A Fixed Fehmarn Belt Connection

A new dynamic regional development in Northern Europe

Summary by Christian Wichmann Matthiessen
A new European metropolitan region takes shape

The establishment of new infrastructure leads to changes in mobility and, therefore, changes to the development in society around the new infrastructure. With the fixed links between Zealand and Funen in Denmark and Scania in Sweden, we have seen dramatic changes to traffic development, geographical perception, community, commuting, recreational activities, culture and economy.

The changes have varied greatly between the Storebælt link and the Øresund link: the Storebælt bridge connects two parts of Denmark which were already fully integrated before the bridge came into being, with no administrative, spiritual or cultural barriers between the two parts. The Øresund Bridge, however, created new and immensely more mobility opportunities between Scania and Zealand and between two regional centres of Malmö and Copenhagen. The Øresund Bridge lessened the gap between those areas which were not, by tradition, particularly integrated as well as the distance between two countries, two administrative systems and two cultures. Developments proceeded slowly at the beginning, but accelerated considerably later on and have resulted in major changes to the communities around the link.

With the establishment of the link across the Fehmarnbelt, we will see a third type of development: a link between two countries, two cultures, two languages and two administrative systems that are not closely related. Granted, there are close political, economic and cultural ties, but mobility between Germany and Denmark – and between Sweden and Germany – remains relatively low.

This will change once the fixed link is completed. New opportunities will arise and new relations and new perspectives for economic growth and welfare will emerge.

In order to highlight these opportunities, we initiated this analysis almost 18 months ago in a partnership between Swedish, Danish and German researchers who, based on their individual expertise, have analysed potential new patterns and opportunities for the region. Based on their work, we have extracted a number of recommendations which address decision-makers and other stakeholders in Sweden, Denmark and Germany:

1. We recommend that political and publicly initiated structures are established in the region in order to handle overall planning and prioritisation within the areas of infrastructure, commercial development, research and education as well as information and marketing. The cities will come to play a major role as growth drivers in the future Fehmarnbelt region – and it is recommended, therefore, that the structures to be established comprise the major cities of Copenhagen, Hamburg, Malmö/Lund, Kiel, Lübeck and Rostock. In certain partnership relations, Berlin will also have a natural place.

2. Within the infrastructure area, the construction of new rail track in both Denmark and Germany is an obvious opportunity to establish faster rail links between the region’s centres. The speed on key stretches will also benefit the regional and local centres in between by providing faster regional trains. In the longer term, the link to the European high-speed rail network is a natural pre-condition for participating in the international competition between the European and global growth centres. Fast rail links between Sweden and Northern Germany with Copenhagen Airport in Kastrup as a natural focal point will also ensure that international airlines serve the region. Locally, the Danish and German infrastructure shall be completed by upgraded
motorways and rail links, including the current bottlenecks between Zealand, Falster and Lolland and between Fehmarn and the rest of Germany.

3. The labour market can develop towards much greater integration and flexibility between the three countries. We recommend that a massive effort is directed at analysing and removing barriers and that the information challenges are substantially upgraded. Finally, full and part-time commuting should be encouraged through future price setting for rail and vehicle passage across the Fehmarnbelt link.

4. There are obvious opportunities throughout the Fehmarnbelt region to create strong groupings within a number of growth areas which are well represented in Scania, Zealand and Northern Germany: life sciences, food, IT (with the media industry as part of this), logistics, green tech, materials research and tourism. We recommend that, in terms of organisation, the starting point in the construction of platforms takes as model the Øresund Science Region where research, public and private sectors meet with a view to promoting research, development and marketing. In a partnership between the parties, an economically strong organisation should be set up to undertake this important co-ordinating role.

5. Within the scientific world, there are corresponding strengths – and complementary functions in the region - which should be further developed. The report lists a number of strength positions which cover the entire region, but also a number of complementary functions where, in most instances, there is a need to extend beyond the narrow regional framework to achieve the best possible synergies. It is recommended, therefore, that an inter-state analysis is set up to elucidate the opportunities for stronger research and educational partnerships between the universities and colleges in Sweden, Denmark and Germany.

6. Culture can play a decisive role in an integration process. The cultural ties between the Scandinavian countries and Germany have historically been strong and German culture has impacted on large parts of European development. In the creation of a new regional identity, the meeting between people is one of the most important tools. Meetings between people engender follow-up activities, which ultimately means that community investment in infrastructure is optimally utilised. In the longer term, we will identify the opportunities for strengthening regional cultural ties, but at the initial stage we do not recommend any substantial regional construction within the cultural area. We recommend, however, that new focussed partnerships are attempted within certain specific activities.

7. We should already begin to update the knowledge Danes, Germans and Swedes have about each other. The level of knowledge about the qualities and skills within research, business life and tourism is low throughout the region. Indeed, the knowledge of Danes and Swedes about Northern Germany in general and about Hamburg in particular is low. We recommend that a range of information and marketing activities as well as activities directed at tourism within the region are set in motion in order to raise awareness levels and thus boost contact interfaces between the population of the Fehmarnbelt region.

We hope that this project will inspire those who are working on, or engaging in, developments around the forthcoming Fehmarnbelt link. It has not been our intention to provide ready-made solutions or present ultimatums. We have, however, endeavoured to define some of the pieces
which – fitted together in different ways – may lead to different developments for the populations of Southern Sweden, Eastern Denmark and Northern Germany over the years ahead.

June 2010

Christian Wichmann Matthiessen
Copenhagen University

Jacob Vestergaard
Femern A/S
The fixed Fehmarnbelt link:
A new dynamic regional development in Northern Europe

Summary of analysis
Christian Wichmann Matthiessen

Table of Contents

Three perspectives within regional development ............................................................... 6
A new growth regime around Fehmarn .............................................................................. 9
Regional boundary: the Fehmarnbelt region ...................................................................... 9
Facts about the region ....................................................................................................... 11
Divided systems: Integration perspectives for infrastructure ........................................... 13
Logistics ........................................................................................................................... 13
A new European metropolitan region on the drawing board ............................................ 15
The property market: the near areas ................................................................................. 18
Labour market: Potential integration ................................................................................ 18
Mobility: new commuter flows ......................................................................................... 20
Strong business clusters: opportunities for partnerships ................................................ 23
The world of science: new axis based on positions of strength ........................................ 25
The cultural sector: interaction perspectives .................................................................... 27
Youth: same values but ignorance about neighbouring countries .................................... 28
The Fehmarnbelt Region analysis in brief ........................................................................ 31
Three perspectives within regional development
The basic analysis model is outlined in two simple diagrams where the upper one shows the current situation while the lower one shows the potential interaction following the commissioning of a fixed link across the Fehmarnbelt.

Figure 1 - Simple model of activities and interaction – current situation in the Fehmarnbelt region
Basically, there are three different perspectives within regional development. The first comprises the interaction between the major heavy centres, i.e. between Copenhagen-Malmö-Lund – hereafter called the Øresund City – on the one side and especially Hamburg, but also Kiel, Lübeck and Rostock on the other. Within this perspective, there are almost exclusively potential gains. The second perspective comprises those parts of the region that are close to the Fehmarnbelt. Here it is not only about potential winners, but also realising that once the fixed link is completed, jobs linked to the ferries and crossings will disappear, and that construction work will cease at the same time. The third perspective encompasses the other ferry towns, which will experience new tough competition.

The major cities will see new growth potential. First and foremost, this will apply to the Øresund City and Hamburg and secondly to Kiel, Lübeck and Rostock which, however, will see some negative development potential in that ferry services in these towns will be exposed to strong competition. The major cities will also see a strengthening of their cross point function, which will make them more attractive as location targets for a wide range of companies. They themselves will be occupied by strengthening the interaction within areas that create new value by exploiting both the complementary opportunities and supplementing each other’s activities. They will be better positioned within the international competition between major cities. Moreover, the construction of the fixed Fehmarnbelt link will provide huge opportunities for linking the Øresund City and the heavy Scandinavian centres to the network of high-speed trains that are increasingly set to become the backbone of Europe’s public transport system. These opportunities are too good to miss and the Øresund City, which is basically an international service centre and networking city, will lose ground if this
link to the traffic system, does not materialise. High-speed trains will also contribute to
growth in and around the cities that have stations.

Those areas (Lolland-Falster, the North Eastern part of Schleswig-Holstein) which border the
future fixed link, can expect job losses when the link opens and the ferry services cease
operating. This is unavoidable, but it could mean that these areas mobilise or require new
localisation of government assets. This was, for instance, the case with Korsør’s success in
connection with the construction of the Storebælt Bridge. However, there are also other gains
to be had. The property market will respond to more efficient traffic connections and to the
fact that access to major cities in the neighbouring country will be much faster and more
convenient. The areas that border the fixed link will become “genuine” border regions with
neighbours in another country within daily reach and commuting areas to the centres
expanded. Differences in property prices will not, to the same extent as has been seen around
Øresund, promote border commuting although the new role as a hinterland for Copenhagen
and Hamburg, Lübeck and Kiel will create new opportunities for what is today regarded as
peripheral areas in Lolland Falster and East Holstein. Similarly, the tourist market and the
market for border localisation will react to the new-found accessibility. This also means
significantly more realistic efforts within the EU’s range of border regional policies.

![Traffic development across the three straits that separate the Zealandian island group from the rest of
the world. The figures in the diagram show traffic across the whole section. With regard to Storebælt, this
means from Sjælland’s Odde to Tårs towards Jutland and Funen. The Øresund statistics comprise traffic
from Elsinore – Helsingborg to Dragør – Limhamn. The statistics for Fehmarnbelt traffic include those
between Rodbyhavn and Gedser to Northern Germany.](image)

**Figure 3** - Traffic development across the three straits that separate the Zealandian island group from the rest of
the world. The figures in the diagram show traffic across the whole section. With regard to Storebælt, this
means from Sjælland’s Odde to Tårs towards Jutland and Funen. The Øresund statistics comprise traffic from Elsinore –
Helsingborg to Dragør – Limhamn. The statistics for Fehmarnbelt traffic include those between Rodbyhavn and
Gedser to Northern Germany.
A new growth regime around Fehmarn
What strikes you when you look at the diagram in figure 1 is the traffic jumps following the opening of the fixed links. The traffic jump was significant after the opening of Storebælt and developments subsequently entailed a new lasting growth regime. The reason was that a number of networks had already been established and were waiting to be employed in new and more value creating ways. Family ties were national, companies had Denmark as their market and the public sector, institutions and organisations were organised on a nationwide basis. What was needed was simply to change the logistics and localisation patterns.

There was also a traffic jump following the opening of the Øresund link, but this took longer because there was no existing, well developed network to build on. Rather, developments following the Øresund Fixed Link can be described as entirely new growth conditions where all localisation decisions were taken when the fixed link became a reality, when logistics acquired new development opportunities and when new economies of scale were added to the agenda with their starting point in an overall Danish/Swedish metropolitan region.

The question is now how the traffic picture at Fehmarnbelt will change. This publication is intended to respond to this question. We do not doubt that changes will occur and that the fixed Fehmarnbelt link will result in a traffic jump and new growth potential. We believe that in the short-term, this will be less dramatic than it was following the two other mega projects (the Storebælt and Øresund links) because there are no well established networks across the Fehmarnbelt or heavy centres near the future fixed link. By contrast, we believe that the project will create a new lasting growth regime based on its considerable value creating potential, particularly brought about by the establishment of new networks.

Regional boundary: the Fehmarnbelt region
For the purpose of this report, we have used different borders of the region based on the themes we are aiming to clarify. The boundary used when we present statistical facts corresponds to the STRING partnership’s Fehmarnbelt region plus the North-Western part of Mecklenburg Vorpommern which will also be directly affected by the fixed link; see figure 4. In other parts of the book, Zealand and the islands, Scania, Schleswig-Holstein and Hamburg are included. In the analysis of major cities we have employed a more comprehensive perspective; by analysing local interaction near the future fixed link, we have only looked at those parts of the region that will be directly affected.
Figure 4 - Municipality level (Denmark and Sweden) and district level (in Germany)

The Fehmarnbelt region extends across three Länder in Northern Germany, the eastern part of Denmark and Scania in Southern Sweden. The region can be defined on the basis of several sub-regional levels. First, the three countries, which form part of the region, can be compared followed by the regions in Denmark and Sweden and the länder in Germany. The regions and the länder can further be divided into municipalities in Denmark and Sweden and districts (Kreise) in Germany.
**Facts about the region**
The overall Fehmarnbelt region covers many differences both between the three countries, of which the region is part, as well as between the different provinces within the borders of the three countries.

![Figure 5 - Population of the Fehmarn region (2008)](image)

**Source:** Statistics Denmark, Statistics Sweden and Federal Statistical Office of Germany.

**Note:** Dots have been randomly inserted inside the polygons and do not indicate where people live within the municipalities/districts.

The region comprises 9.3 million people with 1.2 million in the Swedish part, 2.5 million in the Danish part and 5.6 million in the German part (only including the North-Western part of Mecklenburg-Vorpommern and the other STRING partners). In the Danish and Swedish parts of the region, the younger age groups constitute a larger proportion of the population compared to the German part. According to population forecasts, this trend will become stronger in the future whereas the German population will age.

There are several universities and higher education institutions in the Fehmarnbelt region. Most of the student population is concentrated in and around the university cities, primarily Hamburg, Copenhagen and Malmö/Lund.
Economically, three are major differences within the region’s borders, see figure 6. Characteristic for all three countries is that the major city areas and their hinterlands have the highest per capita gross national product. This applies particularly to Hamburg, Copenhagen and Malmö/Lund. The more rural areas of Northern Germany and Scania have the lowest gross national product per capita in the region. The same trend applies in terms of the unemployment figures. Here again, the major cities and their surrounding areas have the lowest unemployment. In addition, there are differences between the three countries. In the Danish part of the region, unemployment is generally very low compared to the German and Swedish parts.

By far the majority of the region’s inhabitants are employed within the service and information sectors with only a small proportion working in agriculture or the manufacturing sectors. Employment within the manufacturing sector has been declining since 1996 in largely all provinces in the region. Hamburg and Copenhagen are the two financial centres in the Fehmarnbelt region. In these two cities, the largest proportion of the workforce is employed within the financial and business service-oriented sectors. Also, in other larger cities in the region such as Kiel, Lübeck, Rostock and Malmö, a significant number of people are employed in the financial sector compared to the rest of the region.

Tourism is economically important for the Fehmarnbelt region and is especially concentrated around the coastal areas in Northern Germany. In 2008, there were 24.8 million overnight stays in the coastal areas of Northern Germany. With regard to the Danish and Swedish parts of the region, the number of overnight stays was somewhat lower. In the Danish part of the region, overnight stays are mainly centred in and around Copenhagen. In Lolland, however, there are also a relatively large number of overnight stays compared to the rest of the region.
Zealandian island group. In Scania, tourists mainly choose to overnight in Malmö and Helsingborg.

Commuting statistics reveal that the region’s workforce is mobile. This is especially the case in the major cities which attract commuters from the surrounding areas. 105,601 individuals commute to Hamburg and its vicinity from areas in Northern Germany. By far the majority, 40%, come from the Lübeck area in Schleswig-Holstein. In the Danish and Swedish parts of the region, Copenhagen and adjoining areas attract most of the commuting from the surrounding areas, i.e. 66,500 commuters. 74% of regional commuters into the metropolitan area of Copenhagen come from Region Zealand with 26% from Scania. The many commuters from Scania to Copenhagen are largely a result of the increased integration between Denmark and Sweden that followed in the wake of the opening of the Øresund Bridge in 2000.

**Divided systems: Integration perspectives for infrastructure**

In the Fehmarnbelt Region, there are two borders which, at one and the same time, act as dividing lines and as location factors for infrastructure, traffic and logistics. Compared to the purely regional traffic, traffic across Fehmarnbelt is weak and cross-border traffic consists of ferry services with one important exception: the Øresund Bridge. At the same time, the ferry terminals and the bridge are crucial focal points for the entire area's overall infrastructure concept.

In terms of logistics, the Øresund Bridge has clearly changed Southern Scandinavia's structure. Copenhagen Airport is Denmark's leading centre and since the opening of the Øresund Bridge in 2000, Scania's, too. Land traffic across the Øresund Bridge reflects the increasing integration of Greater Copenhagen-Malmö-Lund. Due to the short and frequent ferry services between Helsingborg and Elsinore, this border-area is also displaying some signs of integration. The Fehmarnbelt currently shows no evidence of developing cross-border systems except within some retail areas driven by price differentials.

**Logistics**

The network position of the two major conurbations within the Fehmarnbelt Region - Copenhagen and Hamburg - has been subject to an analysis in relation to two important, international networks.

International aviation traffic indicates potential accessibility for a flow of people and high value cargo and the internet indicates a potential immaterial accessibility for the cities in question.

Do the Region Fehmarnbelt metropolises present themselves as strong centres in the dominating flows of the modern world. Copenhagen is an important centre with flight connections to cities on four continents and a strong European network while Hamburg is served by relatively few international flights and has a modest European network. Compared to other European cities, Copenhagen performs well within key areas in the internet network compared to other European cities. Hamburg is also a central hub, but not as important as Copenhagen.

The Fehmarnbelt link and the Øresund Bridge will bring Schleswig-Holstein and Hamburg closer to the Øresund regional market. Perhaps even more importantly, they will create a direct portal for the entire Scandinavian market and a market of some 20 million inhabitants.
(Sweden, Denmark and Norway) with significant purchasing power and will result in a strengthening of the logistical centre of gravity in Northern Germany.

Since Hamburg is already a strong European logistics region, there is no risk that the city will lose this position to the Øresund Region. By contrast, direct accessibility to the Øresund Region and the Scandinavian market can contribute to Hamburg and Schleswig-Holstein strengthening their position vis-à-vis competing regions and a certain shift from, for instance, Luxembourg, Belgium and Holland upwards towards Schleswig-Holstein and Hamburg may occur.

In the same way, the fixed link across Fehmarnbelt will mean that the Øresund Region will strengthen its position as a Scandinavian hub for logistic activities. Direct accessibility to the German market will mean that within a transport radius of a couple of hours, a market of more than 10 million people can be reached. This will be a position of strength for the Øresund Region which may attract more companies from, for instance, Central Sweden.

As a consequence, the Fehmarnbelt link will first and foremost mean that Schleswig-Holstein, Hamburg and the Øresund Region will strengthen their position in each their own way. As a result, we will not see the direct transfer of logistic activities across the Fehmarnbelt. Instead, logistics companies will be able to benefit from the opportunities offered by the link. In the longer-term, differences in transport prices, accessibility in infrastructure, bottlenecks and labour costs may mean that we will see a transfer of activities from one side of Fehmarnbelt to the other.

By stimulating developments in various ways, including through co-ordinated communication and marketing across national borders, the Øresund Region, Schleswig-Holstein and Hamburg will quickly gain advantages after the opening of the link.

As logistic services become ever more advanced, this sector will also become increasingly knowledge heavy. With increased focus on e.g. traceability, improved security, “Green” logistics solutions and postponement activities, the companies’ interest in establishing close partnerships with universities and scientific institutions will grow. Access to well-qualified employees will thus become important for creating a competitive logistics concept for the future. In Hamburg, Schleswig-Holstein and the surrounding German regions, there are several research and educational institutions which work with logistic-related issues. Since the late 1990s, the Øresund Region has benefited from border regional partnerships between the region’s nine universities. Out of the nine universities, there are currently logistics-related training programmes and research at five universities. Together with Schleswig-Holstein and the Hamburg region, the Øresund Region can create a large knowledge centre for the research and development of logistics systems of the future. A knowledge centre which could become an internationally leading institution while at the same time supporting the region’s logistics chains.
A new European metropolitan region on the drawing board

The Fehmarnbelt region’s urban system is structured with a number of large heavy centres within and outside the region as important nodes (co-ordinating network centres). The Øresund City and Hamburg are crucial for the region’s function, activity level, prosperity and future prospects. Without these cities, the region would not have an international format. These two cities, however, are not alone as high level centres. Berlin, Frankfurt and Stockholm also play significant roles in the region, Berlin as Germany’s capital and a so far failed bid to establish itself in the elite of world cities. Frankfurt and Stockholm are in a class that Berlin aspires to. Frankfurt has a dominating role within Europe’s financial world, which in other major nations is located in the capital. In addition, the city is one of the world’s large intercontinental airport centres. Stockholm occupies a significant role in terms of large international business groups as well as being Sweden’s capital, but is nevertheless more isolated in respect of global integration than the other heavy centres.

Within a European perspective, the Øresund City is small measured in terms of population, but large in economic strength, access to international networks and scientific output. Hamburg is also relatively small measured in terms of population, but has significant economic strength. The city is strong position in terms of access to international networks (except air), but is not on the same level as the other three metropolises on scientific output. Berlin is different, i.e. with a larger population, but with weaker economic impact and poor links to international networks. By contrast, the city has a strong position with regard to scientific production. Finally, Stockholm has a relatively small population and significant economic power while having relatively poor access to international networks. The city, however, is strong in terms of scientific output. The four metropolises each dominate their hinterland and compete directly with each other in respect of customer-related service businesses, cultural offerings, access to terminals and use of business-to-business services.
The way in which the general international business to business service networks function shows notable patterns. We have used the Taylor Group’s analysis of the cities’ roles, see figure 7. The strongest role is that of London, which is Europe’s real world city. Further down in the city hierarchy is Paris, the Amsterdam region, Brussels and Frankfurt. The cities interact in cliques or groupings where they have mutual interaction patterns and interaction patterns with the rest of the world, which are uniform. The individual city may participate in several groupings. Between them, the Danish, Swedish and German cities do not demonstrate any particular degree of mutual cohesion but are part of different cliques of cities, some of them together, others on their own. In the outer Europe band, Copenhagen plays a leading role. However, Stockholm and a number of other cities also contribute. Another band is Germany – Eastern Europe and here you find Berlin and Hamburg among the key players. Moreover, it is interesting to note that, with the exception of Frankfurt, no cities from Denmark, Sweden or Germany rank among the continent’s strongest groupings.

Interaction is always an expression of added value. As a result, it makes sense to examine new opportunities and what these analyses can be used for. The view is that if stronger links
between Copenhagen and Berlin and then Stockholm and Hamburg could be created, a North European band could result, i.e. a network of mutually strongly linked cities with uniform partnership relations with the rest of the world. Such a band could claim a position at a higher level within the continent’s city hierarchy and thus contribute to development, growth and wealth.

The city system within and close to the Fehmarnbelt region includes a number of other centres. There are other large cities of which some with larger or smaller justification claim metropolis status. Three large German cities are found on a somewhat lower level in the city hierarchy, i.e. the specialised centres Braunschweig–Wolfsburg, Hannover and Bremen which are overshadowed by Hamburg but nevertheless play strong independent roles as industrial centres, meeting places and gateway cities.

The region’s city system is also structured by a number of other large cities that play the role of regional centres with a strong concentration of hinterland-oriented public service companies. Most of these cities have a university, some have a gateway function and all have considerable business niches. As part of the picture, there are also 14 medium-sized cities in the Fehmarnbelt region whose roles are mainly local ones although a few like some of the larger centres function as a supplement to, and interact with, the larger gateway cities.
The property market: the near areas
The most established method for estimating the effects of differentiated accessibility on land values is hedonic price calculation. This type of method can be used to estimate the effect of different transport options on residential property prices.

As part of the project, we have estimated the impact of accessibility on house prices. Our estimates confirm that a fixed link will have a substantial and statistically significant positive impact on house prices. These estimates do not take other future dynamic changes into account, such as new property developments or new commuter trends. An eight per cent increase in the price of the average house on the German side corresponds to an absolute increase in 2009 prices of €16,000. The estimates for the Danish side are somewhat more uncertain, but could be expected to fall within the same range. Using data for housing markets in municipalities with high-speed train links shows an overall increase in residential property values of €1.6 billion on the German side of the Fehmarnbelt. The total increase for the local housing markets on the Danish side would amount to at least €1.4 billion if the German estimates are extrapolated to the Danish side of the link. The total minimum increase - assuming high speed rail service links - thus amounts to €3 billion in 2009 prices (providing the economic structure in Denmark and Germany remains unchanged.

We assume, therefore, that the improved infrastructure in the areas near the fixed Fehmarnbelt link will result in relocations from Greater Copenhagen to the Danish areas near the link and similarly, relocations from Hamburg to the North German areas near the link.

Labour market: Potential integration
The benefits of a cross-border region with significant labour mobility between the two sides stem from the fact that commuters themselves contribute to reducing border barriers and promote social cohesion across the whole of the region. Moreover, such cross-border regions profit from the economic benefits of a large and diverse labour market.

Barriers to mobility in cross-border regions are created by geographical distance and other impediments to travel between two countries: administrative barriers, different labour market conditions, qualification barriers and other barriers in the daily lives of the populations of these regions. Furthermore, information about the conditions on the other side is often fragmented. Strategies and measures aimed at reducing border barriers are based upon two principles: (a) solving problems such as harmonisation of regulations through bilateral agreements, and (b) information and consulting. Strategic success also depends on the learning process of the labour force and the consultants.

Cross-border labour mobility comes from differences between the two border regions. These provide an incentive for people to move to the neighboring region. If the conditions on both sides were more or less the same, there would be no incentive to cross the border. However, if the incentives are sufficiently strong, the barriers can easily be overcome. So, there is a tension between barriers and incentives. The third component is the market’s level of information concerning these two factors. On the one hand, the right level of information will raise awareness of the benefits of labour mobility and on the other it reduces the constraints on cross-border mobility.

For most of the mobility barriers, an ongoing process of reduction is likely, either through agreements and regulations, sharing experiences, learning processes or by information and
advisory services. However, the reduction proceeds at different speeds for different barriers. In the long-run, the most important challenges will be language barriers, acceptance of qualifications and some psychological barriers.

For some established cross-border regions with a long tradition for cooperation and often substantial numbers of commuters, we have analysed current cross-border mobility, barriers and incentives as well as the information and advice provided to the labour force in relation to their relevance to the future of the Fehmarnbelt Region. Within the selected regions, the consultation structure of institutions, advisory bodies and internet services frequently consists of an Infocentre, which helps to overcome the many barriers, complemented by institutions responsible for dealing with specific problems. In addition, there is labour market advice tailored to cross-border issues and supplied by consultants.

At the Danish-German land border, commuter traffic from south to north has increased considerably in the past year whereas traffic in the opposite direction has stagnated at a low level. This asymmetric trend developed during the 1990s when labour market conditions on the Danish side improved considerably and unemployment rates began to fall below those of Germany. Particularly in recent years, the incentives inherent in the Danish labour market have been the main driver for cross-border mobility. In keeping with increasing cross-border commuting, a broad consultancy structure for the mobile labour force has been established around the Info Centre in Padborg. With its qualities and experience, but with some deficiencies, the consultancy structure can be a prototype or a case story upon which similar structures at Fehmarnbelt could be established. Some additional elements would, however, have to be organised or located differently.

For the region around the Fehmarnbelt, the Øresund Region is not especially relevant as a prototype. First, the spatial structure differs between the two regions, especially around the border areas. Furthermore, the incentives for cross-border mobility driven by price differences for properties and houses, which are a strong factor in commuting from the Swedish to the Danish side of the Øresund, do not exist in 2010 around the Fehmarnbelt. Moreover, the attractiveness of a large and diverse labour market close to the border (which is part of the Øresund Region’s character), is lacking around the Fehmarnbelt. At the same time, the information and consulting structure at Øresund provides a large number of suggestions for building similar structures around Fehmarnbelt. In particular, the info service “Øresunddirekt“ (an internet service and information centre) that serves as a platform for knowledge about the labour market on both sides of Øresund could serve as a model.

Despite the strong incentives for labour mobility to the North of Zealand, the minor language barriers and a good consulting structure, the number of commuters crossing Øresund from Sweden lags significantly behind those heading towards Denmark’s capital from the Danish hinterland. This also applies to the prototype for all European border regions, the German-Dutch EUREGIO, although the consulting services and strategies aimed at removing barriers have existed for many years. Even EUREGIO, therefore, is a far cry from being a fully integrated labour market with strong bi-directional mobility.

In the region surrounding Fehmarnbelt, the labour markets remain almost completely separate. However, the preconditions for achieving comparative cross-border commuting differ from the situation at the Danish German land border or in the Øresund region. On the other hand, the currently favourable labour market conditions in Denmark are proving attractive. However, even with a fixed link, commuting distances between the large populations and job centres will be so
great that mobility is likely to be centred on weekend commuters. If we apply today’s perspectives, we expect no strong incentives for cross-border commuting because of regional differences in living costs, property prices or salaries and wages, apart from the more favourable labour market situation on the Danish side. Regional differences, which in other cross-border regions have led to considerable commuting, have not yet come into play. Once the fixed link has opened, we expect commuter numbers to rise as information and consultancy structures are established and for barriers to diminish (as in other cross-border regions).

Mobility: new commuter flows
The German and Danish labour markets, particularly in the Fehmarnbelt area, are largely distinct from each other - as is common to many other border regions in Europe. Cross-border commuting between the two countries is characterised by significant differences in the flows between north-south and south-north directions. This is owing to the current market situation where the Danish side offers better opportunities for cross-border employment. The absence of systematic, statistical information about cross-border commuters in the Fehmarnbelt region severely limits the scope of our analysis. Nevertheless, we estimate that some 12,870 individuals work in Denmark and live in Germany while 1,560 individuals work in Germany and live in Denmark (2008).

Compared to the German-Danish land border, the Fehmarnbelt connection has roughly six times fewer commuters in both directions. We believe that the longer commuting distance is an important factor behind commuting in a south-north direction. The flow, therefore, would be significantly affected by the construction of the fixed link. For commuters in the opposite direction, however, travel patterns seem to depend much less on physical distance, but more on opportunities for cross-border employment (e.g. as offered by the German metropolitan regions).

Fare levels at the fixed link will be an important factor in the development of future commuting patterns. Assuming a special fare of, e.g. 20 € per passage for commuters on the new link, the immediate effect on commuters figures from Germany to Denmark would be in the order of a 50 per cent increase.

We thus find that physical closeness does not currently play a decisive role for Danish commuters to Germany as the majority work some distance from the border. This commuter category will, therefore, not be seriously affected by the fixed link in itself. However, we believe that steps towards the integration of the labour markets (e.g. reducing administrative barriers) would have a strong effect on such commuters. In particular, we wish to emphasise the importance of inter-regional co-operation agreements that will become much easier to achieve than agreements at governmental level and are significantly more efficient.

The role of the Fehmarnbelt fixed link in a new cross-border labour market will be substantial. Nevertheless, forecasts based on the experience from the labour markets at the Danish-German land border and in the Øresund Region are unrealistic in the short-term. Long distances will remain an important factor in limiting cross-border labour mobility in the area. Hopes for greater economic co-operation in general and cross-border commuting in particular are based on the creation of a new transport hub near Fehmarnbelt, which would attract investment and generate employment in the region. The possible effects hereof can be inferred from our integration scenarios of which the most favourable predicts a doubling of current commuter numbers.
The modelling team at the Institute for Regional Research at the University of Kiel has presented a new assessment of the commuting potential across the Fehmarnbelt once the fixed link is commissioned and the necessary policy steps taken reduce the psychological distance between the German and Danish regions separated by the Fehmarnbelt. The team presents a status quo scenario, which is an update from the 2008 assessment for 2020 as well as four cross-border commuting scenarios:

1) implementation of the fixed link
2) implementation of the fixed link + moderate integration of the labour market
3) implementation of the fixed link + high integration of the labour market
4) implementation of the fixed link + high integration of the labour market + additional integration effects on the Hamburg-Copenhagen axis.

The figure below summarises the daily commuter flow across the Fehmarnbelt as envisaged in the various scenarios. Please note that prices are per person.

![Figure 9 - Commuting across the Fehmarn Belt in 2020 – alternative scenarios](image)

One part of the mobile labour force, namely those who - generally once a week - commute between the major urban areas and usually use trains or fly, are in a special position. This group specialises in particular jobs in the metropolises, mainly in high-skilled activities in the service sectors usually within management, financial and business services, culture and media, research and development and higher education. Since they have specific personal characteristics (age, education, skills, etc.) which differ from those of the average commuter, they show different mobility patterns, for instance in the form of a greater willingness to commute over long distances. In Germany, fairly large numbers of
commuters travel between the major cities so we have made further calculations specifically for this group. The actual flows are very small. Less than 100 individuals commute from Hamburg to Copenhagen and even fewer from Copenhagen to Hamburg.

In the figure below, we have calculated the potential flow between two metropolises with increased train speed and cost structures and the application of the high integration model above.

![Graph showing potential flow](image)

**Figure 10 - Calculation of the weekly train commuting between Copenhagen and Hamburg in 2020**

In the event of a strong barrier reduction following the opening of the Fehmarnbelt link, for which we have used for the high integration scenario, and in the event of symmetric incentives, we can expect commuter figures of about 1,000 to Copenhagen and nearly 1,300 to Hamburg for the 150 minute journey and 60 € fare, i.e. 2,300 per week. For the 40 € fare, the result will be 1,400 and 1,800 respectively (3,200 per week in total). The links between the labour markets in the metropolitan regions, Hamburg and Copenhagen, are currently very weak with current travelling times being 280 minutes with fares of 40 €. In addition to the dramatically shorter train travelling times generated by the Fehmarnbelt link, significant efforts to diminish border barriers are needed to achieve the numbers projected by our study of long-distance rail commuting.
Strong business clusters: opportunities for partnerships

Scania, Zealand, Schleswig-Holstein, Hamburg and Mecklenburg-Vorpommern each have their own industrial profiles, focusing on specific clusters and their development. While these regions differ, they also operate clusters of similar structure and focus. The object is to identify clusters for potential cooperation. The immediate strategy is based on the fact that life sciences and health are important industrial sectors in most parts of the Fehmarnbelt Region. This research focus of many universities is reflected in the cluster policies of the respective organisations. Also, the industrial sectors of food and information technology (including the media) are widely represented in the Fehmarnbelt Region where they have important roles in the regional economies and are the subject of cluster development efforts. A fourth area with potential for regional partnerships is logistics with focus on maritime-related logistics. A fifth is wind energy/green technology and a sixth is tourism.

There are other strong sectors although these only cover parts of the region. Maritime industries play an important role in all North German regions, nanotechnology in Schleswig-Holstein and Scania, the financial sector (with business to business services) is important in Copenhagen and Hamburg as, indeed, are the cultural sector and airport-related activities. Aviation is strong in Hamburg, but we have been unable to discover information from other parts of the Fehmarnbelt Region although we would like to do so in view of the central role of the industry.

Life sciences/health are mentioned as a cluster by all regions. External relations of the Schleswig-Holstein life sciences/health cluster are closely oriented towards neighbours in the Baltic area, in particular towards the life sciences’ network in Mecklenburg-Vorpommern (BioConValley). Based on participation in the ScanBalt network (metacluster life sciences in the Baltic region), the BioCon Valley has connections to one of the strongest life science clusters in Europe, the Medicon Valley in the Øresund Region. With an expansion of these links, not least inspired by the upgrading of the transport corridor between Hamburg-Lübeck and Copenhagen-Malmö and promoted by different and complementary priorities of the two networks, a “twin” life sciences cluster in the Fehmarnbelt Region would achieve an undisputed top position in Europe.

Food networks and clusters across the Fehmarnbelt Region are partners here as well, particularly between North Germany and Øresund Food together with the Scania Food Innovation Network. Objectives and recommendations for the future include the establishment of joint cluster management for the Schleswig-Holstein region and the metropolitan region of Hamburg and closer relations with the Øresund Food Network for which a fixed Fehmarnbelt link would serve as a catalyst.

The information technology (IT) and media cluster should focus on cooperation between the Hamburg and the Copenhagen parts of the Fehmarnbelt Region, especially within the media sector, since Hamburg and Copenhagen are the two dominant media locations in the western Baltic. Despite the language barrier which is especially relevant here, there is considerable potential for further cooperation as a result of a fixed Fehmarnbelt link.

Links to the logistics networks in the Baltic region are supported by the LogOnBaltic network. In connection with the future upgrading of the Fehmarnbelt route, cooperation between the logistics clusters of northern Germany and the Øresund Region could help to promote and coordinate the logistics industry, especially along the Fehmarnbelt corridor.
Eventually, a “Fehmarnbelt logistics cluster” could be created connecting the two gravity centres of Hamburg/Lübeck and Copenhagen/Malmø.

The generation and use of renewable energy (wind) is a growing part of the economy. International competition has intensified significantly in recent years, especially based on competitive Danish, Dutch and German (Lower Saxony, Mecklenburg-Vorpommern) industries. This makes cluster co-operation particularly important. Currently, there are links between Northern Germany and Southern Denmark as a result of the presence of important companies in the region as well as between the University of Flensburg and the University of Southern Denmark (together with regional development agencies) within the "FURGY" project ("Future Renewable Energy"). This could be a model for cooperation between the German and Danish parts of the Fehmarnbelt Region and could comprise research institutions in Nakskov in Lolland and Region Zealand.

Although important for the regional economies, tourism is an area in which the regions see each other as competitors. Hamburg and Copenhagen compete for metropolitan tourism, including business tourism (meetings, incentive travel, conferences, events). The two metropolises also compete for cultural tourists and families looking for a city product. The many fine beaches around the Fehmarnbelt Region are also attractive destinations, especially for families and for water sport enthusiasts. Although competition is strong, opportunities for partnerships should be explored and joint cluster development be placed on the agenda.

Current nanotechnology cluster relations between Germany and Denmark are mainly linked to the University of Southern Denmark in Sønderborg. Given the strong competition between the microtechnology clusters in Germany, e.g. in Saxony, building partnerships with other networks makes sense. There is actual set a great pressure to establish cooperation on material sciences / nanotechnology in relation to existing and planned mega size research facilities. See next part. Future changes in the Fehmarnbelt Region will create opportunities for cooperation between the Øresund Region and Hamburg.

We also believe that the potential for co-operation between Copenhagen and Hamburg should be explored in terms of finance and related services as well as for the cultural sector. The cultural sector effort could be linked to the media industry. Airport related activities should also be explored with a view to cooperation.
The Fehmern Belt Region: Proposed cluster development efforts

Present in all sub-regions:
- Life science/health
- Food
- Information technology (plus the medias)
- Logistics (with a focus on the maritime)
- Wind energy/green technology
- Tourism (inclusive of business tourism)

Partial distributed:
- Finance sector (with business services)
- Cultural sector (medias)
- Airport related activities, civil aviation
- Material science/nanotechnology
- Maritime industries

Figure 11 - Clusters. Summary diagram. Proposed cluster development efforts

The world of science: new axis based on positions of strength
The Fehmarnbelt region comprises five scientific centres. The Øresund City belongs to the group of Europe’s scientific metropolises, Hamburg and Kiel are research cities on a slightly lower level while Rostock and Lübeck belong to the group of regional research centres.

Denmark, Sweden and Germany are international heavyweights in the world of science. The same applies to a number of metropolises of which three German city regions (Berlin, Munich, Dortmund-Düsseldorf-Cologne), one Swedish (Stockholm-Uppsala) and one Danish-Swedish (The Øresund City) feature on the international top 40 list. None of these cities, however, has a place among the world cities’ global top level, but are considered second level cities. It is also notable that in terms of growth these cities are not doing particularly well. Asian and South European large cities are overtaking our centres and racing up to the upper global levels. However, in terms of positions within the networks, as these are characterised by partnerships with researchers from other top 40 cities, they have a strong position and in this respect Danish, Swedish and German metropolises are not losing ground. Research partnerships between scientific environments in different large cities will accelerate and international cooperation is showing particularly high rates of increase. Analysis of the global level shows that cities with international profiles in the form of bilingualism (Montreal the Øresund City, Aachen-Liege-Maastricht) have an advantage in so far as international collaboration is concerned. They have primary contact with more than one network.

Three European large cities have leading positions in global networks: London, Paris and the Amsterdam region are the continent’s world cities. The largest centres in the expanded Fehmarnbelt region (Berlin, the Øresund City, Stockholm-Uppsala, Hamburg) are well linked to the leading triad and each account for consistent international partnership profiles. The
links between the four major centres is such that Berlin and Hamburg are each other's largest partners on a global level and the same is the case for the Øresund City and Stockholm-Uppsala. In addition, there are moderately strong cooperation axes between the Øresund City and Hamburg and between the Øresund City and Berlin, but not between Stockholm and Uppsala and the two German cities.

The two main axes, the Scandinavian and North German, can and should be supplemented by a third main axis which would strengthen the moderately strong axis between Hamburg and the Øresund City. This means that the two centres can further strengthen the links to their already well-established networks, which in turn, will offer supplementary as well as complementary opportunities. Potentially, a strengthening of the link between Hamburg and the Øresund City will mean that these two centres together will raise themselves to a research dominated level which will actually be drawn by Europe’s main centres. This, however, will require some effort, but it is an inspiring challenge to develop a strong link between Hamburg and the Øresund City as currently exists between Hamburg and Berlin and between the Øresund City and Stockholm-Uppsala. We recommend that the three regional North German centres, Kiel, Rostock and Lübeck will be part of such efforts.

The five research centres have different profiles, but also share some common features. The Øresund City’s position of strength is primarily based on holistic research, geo subjects and the natural environment. In Hamburg, focus is on health together with traditional natural science. Kiel’s strength is centred on geo and marine subjects. Rostock also focuses on marine subjects, while Lübeck has specialist profile, which exclusively focuses on health.

We have analysed the opportunities for partnerships by isolating those disciplines with potential for developing new links and which can either supplement or complement each other. We have also pointed to obvious opportunities for strengthening the interaction between the centres in order to achieve gains. On the backdrop of positions of strength, north as well as south of the Fehmarnbelt, a number of marine disciplines (oceanography, marine biology, limnology) health-science fields (anaesthesia, endocrinology & metabolism, immunology, research into infectious diseases, rheumatology, haematology) geo-scientific areas (soil science, meteorology and atmospheric science, geo science: multidisciplinary) and two traditional natural science disciplines (physics: particles and fields; mathematical biology) would be able to supplement each other at a high level. Similarly, it should be recommended that disciplines that are strong on one side of the Baltic and medium strong on the other, aim for complementary interaction. This is the case with a range of health-science disciplines where neuro images, virology, radiology, nuclear medicine, chemical medicine, oncology, dermatology, otorhinolaryngology, biophysics, orthopaedics and spectroscopy are strong in the south and medium strong in the north while allergy research, nutrition & dietetics, research into public health, the environment, and parasitology are strong in the north and medium strong in the south. This also applies to some geo subject disciplines where the south is strong within geochemistry and geophysics, while the north is strong within palaeontology, geology and mineralogy. Finally, there is development opportunities for complementary disciplines within some of the traditional natural science disciplines where astronomy and astrophysics are strong in the south while north is strong within the disciplines evolutionary biology, ecology, biodiversity and environmental research.

With regard to partnership relations, it should be noted that these are currently at a low level between the northern and southern parts of the Fehmarnbelt region. Of the five cities combined output of 60,181 papers in 2006-2008, 391 have authors from both the northern and
southern part of the Fehmarnbelt Region, largely between the Øresund City and Hamburg. However, it should also be pointed out that there are opportunities for mobilising partnerships based on uniform positions of strength and that, in addition, there are strong grounds for focusing on a range of scientific disciplines where one part of the region has a strong position while the other has only medium strength. There are reasons for optimism, but a serious effort is needed. Such efforts comprise focus on the development of more partnership-oriented frameworks and on information about each other’s respective advantages. We also recommend further analysis of existing partnership relations.

We have established that a series of initiatives is currently under way to strengthen research within nano-science and nano-technology. No fewer than four new scientific avantgarde-facilities in the form of gigantic research laboratories are under establishment. Two of these are located in Hamburg, European XFEL (an experimental facility which generates extremely fast x-ray flashes) and PETRA (synchrotron x-ray facility) and two in the Øresund City, the European Spallation Source (European experimental facility based on the world's strongest neutron source) and MAX IV (synchrotron radiation facility). Accounting for investments running into many billions (DKK), these projects will also establish new contacts and new partnership relations with the business community. The perspectives for research into materials technology and life science research are significant and are monitored with great interest by those commercial sectors that have the potential to participate in, and exploit, the planned research activities.

It should be noted, however, that efforts within the field of nano-science and nano-technology are based on current productive forces on a level below the top-level. The Danish-Swedish-German environment with demonstrated top level is Berlin, which plays a leading role within the discipline's network. We recommend that Berlin be included in these efforts.

**The cultural sector: interaction perspectives**

Culture is a location factor and a factor behind change and challenges for the Fehmarnbelt Region. In order to gather different experiences and ideas regarding the cultural potential of the region, in-depth interviews were carried out with professionals on a range of issues:

- Personal links to the Fehmarnbelt Region.
- The role of culture within a national and international framework.
- The role of culture in rural and urban environments.
- The role of cultural identities in region building projects.
- Cultural cooperation across national borders.
- Cultural potential and challenges for the Fehmarnbelt Region.
- Recommendations for improving cultural life within the region.

The main results of the interviews are that links with, and definition(s) of, the Fehmarnbelt Region differ significantly, that only a minority of the interviewees are familiar with the official extent of the region, and that the majority of interviewees did not include Scania into the Fehmarnbelt region. Since the Fehmarnbelt Region is not as yet a well-known (cultural) region, communication about the region is seen as vital. Several interviewees emphasised the importance of convincing verbal and visual communication about the region while at the same time avoiding the trap of a pure marketing strategy with empty rhetoric.
With regard to the cultural potential and challenges for the Fehmarnbelt Region, many interviewees pointed to the weaknesses of existing cultural life within the region (particularly in relation to quantity, except for the cities). This weakness was explained by the low population density outside the centres, and also by the general structural problems of the region’s rural areas. However, some important cultural projects ought to be mentioned, such as the well-established Schleswig Holstein Musikfestival, the JazzBaltica festival and the recent initiative on the part of the Royal Danish Embassy “Kulturbrücke Fehmarn Belt”. Several interviewees emphasised that political involvement in the cultural sector is essential for the success of the region.

The Øresund Region is a source of inspiration, but also provides a salutary lesson. Some interviewees mentioned that cultural cooperation across national borders has only existed at times when EU funding was available. Also, against the background of the experiences from the Øresund Region, “regional identity” is treated as a rather delicate issue. The focus on a “common identity” within the Fehmarnbelt region is seen as rather dangerous and unnecessary.

With regard to recommendations for improving cultural life within the region, several interviewees suggested establishing positions as “artist in residence” in rural parts of the region. Closely connected to this is the idea of supporting joint exhibitions or events across national borders. To secure a high level of professionalism and ambition, working scholarships and the co-funding of concerts, exhibitions and workshops are seen as important. Concerning the existing offerings of cultural events, there is general agreement that events for young(er) people should be substantially improved. And “everything should be linked to good transport services”, as one of the interviewees said. In this context, the importance of local public transport was stressed several times.

Mobility is seen as one of the basic requirements for cultural participation. Mobility not only comprises public or private transport, however, but also aspects of financial and intellectual capacity. However in the view of several interviewees, the main challenges for the future cultural life of the region lie in the cost of crossing the link and the accessibility of cultural institutions and events, both in the urban and rural parts of the region. Another frequently raised and important issue is improved access to relevant, up-to-date information about cultural issues and events within the region.

There is no doubting the important role of culture in the lives of local people as well as in terms of the region’s development. Culture can be seen as the glue in the growth process, but should not be exploited for the political project “the region”.

**Youth: same values but ignorance about neighbouring countries**

In order to obtain a “baseline” study of the attitudes in the three countries involved in the formation of a new entity around the fixed link across the Fehmarnbelt, a survey was carried out in late 2009/early 2010 among students in the final year of their schooling (aged 18-20) in the Fehmarnbelt Region. The survey reveals a great deal of asymmetry in terms of knowledge about the neighbouring countries. Despite this, interest in studying, working or living permanently elsewhere in the region is fairly high among young people (except that young Danes and Swedes are not attracted by the idea of living or studying in the German part of the region).
An important revelation in the survey are the differing views of young people from the three countries with regard to general values and attitudes towards the labour market, housing and culture, politics and environmental issues. In general, it appears that the main dividing line for these themes lies between the sexes and not so much between the countries. Young people of the region have more in common in respect of their general values and attitudes than there are differences that separate them.

The topics covered in the survey, which comprised 800 young people were:

- **Values and attitudes in general**
- **Attitudes towards the labour market**
- **Future society and politics**
- **Environmental issues**
- **Housing and culture**
- **Interaction between the countries and**
- **Consequences of a permanent Fehmarnbelt link**

German youth and Danish women have the highest rate of post-materialistic values while Swedish men are the most materialistic; Swedish women are neutral. An interesting finding is that young Swedes who are generally assumed to be among the most post-materialistic in Europe are much less post-materialistic than young people from the other two countries.

Important values “today” are much the same among young people in all three countries. Family relationships and relationships with boyfriends/girlfriends are very important, as is earning money among some sub-groups. A happy life with parties to go to and hobbies to enjoy are important to men in all three countries – less so among women. Enjoying life has great appeal at this stage of life.

The list of priorities 15 years from now gives a very clear picture of “responsible bread-winners”. Young people of today expect to have started a family within 15 years, have good quality housing and an interesting job. To achieve these goals they also need to be healthy. We also noticed that earning money has become considerably more important with regard to the future than is the case today. When it comes to more general values like censorship, abortion, ethnic diversity and religion, the major differences are between countries rather than gender.

Traditional job characteristics are ranked almost in the same order by young people from all three countries: young Germans are a little more materialistic when it comes to working conditions, while young Swedes regard work not only as a means of earning a living, but also as part of their social life. For young Danes, work is not only a part of their social life, but a necessity for making a living. Job security is very important to women of all three countries. Job security is only important to young men from Sweden. Young Germans and Danes are fairly indifferent.

When it comes to career, answers clearly demonstrate the gender gap. Men in general opt for technical and computer jobs while women prefer jobs that are people-oriented. The list of selected jobs is similar in the three countries, with only a few exceptions. A teacher at “gymnasium” level (i.e. 16-19 year olds) is much more highly rated in Denmark among both men and women than in Sweden.

There are distinct difference in political attitudes between men and women and these differences are most evident to the right of the spectrum. There are more men among right extremists, while women tend to gravitate towards the centre or the left. It can be concluded that political interest
is much higher among young Danes and Germans than among young Swedes – now and in the future.

When asked about their ideal future society, the more materialistic attitudes among Swedish men are reflected in their strong interest in an industrial society. By contrast, a knowledge society seems to be the preferred choice for all other sub-groups – around 50 per cent of all young people (two-thirds of young Danes) opt for this type of society.

Another important issue relating to the future is how to solve our current environmental problems. We have found a striking difference between the countries in respect of alternatives: young Swedes are in favour of market solutions, young Germans prefer laws and regulations while young Danes think that environmental issues are over-rated.

With regard to future housing, there is complete unanimity. Eight out of ten young people declare that they would prefer a detached house. After finishing school, however, the most important nearby amenities are friends, workplace, alternatively higher education and public transport. Within a fifteen year perspective, most young people expect to have started a family, which makes a child-friendly environment important as well.

One of the main issues addressed in this survey is a possible asymmetry in knowledge about the respective neighbouring countries. The results from the survey clearly demonstrate the existence of such asymmetry. Contact with, and knowledge of, the German part of the region is rather limited. Contact between the three countries is mainly in the form of visits by young Danes and Swedes to Germany (but not the other way round). The Danish part of the region, including Copenhagen, is very well known to young people from both Sweden and Germany while young Danes and Swedes know almost nothing about Hamburg. Only a few young people from the two countries are able to mention tourist attractions in Hamburg. Young Germans’ knowledge of Malmö is equally limited.

When it comes to studying, working or living in the neighbouring countries, contact between Denmark and Sweden is well established and interest is quite high. In relation to Germany, interest among young Germans in the other two countries is much higher than the other way around. Young Danes and Swedes are not interested in living or studying in Germany, but see working there as an interesting possibility. Young Germans, on the other hand, are interested in both studying and living and, to a very high degree, of working in either of the two countries.

<table>
<thead>
<tr>
<th>Do you want to:</th>
<th>Work</th>
<th>Live</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In Denmark?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>German youth</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Swedish youth</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>In Germany?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Danish youth</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Swedish youth</td>
<td>Yes</td>
<td>50/50</td>
<td>50/50</td>
</tr>
<tr>
<td><strong>In Sweden?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Danish youth</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>German youth</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Figure 12 - Overview of the three sub regions’ power of attraction for young people in the neighboring countries
The Fehmarnbelt Region analysis in brief
The above summary is based on an analysis project initiated in January 2009. The project is headed up by Professor Christian Wichmann Mathiessen, University of Copenhagen, in conjunction with experts from Sweden, Denmark and Germany. Professor Wichmann Mathiessen has undertaken a review of all sub-studies and, therefore, has overall qualitative responsibility for the publication and the summary. The analysis will be published in full during the autumn of 2010.

The various sub-elements have been prepared by:

Patrik Ryden (Øresund Logistics), Immanouil Traanas (Newcastle University), Lars Rostgaard Toft, Morten Vedby (Copenhagen University)

Johannes Bröcker, Hayo Herrmann, Artem Korzhenevych (Kiels University)

Christian Wichmann Matthiessen (Copenhagen University), Søren Find, Annette Winkel Schwartz (Denmark’s Technical University)

Åke E. Andersson (Jönköping International Business School), David Andersson, Zoltan Kettinger, Oliver F. Shyr (National Sun Yat-sen University)

Birgit Stöber (Copenhagen Business School)

Ingvar Holmberg (Chalmars University of Technology)

Signe Schilling, Petra Aulin, and Jacek Rokicki (Femern A/S)