figure 20   Estimated development of the logistics costs (manufacturing)

5.4.2 Trading industry

From the total population of respondents, 33% belong to the trading industry, in which medium-sized companies are also represented.

The incidence of the total costs also varies between micro, small, and medium companies. The total logistic costs represented 13% for micro companies, 16% for small companies, and 17% for medium companies from the total turnover 2005. These average costs are lower compared to the production and construction companies.

Transportation costs represented between 6.8% and 8% of the turnover 2005, but still represented around 40% - 50% of the total logistic costs.

Warehousing costs represented between 2.5% and 2.9% for micro and small companies, while for medium companies it represented as much as 7%. Smaller companies usually keep the goods they handle

at the selling point, in a separate small room or somewhere in a corner. But medium-sized companies usually have to keep their goods physically separated from the selling point, outsourcing this activity to a third party. Also, they simply have bigger amounts of goods to take care of. This explains partially the relative higher warehousing costs of these companies.

The latter explains why inventory carrying costs are higher for the smaller companies than for the medium companies; the goods that are not sold and are in storage generate opportunity costs, which are part of the inventory carrying costs.

Since the smaller companies do their own logistics, that explains why the relative incidence of the administration costs can be the same or even higher than for the medium-sized companies. The "Other logistics costs" are not analyzed in detail here.
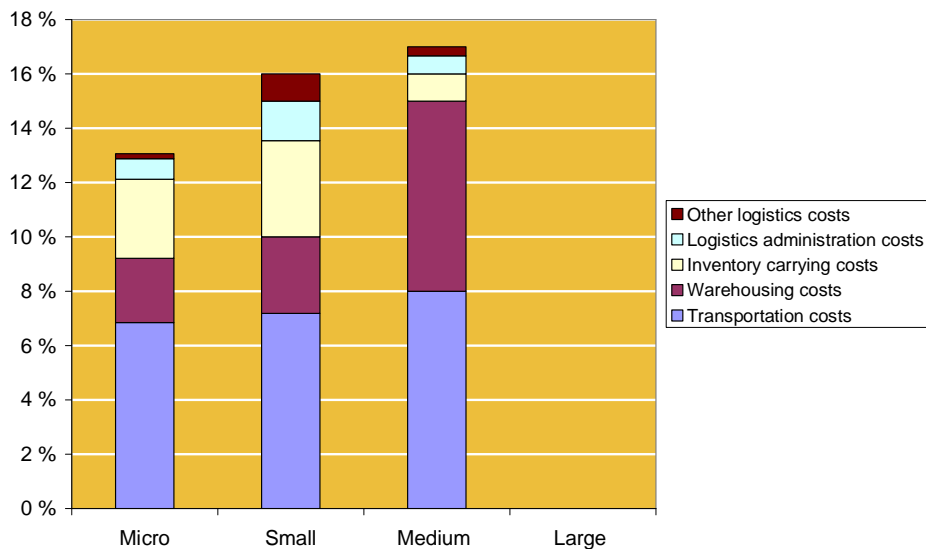
Figure 21   Total logistics costs as a percentage of the turnover (trading)

None of the surveyed companies believed that any of the specified components of the total logistic cost will sink in the next few years.

As a matter of fact, all of the respondents thought that the transportation cost will definitely increase, while most of them (95%) believed that the warehousing costs will have the same behaviour. The expectation of increasing warehousing costs among trading companies could be understood if it is taken into account that these companies have to confront a more uncertain demand of their products; a

production or construction company can produce on demand, while a trading company has to have a minimum stock to face quicker and more often changes.

Somewhat behind, the expectations for logistics administration costs and inventory carrying costs to increase are also significant (66% and 73% respectively). Connected to this statement, the respondents of trading companies (mostly belonging to Senior- and Middle Management levels) find it necessary for the personnel to develop their competences in inventory management and in basic concepts linked to Supply Chain Management (SCM). This will definitely help them reduce these costs partially.
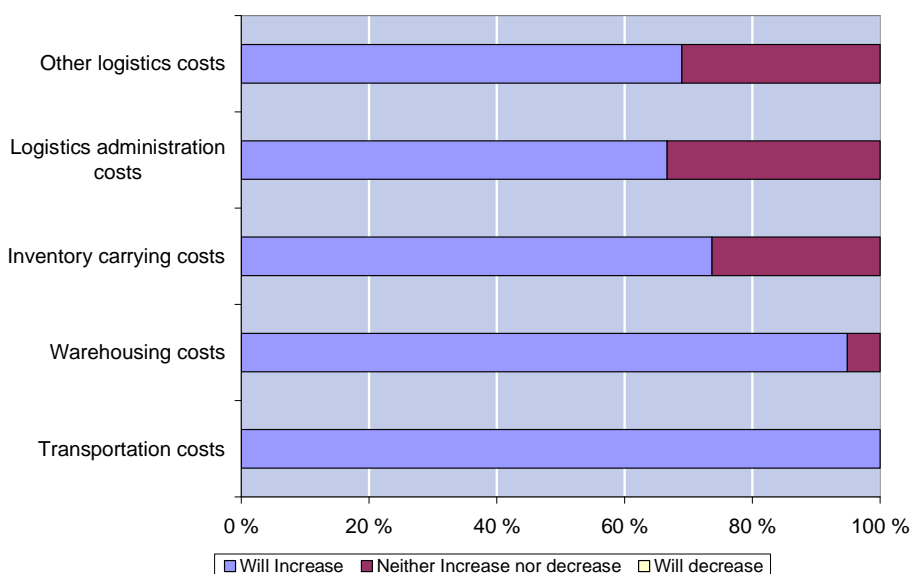
Figure 22   Estimated development of the logistics costs (trading)

5.4.3 Manufacturing/construction industry and trading industry

Logistics outsourcing is a dynamic, shifting and growing business environment. An increasing number of companies are realising the potential economic advantages of outsourcing their logistics activities. In an effort to establish the degree to which companies make use of a logistics service provider, the respondents were asked to estimate the extent up to which their company outsource certain logistics activities.

Domestic transportation, reverse logistics and freight forwarding – in different degrees - are the most outsourced logistics activities in Mecklenburg-Vorpommern.

Taking into consideration those companies who answered the question regarding the outsourcing of the different logistic activities, it appears that 29.2% of the companies outsource this activity almost completely (> 75% of the times), 6.3%, between 50% and 75%, 20.8% between 25% and 50% of their domestic transportation, and 25% outsource up to 25% of their domestic transportation.
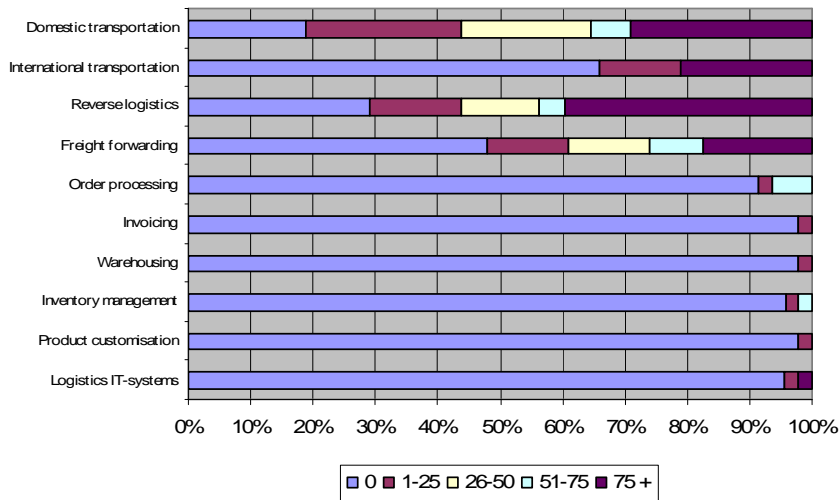
Figure 23   Outsourcing of logistics operations (diagram)

An overview of the activities and the degree of their outsourcing is given in the table below.

Table 2   Activities and the degree of their outsourcing

Activity	0	1-25	26-50	51-75	75 +
Logistics IT-systems	95,7%	2,2%			2,2%
Product customisation	97,8%	2,2%			0,0%
Inventory management	95,7%	2,1%		2,1%	0,0%
Warehousing	97,7%	2,3%			0,0%
Invoicing	97,8%	2,2%			0,0%
Order processing	91,5%	2,1%		6,4%	0,0%
Freight forwarding	47,8%	13,0%	13,0%	8,7%	17,4%
Reverse logistics	29,2%	14,6%	12,5%	4,2%	39,6%
International transportation	65,8%	13,2%			21,1%
Domestic transportation	18,8%	25,0%	20,8%	6,3%	29,2%

5.4.4 Logistics service providers

From the total number of respondents, 29% of the companies were logistic service providers. They offer a wide range of services to their customers. These have a relative incidence on the company's turnover.

In 2005, 67% of their turnover was generated alone by transport services; 15% was generated by warehousing services only; 6% was generated by standard service packages, while the remaining 12% of their turnover was generated by customised service packages.

Asked about their expectations on the incidence of these services on the turnover in the year 2010, the proportions stayed pretty much intact, except for a small increase of the standardised and customised service packages of 1% and 2% respectively.
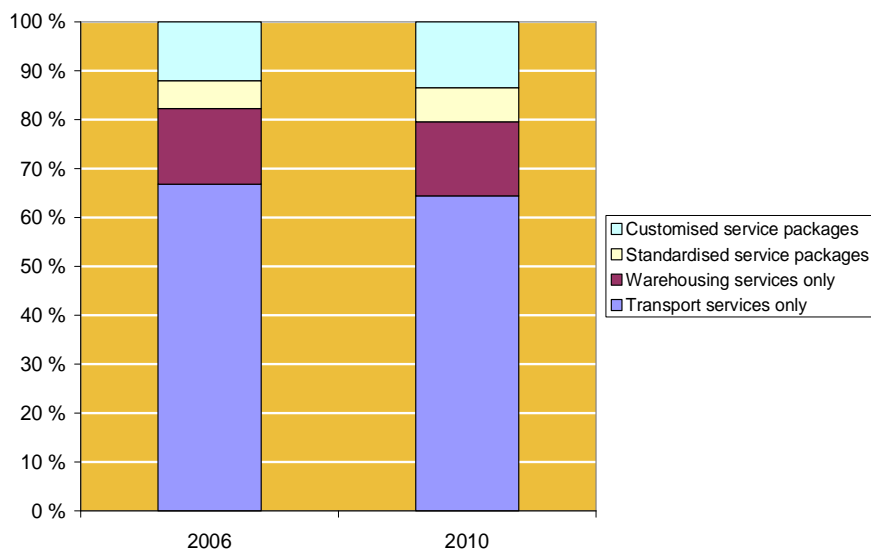
Figure 24   Turnover generated from the different logistic services (actual – 2006 – and estimated – 2010)

After the introduction of market economy in Eastern Germany, the "rules of the new economy" forcedly changed the way of thinking of many economic players. With these new rules, new threats appeared. The survey results also show that the biggest threats to business mentioned by the logistic contractors are the increasing costs of the services (in first place), the increasing competition among contractors, and the decrease in the demand of their services (Figure 24). The last two, closely related. The increase in competition can be in form of new

players on the market, or better services offered by the competitors. To cope with this problem, it is among the top priorities for the companies to extend the range, or upgrade the services offered to their customers.
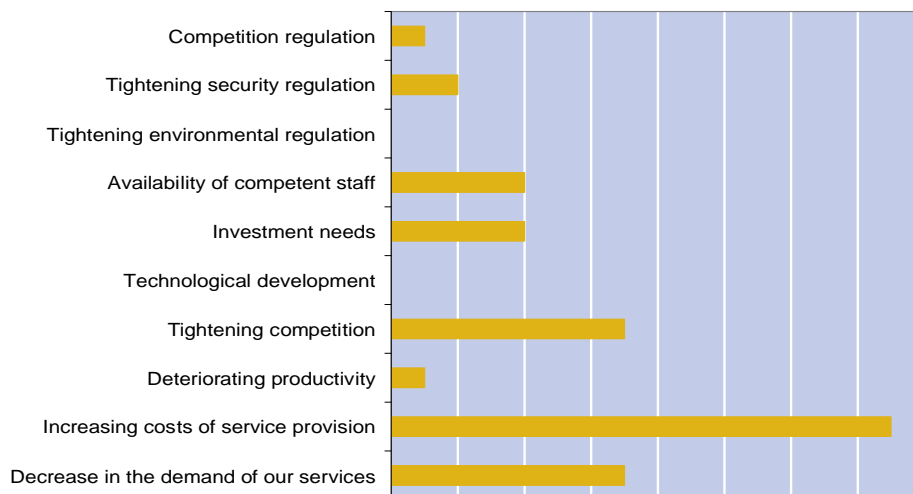
Figure 25   Major threats considered by the LSP

The existing workforce in the logistics industry in Mecklenburg-Vorpommern seems to be quite competent, although a refinement of transport management and business strategy skills are considered necessary. Higher qualifications and the development of industry-specific competences are always welcome.

In general, the operating environment for the logistics service providers in Mecklenburg-Vorpommern is rather good. Only very few thought that the transport infrastructure in the region was poor, and that the logistics efficiency was deficient. (Figure 25)
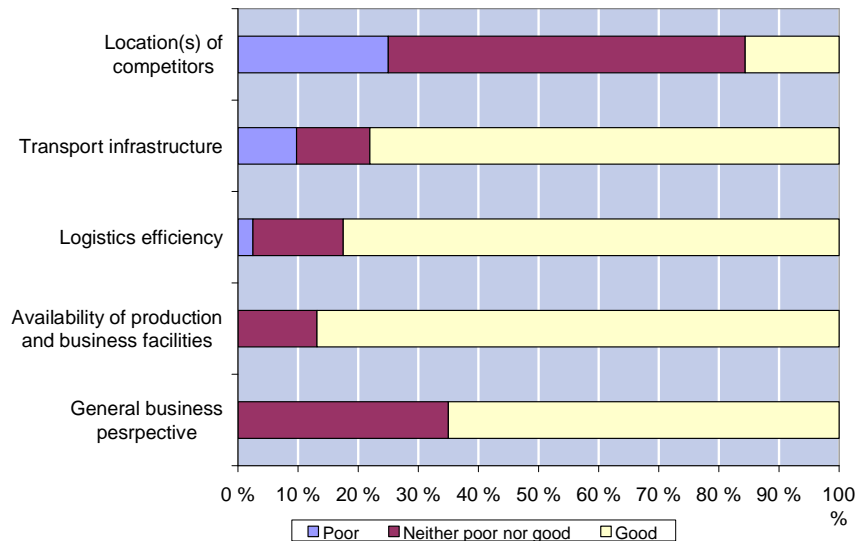
Figure 26   Operating environment from the view of the LSP's

5.5   Logistics sector development and outlook

Mecklenburg's geographical location confers the region a strategic role in Logistics, with good opportunities for the maritime traffic in the North-Eastern part of the Baltic Sea.

The concept of international trade has undergone profound changes in the past years, creating "new" market rules. These changes have led to the opening of new markets and the expansion of existing markets around the world, increasing the variety and volume of transported goods between them, and affecting the flow of goods all around the world.

In order to adapt to these new market rules, Mecklenburg-Vorpommern will have to make big efforts to cope with these changes.

The low density of industries has a significant impact on the economic activities in the region. After the EU-enlargement of 2004, many industries have migrated towards Eastern, South-Eastern Europe, in search of lower costs that will make them more competitive in the global market.

After the reunification of Germany in 1990 a big part of the qualified workforce of Eastern Germany migrated to other markets looking for better job possibilities.

6 ICT IN THE REGION

6.1 General ICT infrastructure in the region

Mecklenburg-Vorpommern is an ideal location for a future-oriented industry with perspectives in the German, Northern European and Eastern European market. The region is equipped with one of the most modern digital telephone and data networks of Europe. The completely digitized communications network with recent fibre glass technology is only a few years old. The most innovative net of Europe is online and available for communication with other partners.

In Mecklenburg-Vorpommern the information and communication technology developed positively. Currently there are about 600 ICT-enterprises with approximately 14,000 employees, with approximately 9,000 in the service and around 5,000 in the telecommunications. Further 1,000 co-workers are busy in ICT at universities and institutions. The different projects within the ICT range are bundled and coordinated by the IT-initiative Mecklenburg-Vorpommern since 2005[28].

The 10th of December 1997 marked the dawning of the digital age in Mecklenburg-Vorpommern. For EUR 3.25 billion, a closely-meshed network of more than 4,500 km of optic fibre cable was created. This network is one of the most modern of its kind in the world and promises to satisfy even the most demanding communication needs for years to come. All points of junction were completed using state-of-the-art technology. A network of this quality is able to support the communication of a virtually unlimited amount of data.

The telecommunications infrastructure does not only extend from the cable to the telephone outlet. Deutsche Telekom offers communication systems and individualized services, ranging from comprehensive consultation to complete Call Center equipment solutions including computers, software and headsets.

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[28] http://www.mv-regierung.de/stk/doku/bilanz/Bilanz_2002-2006_I_Arbeit_M-V.pdf#search=%22cluster%20mecklenburg%20vorpommern%20telekommunikation%22, January 2008.

6.1.1 Very High Frequency

Very High Frequency (VHF) is the radio frequency range from 30 MHz to 300 MHz. frequencies immediately below is HF, and the next higher frequencies are known as Ultra High Frequency (UHF).

Common uses for VHF are FM radio broadcast at 88 – 108 MHz and television broadcast (together with UHF). VHF is also commonly used for terrestrial navigation systems (VOR[29] in particular), Marine Communication, and aircraft communications.

Figure 27   Network coverage of VHF Band III for Germany, Sep. 2006

Figure 27 shows 95% coverage for Germany. Mecklenburg-Vorpommern is currently rather far from having a good VHF Band III network. Schwerin area is the only area with a good coverage.

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[29] VHF Omni-directional Radio Range. It is a type of radio navigation system for aircraft.

6.1.2   Digital Video Broadcasting – Terrestrial[30]

DVB-T is the DVB European consortium standard for the broadcast transmission of digital terrestrial television. This system transmits a compressed digital audio/video stream.
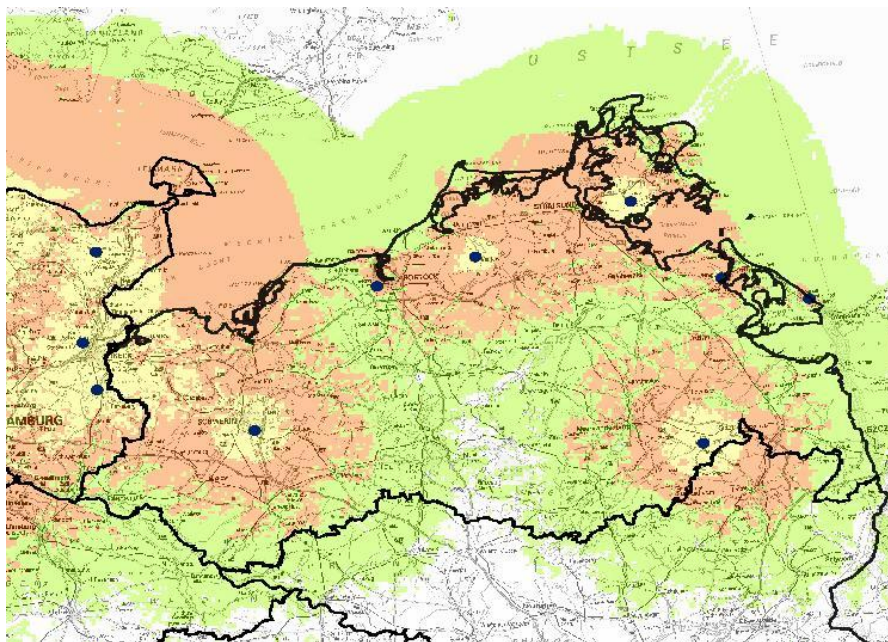
Figure 28   DVB-T reception network in M-V as of July 2006[31]

The green areas indicate the reception with room antenna, the pink areas the reception with outdoor antenna, the green areas the reception with roof antenna, and the white areas, the lack of reception.

In Mecklenburg-Vorpommern around 90% of the population has access to digital television. The reception is mainly made over outdoor and roof antenna. There is hardly any reception in the Müritz area. Mecklenburg-Vorpommern is the fourth contractual state partner of the public-law program NDR, which introduces digital antenna television. At the beginning, there were only 8 public programs in the North-East of Germany offered by the digital television. For the reception of digital television, an additional 'top box' is required, which can be bought for approximately 50 euros (or more).

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[30] http://www.lrz-mv.de/digital/
[31] http://www.dvb-t-nord.de/empfangsgebiete/media/mv_gesamt_zdf.pdf, July 2006.

Analogue terrestrial television is no longer an option in Mecklenburg-Vorpommern. In 2005 a radical change from analogue to digital television took place.

6.1.3 Digital telephone

Over the last several years, the Deutsche Telekom has installed in Mecklenburg-Vorpommern one of the most modern digital telephone and data networks in the world, thereby laying a fundamental building block for a new age of communication. Of the more than 700,000 telephone connections, 105,000 are high-grade ISDN connections and a further 75,000 connections are part of a modern fibre optic system. Above that, Mecklenburg-Vorpommern has an internet backbone which is as good as any in the world. The mobile telephone networks D1, D2, and e-plus have virtually total coverage and are continuously modernized and developed with the future in mind (GPRS, UMTS).

6.1.4 Call Centres

Mecklenburg – Vorpommern offers optimal resources for the establishment of a modern Call Center: qualified employees, high financial incentives, inexpensive real estate and an ultra-modern telecommunications network, among others. Companies active in the field of telecommunications will find the support of the Telemarketing Initiative Mecklenburg-Vorpommern e.V. (www.tmi-mv.de), which was founded in 2001. According to the Initiative, following are some characteristics of the Call Center branch in Mecklenburg-Vorpommern:

- it's a young industry; 36% of the existing companies were created in the past 2 years
- from small (5-10 employees) to big (approx. 1,000 employees), all sizes of Call Centres have established in the region
- 20% are Inbound-Call Centres, 40% are Outbound-Call Centres, and the rest are a mixture (this form is growing fast)
- 1/3 of the companies offer services on Saturdays and Sundays
- 2/3 of the employed people in this branch are part-time workers
- 88% of the workers are female
- 2/3 of the companies intend to hire more personnel
- 25% of the Call Centres offer services in a foreign language

A more detailed analysis of the development of this branch in Mecklenburg-Vorpommern can be obtained by purchasing the "Call Center Industry Research in Mecklenburg-Vorpommern" from the mentioned Initiative.

Figures 29 and 30 describe the development of this branch (provided by the Invest in Mecklenburg-Vorpommern GmbH, former Economic Development Corporation).
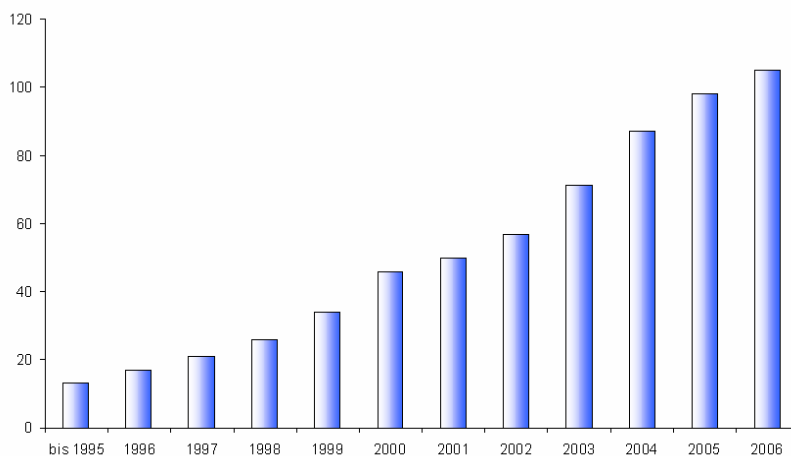

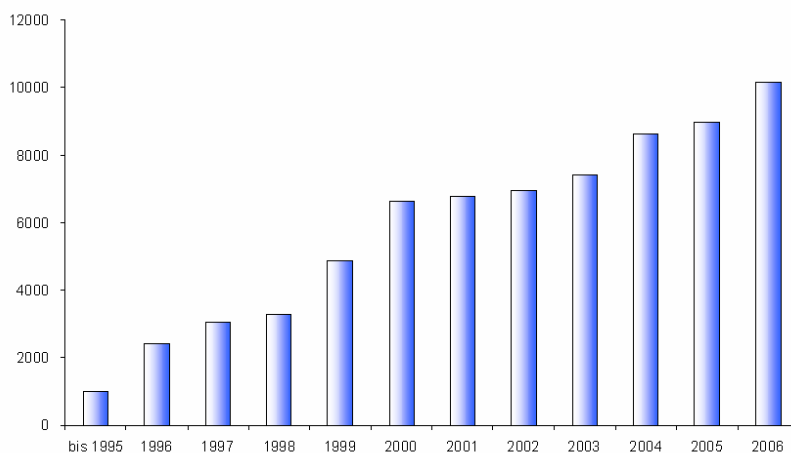Figure 29   Number of call-centres in Mecklenburg-Vorpommern[32]

Figure 30   Number of employees in call-centres in M-V[33]

[32] http://www.gfw-mv.de/de/branchenuebersicht/callcenter/anzahl_callcenter/, January 2008.

6.1.5 Organisations and associations

<u>LiNK MV</u>

This association – in German, *Landesinitiative Neue Kommunikationswege Mecklenburg-Vorpommern e.V.* - consists of representatives from Industry, Professional Trades, Research and Educational Institutions, Scientific Organisations and Economic Institutions.

It aims at the dissemination of new information and communication technologies in the business sector and in the field of education, science and public services.

The association maintains two consulting offices to advise companies in the field of e-Learning, tele-cooperation and IT security as well as to assist them with the application and optimisation of digital communication technologies.

It also offers competence centres for project development and application engineering of entrepreneurial projects that focus on internet technology and workplace oriented multimedia communication.

Target groups include: SME's, new businesses, entrepreneurial institutions, economic institutions, public and educational institutions.

The activities of the association comprise not only public relations, information, consulting and coordinating tasks, but also software development, testing and technical support.

The association gives special attention to projects promoting regional economic development but is also actively involved in European wide business development activities.

http://www.mvlink.de/english/

<u>IT Initiative Mecklenburg-Vorpommern</u>

The Initiative was founded in January 2005 and represents the common interests of the IT industry in the State of Mecklenburg-Vorpommern.

The Initiative is open to all interested parties in matters of support, cooperation and membership.

Among the activities, the Initiative:

- promotes the region as a location for future-oriented companies,
- supports the creation of company networks,
- provides a bundling of the competences of its members,

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[33] http://www.gfw-mv.de/de/branchenuebersicht/callcenter/anzahl_mitarbeiter/, Jan. 2008.

- functions as a coordinating and organizing authority of cross-company projects
- supports the education and training of IT professionals in order to maintain a standard level of knowledge

A list of the actual members can be found under http://www.iti-mv.de/Mitglieder/.

6.2   ICT industry: characteristics

The development and execution of an ICT Survey was another of the main activities conducted during the project life.

The same survey has been conducted in the participating regions around the BSR.

Also here, the obtained results are included in a comparative report, where a cross-regional analysis is done, focusing on differences and similarities between the regions. The cross-regional analysis is presented in a separate report available at the project homepage www.logonbaltic.info.

Following are the results obtained from the ICT Survey conducted in Mecklenburg-Vorpommern.

6.2.1   About the surveyed firms

The general features of the participating companies are the same as for the companies participating in the logistics survey, reflecting again the economic landscape of the region. Some companies participated in both surveys.

78% of the respondents belong to the Senior Management, while 6% belong to the Middle Management. This is not surprising considering that 66% of them are micro companies, 26% are small companies, and the remaining 8% is divided in equal shares among medium and large companies. The higher management level can be expected to have a broader view of the company's actual situation, and a more strategic view on future developments and trends. Since most of the companies are SME's, these managers are usually involved in operational activities of the company, giving them an idea of the daily problems and challenges.

6.2.2   Use of ICT

E-mail and Internet have become important tools in the processing of the daily data. These tools – and ICT in general – have a great impact on the performance and competitiveness of the companies increasing information flows, improving production capacity, reducing transactions costs, and increasing the efficiency of management functions, among others. When the access to Internet and the possession of an company e-mail account was measured, it appeared that in 48% of the companies less than one fourth of their employees have an own company e-mail account; in 16% of the companies, between 26% – 50% of them have, and in 36% of the companies, more than half of the workforce has one.

The figures regarding the access employees have to internet are very similar.

These low numbers are directly related to the size of the companies. Since most of the companies in the region are micro or small companies – mainly shops, stores, consulting firms, etc - where one computer or terminal is more than enough to manage the business activities, it sounds reasonable to assume that there is no need for every employee to have a computer.
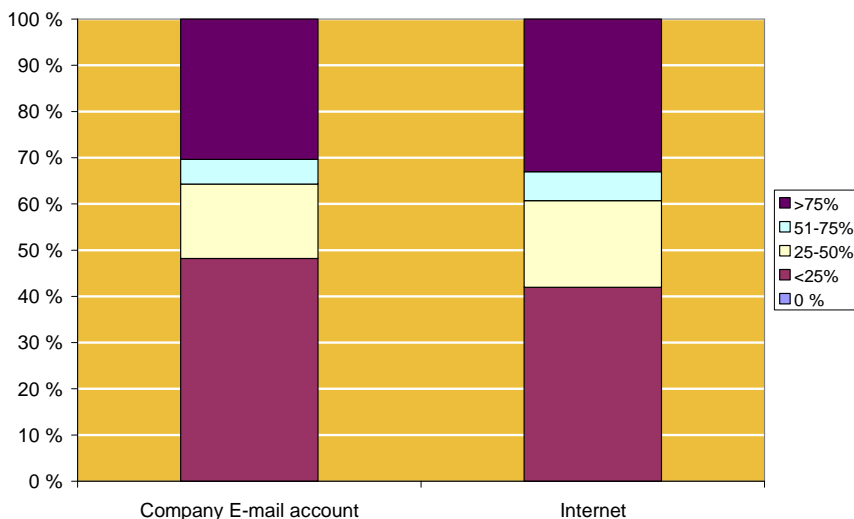
Figure 31   Employee's access to Internet and E-mail

The respondents were also asked to specify in which business areas of their companies ICT are implemented.

With 86%, Accountancy is the area where most of the companies implement some type of information technology, and further 7% are planning to use ICT in this area in the near future.

In second place we find Marketing & Sales with 67% of the companies implementing ICT in this area, and 17% more who are planning to use ICT in this area in the near future.

In third and fourth place are the areas of Sourcing & Supply and Logistics & Stock keeping. Somewhat behind are the other defined areas, such as Production Planning, Production, Finance, Human Resources.

With only 28% of the companies actually using or planning to use some type of technology, the area of Human Resources is lagging behind. This seems logical if we consider that it is not necessary to have complex systems to administer the personnel of small companies (the majority in Mecklenburg-Vorpommern). A simple calculation sheet – if even necessary – is probably enough.

The low percentages for the areas of Production and Production Planning are explained by the fact that there are only a few bigger industrial companies in the region which could use ICT intensively in these areas.
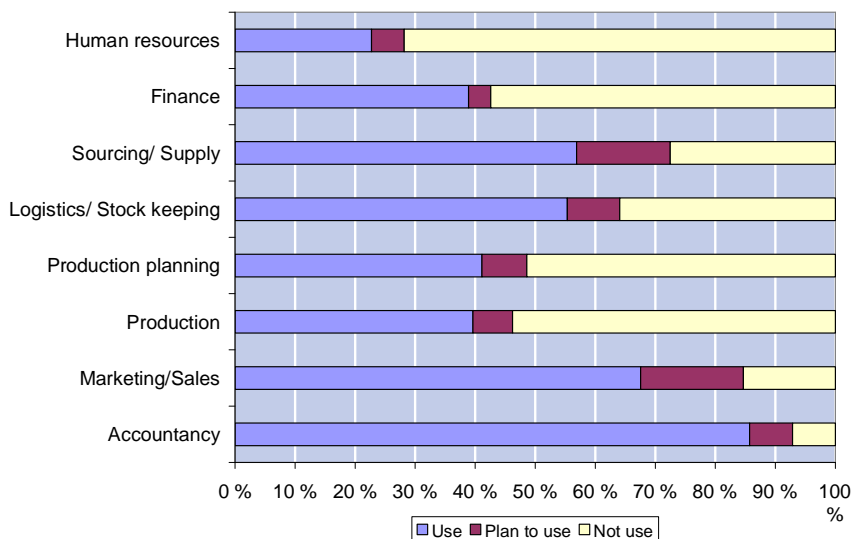
Figure 32   Business areas in which ICT is implemented

An estimation of the companies IT expenses in 2005 for personnel, software and hardware in relation to their turnover is shown in the figure below.

As expected from small companies, very few do not have any software or hardware expenses at all. The bakery, the flower shop, the coffee shop, or even the attorney and accountant, all of them use a personal computer or need a cash register to do their business. That explains why relatively many companies spend only up to 2.5% of their turnover to acquire some sort of hardware (46%) and/or software (58%).

It also seems logical to assume that the companies will spend more money for hardware than for software, because in some cases, the complexity of the business does not require sophisticated software; the standard software packages included in the installation of a personal computer are enough to run the business.

The fact that so many small companies consist only of their owners – and maybe a few employees – explains why at least more than a fourth of them don't have any IT-personnel expenses at all, because the owner or any of the employees has the required skills to administer the elementary systems. Maybe these companies will occasionally need some advice from an IT consultant, whose services they will have to hire.
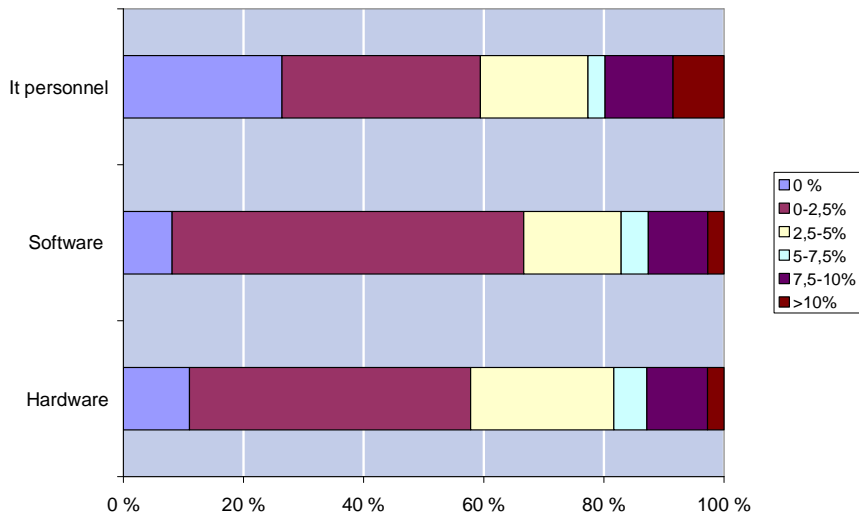
Figure 33   ICT expenses as a percentage of the company's turnover

The perceptions regarding the future development (next three years) of the analyzed ICT costs reveals that nearly half of the respondents thought that the expenses for IT personnel, software and hardware will definitely increase. Only around 5% believed that software and IT

personnel expenses will decrease, while 8% thought the same about the hardware expenses.

Information and network security are increasingly recognised as vital elements for ensuring wide participation in the Information Society. Around 90% of the companies use and regularly update some type of system/information security measures (i.e. password access control, antivirus software or firewall applications) to protect their data.

6.2.3 Use of Internet

High-speed connections are becoming more and more a standard in Germany. Some companies take this into consideration when deciding on establishing a company in certain region. With the "Broadband Initiative" the Federal Government tries to accelerate the use of new technologies.

In Mecklenburg-Vorpommern, 29% of the companies still use a modem for connecting to the Internet, while 70% have a broadband connection.
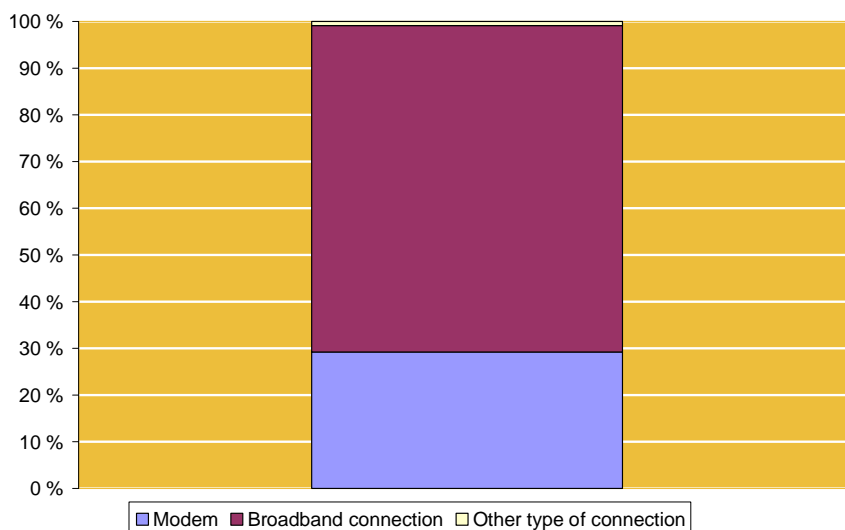
Figure 34   How companies are connected to the Internet

Nearly 68% of the companies in Mecklenburg-Vorpommern have a website. Small companies like for example a bakery, a repair-shop, or a dry-cleaner don't need to have an elaborate Internet presence to attract many customers. Since they are predominantly focused on the

local market, advertisement in local newspapers and mouth-to-mouth marketing is the best methods they have to market their products/services or attract clients.

Among the companies with Internet presence, more than half have the basic features on their websites: information about the company, about their products/services, and some type of contact possibility.
Only about 12% use their website for online job applications.
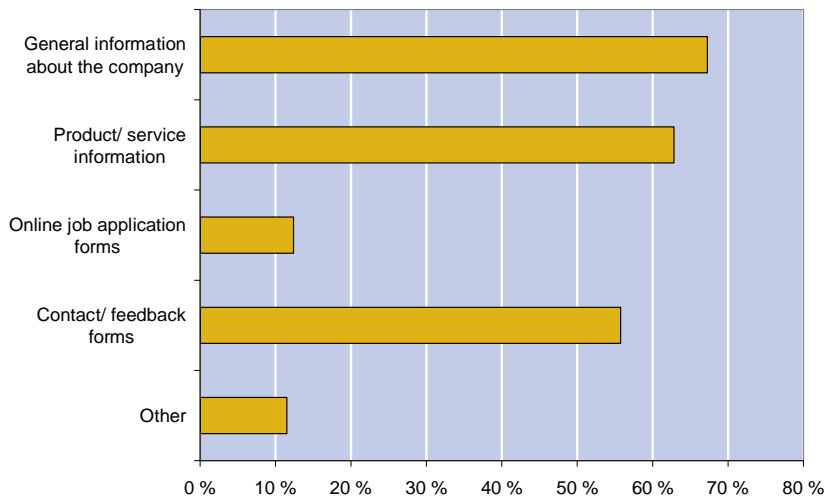
Figure 35   Main features the company websites include

Not only do the companies use their website to interact with their clients and/or suppliers. National, local, or municipal authorities also provide different options for interacting with the users.
Nearly 47% use Internet for online payments to governmental organisations; 35% of the companies use the Internet for downloading or requesting forms, while another 35% use it for completing and sending forms. About 20% of the companies don't use the Internet at all to interact with public authorities.
61% of the companies have an external IT provider who designed and administers the company's website; 45% have an own IT department (or employee) who takes care of the website.
In some few cases, the companies divided these responsibilities: they had outsourced the design of the website, while their IT-department/employee is responsible for the administration of the website.

6.2.4   E-commerce and E-business

Electronic commerce is a part of the wider process of digitization of the economy, and a major business innovation. It has the potential to affect user's behaviour, business processes and the socio-economic system. E-commerce via the Internet is quite widespread in the BSR, especially in the Nordic countries and in Germany.

In Mecklenburg-Vorpommern the companies are aware of the increasing importance of e-business in everyday business. The big majority agrees with the fact that it helps them improve competitiveness.

Approximately 70% allege that it has a major impact on their profitability and that it helps simplify transactions, while 65% believe it gives the company a competitive advantage.

A little bit less than 60% say that e-commerce helps the companies reach new customers and also improve the companies' customer service quality.

Figure 36   Benefits of e-commerce for the companies

Among some of the activities handled electronically are the order placement for products/services, track & trace of orders, payment, after sales support.

6.3   ICT sector development and outlook

Most of the ICT companies in Mecklenburg-Vorpommern are micro- or small companies.

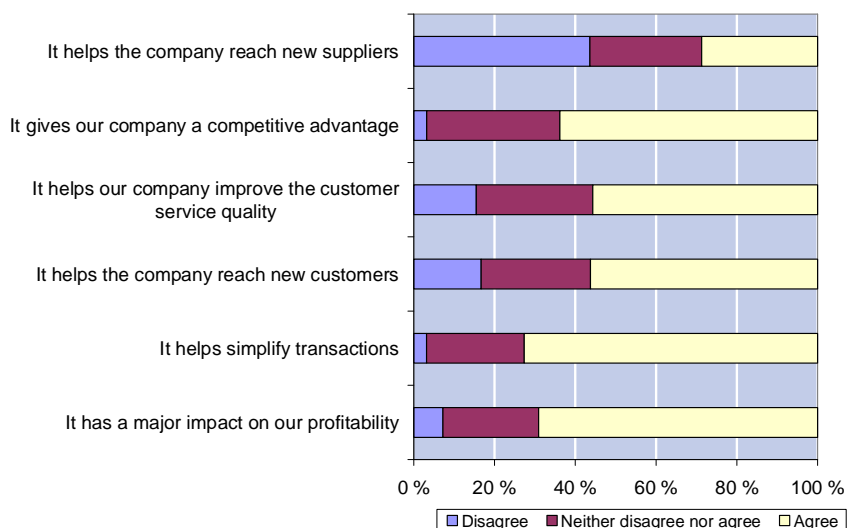Although the State of Mecklenburg-Vorpommern has been improving the regional ICT infrastructure through a variety of investments in state-of-the-art technologies, this is not yet fully exploited. Companies – especially SME's - use their website predominantly for marketing reasons or contact purposes, but not so much for interacting with their business partners.

Concerning e-commerce, it seems like the companies are still getting familiar with the different possibilities to do business over the Internet, but they have recognized that e-commerce: helps them simplify transactions, has an impact on the company's profitability, gives their company a competitive advantage.

The regional strengths of the ICT lie – from the point of view of some interviewed experts – in the existing infrastructure. The technical condition of the telephone network was especially highlighted beside the development of the fibreglass networks and a full digital dialling technology. Some innovative IT service companies already exist in the State. The missing integration of networks and the lack of extensive DSL-connections were considered weaknesses in the State, despite the good ICT infrastructure. So the experts stressed that an improvement of the networks and the DSL-connections for the region is required, laying emphasis on the extensive coverage of quick Internet connections. In particular, the lack of DSL-connections in many parts of the State should be solved in the short term through higher investments.

The networking level into regional IT cluster is not highly developed despite the fact that there is an IT-Initiative Mecklenburg-Vorpommern.

The local IT companies focus their services on the local demand, not enabling a supra-regional development in the field of ICT, making it hard to address supra-regional markets. They should also have a market outside of Mecklenburg-Vorpommern. To enhance the marketing of the regional IT-companies, a stronger integration into customer networks is encouraged.

7   HUMAN KNOWLEDGE BASE

Germany is known for the dual education system, which combines a practical training in a company and a vocational education at a vocational school.

7.1   Professions and their qualifications

The logistics industry is one of the largest industry sectors in Germany, representing a genuine job generator and an engine for growth and innovation.

The 2.1% average growth of the economy between 2001 and 2004, the volume operated in the logistics market (nearly 170 billion euros), the fact that every twelfth German is working in the transport or logistics sector, the high stage of development due to a well developed infrastructure in Germany, the most modern technologies used in the logistics industry, and a calculated 64% growth in the goods transport until the year 2015 in Germany, are only some reasons supporting the preceding statement.

Today, Germany's logistics industry employs more than 2.5 Mio people, a fifth of which are employed in transport and warehousing. Transport alone accounts for about 40% of the German overall logistics market.

Mecklenburg-Vorpommern possesses a wide variety of potential engineers and managers. The growing maritime cluster is particularly attractive to highly qualified specialists. The "Gamma" project[34] unites scientists and engineers from the region in one of the most ambitious European research projects.

Following companies – from the transport & logistics, and ICT industry in Mecklenburg-Vorpommern - were considered among the 100 biggest employers in the region:

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[34] http://www.gamma-project.info/objectives.html, February 2008.

Table 3   Top employers in Mecklenburg-Vorpommern[35]

Name	Domicile	Industry
Deutsche Bahn	Schwerin	Transport
Deutsche Post AG	Neubrandenburg	Service
Deutsche Telekom	Schwerin	Telecommunication
Deutsche Seerederei GmbH	Rostock	Conglomerate
Scandlines AG	Rostock	Ferry
Aker Yards Germany	Wismar	Shipbuilding
AIDA Cruises	Rostock	Cruise company
Volkswerft Stralsund	Stralsund	Shipbuilding
Telegate AG	Neubrandenburg	Call Center
Detlef Hegemann	Wolgast	Shipbuilding
Reederei F. Laeisz	Rostock	Shipping company
Vivento Customer Services	Neubrandenburg	Call Center
Rostocker Straßenbahn AG	Rostock	Passenger transport
SYKES Interprises Support	Pasewalk	Call Center
DBDialog Telefonservice	Schwerin	Call Center
Transcom Europe	Rostock	Call Center
D+S Europe AG	Parchim	Communication Center
Seehafen Rostock	Rostock	Freight forwarding
AVA-Logistik	Zarrentin	Logistics

Although it is not our intention to list all of the existing web sites dealing with job postings in the fields of transport & logistics and ICT in Mecklenburg-Vorpommern, we would like to give a hint on some of them:

- www.mvjob.de, where a specific branch, type of position, or region can be selected
- www.mvweb.de/job

These two web sites are especially designed for jobs in Mecklenburg-Vorpommern.

Besides the well-known web sites like www.monster.de, www.jobpilot.de, www.stellenanzeigen.de, www.jobware.de, www.jobscout24.de, www.stepstone.de, etc.

Another interesting web site - not especially designed for jobs in Mecklenburg-Vorpommern – is www.meinestadt.de. Once on the homepage, the user is able to choose a region in Germany and look up different things; among those things, job postings in:

- logistics, warehousing & transport, www.meinestadt.de/mecklenburg-vorpommern/jobs/jk/0-15237
- IT and data processing, www.meinestadt.de/mecklenburg-vorpommern/jobs/jk/0-15711

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[35] Ostsee-Zeitung, January 2nd 2007.

Some of the professions required in the fields of logistics and IT in Mecklenburg-Vorpommern[36] are:

- Professional driver
- Forklift operator
- Deliverer
- Warehousing worker/supervisor/manager
- Quality manager
- Railway safety officers
- Electrician
- Forwarding agent
- Dispatcher
- Software developer
- System administrator
- In-house trainer (for specific systems)
- Database administrator
- Developer of web applications
- Development engineer
- E-commerce manager

7.2   Education and training

Location and infrastructure may be essential factors for logistics and IT companies, but productivity and know-how ultimately depends on manpower; the competitive value of a highly skilled workforce can difficultly be compensated by technology.

Due to the fast-growing logistics industry, the skills required of today's logistics professionals often exceed the scope of traditional training schemes.

The vast majority of the German workforce has received practical or vocational training and a large proportion has completed higher education. At the same time, a big number of workers in Germany have at least basic foreign language skills, this being of great advantage to companies with international operations. However, this does not make German workers more expensive than those in other EU countries.

Considering productivity, not only are the unit costs per worker in most segments of the logistics sector in line with the EU25's average, but in fact they are also lower than those in France and the United Kingdom.

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[36] http://www.meinestadt.de/mecklenburg-vorpommern/jobs, February 2008.

Logistics has close traditional links with the region and especially with the city of Rostock, which has been a leader in freight transport for many years. The University of Rostock has a close working relationship with logistics companies and fosters an extensive program of research and development.

95% of the entire labour force has received vocational training or a university education. Universities rich in tradition, research institutes, and technology centres offer innovative and creative partners.

Among the institutes that are also involved in logistics-related research and teaching, we can mention:

- Institute of Transportation & Logistics (www.wiwi.uni-rostock.de/~verkehr/)
- Baltic Institute for Marketing, Traffic and Tourism (www.wiwi.uni-rostock.de/~verkehr/ostseeinstitut.htm)
- Faculty of Production- and Intralogistics (www.lpl-rostock.de)
- Faculty of Factory Systems and Materials Handling (www.fms.uni-rostock.de/ifl)
- Navigation School (www.sf.hs-wismar.de)

There is also the TGS - *Gesellschaft für Strukturentwicklung und Beschäftigung*, founded in 1991 as *TGS Trägergesellschaft Schiffbau*. TGS acted as a holding company of job creation companies for former employees of the shipyards and their suppliers (German Engineering And Shipbuilding Corporation, Rostock). In 2004 the Gesellschaft für Struktur- und Arbeitsmarktentwicklung (GSA) arose from the TGS.

TGS' shareholders are the Employer Association Nordmetall, the Metal Industrial Union as well as the GSA Gesellschaft für Struktur- und Arbeitsmarktentwicklung. The TGS' business areas and projects are based on the shareholder's consensus principle that is practised from the very first and they aim for creating and securing jobs[37].

Currently TGS is active in two business areas. For one thing TGS deals with the "common fund" of the Metal Industrial Union (IG Metall) and the Federal Agency for Specific Tasks Resulting from the German Reunification, Berlin (Bundesanstalt für vereinigungsbedingte Sonderaufgaben, BvS), and for another TGS is implementing the project Labour Market Monitoring within the scope of a project promotion[38].

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[37] http://www.tgs-schwerin.de/index.php?lang=2&idcat=3
[38] http://www.tgs-schwerin.de/index.php?lang=2&idcat=1

Among the institutes that are also involved in ICT-related research and teaching, we can mention:

- School of Electrical Engineering and Computer Science (www.fh-stralsund.de)
- Faculty of Technology, Wismar University (www.hs-wismar.de)

At the same time, short and specialized courses are constantly offered by the different education institutions.

7.3   Development and outlook

The German logistics sector, with approximately 60,000 companies, employs almost 2.5 million people, approximately 8% of the total workforce. According to analysts predictions the logistics-related employment could expand by as much as 20% during the next decade. Will Mecklenburg-Vorpommern also be able to benefit from this trend?

For this to happen, a number of radical measures will have to be undertaken.

According to the experts interviewed for this project, the level of qualifications in the region is considered under average compared to the other regions in the BSR, pointing out an urgent need to catch up with the average level. A closer look at the qualifications at different hierarchical levels of the companies reveals that there is a rather acceptable level of qualification among all levels, but in some cases specific weaknesses appear (i.e. in the strategic area of the middle and upper management).

A concept for continuous training in logistics for the middle management is missing in Mecklenburg-Vorpommern. At the same time, additional training in logistics is considered necessary for the top management, but the lack of time is an obstacle in this area. At the time only a training program in port logistics is available.

As a general obstacle in almost all levels of the companies, the interviewed experts pointed out the underdeveloped language skills and international experience, underlining the fact that the region is not sufficiently prepared for international business. This does not mean that there is only a lack of English knowledge, but also of other languages spoken around the BSR.

The development of new and better opportunities to increase the language skills and the possibility of choosing from a wider spectrum of study possibilities in the fields of IT and - especially –logistics is

regarded as a priority issue for the region. In general, more technical specialists are needed in the region.

8 REGIONAL LOGISTICS AND ICT COMPETENCE

In the following sections, some of the most relevant findings obtained from the logistics survey, the ICT survey project activities regarding logistics and ICT will be summarized.

8.1 Regional key indicators

The annual turnover rate – measured in tons – is one of the many indicators usually used to measure the performance of port logistics. Figure 37 shows annual cargo volumes handled in the ports of Mecklenburg-Vorpommern between 1989 and 2006.

Table 4   Development of cargo volume handled in M-V

Jahr	Rostock	Wismar	Stralsund	Fährhafen Sassnitz	Greifswald	Anklam	Wolgast	Uecker- münde	Rostocker Fracht-und Fischereihafen	Gesamt
1989	20.775.000	3.346.000	1.023.000	3.071.000	-	-	-	-	-	28.215.000
1990	13.316.000	2.998.000	842.000	1.861.000	-	-	-	-	84.600	19.101.600
1991	8.464.000	2.075.000	580.000	1.068.000	535.000	-	142.700	-	221.900	13.086.600
1992	9.881.000	1.925.000	950.000	1.054.000	726.300	278.000	418.000	6.000	247.600	15.485.600
1993	10.165.000	1.681.000	743.000	1.648.000	436.471	149.000	392.000	2.916	379.800	15.597.187
1994	15.849.000	1.690.000	1.013.000	1.715.000	475.970	111.000	409.400	54.300	335.100	21.652.770
1995	17.813.000	1.754.000	989.000	1.769.000	429.000	207.525	456.700	49.314	721.000	24.188.539
1996	19.014.000	1.836.000	831.000	1.647.000	472.000	154.000	456.000	116.000	326.000	24.852.000
1997	18.988.000	1.948.000	707.000	1.674.000	432.000	90.900	530.300	176.000	402.000	24.948.200
1998	18.625.500	1.930.700	672.000	5.880.100	501.800	144.400	778.800	177.500	520.500	29.231.300
1999	21.100.000	2.488.000	580.000	5.846.000	530.000	116.600	770.300	207.500	579.200	32.217.600
2000	22.000.000	2.796.600	873.300	5.378.400	868.300	148.900	745.200	258.400	711.600	33.780.700
2001	20.500.000	2.912.500	885.000	5.400.000	565.000	167.000	1.006.000	204.000	700.000	32.339.500
2002	22.500.000	2.963.000	1.197.000	5.352.500	891.500	142.400	800.250	165.000	695.700	34.707.350
2003	21.600.000	2.900.000	1.300.000	5.270.000	570.600	85.890	607.600	149.000	681.100	33.164.190
2004	21.800.000	3.016.700	1.436.300	5.311.100	445.300	134.400	582.400	179.700	585.800	33.491.700
2005	22.900.000	3.950.000	1.418.000	5.024.000	423.000	209.000	505.000	192.700	686.500	35.308.200
2006	25.300.000	4.100.000	1.431.000	5.030.000	313.000	145.200	462.000	190.000	884.100	37.855.300

In the field of ICT, the Call Center industry is booming. Figure 28 (Chapter 6) clearly shows the rapid growth of these companies in the region during the last years.

8.2   Needs

The needs in the fields of ICT and logistics in the region of Mecklenburg-Vorpommern that are mentioned in this section were extracted from the expert interviews.

According to the expert's testimonies who were interviewed for this project, the development of a logistics strategy for the region should be among the top priorities on the local authorities' agenda. Not only to be able to adjust to the increasing volumes of transported goods – especially in the BSR - but also to strengthen the logistical integration of the different locations in Mecklenburg-Vorpommern.

The development of new and better opportunities to increase the language skills and the possibility of choosing from a wider spectrum of career possibilities in the fields of IT and - especially –logistics is regarded as a priority issue for the region. In general, more technical specialists are needed in the region.

Traffic safety regulations at an EU-level should be implemented uniformly.

Although the experts mentioned the local authorities' openness regarding logistics concerns, their competences in the field of logistics were considered very poor compared to other regions in the BSR and to South Germany.

In connection with the road network, the construction of the Rügen-bridge should be connected with an extension and improvement of the B96 to Sassnitz. Further urgent projects that were mentioned concerning the road infrastructure is the extension and improvement of the A14 and the A241, as well as the B190 and B189.

The experts also demanded a strategic support of the airports in the region.

The experts from Rostock pleaded for further development of the railway in the seaport of Rostock. As a result of the increasing railway cargo volumes – with a current growth rate of 15% and an expected 40% growth rate in the future – experts anticipate cargo handling problems in the Port of Rostock. The increase of the railway-tonnage is a result from the lack of truck-space, expecting in this sense a future shortage of wagons.

The experts asked for a better cooperation among the institutions operating in the interface between logistics and regional development. In this connection, a better coordination of the Planning Associations' tasks and the activities of the economic promotion were mentioned. There was total agreement on the fact that regional development - from

a logistical point of view – is significantly influenced by the availability of space at traffic hubs, and the availability of qualified manpower.

A bigger variety of cultural as well as dwelling conditions are some areas that have to be improved in order to attract qualified workers to the region.

8.3   Regional outlook

One of the major assets of the region is its excellent geographical location in the heart of Europe, with good opportunities for the maritime traffic in the North-Eastern part of the Baltic Sea. Thus, the region can be considered the country's gateway to the Baltic countries and to Scandinavia.

The well developed road and rail network, together with the port infrastructure are considered one of the regions' strength regarding logistics infrastructure, especially the connections from the seaports of Wismar and from Rostock to the hinterland.

The low labour costs and the availability of wide extensions to settle a company – or even an industrial park – are seen as positive, since these same issues are usually a bottleneck in other regions.

In the past years a lot of investments have been taking place in Mecklenburg-Vorpommern. The expanded and modernised traffic network, the modernisation of the ports, and the installation of the state-of-the-art digital network, is a good example of this.

And further measures are taking place or are planned for the future, i.e. the extension and deepening of the navigation channel for overseas traffic in the seaport of Wismar, the construction of a highway connection between the A20 and A14 (North-South) providing direct access to the southern metropolis.

From the expert interviews, following portfolio of strengths and weaknesses can be defined:

Strengths of the region	Weaknesses of the region
- geographical location	- lack of a regional logistics strategy
- good transport and ICT infrastructure	- insufficient qualified workforce
- well developed network of partners around the BSR, due to the participation in several EU projects, and due to the town twinning	- weak language skills and international experience - weak economy compared to other regions in Germany
- availability and prices of real estate	
- low labour costs	

One of the big opportunities the region should take advantage from is the enlargement of the EU. New markets become more accessible.

But on the other hand, this can also develop in a threat, since competition grows stronger. Companies move to regions where the labour cost is cheaper, or even the qualified workforce moves to regions where they consider they will have a better living standard.

The poor diversification of industrial products is a consequence of the low industrial density and the simpleness of the industrial structure, dominated by the agricultural goods, wood, and commodities. But on the other hand, the strong role of agriculture in the region offers a good chance for specialized product development in the area of logistics.

As pointed out before, analysts predict that the logistics-related employment could expand by as much as 20% during the next decade. Will Mecklenburg-Vorpommern also be able to benefit from this growth, and sink the actual unemployment rate? Figure 37 shows the unemployment rates for the different administrative districts in Mecklenburg-Vorpommern.
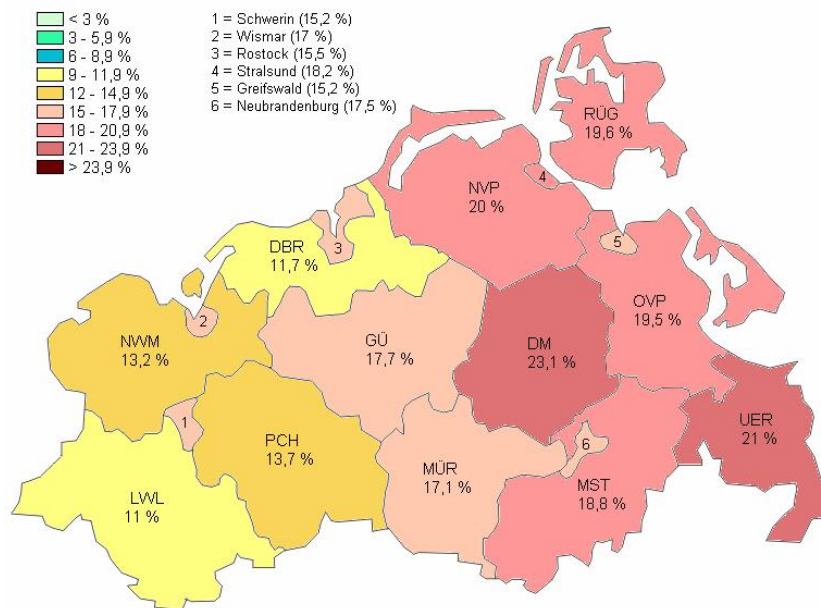
Figure 37   Unemployment rate in Mecklenburg-Vorpommern[39]

   With the reunification of Germany, many people left Eastern Germany seeking for better job possibilities in Western Germany. This massive exodus has originated a shortage of qualified workforce, and the experts believe this situation will increase dramatically in the future.

   In a survey conducted and published by the local newspaper Ostsee Zeitung (December 5th 2006) 70% of the 391 respondents said they would leave Germany in look for better job possibilities.

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[39] http://de.wikipedia.org/wiki/Bild:Arbeitslosenquote_Mecklenburg-Vorpommern_12.07.PNG, February 2008.
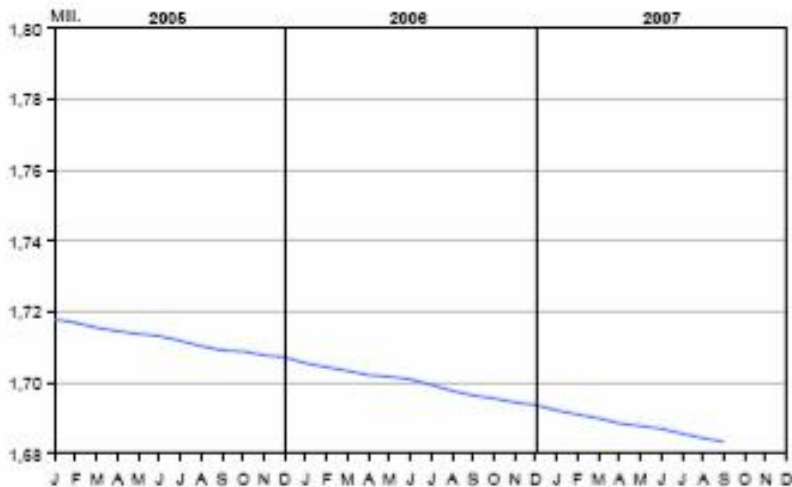
Figure 38   Population and changes[40]

Figure 38 shows an official statistic on how the population in the region has changed during 2007. The trend is not very promising.

The regional authorities are now confronted with the tough task of getting qualified workers and companies - who will add considerable value to the regional economy - back to settle in the region. They have to transform Mecklenburg-Vorpommern into an attractive region.

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[40] http://www.statistik-mv.de/doku/veroeff/zahlenspiegel_aktuell.pdf, February 2008.

9 LOGON BALTIC INITIATIVES

9.1 Regional LogOn Baltic initiatives

The Logistics Initiative Westmecklenburg was constituted as a work group depending from the Chamber of Commerce Schwerin in March 2007, partly, due to the preceding work of the LogOn Baltic Project. At the present, the work group consists of eight logistics companies and twelve public institutions.

One of the first activities of the group was the preparation of a flyer about the logistics initiative to be presented at the Transport Logistic exposition in Munich, during June 2007.

Further measures will be the coordination of an information day for parents and students at a haulage company in Parchim. The goals of this information day are to attract future potential workforce and to improve the image of the haulage sector. Further information days that will take place in other cities will have the purpose of attracting new members – especially logistics companies in the region - for the work group.

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