Creative Future
Growth Potentialities for Baltic Cities – Outline
Abbreviations

<table>
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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>DCC</td>
<td>Day Care Centre</td>
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<tr>
<td>EFRD</td>
<td>European Fund for Regional Development</td>
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<td>ESDP</td>
<td>European Spatial Development Perspective</td>
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<td>ESPON</td>
<td>European Spatial Planning Observation Network</td>
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<td>EU</td>
<td>European Union</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IPN</td>
<td>Interpenetrating Polymer Network</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>thousand</td>
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<td>Ltd.</td>
<td>Limited by guarantee</td>
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<td>MBA</td>
<td>Master of Business Administration</td>
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<td>million(s)</td>
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<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
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<td>R&amp;D</td>
<td>Research and Development</td>
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<td>SSE</td>
<td>Stockholm School of Economics</td>
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<td>USA</td>
<td>United States of America</td>
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1 Development factors for Baltic cities
1 Development factors for Baltic cities

Surveys to rank cities for their future prospects are a recurrent phenomenon. One notable global trend is the tendency for these surveys to be topped by locations whose appeal comes from their diversity, vibrancy and charisma. These booming centres are winning the competition to attract creative people and innovative enterprises. Their recipe for success includes having reacted flexibly to the ever-changing conditions for economic success and having (at the opportune time) not only developed their hard locational conditions, but also enhanced the quality of their soft locational conditions. In order to prevail in the international competition for locations, cities must make use of their particular attributes not only to attract knowledge-intensive and research-intensive enterprises, but also to offer a high-value living environment for qualified personnel. Attractive soft locational conditions are the decisive success criterion for urban growth and the essential condition for attaining cutting-edge positions in science, scholarship, research and education. These fields in turn affect urban development perspectives, because the future task of 21st century cities is clearly defined. In order to keep up in the international contest for investors and a mobile workforce, cities must achieve the structural shift to a knowledge economy. In the past when urban development policy has considered this field, major metropolises have tended to be the focus of attention. Yet in Europe, it is in fact small and medium-sized cities with populations between 100,000 and 1 million which, as centres of their particular regions, tend to dictate the socio-economic development of economic areas.

For example, in the dynamic Baltic region, structures tend to be determined by cities of a more traditional scale rather than by metropolises. How are such small and medium-sized cities to approach the development of population and economic power? The question is whether the aforementioned particular locational conditions will be of decisive importance to the growth of this group of cities in the age of the knowledge economy. The present study examines the nine cities of Århus, Gdaňsk, Kiel, Riga, Rostock, Tallinn, Turku, Umeå and Vilnius, against the background of changing demands on locational policy. Selected indicators will be used to analyse to what extent these Baltic cities are characterised by the locational conditions essential to knowledge-based growth: capacity for innovation, knowledge and openness. Since not only quantitative values are significant here, the assessment of development potential in the selected cities will also include qualitative data obtained from numerous interviews with representatives of the particular regional business and administrative sectors and our own observations. These will take into consideration the nature of the political support apparent in the respective locations. A view will be taken on the focus of political approaches and whether they are consciously supporting so-called ‘creative urban development’. The survey results will be consolidated into recommendations for action intended to stimulate innovative urban development strategies. The survey method developed in the context of this study is transferable to other cities and regions. Below, Chapter 2 gives an overview of current economic and demographic trends in the Baltic cities under scrutiny. Chapter 3 presents the concept for evaluating the development potential of these cities under the conditions of their onward structural transformation into knowledge economies. Chapter 4 gives a summary evaluation of the locational conditions in these Baltic cities and presents recommendations for action to reinforce their competitive positions.1

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1 This text is an abridged version of the German original version of the study which was published in October 2008. A detailed description of the locational conditions in the individual cities is given in the full German version of the study.
Cities – the future of the Baltic region
Figure 1: Population density in 2005

Source: Eurostat (2008), original illustration
2 Cities – the future of the Baltic region

Heterogeneous settlement structures

Spatial trends in Europe are characterised by the ever greater concentration of population and economy in cities. Urban centres are of constantly increasing economic importance. A differentiation into sparsely populated peripheral regions on the one hand and urbanised ‘boom regions’ driving economic development on the other is particularly evident in many states of the Baltic region. In this economic area, economic activities are concentrated in a few cities. For instance, in the Baltic states, between 25 and 40 percent of populations live in capital cities; in Denmark and Finland, one fifth of each respective population lives in the three largest cities. The future development of the Baltic region is therefore closely connected with the economic capacity of these centres. While they are not ‘megacities’, they are playing an important role as regional initiators of the knowledge-based structural transformation. The present study will analyse the specific locational conditions and development potentialities demonstrated by individual cities of the Baltic region in this context. The ‘Baltic region’ is defined here as comprising the states of Lithuania, Latvia, Estonia, Finland, Sweden and Denmark, the German Federal States of Mecklenburg-Vorpommern and Schleswig-Holstein and the Podlaskie, Zachodniaopomorskie, Warmińsko-Mazurskie and Pomorskie województwa (voivodships) of Poland. Because the more southerly areas of Germany and Poland are less closely economically connected with the Baltic region, they are not considered in this survey. The Baltic region is exceedingly diverse and its sub-regions and cities are characterised by very different structures and historical developments. This is also reflected in the selection of cities considered in the analysis. These cities are Kiel (Germany), Rostock (Germany), Gdansk (Poland), Vilnius (Lithuania), Riga (Latvia), Tallinn (Estonia), Turku (Finland), Umeå (Sweden) and Århus (Denmark). These examples allow a broad range of influential factors of relevance to urban development, and political support strategies, to be studied. The largest of the selected cities, with 729,700 inhabitants, is Riga, the capital of Latvia. The smallest is Umeå in northern Sweden, which is home to 110,800 people.

As a whole, the states of the Baltic region are characterised by considerable differences in terms of settlement structure. A few densely populated urban regions are juxtaposed with many rural regions with very sparse population densities (cf. Figure 1). Kiel and Gdansk, for example, are in relatively densely-populated areas of their particular region, i.e. a comparatively high density of population can also be found beyond the city limits. Conversely, Umeå and Turku are in relatively sparsely-populated regions. There are also differences in population density between the individual cities, indicating that factors favouring and hampering agglomeration exist to differing degrees. The most densely-populated city is Riga, while Umeå has the lowest population density.

Although the cities analysed differ clearly from one another in terms of size, they are all of great importance to the development of their respective surrounding regions, representing as they do their socio-economic centres. The Baltic national capitals in particular are engines of growth for their respective nations, because they possess a high proportion of the nation’s Gross Domestic Product (GDP), at 35.9 percent (Vilnius), 57 percent (Riga) and 59.3 percent (Tallinn) respectively (cf. Figure 2).

All the cities surveyed can be described as initiators for the development of their region.
Crucial importance of knowledge-intensive economic sectors

The current economic structures and flexibility in regard to economic structural transformation will be decisive for the future development of all Baltic cities. From this perspective, the initial conditions for the individual Baltic cities are very different, especially for those in western areas of the Baltic region as opposed to those in the east. Although the share held by the service sector in the Baltic capitals and Gdańsk is still relatively low (cf. Figure 3), it is already beginning to approach those of western cities. Of the locations analysed, Kiel and Rostock are the cities most strongly specialising in services, and their economic structure results from the clear transformation away from traditional industries. The service sector continues to gain in importance in the Baltic cities.

A particularly significant factor here is specialisation in knowledge-intensive services. Here, Århus, Turku and Umeå achieve clearly better results than the other cities. While the proportion of those employed in knowledge-intensive services is 40 percent of the total employment market in Turku, 42 percent in Århus and almost 50 percent in Umeå, the figures in the other cities are only between 20 and 30 percent, except Kiel at 33 percent.
Demographic perspectives demand targeted action

Growth potentialities for the knowledge economy in cities are based on the provision of a (highly) qualified workforce. Demographic perspectives therefore constitute an important condition for the future prospects of cities, because the size and structure of the population are relevant to the qualitative and quantitative labour supply and the coverage of the demand for labour. The provision of workforce determines regional production opportunities and the conditions for dealing with structural changes. Developments in terms of population differ widely across the Baltic region. While regional population growth rates for the period from 2000 to 2005 were clearly positive (and more pronounced in this respect than on the respective national level) in Umeå with +6 percent and Århus with +3 percent, some other cities reported stagnating population figures and Riga even suffered dramatic population losses.

Future demographic developments in most cities of the Baltic region will continue as in the past to be marked by low birth rates and rising life expectancy. Fertility rates in Århus, Turku and Umeå are above the EU average, but even there they are below the replacement rate of 2.1 children per woman. Under these conditions, an increasing average age and negative rate of natural population increase are inevitable in the analysed cities. However, these demographic development trends are by no means inescapable for the individual regions and cities of the Baltic region. Migration can considerably exaggerate tendencies, but can also reverse them. What will decisively affect future demographic development in the individual cities will be how many people from other parts of the country and from abroad move into and out of those cities. The migration balance of a city is a result and a sign of its attractiveness as a location. Population forecasts for the Baltic cities give very variable results. While it is expected that population will grow up to 2020 in Umeå, Århus and Turku, forecasts for the other cities are for declines – of up to 8 percent for Tallinn, Vilnius and Riga. Against the background of the increasing competition for (highly) qualified labour, cities therefore increasingly face the challenge of positioning themselves as attractive locations in order to attract migration from other regions of their own countries and from abroad.

Figure 4: Proportion of people employed in knowledge-intensive services compared to the overall employment 2000

Sources: Overview, p. 83.
Dynamic change in economic structures will continue

The global competition between major cities will continue to intensify in the future, not only because of demographic factors, but also because of the increasing mobility of labour and capital, the intensification of the global division of labour and the growing globalisation of economic activities. Economically successful cities, able to assert themselves with their surrounding regions as attractive locations, are needed as engines of growth for regional development in Europe. This is particularly true against the background of structural transformation towards knowledge economies. Cities in particular have what is required progressively to establish themselves in this dynamic field as ‘knowledge locations’. They have agglomeration benefits which favour economic growth: universities and other institutions of education and research are concentrated in cities, (highly) qualified personnel live here and cities offer a diversified service landscape.

Hence, in the Baltic region too, it is these very cities which are in a position to drive the further structural transformation of their entire nations or regions into knowledge economies. Last but not least in this context, it will be necessary to examine the status quo as regards locational factors and central policy areas of relevance to the knowledge society, as well as the specific attractiveness of the nine selected cities of the Baltic region.

Figure 5: Population dynamics 2000–2005 and forecast until 2020

Forecast 2005–2020 for all cities except of Kiel and Rostock on NUTS-2-level, that is national level for Estonia, Latvia, Lithuania and Denmark and regional level for Umeå (Övre Norrland), Gdańsk (Pomorskie) and Turku (Etelä Suomi).

Sources: Overview, p. 83.
3 Concept for evaluating urban development potentialities
3 Concept for evaluating urban development potentialities

Soft locational factors crucial to successful economic development

The continuing transformation towards the ‘knowledge society’ is dominating political discussion surrounding the future economic prospects of the European economic area, the approach being to develop the EU by 2010 into the most competitive and dynamic knowledge-based economic area in the world.2 In the changing economic climate, development potentialities of regions and cities are founded on the specific combination of ‘hard’ and ‘soft’ locational factors which are relevant to the knowledge society. Hard locational factors have a direct impact on enterprises’ production costs, and include land prices, salary levels and transport costs, which depend, among other things, on the quality of the traffic infrastructure. Soft locational factors, conversely, tend to have an indirect impact on entrepreneurial activities, and are generally more difficult to measure, because they reflect qualitative conditions. They include the ‘image’ of a city, the attractiveness of the cultural life it has to offer, and the quality of life it provides.3 In an age when infrastructure is well-developed in many parts of Europe, these soft factors are of increasing importance to many industries in deciding where to locate, or whether to stay loyal to an existing location.4 Industries’ highly-qualified workforces are comparatively mobile, and in choosing a workplace, people also consider the quality of the private sphere of life in a particular city.5 At the same time, as they choose where to live and work, highly-qualified workers also increase the availability of knowledge in that region, further enhancing the attractiveness of that location to enterprises. The attractiveness of a city to these people is consequently of crucial importance in a knowledge society. Soft locational factors are thus gaining in importance as structural changes in the European economy continue, and are leading the way in determining urban development potentialities.

The attractiveness of a city and the quality of its education institutions are decisive factors in bringing people in.6 The potential for increasing the number of highly-qualified people in a city also lies in the education of locals and incomers in the city. The importance of providing attractive education opportunities for students from around the world is seen in the example of the USA, where half of all foreign postgraduates remain in their place of education either temporarily or permanently after completing their studies, thus enlarging the pool of qualified labour.7

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5 Cf. Leßmann et al. (2002).
6 Cf. Leßmann et al. (2007).
Successful urban development: Florida’s “Three Ts” model as a theoretical basis

Adaptability is a vital characteristic of creative cities

The great socio-economic relevance of urban development processes has led scholars for some years to engage intensively with the influencing factors and effects of rapidly-changing locational conditions. The American economist and urban planner Richard Florida developed highly-regarded theories on modern urban development early in the 21st century. He co-ordinated various soft locational conditions to form the concept of the ‘creative city’. In doing so he revived a term coined in the 1990s by Charles Landry. According to Landry’s definition, the hallmark of a ‘creative city’ is the ability to adapt to new conditions in order to solve problems of all kinds. This presupposes a suitable environment in which it is possible to implement new ideas, and in which individual talents can flourish. This requires both openness and the courage to change on the part of citizens and institutions, and moving away from outdated thought patterns and behaviour. These qualities in turn depend to a high degree on soft locational conditions. Richard Florida took up these points of departure in his work and developed them further. His best-known and most discussed work, ‘The Rise of the Creative Class’ (2002), redefines the term ‘creative city’ and lays the foundations for the ‘creative urban development’ model for economic success. By ‘creativity’ he means the ability to create new knowledge and to deploy existing knowledge successfully. Florida’s central hypothesis argues that creative cities develop out of the interplay and mutual positive reinforcement of the three locational conditions ‘Technology, Talent and Tolerance’ – the ‘Three Ts’ (cf. Figure 6). The inhabitants of cities and their activities and interactions, lie at the heart of Florida’s urban development concept.

Figure 6: Locational conditions in creative cities according to Richard Florida

Source: original illustration.

Florida (2002) uses the ‘Tech-Pole Index’ developed by the Milken Institute as an indicator of the locational condition ‘Technology’. He also takes the total number of patent applications per inhabitant into consideration in estimating technological productivity.\(^{13}\) The values for the locational condition ‘Talent’ are measured by the ‘creative class’ index. This represents the proportion of people employed in creative occupations in a region. A particularly innovative aspect of Florida’s approach to explaining urban and economic growth is the evaluation of the condition ‘Tolerance’, which Florida approximates with a ‘gay index’. In general, the assumption is that as globalisation gains momentum, cities that are open to other nationalities, ways of life and cultures will be at an advantage. Florida justifies the importance of this aspect by arguing that cities where tolerance and a diverse cultural offering determine the tone of life have a greater power of attraction for highly-qualified workforces. A community which treats people of different origins, religions and sexual orientations with respect exerts no pressure to conform. Individual behaviour is favoured and creative potential can be fully utilised.

Florida lends his theory empirical support with an analysis of 250 metropolitan regions of the USA. His survey shows that creative economic areas exist at an above-average concentration in cities where the diversity of cultures and ways of life are also more developed than average.\(^{14}\) Other surveys of American cities and European regions also attest to the positive influence of cultural and ethnic diversity not only on productivity but also on per-capita incomes.\(^{15}\) In the case of German regions, a 2006 study by Niebuhr demonstrates the beneficial effects of cultural diversity within the population on innovation.\(^{16}\) Florida’s proposition gives a plausible explanation of the changing importance of particular locational conditions and convincingly argues the necessity of innovative policy approaches. He concludes that the design of optimum framework conditions for successful urban development must extend beyond purely economic perceptions. He demands an integrated approach of economic and social policy, lending new value to political areas such as integration, family and cultural policy. Future policies, especially those on a regional level, must go far beyond measures for expanding infrastructure and adjusting rates of taxation. Rather, urban systems must consider the individual, the human. Florida’s innovative ideas have provided valuable impetus for the design of many development strategies. London and Toronto have already integrated his suggestions into their urban development policy.\(^{17}\) All concepts follow the central objective of attracting creative, qualified people and getting them to stay permanently in the city.

### Academic inquiries: need for focus on small and medium-sized cities

The current level of debate on the need to design innovative urban development strategies makes plain that this research topic is of the utmost relevance. However, academic inquiries into creativity as a significant development factor have so far tended to concentrate mostly on major metropolises, raising the question of how relevant these theoretical investigations are for other types of cities. In Europe, it is small and medium-sized cities in particular, i.e. those with a population between 100,000 and 1 million, that form the nodal points in the spatial system. They are unquestionably initiators of socio-economic development for their entire regions. The Baltic region, as already explained, is no exception.\(^{18}\) This is also accorded weight in the European Spatial Development Perspective (ESDP), which talks of the ‘polycentric urban system’, emphasising the importance of smaller and medium-sized cities to economic spatial development.\(^{19}\)

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15 Cf. Ottaviano / Peri (2006); Ballini et al. (2008).
17 Cf. Gertler et al. (2006); Greater London Authority (2004).
18 Cf. ESPON (2008).
This study therefore considers the issue of how applicable Florida’s concept is to small and medium-sized European cities. It must also be assumed that in the medium term, the continuing globalisation of labour markets and the increasing dominance of services and the knowledge economy in urban economic structures will mean that influential factors in the development of small and medium-sized cities will increasingly converge with those affecting development in metropolises. The same applies to the opportunities and challenges presented by the continuing emergence of knowledge societies. Sooner or later, cities of all sizes must face up to this structural shift.

In the study ‘Creative Future – Growth Potentialities for Baltic Cities’, the particular respective potentialities of selected Baltic cities under the conditions of the knowledge society is examined in the light of the concept of ‘creative urban development’. The Baltic region has been chosen for analysis because this region contains heterogeneous cities of varying historical influences and specific structures. This facilitates the evaluation of the innovative urban development concept under various locational conditions. Although the cities under scrutiny are developing at different rates and levels of intensity, structural economic transformation everywhere is proceeding in the same direction: towards knowledge-based economic areas hosting research-intensive industries and knowledge-intensive services.

Study methodology

The study will define a meaningful set of indicators for the practical analysis of small and medium-sized cities. Using this practical tool, the specifications of relevant (and especially soft) locational conditions in each city will be measured, evaluated and compared. As well as obtaining a comparative view of the status quo, the aim is to estimate the potential for development inherent in each individual city in terms of the structural shift towards a knowledge-based society. Light will be shed on the priorities of support provided up to now in relevant policy areas. Policy recommendations will be obtained based on the results of these empirical analyses of the diverse urban landscape of the Baltic region. These recommendations will be fundamentally transferable to other cities. Finally, an attempt will be made to suggest how the idea of ‘creative urban development’ might also in essence prove a successful concept for small and medium-sized European cities.

The theoretical foundations constructed by Richard Florida prove a fundamentally sound basis for the investigation of locational conditions of selected Baltic cities in the context of the ‘creative city’ model. However, extensive adaptation of the analytical methodology is required in order to adjust to the specific structural conditions prevailing in Central and Northern Europe. This study therefore uses an analysis and evaluation approach of its own design. Locational conditions of a creative city in this study are described in terms of three aspects: ‘Innovation’, ‘Knowledge’ and ‘Openness’. The particular city’s significant features and the abilities and knowledge of its inhabitants have a formative influence on all aspects. These ‘locational conditions’ determine the attractiveness to creative and talented people of all backgrounds and exert an influence on economic success and prosperous urban development.

First analytical step:
Set of indicators and quantitative evaluation

The first step in the analysis involves quantitative evaluations. The three aspects are each operationalised by means of a set of sixteen indicators specially designed for this study in order to clarify the nature of locational conditions in the selected cities. Scientific analysis has empirically demonstrated the relevance to regional growth of the majority of these indicators.20 For all indicators, data is available on a city or regional level (the latter including the city) from the harmonised European database, Eurostat. However, in most cases the most recent available values in this system are from 2005.

Reliable conclusions may nonetheless be drawn based on these values, since these are mainly structural data only changing at a low pace over time. The analysis of the indicators is made in relation to the EU25 average (=100) (cf. Figure 7). A value lower than 100 means that the degree of prevalence of a particular locational factor in a city is less than the EU average. A value above 100 means the opposite. Where data availability permits, indicators refer to the city level. In some cases, data from the harmonised EU statistics has been combined with data from national statistical offices or those of the cities concerned.

Indicators of the locational condition ‘Innovation’

‘Innovation’ measures the capacity of a city to develop further economically and socially by means of the production and use of technological innovation. It is measured by a conventional selection of indicators. For instance, public and private expenditure on Research and Development (R&D) and numbers employed in R&D are usual input factors for innovation processes. Factors here are not fully substitutable. This means that all three R&D aspects are indispensable to a successful research landscape. According to so-called ‘endogenous growth theory’, R&D investments are essential drivers of growth. In the model of Paul Romer, for instance, R&D constantly develops new interim products which lead to a continual increase in productivity.21

The set of indicators also includes the number of patent applications at the European Patent Office (weighted according to population), as an output value for innovation processes. The distribution of internet access points is also considered in an estimation of the innovation of a city’s total population. This is a standard indicator for evaluating the status quo of a knowledge society. The result permits conclusions to be drawn about the distribution of technological innovations, which is an essential condition for a city’s innovation and thus for economic growth.22

Indicators of the locational condition ‘Knowledge’

The locational condition ‘Knowledge’ reflects the prominence of the particular city in terms of education, knowledge-intensive economic activity and culture. Conventional indicators in general use are employed to estimate the position of cities in terms of knowledge. The proportion of employees with qualifications at tertiary level gives an insight into the level of education of the workforce living in the city.\(^{23}\) This can be used as a measure of the presence of talent and creativity in the population.

It is also an indicator of the ‘knowledge intensity’ of those in employment as a whole, a factor which in turn forms the basis of productivity growth and technological capacity.\(^{24}\) Productivity measures the capacity of the total economy. It reflects the relationship between input and output, which depends in particular on the expertise deployed and the level of technology. Productivity is calculated by GDP per person in employment. The number of students per 1,000 inhabitants permits conclusions on the provision of higher education and the potential for future appointments of qualified persons in a city. The extent to which a city already has a knowledge-based economy and the chances of (university) graduates obtaining suitable employment can be measured by means of the proportion of employment in knowledge-intensive services and industries. The definition of ‘knowledge-intensive industries’ follows OECD classification and the equivalent classification in EU statistics.\(^{25}\) Because the provision of culture in a location has an ever more frequent role in the personal location decisions of (highly) qualified people, the analysis also takes into account an index of cultural provision.\(^{26}\) This indicator describes the cultural rating of the city, but can also be seen as an approximate value for the size of the culture sector and its relevance for the regional economy.

Indicators of the locational condition ‘Openness’

‘Openness’ as a locational condition encompasses various dimensions. On the one hand, inhabitants’ experience of diversity, for example in relation to people’s backgrounds and cultures, comes under scrutiny. Equality and the conditions for getting to know different kinds of people are also analysed. Unlike the sets of indicators for innovation and knowledge, there is as yet no system of indicators for studying this locational condition in common use in the Baltic region.\(^{27}\) To ensure comparability in the survey nonetheless, five specially devised indicators have been defined for determining the various aspects of this locational condition.

The proportion of foreign students and the proportion of foreigners in the total population were used in the analysis as indicators for cities’ openness and experience of internationality. Incomers who view a city as open and hence attractive will pass this opinion on to other potential incomers through word of mouth.\(^{28}\) The study also considers the integration of women into the labour market through the number of employed women as a proportion of the total employed population. From this it is possible to infer the extent to which equality of opportunity for economic integration and social equality prevail. These are crucial aspects of open urban societies. The analysis also includes an indicator on population density, which gives information about the concentration of inhabitants in a location. The values obtained permit inferences on the fundamental opportunities that are provided for different people to communicate with one another. The presence and prevalence of positive agglomeration effects such as ‘knowledge spillover’ depend on the proximity of people and the frequency of ‘face-to-face’ contacts. Trans-regional accessibility is also of vital importance to a city’s international character. For this reason, the index of multimodal transport network accessibility of population (by air, car, rail and ship)

\(^{23}\) Cf. OECD (2008).
\(^{24}\) Cf. Romer (1986).
\(^{26}\) The index includes the number of museums, theatres, public libraries and cinema seats per 1,000 inhabitants.
\(^{27}\) As our approach measures openness in various different dimensions and for medium-sized cities, the ‘gay index’ will not be used, but a set of indicators of our own design.
was considered, an index developed in the context of the European Spatial Planning Observation Network (ESPON). This permits conclusions on a city’s attractiveness as a business location and tourist destination.

Second analytical step: qualitative evaluation

The statistical evaluations are expanded upon in a second methodological step involving qualitative data. The grounding of this is formed from 48 interviews conducted on the basis of structured questionnaires in the selected Baltic cities with decision-makers from politics and business, and experts in urban development, cultural and economics. Inferences can be made from these personal conversations on such matters as the perception of indicator characteristics and the impact of support policies in the individual cities.

City portraits

Brief portraits of the individual cities have been prepared on the basis of the quantitative appraisal of the locational conditions ‘Innovation’, ‘Knowledge’ and ‘Openness’. These portraits assess cities’ development potential as locations of the knowledge economy. The results of conversations with experts have also been used for the qualitative estimation of such development potential. Results are incorporated into the evaluation of the locational conditions and the support landscape.

A city’s development potential is portrayed by means of its present values for the locational conditions ‘Innovation’, ‘Knowledge’ and ‘Openness’. This is an overall estimate based on an abstraction of the results. The portrayal shows what areas are found to have average, above average and below average values compared to the EU average, not to the other cities. As the estimation incorporates both quantitative and qualitative aspects, the circles chosen do not in this respect represent actual, measurable values. Section 4 summarises the results of the analysis of the cities. The full, German-language version of the study contains a more comprehensive account of the results.

Figure 8: Value and previous importance to support policies of locational conditions ‘Innovation’, ‘Knowledge’ and ‘Openness’

Source: original illustration.

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29 The indicator measures the population potential accessible at a minimum journey time by intermodal transport from a city. Cf. ESPON (2004).
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Brief city portraits
Kiel, with a population of approximately 235,000, is the federal state capital of Schleswig-Holstein. It is located on the Kiel Fjord, with direct access to the Baltic Sea. A shipbuilding and naval city of long tradition, it has a strongly maritime image and is regarded as the 'world capital of sailing'.

Leisure value, excellent research facilities: knowledge-based growth on the rise

4.1 Kiel: cutting-edge research with maritime flair

The structural transformation to a service society is showing clear results in Kiel: 87 percent of jobs here are already the product of business establishments. Apart from traditional sectors such as shipbuilding, important industries include medical engineering and other healthcare fields.30

An important factor in urban development is the creation of ever higher knowledge intensity in both service and general industries through the enhancement of locational conditions. Kiel’s diverse landscape of university and research institutions provides the starting conditions for this. Research institutions act as lodestars, creating favourable conditions for attracting a highly-qualified workforce and hence stimulating knowledge-based growth. The renown of its universities and research institutions as well as the international character of the city also make Kiel an attractive location for foreign students. Tourism and the world-famous ‘Kiel Week’ sailing event lend it a particular flair, with positive effects on the quality of life.

Figure 9: Values for the three locational conditions and their previous importance to support policies

Source: original illustration.

Knowledge clusters create potentialities

Overall, Kiel can be categorised as average in terms of innovation. If productivity and per capita incomes are set as the indicators of economic capacity, Kiel has achieved a good position in the Baltic region. A policy of targeted support has enabled various clusters to become established in the city. In particular, medical engineering has taken root alongside the traditionally strong maritime cluster. Kiel is one of the leading locations in this field in Germany. Enterprise start-ups are supported by various technology centres. However, this positive picture in terms of the locational condition ‘Innovation’ is somewhat tempered by the fact that Kiel is below the EU average on R&D expenditures, both in the public and private sectors. This weak performance in research and development is reflected in a relatively low number of patents. Kiel can demonstrate some strengths in terms of the locational condition ‘Knowledge’. As well as the internationally renowned Kiel Institute for the World Economy, the cluster of excellence ‘Future Ocean’, the flagship of the city as a location for research and scholarship, offers particular opportunities for knowledge-based growth. The city is home to its own University of Schleswig-Holstein, with a full portfolio of faculties, and to other institutions such as the Kiel University of Applied Sciences. However, the large proportion of students in the populace is set against a below average share of employees with tertiary qualifications. This betrays some potential for raising the level of knowledge intensity in the local economy. Currently, there are not enough vacancies for highly-qualified individuals available. Overall, then, Kiel is graded average in terms of the locational condition ‘Knowledge’. An open atmosphere prevails in Kiel with its many international students in particular contributing to this ambience. Cruise ship tourism and the city’s reputation as an international centre for the sport of sailing – a reputation deriving not least from the ‘Kiel Week’ sailing festival – bring Kiel great renown. The level of employment among women in Kiel is just over the EU average. However, further efforts are needed (as they are in Germany as a whole) to refine the reconcilability of family and career. The foundations have been laid in Kiel for attaining a good position in the knowledge economy. Openness and excellent institutions of education and research offer a basis that promises success. The particular challenge for the future will be to increase the level of knowledge intensity in the economy.
The Hanseatic city of Rostock, with around 200,000 inhabitants, is the largest city in Mecklenburg-Vorpommern. It has a maritime flavour, and derives its particular character from its many brick Gothic buildings and its location on the shore of the Baltic Sea.

4.2 Rostock: Brick Gothic and high-tech ambitions

Rostock is not only a tourist centre, but also the largest university town and the leading economic location in the federal German state of Mecklenburg-Vorpommern. Around one seventh of the state’s economic activity and jobs are found in this Hanseatic city. An immense structural shift is underway to transcend the old, industrial past. Rostock has developed into a location in which 87 percent of those in employment today are working in the service sector. Rostock’s industrial economic structure comprises a mix of the region’s traditionally strong economic specialities, such as shipbuilding and the shipyards’ suppliers, and innovative high-tech enterprises. Rostock is home to one of Germany’s most modern shipyards: the Wadan MTW yard. The European Aeronautic Defence and Space Company (EADS) operates a production and research laboratory here. The inter-sectoral BioCon Valley network has a project office in Rostock and researchers working on the latest developments in the modern life sciences and the healthcare industry. In spite of these successes, however, Rostock has not yet achieved complete success in its transformation into a lodestar knowledge centre for the Baltic region. Productivity growth is only increasing slowly and from a below-average starting point. The number of people in employment per 1,000 inhabitants has been growing slowly since 2005 after many years of decline. However, there is potential for knowledge-based growth, for example provided by the many research institutions in the city and the resources of the educated and trained workforce.

Course set for the development into a knowledge economy

In spite of comprehensive support from many programmes, the locational condition ‘Innovation’ has not as yet developed as well as it might have done. There is a lack of a broad foundation for industrial technological enterprises in the economic structure, which is dominated by the service sector. While the development of the knowledge-based economy as a whole is progressing, the number of research-intensive industrial enterprises is still insufficient, resulting in a lack of private R&D investment. To function correctly and to bring innovation successes, even clusters need a ‘critical mass’ of enterprises and of private and public research activity. Work is already ongoing to counter these unfavourable tendencies, through support to competence networks and the grouping of expertise. This should continue to be a focus of support to the economy in the future. Specialisation, for example, in the healthcare industry, offers a good starting point for the further development of the knowledge economy. Rostock’s strength in the field of ‘Knowledge’ is determined above all by its long established university and renowned research institutions, as well as their students and staff. However, up to now even the well-developed educational landscape has been unable to stem the population flight which has been continuous since the

early 1990s. A more favourable development of the knowledge-intensive sectors of the economy would also in future bring with it an increase in the proportion of highly-qualified employees. The need to provide active support to inward workforce migration has been seriously considered in Rostock as throughout the state of Mecklenburg-Vorpommern. Project-related initiatives are devoted to bringing in specialist and managerial staff. The further enhancement of ‘Openness’ is particularly important to the future of Rostock. In the wake of xenophobic events in the 1990s in particular, the city has experienced the unfavourable impact of a negative image on economic and urban development. Changing this image is therefore a vital element of marketing the location. Today, tourist highlights are often associated with the name of the city, and Rostock is increasingly establishing itself as a tourist destination with foreign guests bringing an international flair to the Baltic city. The importance of the international character of society and economy as an influential locational factor was also emphasised by interview participants in Rostock.

Figure 10: Values for the three locational conditions and their previous importance to support policies

Source: original illustration.
With around 460,000 inhabitants, Gdańsk is the capital of the województwo pomorskie, or Pomeranian Voivodeship. The city is part of one of Poland’s largest conurbations, the so-called ‘Tricity’ (Trójmiasto), comprising the centres Gdańsk, Sopot and Gdynia. This port city has always been an important trading centre, beginning with the amber trade of antiquity and later becoming a Hanseatic port.

4.3 Gdańsk: Poland’s Baltic city of knowledge

Overall economic development in Gdańsk in recent years has been characterised by a rise in productivity, and the number of jobs has also increased. However, there are still deficits in Gdańsk, in both hard and soft locational factors. For the city’s development potential to be fully realised, the coming decade in the Gdańsk location must in particular see the education and training of specialist personnel, who must be tied to the city. However, structural changes towards an economic location with pronounced intensity of knowledge and technology are currently still at an early stage. To change this, R&D capacities must be expanded and the technological achievement potential improved.

Developing creative potential further

Although productivity has markedly increased in recent years, and although the number of jobs has increased and the level of incomes is now approaching the EU average, Gdańsk still has pronounced deficits both in the traditional hard locational factors and in soft factors. Because of these deficits, the process of gaining economically on other, highly-developed European cities will require more time. Previous experience in the course of the EU integration process suggests that over coming decades Gdańsk too will see its economic structure converging with that of western EU cities, which to a large extent specialise in knowledge-intensive service sectors. The importance of creative economic sectors is currently rather poorly developed here in comparison to the other Baltic cities. These sectors also show deficits in terms of innovation and R&D capacities. Comprehensive urban development policy strategies for attracting high-tech enterprises are currently only at the discussion and development stage. Gdańsk is graded average in terms of the locational condition ‘Knowledge’. The city is an important university location with many private and public educational facilities, but their internationalisation is in its early stages. One problem is that Gdańsk has been affected by a considerable brain drain since the early 1990s, although very recently a trend towards return migration has also begun to be observed, associated with rising rates of pay in Poland. In the opinion of local stakeholders, return migration and ‘brain circulation’ will have a positive impact on the development of the location, because returning migrants will be coming back armed with specific cultural experiences and abilities, as well as contacts with international networks and linguistic abilities. At the same time, this will contribute to the expansion of the pool of experience with other cultures, which is currently comparatively small because of the low proportion of foreigners. For this reason, the factor ‘Openness’ is graded below average. The focus on infrastructure dominates support policies and currently has priority over the field of human capital. The prioritising of infrastructural expansion, which is being even further reinforced in view of preparations for the European Football Championships ‘EURO 2012’, is too one-sided in the long run. Although these tendencies are not yet particularly clear, rising wage costs, which will lead labour-intensive economic sectors to emigrate, will require Gdańsk
too to specialise in knowledge-intensive industries and services. Yet for Gdańsk to fulfil its development potential and become an attractive place for highly-qualified people to live and work, it is not only the expansion of infrastructure that is essential, but also the further enhancement of soft locational factors. Fertile soil for economic growth is not created by investment in tangible capital projects alone, but also in human capital. The crucial future task for Gdańsk is to accomplish the technological structural shift to economic sectors of higher value, and this will require continuous increments in productivity and knowledge. It remains to be seen when suitable instruments will be implemented in order to accelerate further the encouragement of high-tech enterprise locations and direct foreign investments in the Gdańsk region, and so to stimulate economic growth. Stimulus in this regard may emerge from the implementation of the regional programmes operating since 2007 in the context of EU aid.

**Figure 11:**
Values for the three locational conditions and their previous importance to support policies

Source: original illustration.
Vilnius, the capital of Lithuania, lies in the south-east of the country, and is with around 555,000 inhabitants the largest city and economic centre in Lithuania.

4.4 Vilnius: City of culture at Europe’s geographical centre

The economic development of Vilnius clearly outstrips that of the Lithuanian nation as a whole. Nonetheless, the knowledge-based structural shift is proceeding at a modest rate, so that the main future task will be to further this restructuring of the economy. Demographic developments also pose a crucial challenge for Vilnius. According to forecasts, a further considerable fall in population is expected by 2020.32 In order to counter this and to accelerate the structural shift to a knowledge society, Vilnius thus faces the task of creating attractive locational conditions. Vilnius has clear advantages regarding the locational factor of culture. The old city, covering an area of 360 hectares, is one of the largest and best-preserved historical city centres in Europe, and in 1994 it was made a UNESCO World Heritage Site.

Vilnius has also been named Europe’s Capital of Culture for 2009, which will contribute to the enhancement of the city’s international character.

Strengthening locational conditions for the knowledge society

Although Vilnius rates above average for some indicators in this European comparison, the overall picture of locational conditions shows the city clearly falling short of the European average. Because programmes for promoting the locational condition ‘Innovation’ have only been developed on a large scale in recent years, technical R&D facilities, research quality and salary levels are underdeveloped by international comparison. And there is a lack of qualified specialist personnel. But because these factors play a key role in relation to the attractiveness of Vilnius to foreign investors, especially in innovative technological industries, there is a risk of a self-perpetuating vicious circle. If relatively few investments are made, this may cause a further emigration of highly-qualified scientists and researchers, which would in turn have negative consequences for innovation capacity, which is, all things considered, as yet not particularly strong.33

There are many starting points for improving the efficiency of the knowledge base, arising from the lack of specialist personnel (which is aggravated by the limited opportunities for reconciling family and career life) and the lack of future-oriented educational profiles. Conversely, as the city has become more international in character, dealings with minorities and investments in transport infrastructure are rated positively. Overall, Vilnius is graded average in terms of the locational condition ‘Openness’ (cf. Figure 12). A change in the trend regarding the numbers and educational level of qualified personnel is a particular essential precondition for maintaining the dynamic development seen in the past decade in productivity and per capita incomes in particular.

Riga, the capital of Latvia, is on the southern shore of the Gulf of Riga and at the mouth of the River Daugava. With around 728,000 inhabitants, Riga is one of the largest cities in the Baltic region.

4.5 Riga: Knowledge, culture and architecture driving urban development

Founded in 1201, Riga quickly established itself as a point of contact and interaction between east and west, and it joined the Hanseatic League in 1282. Riga’s traditional industries are therefore trade, transport and logistics but economic sectors with promise for the future are primarily creative industries such as tourism, consultancy and financial and communications services. The historic city centre and the many Art Nouveau buildings are attractions for foreign tourists. Since the turn of the millennium, the number of tourists has been constantly increasing, by 15 percent per annum across Latvia as a whole with 71 percent of tourists visiting Riga. The figure of two million visitors was exceeded for the first time in 2004.

The city’s locational advantages include not only its cultural offering, but also the diverse university landscape, which has great potential as a catalyst for the further development of the knowledge economy. There are also already inroads being made in the field of cutting-edge technologies. Overall, however, the development of innovative technology industries in Riga is still at an early stage, hampered by various obstacles. One of the city’s greatest current challenges is its continuously falling population, a trend which forecasts suggest may continue in the future.
Riga has drawn ahead of other regions of Latvia in terms of the locational conditions 'Innovation', 'Knowledge' and 'Openness' as a result of a dynamic structural shift since the 1990s. However, in comparison to the European average, all three locational conditions still show room for improvement. The lack of private entrepreneurship prior to 1990 and the strong specialisation of the economy in trade and services mean that Riga is rated below average in terms of the locational condition 'Innovation', but this area is already being actively promoted. The success of this strategy, however, also depends on everyday social acceptance of research in cutting-edge technologies and technological innovation. As yet, the spirit for adopting new technologies and innovations is still developing (cf. Figure 13). Regarding the locational condition 'Openness', too, personal attitudes and willingness to change are of decisive importance to future developments. At present, Riga is below the EU average in terms of openness (cf. Figure 13). Riga’s strength lies in the locational condition ‘Knowledge’. Quantitatively speaking, opportunities for education and training and cultural facilities are present in sufficient strength, although the quality of these facilities does not as yet match Western European standards. The factor of ‘Knowledge’ is thus overall rated as average. As the development of knowledge potential could also have a positive influence on innovation and openness, the field of education offers a very good starting point for targeted support. Riga’s enhancement as a knowledge location could contribute to this attractive Baltic city gaining still more appeal and positioning itself favourably in the context of international competition.
Some 403,000 people live in the capital of Estonia on the country’s north coast. With its positive image forged in the 1990s, Tallinn is well-known as the ‘City of New Technologies’.

4.6 Tallinn: Tradition and technological innovation

‘Traditional Tallinn’ is defined by its mediaeval Old Town. At the same time, though, Tallinn is a showcase city for the acceptance of technology and is home to Skype, the market leader in VoIP (internet telephony). Rising wage costs and the emigration of labour-intensive industries currently present Tallinn with the task of proceeding further with the accomplishment of the economic and social structural shift and establishing itself as an attractive city with a diverse cultural scene and a broad base of knowledge-based commercial enterprises. This necessity was already recognised by the former Mayor of Tallinn, Edgar Savisaar, who was in office from 2001 to 2004. He made efforts to implement the concept of the ‘creative city’ in Tallinn, even consulting with Richard Florida for this purpose.\(^{36}\) In spite of his commitment, the new concept has yet to make a decisive breakthrough among politicians and the public. The city is currently looking for suitable strategies for accomplishing its crucial future tasks: intelligent responses to the population decline, preventing the drain of highly-qualified workforce, solving problems of intercultural co-existence and the more intensive integration of the Estonian economy into the global economic system.

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\(^{36}\) Cf. City of Tallinn (2008).
Overcoming talent shortages to develop the IT city

The city offers much development potential here. Innovation in Tallinn is currently rated as average but is developing rapidly and important momentum is being gained, especially from the IT and software firms establishing themselves here. The ‘IT City’ image also draws strength from a population that is open to new technologies. Political decision-makers have long recognised the importance of technology and innovation as growth factors. Although there is as yet no overall strategy for exploiting potential in this field, it has nonetheless been well-supported by political policy in recent years. Further support measures, however, are still required to close the gap on leading European innovation locations.

Tallinn’s advantage in terms of the locational condition ‘Knowledge’ is its plentiful resource of specialist personnel. However, this potential is being reduced in the course of the negative demographic trend, and the overall rating for this locational condition is therefore average. Because the traditional education system has not as yet been sufficiently adapted to meet the changed labour market demands of the expanding knowledge economy, it is essential that the profile of educational institutions should be sharpened and that they should be made more international in character. Strict visa and entry policies have prevented foreign students and teaching staff from being active in Tallinn’s institutes of higher education. In the past, no focused support was given to the development of knowledge resources. There is still much room for improvement for the locational condition ‘Openness’ in terms of diversity, integration and internationality. This factor is currently rated below average overall. The subject has not yet been the focus of concrete political targets or programmes. Improved openness in the city towards highly-qualified personnel of all ethnic backgrounds and cultures is of vital importance to the future development of Tallinn, as it is only through reciprocal relations that the locational conditions ‘Innovation’ and ‘Knowledge’ will also fulfil their full potential. There are numerous opportunities in Tallinn for improvements towards a creative, multicultural knowledge location. These need more intensive strategic local planning and exploitation. The ‘Initiative European Capital of Culture 2011’ offers a favourable platform and framework for suitable activities. Tallinn is the Baltic innovation location known for astonishing technological innovations. The city would be well able to build a positive image as a high-tech city. To make full, real use of the existing potential and to establish itself in the long term as a city with knowledge-based structures, Tallinn is in urgent need of specialist personnel. One of the ways of achieving this would be for the nation to open itself further to immigration.
Turku is the oldest city in Finland, and the capital of the region of Finland Proper (Varsinais-Suomi). Its coastal location has inspired the byname ‘Finland’s Gateway to the West’ for this city of 176,000 inhabitants.

4.7 Turku: Cutting-edge technologies and cultural vibrancy

Turku is one of the top innovation locations in the EU. The city’s strength derives from its early movement towards the knowledge society. It has enjoyed excellent economic development over recent years, and has achieved prodigious productivity increases. The birth rate, which is high for Europe, and inward migration mean that Turku’s demographic situation is more favourable than those of other European Baltic cities. A population growth in excess of 7 percent is forecast by 2030. Despite being a well-established knowledge and innovation location, Turku too would be well-advised to focus on enduringly appealing local conditions in order for the city to remain attractive to incomers. As Turku becomes the European Capital of Culture for 2011, it is to be expected that the dynamics and attractiveness of this southern Finnish city will be greatly enhanced.

Figure 15: Values for the three locational conditions and their previous importance to support policies

Source: original illustration.

Overall, Turku shows clear strengths in the fields of ‘Innovation’ and ‘Knowledge’. The pronounced focus of its universities on innovative study courses gives the city particular strength in the field of ‘Knowledge’. National subsidies are mainly available when a particular field of research is in a class apart from those of other Finnish universities. The merging of all faculties of a subject in the Turku Science Park along with other research institutions and enterprises has gone a long way to determining Turku’s outstanding position as a knowledge location. In regard to the locational condition ‘Openness’, Turku still has the potential to improve its urban qualities. Finland’s immigration history is relatively recent. On a local level, the opening up of the city to incomers is promoted in a number of ways today, but the overall direction of immigration policy is determined on the national level. The open atmosphere in Turku is also shaped for the better by the positive overall situation in terms of the integration of women into the labour market. As a whole, the existing and diverse commitment of politicians, administrators and interest groups offers numerous points of contact for further increasing openness in Turku. To this extent, Turku is an exemplary city in terms of the locational conditions vital to the knowledge economy, and is thus very well-equipped for the challenges of the future.

Turku – prepared for the future

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With around 111,000 inhabitants, Umeå is the capital of the northern Swedish province of Västerbotten and the cultural hub of the region. The city is renowned for its international, youthful flair.

4.8 Umeå: Small but successful

Umeå’s economic upswing began in 1965 with the foundation of its university, with the help of which the city has increasingly established itself as a knowledge location. Many successful research institutes and enterprises have grown from the university, further catalysing the development of Umeå.

They are elements within a knowledge economy which is particularly advanced in the field of services. Umeå shows correspondingly high rates of growth in regard to productivity, per capita income and population. The city is well above the level of the national dynamic. The high number of students means that the population is distinctly young, with an average age of just 37. Its continual population growth means that Umeå is favourably forecast to be home to a population of 150,000 by 2050. A current focus is on mindfulness of culture: Umeå is applying for the title of European Capital of Culture for 2014.
Arrived in the age of the knowledge society

Overall, the locational condition ‘Innovation’ is rated as average in Umeå. Positive aspects can be traced to the R&D in its university institutions. The relatively low levels of private R&D investment are an obstructive factor, and this requires stronger development. Entrepreneurial activity has been actively supported for a while. To enable further development, collaboration with the technological location of Luleå may be helpful, especially for filling niches in innovative industries. The urban development of Umeå is largely based on the locational condition ‘Knowledge’. Systematic support has brought the university to a high level, attaining great renown not only across Sweden but also on an international level determining the atmosphere of the city. The great challenge for the future is to reduce outward migration of highly-qualified university graduates. The image of a ‘student city’ influences the locational condition ‘Openness’ (cf. Figure 16) and a comparatively high number of foreign students contributes to the cosmopolitan atmosphere. The commitment of the city administrators and the university to promoting gender equality also improves the quality of life. The city of Umeå has arrived in the knowledge society. It is a very welcome development that decision-makers in the city have adopted Florida’s concept of ‘creative cities’ and are actively supporting hard and soft factors. To ensure further positive future development, it is of the utmost importance that more attractive job opportunities must be provided for young people from the university or otherwise.
Århus, Denmark’s second city, is in the region of Mid-Jutland, and the settlement dates back to the Viking period. Today, Århus is a modern university city whose hallmark is knowledge-based services.

4.9 Århus: Growing university city in the heart of Jutland

Thanks to its locational strengths, in particular in the field of education, Århus has emerged from the shadow of the dominant Danish metropolis of Copenhagen and has developed into a growing city with a national and international aura. The particular keynote of the creative scene in Århus is the experience economy, with innovative enterprises at work in the fields of architecture, design, events, film and culture. For the further growth of these industries, creative ideas and their implementation in the form of products and services are crucial. The background conditions for this are extremely favourable. The creative potential is high, demographic prospects are very good, and a committed city administration is investing in the locational conditions for the creative economy as a strategy for growth. One of the greatest challenges for the future will be the better economic integration of the ethnically and culturally diverse population particularly in view of the fact that employment trends since 2000 have been sluggish and productivity growth remains below the national average, Århus will need to create new growth stimuli, not least by the better integration of knowledge-intensive industries with university research.

Figure 17: Values for the three locational conditions and their previous importance to support policies

Source: original illustration.
Active policies promote the experience economy

Overall, this city in the heart of Jutland is very well-positioned in terms of the locational conditions ‘Innovation’ and ‘Knowledge’, and there are excellent conditions for a dynamic development as a ‘city of knowledge’. The above average rating for innovation in Århus arises from the city’s being a successful location for research and development, which is reflected both in R&D expenditures and R&D employment levels. Both the state and private sectors are very active in this field. The populace is also favourably disposed towards new technologies, as is shown by the high proportion of households with internet connections. Århus is also rated above average in the locational condition ‘Knowledge’. The city has particular strengths in the proportion of its workforce employed in knowledge-intensive services. Århus’ economy is largely based on the expanding fields of the knowledge-intensive economy. The cultural offering in Århus is above the EU average, which represents a very favourable distinction, especially in comparison with other cities of the Baltic region. However, the locational condition ‘Openness’ is only rated as average in Århus, and thus presents the clearest opportunity for development compared with other locational factors. The multimodal accessibility of the city is particularly unfavourable. This is mainly due to the inadequate integration of Århus into international air and rail routes. The proportion of foreign students in higher education in the city, which is another aspect of internationality, would benefit from further improvement.

The Århus city administration has recognised the importance of the creative economy to further development, and has committed itself to the inter-sector target of cultivating a ‘creative city’. The mayor’s office has set up a special office for the knowledge economy and the creative economy within the Department for Economic and Urban Development. The most important job of this office is to take

39 Cf. Århus District Council (2008).
part in urban development planning. Other tasks are the promotion of measures for education and further education, and to support cooperation between public and private institutions within the fields of culture and media and in other fields of the experience economy. The development plans ‘Growth in Århus’, drawn up every four years, present a vision and individual targets for city development, and describe fundamental strategies for realising these concepts. Attention here is paid to improving the locational conditions for the creative economy. The present plan, ‘Growth in Århus IV’, covers the period 2005–2009. To address the interests of all involved institutions, discussions are held pending the approval of each particular plan involving representatives of business, educational institutions and interested citizens. Halfway through each four-year period, an evaluation takes place based on criteria such as employment and population developments. Proposals for improvement and recommendations for action are drawn up for the remaining lifetime of the plan.

Networks of enterprises, educational institutions, administrators and citizens focus support in local programmes. Local stakeholders meet at regular intervals to discuss socio-economic problems and to generate proposals for urban development. Targets and measures floated in the urban development programme are also discussed here. The latest project of this kind is the ‘Think Tank’ initiative, in which various stakeholders consult on new directions for urban development. Århus is already well on its way in the knowledge economy, thanks in no small measure to its bold and targeted urban development policies.

40 Cf. Århus District Council (2005).
5
Baltic cities with different location profiles: diverse potentialities for creative development
5 Baltic cities with different location profiles: diverse potentialities for creative development

5.1 Location conditions compared city by city

The results of the regional economic analyses show that innovation, knowledge and openness are of particular importance in the successful positioning of the Baltic cities as knowledge locations. As the comparison shows (cf. Figures 18 to 20), the cities surveyed currently show different configurations of locational conditions and potentialities. In the following, best practices for knowledge-based urban development will be highlighted, based on the collated results of the city comparison. Successful projects and support instruments give indications for the future design of a location policy focused on the specific conditions for the continuing transformation of Baltic cities into knowledge economies.

Innovation

Three groups of cities with distinctly different characteristics emerge in terms of their position regarding the locational condition ‘Innovation’ (cf. Figure 18). Innovation levels in Århus and Turku are graded as very good, which to a large degree arises from these cities’ above average strength in R&D capacities and effective knowledge transfer between the various stakeholders participating in the innovation process. Århus and Turku score in particular through their efficient harmonisation of knowledge-intensive industries and university research. The short communication paths typical of these cities facilitate face-to-face contact, knowledge exchange and efficient networking. Technology centres such as the Århus Science Park and interdisciplinary university institutions also have a positive impact here. Århus invests purposefully in industry-specific support to technological future fields such as nanotechnology and life sciences. The concentration of globally-renowned enterprises such as Google, Vestas, Bang&Olufsen and Arla form the basis for technology-based growth. The Finnish city of Turku is also investing in innovative, cutting-edge technologies such as biotechnology, and in the facilitation of clusters.

The Turku Science Park supports the practical application of academic knowledge. The close interplay of the education of young people with R&D activities and the patenting and marketing of new products succeeds by virtue of the spatial concentration of institutions relevant to the innovation process. There is targeted support for new enterprises emerging from university research projects, which find it relatively difficult to obtain capital to finance their R&D activities due to the high risks attached to their outcomes. The positive examples of Århus and Turku show good values in all factors dependent on innovation. The establishment of key technologies, the spatial concentration of enterprises and research institutions, the targeted support of innovative companies, and high levels of investment in R&D and a broad public research infrastructure have triggered self-reinforcing growth processes. In comparison to these two centres, the other cities need more development in terms of the indicators for innovation examined here.

The mid-table positions for the development of this locational condition are occupied by the cities of Kiel, Tallinn and Umeå. Positive trends in these cities indicate a further expansion of the knowledge economy.
### Innovation

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<th>City</th>
<th>Private and public R&amp;D expenditures, proportion of GDP</th>
<th>Private R&amp;D expenditures, proportion of GDP</th>
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<td>+</td>
</tr>
</tbody>
</table>
### Further elements of evaluation:

**Developments, trends and support policies:**
- Economic structure – Knowledge-based services;
- Networks/ clusters

<table>
<thead>
<tr>
<th>Parameter value of the locational condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Well-established location of the health care sector (medical engineering, pharma)</td>
</tr>
<tr>
<td>• Development potentials through strong maritime cluster</td>
</tr>
<tr>
<td>• Growing locational advantages in knowledge-intensive services, e.g. health care services</td>
</tr>
<tr>
<td>• Expanding high-tech cluster</td>
</tr>
<tr>
<td>• Continuously improving ICT-infrastructure</td>
</tr>
<tr>
<td>• Development of knowledge-intensive services below the average so far</td>
</tr>
<tr>
<td>• Slow emergence of technology-focussed clusters, no targeted support policy yet</td>
</tr>
<tr>
<td>• Slow progress of knowledge-based structural change, mainly because of deficits in infrastructure</td>
</tr>
<tr>
<td>• Upgrading of technology parks in an early stage</td>
</tr>
<tr>
<td>• Development of innovative technology industries shows progress, but is hindered by deficits in the public R&amp;D infrastructure</td>
</tr>
<tr>
<td>• Commercialisation of research not optimal yet technology parks founded</td>
</tr>
<tr>
<td>• Leading technology location in the Baltic states and place of business of globally renowned IT enterprises like Skype</td>
</tr>
<tr>
<td>Technology parks support start-up companies, e.g. via the provision of venture capital</td>
</tr>
<tr>
<td>• Positive effects on the capability for innovation through close cooperation with Helsinki</td>
</tr>
<tr>
<td>• Population affine to new technologies</td>
</tr>
<tr>
<td>• Specialization on cutting-edge technology, focus on biotech</td>
</tr>
<tr>
<td>• Variety of initiatives to support the transfer of knowledge between public research and the private sector</td>
</tr>
<tr>
<td>• Forceful investment in R&amp;D</td>
</tr>
<tr>
<td>• Knowledge-based services mainly shaped by the university, but no respective environment in the private sector so far</td>
</tr>
<tr>
<td>• Support of technology-orientated start-ups mainly taking place in Luleå, regional collaboration with Umeå makes sense</td>
</tr>
<tr>
<td>• Proportion of knowledge-intensive services with focus on ICT, renewable energies as well as media and design is well above the average</td>
</tr>
<tr>
<td>• Effective networking of local stakeholders</td>
</tr>
<tr>
<td>• Local venture capital fund to support entrepreneurs</td>
</tr>
</tbody>
</table>

**Source:** original illustration

---

**Figure 18: Innovation in city comparison**

Source: original illustration
There are initiatives to improve knowledge transfer between university research and private enterprise, and to raise innovation by expanding R&D capacities. An outstanding example here is the ‘Future Ocean’ cluster of excellence in Kiel, which offers great potential for the generation of knowledge. By comparison, the cities of Rostock, Gdańsk, Vilnius and Riga still score below average for the locational condition ‘Innovation’. On a positive note in terms of these cities’ potentialities, it can be said that measures are being initiated everywhere in support of knowledge-intensive economic sectors and technologies. Regional stakeholders have recognised the need to strengthen relevant developmental factors. In general, however, structural change processes in these cities are less dynamic than in the other cities, which may be a particular consequence of the specific economic history of the organisation of these formerly state-planned economies. These cities are still in the process of making up for lost time, not least in their development of the locational condition ‘Innovation’. Nevertheless, the knowledge-based structural transformation continues to proceed in these cities too. Rostock has already attained a good position here in comparison to the other cities.

Knowledge

The comparison between the Baltic cities provides just as varied a picture in regard to the locational condition ‘Knowledge’ (cf. Figure 19). Three cities achieve a very good position, followed by a relatively well-populated mid-table. Vilnius comes last, its position in relation to this locational condition being graded below average. Århus, Turku and Umeå are the cities clearly ahead of the others in terms of locational conditions in the field of knowledge. They have already specialised to a high degree in knowledge-intensive economic sectors and their economic structure is distinguished by above-average productivity.

The outstanding positions of these cities in the knowledge economy result among other things from a diverse and high-quality educational landscape. Universities and other educational institutions act as initiators for the development of the regional economy. In Umeå in particular, it can clearly be seen how a university can function as an engine of growth for a city, and indeed for a whole region. The university here is one of the most important regional employers, which is reflected in the high proportion of employees in knowledge-intensive services. The University of Turku too has been steadily climbing various rankings of top international universities over recent years. In 2006, the Swedish-language Åbo Akademi at Turku was awarded the accolade of Finland’s most efficient university, in particular because of its outstanding successes in research. Both universities have systematically tailored their programme of studies to the needs of the labour market, and are following a consistent strategy of internationalisation, which is having a positive impact on the provision of highly-qualified workforce and knowledge-based growth processes.

Turku also successfully implements knowledge transfer between universities and business. Århus University also enjoys international renown, and has even produced a Nobel Chemistry Laureate. Other well-known institutions, such as the Danish School of Journalism, determine the diversity of its higher education landscape. The interplay between excellent institutions of education and research and a lively cultural scene create a sustainable basis for creative urban development at Århus.

This development focuses on industries crucial to the experience economy, such as film, fashion, architecture and design and is furthered by a consistent policy of political support. The large pool of graduates provides enterprises of the knowledge economy with a large selection of potential employees in these three cities, creating favourable development perspectives for knowledge-based growth.

As well as attractive job prospects, a high quality of life is also important for retaining highly-qualified people in the city. One of the focus areas for Århus, Turku and Umeå in this regard is to enhance the attractiveness of their respective cultural offerings. Umeå and Turku are still in need of improvement here. The high status value of this field in the context of their urban development is attested by the fact that Turku
will be the European Capital of Culture in 2011. Umeå is applying for the same title for 2014 and Århus also has a pending application for 2017. Behind this triad is a large group of cities – Kiel, Rostock, Gdańsk, Tallinn and Riga – which also show good starting conditions for knowledge-based growth thanks to their functions as venues of higher education and their high student populations. As well as the universities, some hosting excellent research work, there are numerous other educational institutions here. However, for many of these cities, it must be said that public R&D is not always closely linked to local enterprise, meaning that the potential for knowledge spillover is not being exploited. Nonetheless, these cities’ established institutions of education and research do provide a sustainable foundation for successful developments. To accelerate knowledge-based growth and to counteract the rising shortage of specialist personnel, there is a general need here for the studies on offer to be better (or even better) adapted to the changing needs of the labour market.

For all these cities in equal measure, the ‘brain drain’ and demographic trends could pose a danger to the expansion of the knowledge economy. It is therefore important for the enhancement of these cities’ development potential that quality of life must be improved in order to attract and bind workforce to the location. Gdańsk and the Baltic capitals already have above-average strength in regard to the cultural offering. Vilnius is the only one of the cities under scrutiny where the locational condition ‘Knowledge’ must be graded as below average. The city’s educational system continues to show clear structural flaws. The quality of facilities is graded inadequate by experts from the region, despite the high number of graduates. Stimulation of urban development may emerge from the cultural strengths of Vilnius.
### Knowledge

<table>
<thead>
<tr>
<th></th>
<th>Proportion of employees in knowledge-intensive services</th>
<th>Proportion of employees in knowledge-intensive industry</th>
<th>Students per 1,000 inhabitants</th>
<th>Proportion of employees with tertiary education</th>
<th>Cultural Offering</th>
<th>Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiel</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Rostock</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gdańsk</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Vilnius</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Riga</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Tallinn</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Turku</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Umeå</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Århus</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
### Further elements of evaluation:

<table>
<thead>
<tr>
<th>Developments, trends and support policies</th>
<th>Parameter value of the locational condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Renowned educational and research institutions located&lt;br&gt;• Established excellence cluster “future ocean”, focus on marine sciences and maritime technologies&lt;br&gt;• Quality of the cultural offering has potential</td>
<td></td>
</tr>
<tr>
<td>• Traditional university city with appeal on transregional scale&lt;br&gt;• Diverse public research landscape&lt;br&gt;• Committed support of cooperations between partners from science, administration and business&lt;br&gt;• Campaigns against the emigration of high-qualified workforce&lt;br&gt;• Recognition of culture as an influential factor of urban development</td>
<td></td>
</tr>
<tr>
<td>• Distinct concentration of educational institutions&lt;br&gt;• Provision with a high-qualified workforce in Gdańsk shows some potential in the interplay within the TriCity&lt;br&gt;• Stabilizing population figures</td>
<td></td>
</tr>
<tr>
<td>• Structural deficiencies in the educational system&lt;br&gt;• Strive for international cooperation of universities&lt;br&gt;• Ongoing brain drain amplifies shortage of high-qualified workforce&lt;br&gt;• Rich cultural offering: European Capital of Culture 2009</td>
<td></td>
</tr>
<tr>
<td>• Manifold educational landscape, including private institutions like the Stockholm School of Economics&lt;br&gt;• Campaigns to mitigate brain drain&lt;br&gt;• Upscale cultural offering has positive influence on creative industries and quality of life</td>
<td></td>
</tr>
<tr>
<td>• Diverse landscape in tertiary education&lt;br&gt;• Rising internationality in the educational system&lt;br&gt;• Cultural offering with high quality: European Capital of Culture 2011</td>
<td></td>
</tr>
<tr>
<td>• National centers of excellence and innovative courses of studies facilitate high quality in the educational landscape&lt;br&gt;• Demographics show positive trend&lt;br&gt;• Cultural offering with high quality: European Capital of Culture 2011</td>
<td></td>
</tr>
<tr>
<td>• University strongly influences the economic structures and urban development, has orientation towards innovative fields of study&lt;br&gt;• Low average age and a large pool of qualified labour in the city due to a high number of students&lt;br&gt;• Continuously increasing population&lt;br&gt;• High quality and diversity of cultural offering</td>
<td></td>
</tr>
<tr>
<td>• Diverse educational location&lt;br&gt;• Working cooperation between educational institutions and business regarding the experience economy&lt;br&gt;• Good demographic development&lt;br&gt;• Outstanding cultural institutions established in the city</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 19: Knowledge in city comparison**

Source: original illustration
Openness

It should be understood that the evaluation of the cities in respect of the locational condition ‘Openness’ in this study is a picture derived from the comparison of the indicators used here and from qualitative evaluation elements, in particular impressions gained from interviews. According to this, Umeå and Kiel are distinguished by the very positive nature of various factors contributing to an open climate in a city. Other cities, conversely, fail to attain these values (cf. Figure 20). Of the cities analysed, Kiel has the best accessibility, attracts tourists and students from abroad and has a much higher proportion of foreign inhabitants than the other Baltic cities. From this perspective, the population of Kiel has the highest level of ‘Internationality experience’. Moreover, the German Science Foundation (Stifterverband) in 2002 named the Kiel Aliens Department one of the friendliest in Germany, which can be interpreted as another sign of the openness of the city towards people from abroad. The positive evaluation of this locational condition in Umeå also results from experiences of internationality, in particular in the sphere of the university. The relatively youthful population and the high proportion of students in the population also contribute to the city’s urban image.

Another indicator of the openness of the city is the fact that many initiatives support gender equality, so that women make up an above-average part of the labour force. The cities of Rostock, Vilnius, Turku and Århus occupy the mid-table positions in the analysis of the locational condition ‘Openness’. All these locations are characterised by an increasingly international character, especially a strong tourism sector and a constant increase in the proportion of foreign students at their universities. Women in the labour market are also actively supported in Rostock, Turku and Århus, for example by favourable political framework conditions and a suitable social infrastructure to facilitate better reconcilability of family and career life. Overall, there are clear positive trends discernible in these four mid-table cities. Their diversity and international character are increasing.

The third group of cities, in which the locational condition ‘Openness’ must be graded as below average in prominence, comprises Tallinn, Riga and Gdansk. These cities are affected by restrictive national regulations on immigration, which counteract the emergence of increasing internationality in the education sector, the labour market and society as a whole. Conservative family policies also prevail, limiting the reconcilability of family and career life. While this is also true of Vilnius, Lithuania’s laws promoting integration of different population groups are clearly better than those in Latvia and Estonia. All the Baltic cities also suffer from the fact that compared to more central European regions, the infrastructure connections to international traffic networks are poorer, and the consequent problem of international accessibility is disadvantageous to the further internationalisation of the economy and society.
## Openness

<table>
<thead>
<tr>
<th></th>
<th>Proportion of foreign population</th>
<th>Proportion of foreign students in total student population</th>
<th>Proportion of employed women in total workforce</th>
<th>Population density</th>
<th>Accessibility in multi-modal transport networks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kiel</strong></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Rostock</strong></td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Gdańsk</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Vilnius</strong></td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Riga</strong></td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Tallinn</strong></td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Turku</strong></td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Umeå</strong></td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Århus</strong></td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>
### Further elements of evaluation:

**Developments, trends and support policies**
- Ethnical diversity/ modern minority rights
- Support of integration – own programmes
- Reconciablity of work and family
- Tourism
- Quality of life and leisure

<table>
<thead>
<tr>
<th>Parameter value of the locational condition</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="blue_circle" alt="High proportion of foreign students and foreign residents facilitate the international orientation of the city" /></td>
</tr>
<tr>
<td><img src="blue_circle" alt="Role model for integration through strong efforts and initiatives by the city council" /></td>
</tr>
<tr>
<td><img src="blue_circle" alt="Magnet for tourism in Northern Germany" /></td>
</tr>
<tr>
<td><img src="blue_circle" alt="High quality of life and leisure with a maritime tone" /></td>
</tr>
</tbody>
</table>

| ![Proportion of foreign students and foreign residents below the average](blue_circle) |
| ![Support of openness strengthens a positive image of the city](blue_circle) |
| ![Family-friendliness through a good infrastructure for child-care](blue_circle) |
| ![Magnet for tourism in Northern Germany](blue_circle) |
| ![High quality of life and leisure with a maritime tone](blue_circle) |

| ![Low ethnical diversity due to relatively low shares of foreign students and residents](blue_circle) |
| ![So far no targeted strategy of internationalisation by the city council](blue_circle) |
| ![Infrastructure for child-care not fully developed yet, impeding the reconciablity of work and family](blue_circle) |
| ![International tourism growing slowly but constantly](blue_circle) |

| ![Great ethnical diversity](blue_circle) |
| ![Modern minority rights promote strong efforts for integration, e.g. on the labour market](blue_circle) |
| ![Proportion of working women well above the average](blue_circle) |
| ![Infrastructure for child-care has potential](blue_circle) |
| ![Increasing number of tourists visiting](blue_circle) |

| ![High proportion of foreigners, but low diversity](blue_circle) |
| ![Minority rights not developed to full scale](blue_circle) |
| ![So far efforts for stronger integration do not show a strong effect yet](blue_circle) |
| ![Proportion of working women relatively high, but possibilites to reconcile work and family show potential](blue_circle) |
| ![Developing into a tourism magnet in the Baltic states](blue_circle) |

| ![High proportion of foreigners, but low diversity](blue_circle) |
| ![Weak minority rights](blue_circle) |
| ![City council has department for integration](blue_circle) |
| ![Despite the high proportion of working women, potential for a better reconciablity of work and family exists](blue_circle) |
| ![Tourism magnet in the Baltic states](blue_circle) |

| ![Low share of foreigners in the population](blue_circle) |
| ![Local initiatives for stronger integration added to national programmes](blue_circle) |
| ![Proportion of working women well above the average](blue_circle) |
| ![Strong tradition of support for gender equality](blue_circle) |
| ![Tourism has potential](blue_circle) |

| ![Modern minority rights](blue_circle) |
| ![Focus on support for foreigners and people with special needs especially with respect to the integration into the labour market](blue_circle) |
| ![Gender equality is officially supported](blue_circle) |
| ![Target marketing initiatives to strengthen tourism](blue_circle) |

| ![Proportion of foreigners below the average, but high diversity](blue_circle) |
| ![Efforts to integrate immigrants into the labour market have some potential](blue_circle) |
| ![High proportion of working women, good reconciablity of work and family](blue_circle) |
| ![Good development in the tourism sector](blue_circle) |

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**Figure 20:**
Openness in city comparison

Source: original illustration
5.2 Summary: Potential for creative urban development in the Baltic region

While the expression ‘Baltic region’ tends to suggest a structural unity, this region in fact consists of very different nations with extremely diverse cities. Although the connecting element of the sea gives those nations sharing the Baltic shore a consciousness of being part of a larger, shared region, differences in historical and political developments and economic framework conditions cannot simply be ignored. The cities examined in this study differ widely and their diversity becomes clear through the location profiles of the individual cities.

The comparison between the cities shows the current inequalities of the Baltic cities in terms of their specialisation in knowledge-intensive economic sectors, and hence in terms of knowledge-based growth. Figure 21 summarises the evaluation of locational conditions and urban development potentialities.

Dynamic knowledge economies: Århus, Turku and Umeå

Turku, Umeå and Århus are graded good or very good in the evaluations of all three locational conditions under consideration. All three cities have excellent universities of global renown.

Economic support is focused on knowledge-intensive industries, and there is a high degree of affinity with the application of new technologies. All three cities demonstrate an efficient transfer of knowledge between institutions of education and research on the one hand and business on the other. Around half of all those in employment in the economic regions, to which Turku, Århus and Umeå belong, already work in the knowledge economy. The attractiveness of these cities impacts not only on the dynamics of the economy, but also has a positive effect on population trends. The ‘surprise victor’ in this category is the Swedish city of Umeå, which until now has remained little-known on an international scale. With its northerly location within Europe and its comparatively low population, it may well not be immediately expected that the city would be so dynamic and attractive. The example of Umeå clearly shows that the systematic enhancement of the three locational conditions in no way depends either on a ‘minimum city size’ or central geographical location. The approach of creative urban development and the theories of Richard Florida are clearly applicable to these three cities. The outstanding performance of Umeå in particular shows that a targeted approach and sharing the workload with other cities, in this case the relatively nearby Luleå, can solve the problem of a lack of ‘critical mass’. Umeå has already implemented Richard Florida’s concept of the ‘creative city’ and the city is explicitly working on the development of soft locational factors. In Århus, too, politicians and administrators are conscious of these issues. This is evident in the city’s urban development blueprints and in the daily actions of politicians and administrators. The applications of Umeå and Århus for nomination as the European Capital of Culture, and Turku’s award of the same title for 2011, show the understanding these cities have of the strong influence of culture as a locational factor.
Figure 21: Locational conditions of the Baltic cities
Source: original illustration
Knowledge-based growth gaining momentum: Kiel, Rostock and Tallinn

The three cities of Kiel, Rostock and Tallinn are increasingly establishing themselves as knowledge economies, but in some locational conditions they fall somewhat behind Turku, Umeå and Århus. One third of all jobs in the regions to which these cities belong are already within knowledge-intensive economic sectors.

In all cities, knowledge-based growth is primarily borne by the service sector. Thanks for their universities and excellent research facilities, Kiel and Rostock have a particularly good position and good prospects for potential in terms of the locational condition ‘Knowledge’. Tallinn is also in this group because the dynamics of its process of gaining ground have been clearly stronger over the past decade than those in Vilnius, Riga and Gdansk. Tallinn is also the leading technology city in the Baltic States, and there are clear signs of the incipient establishment of technology-based clusters. Population numbers in Kiel, Tallinn and Rostock have stabilised in recent years. However, forecasts of population decline in coming decades are warnings that must be taken seriously, because a shrinking population also reduces the ‘critical mass’ for knowledge-based developments and the pool of specialist labour.

In spite of their current need to develop further in certain locational factors, the concept of creative urban development may set a trend for these three cities. There is potential in the fields of innovation, knowledge and openness. In many cases, stakeholders in politics, administration and business are aware of the need for action in regard to managing the knowledge-based structural transformation. However, competitive profiles related to creative urban development need to be more strictly designed and expanded.

Course set for knowledge-based growth: Gdańsk, Riga and Vilnius

The analyses of the locational conditions in Riga, Vilnius and Gdansk clarify strengths and weaknesses of all these cities in a wide range of transformational processes. The structural shift from labour-intensive to knowledge-intensive industries poses new challenges to these cities. Around one third of all employment in Riga, Vilnius and Gdansk and their respective surroundings is already in knowledge-intensive sectors, demonstrating that all three cities have a high knowledge potential, but this potential has yet to be fully realised. The expansion and maintenance of a high-quality education system is a vital condition for supporting the transformation towards economic sectors with high levels of knowledge intensity. Population losses, slight in Vilnius, pronounced in Riga, have a negative impact on these cities’ growth perspectives. Conversely, Gdansk no longer has a severe brain drain problem. For Vilnius, Riga and Gdansk, the concept of creative urban development can only take secure root once the necessary foundation of basic, hard locational factors is actually present. Therefore, although the political and administrative focus continues to be on the construction of infrastructural framework conditions, existing potentialities in the three soft locational conditions, ‘Innovation’, ‘Knowledge’ and ‘Openness’ should already be being consistently exploited. This would enable interesting, competitive location profiles to emerge.
Sustainable future model: knowledge-based urban development

Overall, the most vital condition for the future development of the Baltic region is the consistent support of the development potential of its cities since the economic development of the Baltic region will stem primarily from these cities. A small number of centres in this somewhat sparsely-populated region host a considerable proportion of the respective economic growth in their regions and nations, and possess trans-regional charisma, meaning that the dynamics of individual cities can exert an influence not only on the growth of their neighbouring regions, but also across national frontiers on the development of regions and cities in other nations. Positive stimuli can reinforce one another reciprocally through such processes. This study has shown that the economic power of the cities analysed here is also of great relevance to respective national, or at least regional developments.

This is attested by the prominent role of these cities in production figures for goods and services and employment figures. It is of great importance to the role of these cities as engines of growth and initiators for further development of the Baltic region that the structural transformation to economic sectors of higher value should continue. In view of the results of this study, the following conditions can be described for small and medium-sized cities to manage this structural transformation to knowledge economies:

A city must have the basic hard locational conditions in place. An inadequate infrastructure, for example in the fields of education or research, makes the transition to a knowledge-based economy difficult to achieve. Without the necessary set of hard locational conditions, there is little to be gained from focusing solely on soft locational conditions.

The three locational conditions 'Innovation', 'Knowledge' and 'Openness' are of great relevance for prosperous urban development. They should be designed with a view to achieving a balance between them. Potential in one locational condition, for example innovation, is reduced if another, for example openness, is graded below average. This area in particular seems especially influential for the implementation of dynamic development processes. 'Openness' entails an unprejudiced approach to other cultures, technological innovations and social change. These in turn are important influential factors on creative growth. Diversity and internationality also play an important part because of the increasing global interpenetration of economic activity. The concept of creative urban development is one that can certainly be applied to the cities of the Baltic region. The example of Umeå in particular clearly shows that there is no 'minimum size' for a city to be able to apply these ideas successfully, nor is a central location a necessary condition. Most locations have the foundations in place for knowledge-based development, with in many cases good infrastructure and highly-qualified local workforce resources. Even cities with deficits caused by their historical backgrounds have specific starting-points for the structural transformation to the knowledge economy. What is required is an integrated, active and focused support policy.
5.3 Recommendations for action: focus areas

The analysis of the three interdependent locational conditions ‘Innovation’, ‘Knowledge’ and ‘Openness’ has shown that these areas have a vital influence on the development opportunities of these Baltic cities. During the ongoing knowledge-based structural transformation, the future challenge for all small and medium-sized cities analysed here will be to keep their ‘creative heads’ and attract still more highly-qualified labour, in order to continue increasing the long term attractiveness of their location profile to enterprises. Active measures are needed, and these must be equally focused on all three locational conditions. The focus areas for action described below are intended to provide food for thought and to stimulate ongoing conceptual engagement with the desiderata of creative urban development. They apply to all the soft locational conditions. Examples of effective existing measures already practised in particular cities are meant to serve as models for comparable activities in other locations. There are certain fundamental conditions which are indispensable to creative urban development, which can be used as a starting point to create framework conditions conducive to innovation.

Essential condition for creative urban development: stakeholder innovation, knowledge and openness

One such fundamental condition for cities is the presence of a climate conducive to reform. This can only happen when public and private sector decision-makers are open to change. During the survey, such an open attitude was found to prevail in such cities as Umeå and Århus, where the responsible stakeholders discuss possible development models together.

Successful transformation requires committed people with creative ideas. Politicians, local government staff and entrepreneurs can all drive such ideas forward very effectively through their personal dedication. Adaptation processes are considerably streamlined by clear structures and personal contacts among those responsible. Close-at-hand contacts in a city with short lines of communication, such as Århus, facilitates considerable local know-how. Face-to-face information exchange clearly accelerates the dynamics of processes of innovation and change. Hence, it is small and medium-sized cities in particular whose policy areas possess favourable framework conditions and flexible structures for implementing innovative systems and processes. ‘Close-at-hand politics’ can be a locational advantage over larger cities.

Just as important are the communication skills and will to communicate of the decision-makers responsible for urban development. The use of modern technologies facilitating knowledge management means that almost all stakeholders today have access to limitless communication possibilities and a plethora of exchange processes. However, transparency and the willingness to share knowledge with others are vital for the establishment of synergies.

Such phenomena as ‘e-government’ initiatives and internet information platforms have a role to play here contributing to an atmosphere of open discussion. Cooperation of this kind, along with the targeted conveyance of knowledge, gives rise not only to innovative ideas, but also to increased motivation among participants to strike out along these unusual routes of development.
Securing the fundamental conditions for creative urban development: networking and cooperation

The principles of networking and cooperation play a vital part for small and medium-sized cities in particular in relation to successful positioning in international competition. They help create ‘critical mass’ in creative individuals, a necessary part of developing and implementing new ideas. Regional and inter-regional cooperation helps greatly in overcoming cities’ size-related weaknesses and pooling specific strengths. The close interrelations between cities and their environs create reciprocal benefits – for instance in regard to financing projects – and increase the chances of implementing and sustaining innovative processes, as is exemplified by the cooperation in the Umeå region (cf. ‘Innovative Libraries in Umeå’ feature box). Cross-boundary interchange between cities can also bring further stimulus to urban development, as is shown by our example of an inter-regional network of cooperation (cf. ‘Connect Baltic Sea Region’ feature box). Many Baltic cities have realised this and are working intensively together, for example in the context of the INTERREG programmes set up by the European Union.

Regional cooperation in the Baltic – Connect Baltic Sea Region (CBSR)

Between a good business idea and its successful implementation, there usually needs to be a business plan. To help start-up businesses develop a business plan that promises success, the ‘Connect Baltic Sea Region’ network and its successor institution ‘Connect Baltic Sea Region +’ were founded. The network brings together start-up entrepreneurs with experts in R&D, patent law and marketing, as well as venture capital investors and other business partners. The idea is for these tailor-made expert groups to help founders with getting the very best out of their business idea.

As well as supporting innovative small and medium-sized enterprises, another central purpose of CBSR is to promote the trans-regional and trans-national exchange of knowledge and technologies.

It has national organisations in Norway, Denmark, Sweden, Finland, Estonia, Latvia, Lithuania and Germany. Regional networks have also developed in many countries, and the network has a total of 26 project partners.

850 entrepreneurs were advised on setting up their business plan from 2002 to 2005, and another 400 were helped to develop further an already existing business idea. The pool from which Connect assembles its working groups consists of over 5,000 experts. Among the network’s centres of operations are Århus, Umeå, Tallinn and Riga. The leading role in the network is taken by the Norwegian Oslo Teknopol organisation, which works to support innovative clusters in the Oslo region. Financial support came from the EU’s INTERREG-IIIB programme, totalling around 2.4 million euros, while Norway contributed a total of around 2 million euros.41

Regional networking: innovative libraries in Umeå

The libraries of six county districts of the Umeå region have launched the ‘Bibliotek 2007’ (‘Library 2007’) project. Without such a combined effort, it would not be possible to offer a broad, attractive provision of library services to the inhabitants of the city and the populace of the surrounding, sparsely-populated rural region.

The joint library card now introduced allows all users to make use of the media inventories of all branches. Customers can also obtain most of that provision via the internet, restamping or pre-ordering books online. Thanks to this alliance, people living in smaller centres and those with limited mobility now also have access to the network’s million or so books. ‘Bibliotek 2007’ was co-financed by national and local public and private sector institutions and by the EU through its “Structural Fund Objective 1”.

Action focus: supporting knowledge transfer

Among educational institutions, it is mostly universities and other colleges of higher education which function as engines and initiators of urban development. Umeå provides the best example of how tactical use of university resources can bring dynamic growth to a city and lend it certain flair. It seems important to ensure that universities and other colleges have a clear direction and that their educational quality is perpetually improving. The integration of education and research institutions and the transfer of knowledge between these institutions and businesses are important to the development of knowledge economies. It is vital to the exchange of knowledge that public research and business specialisation are perfectly matched to one another. The better the coincidence of subject matter, the more potential there is for spillovers and beneficial effects in the innovation process. In this spirit, the city of Turku has ensured through its creation of the Turku Science Park that new ideas emerging in university research are directly implemented in the commercial sector and can thus be marketed. As a reciprocal effect, new, practice-related courses of study are founded at the University of Turku and the Ammattikorkeakoulu Turku (Turku University of Applied Sciences).

Available research funding should now generally put towards profiling. Targets should not be set too widely, and the present foundation should be the starting point. Measures for promoting innovation should be directed at the existing development clusters and research networks and the existing expertise of the labour force. In this context, supporting urban and regional innovation potential with relatively non-specific, generalised R&D funding, promises little in the way of success. Initiatives should be aimed at expanding the foundations of knowledge, establishing communications platforms for the exchange of non-standardised knowledge and improving absorption capacities in the city and region. Expanding R&D capacities by investing across the whole spectrum of the research landscape without paying attention to the particular specialities of a region does not ultimately address needs or potentialities. It is preferable for R&D to be supported in a geographically and thematically focused way. When supporting innovation, attention should be paid to reaching a critical mass in order to create successful production and innovation networks. Network formation can be the key to success here, setting self-reinforcing growth processes in motion.
Action focus: reinforcing inter-sector coordination and an integrated approach to urban development policy

Soft locational conditions are influenced by a broad range of departmental policies, calling for an inter-sectoral approach to urban development. Until now, different departments have been acting separately on policy but this is no longer appropriate. Only by coordinating approaches in finance, economics, integration, family policy, education, science/research and environment within a city or region can complex targets of development policy be achieved. Such an integrated approach combines specialist competences and financial resources to synergetic effect. This is the spirit in which the cities of Århus and Umeå have already realigned their urban development policies very strongly in favour of soft locational conditions and an integrated locational policy (cf. ‘Innovative Urban Development Policy in Århus’ feature box).

This overall networking of specialities, however, should not just be a hallmark of urban development policy, but should also, for example, be brought to bear in marketing the city. Associations marketing the city to tourists as an overall brand for events and as a location are all working to the same end: to increase the attractiveness of their city. A coordinated, interdisciplinary approach creates the opportunity of giving the location a clear profile and winning competitive advantage by presenting a united front. There must always be a concept with a clear principle and realistic goals. From these, long-term measures can be derived because soft locational conditions can generally only be influenced in the mid- to long-term. The principle of creativity and competence developed by Umeå is a good example to follow here: its aim is to develop the city dynamically as an attractive location in the north of Sweden offering high quality of life and attractive career opportunities. An integrated approach is also seen in the realisation of substantial urban construction projects, e.g. the Młode Miasto or ‘Young City’ area of Gdańsk. Both thematically and in terms of the partners involved, perspectives such as the reconciliation of architecture, culture and economics play a vital role.

All activities require accompanying evaluation and monitoring of results. With this in mind, the city of Århus tracks the progress made by its urban development policy measures.
Innovative Urban Development Policy in Århus

One of the ideas behind developing the ‘Growth in Århus’ strategy was to focus on strengthening the development of the creative economy. Lars Høeberg of the Urban and Economic Development Department of the Århus Mayor’s office explains the focus of this programme.

What were the focus areas for the urban development concept?
'The development strategy for the city of Århus is based on a threefold foundation. The first focus which is important to us is to optimise the overall economic conditions. We want to build on regional strengths such as particular industrial clusters or the educational and research landscape, and promote innovation, for example by providing venture capital for entrepreneurs starting up. We also want to attract direct foreign investment. A second area of focus concerns efficient cooperation among all stakeholders. In particular, we are catalysing the formation of local networks between businesses, higher education, government and the culture sector – also making use of existing networks in the process. Our aim is to involve regional, national and international partners in these alliances. Our third focus is to present our particular locational advantages through targeted urban marketing.'

What are the concrete aims of your strategy?
'In terms of education, for example, all schoolchildren should be able to take the International Baccalaureate at their secondary school in the city, so as to enhance their subsequent mobility. We are also striving to achieve closer contacts between students and potential employers in the region. As well as expanding the media cluster, we are above all providing support for the expansion of the creative economy, that is, industries such as architecture, design, culture and tourism.'

Why does the Århus city administration see such good development perspectives in the field of the creative economy?
'This economic sector has been very dynamic in the past and will probably continue to grow strongly. Århus is well-positioned in many aspects of this field. We are convinced that the creative economy will bring powerful spillover effects to increase the attractiveness of the city as a whole.'

What are the most important projects in this area?
'The most important initiatives in the sphere of the creative economy have a cultural element. Århus’ application to be the 2017 European Capital of Culture is currently being promoted.'

What is your estimate of the success of this urban development strategy to date?
'An evaluation from 2007 confirms that we have very good results. The success of the strategy can to a great extent be attributed to the methodical approach of integrated planning and implementation. To provide new stimulus to our policies and to evaluate developments to date, we have set up a think tank in which all relevant stakeholders from the city are represented. It is a basic principle that initiatives at Århus are put into effect with the close collaboration and involvement of the decision-makers affected. Participation creates identification and motivation among stakeholders. Our strategy content is currently being reviewed and an updated strategy is to be presented in autumn 2009.'

Interview with Lars Høeberg of the Urban and Economic Development Department of the Århus Mayor’s office, 15.08.2008
Action focus:
formulating individual, specially adapted strategic targets for each city

The Baltic cities have different structures and therefore no ‘one size fits all’ concept can be applied. As we summarise in Chapter 5.2, the recovering economies of the Baltic States have different needs from those cities that are already established as knowledge locations. The theories of Richard Florida and the creative urban development approach can only be successfully applied if they are adapted to these existing conditions and based on a balanced interplay of hard and soft locational factors. What works in one city may therefore fail if implemented in the same way in another city, because the starting point of the other city is different. A tailor-made approach is needed, entailing an intensive and detailed engagement with the specific locational conditions of the particular city. The individual locations should, as this analysis has shown, focus on quite different fields in their development strategies. A conscious decision needs to be made as to the principle to be followed when devising support policies according to needs: is the priority to develop strengths or to mitigate disadvantages? The choice of strategy depends on the city’s level of development, and this must be ascertained by analyses and reflected upon objectively by stakeholders in the course of participatory, discursive processes. Decision-makers themselves must undertake the definition of tailored targets in order to lend them momentum.

Action focus:
specialisation, concentration and cluster formation

The cities of Umeå and Århus show that a focused, rather than a “scattergun approach”, is what works. For small cities, it is important to focus on particular strengths and to profile themselves accordingly. Specialisation means finding a niche. A profiled image brings international renown irrespective of small city size or geographical remoteness. Umeå’s profile as a university city is impressive proof of this and Århus too has become known beyond the borders of Denmark for its innovative media and design industries. In this way, both cities attract young people from around the globe, which in turn further increases the locational attractiveness for businesses seeking creative employees. A positive example of specialisation and focus is the Turku Science Park, which brings together all R&D activities under one roof.

However, it is vital to the success of initiatives that the necessary critical mass of specialists and human resources in general are reached so that specialities can develop. For small and medium-sized cities in particular, cooperation is the key to success in forming clusters and minimising disadvantages of scale. Examples of the successful pursuit of this policy are the technological enterprises of Umeå and Luleå. In Vilnius, too, technology parks also work in collaboration with the neighbouring city of Kaunas, bringing benefits to both centres. Such division of labour is a rising trend, as is also exemplified by the cooperation between the German cities of Kiel and Lübeck to exploit synergies in the medical engineering cluster.
Action focus:
developing the international focus of the educational sector

The international character of a city has a decisive influence on its locational conditions and competitiveness. Diversity and internationality apply to society as a whole, but in particular to the educational sector.

Educational facilities ranging from kindergartens to schools and universities become more attractive and trigger dynamic urban development processes through their specific and multilingual offerings, as the example of Turku impressively demonstrates. The prospect of a highly prestigious qualification motivates young people to spend time in the Nordic region of Europe. The availability of international courses, not only in English but also in other major world languages, would further enhance the attractiveness to foreign students of higher education in the Baltic region. Promising starting points for international collaboration between educational institutions in the Baltic region may include bilateral agreements, like those existing between the University of Vilnius (Lithuania) and the universities of Riga (Latvia), Tartu (Estonia), Turku (Finland), Umeå, Uppsala and Lund (Sweden), Roskilde (Denmark) and Greifswald (Germany). Concrete cooperation projects allow not only the combination of course offers and expertise, but also contribute significantly to the internationalisation of the education system through the processes of exchange they stimulate (cf. ‘Baltic Sea Virtual Campus’ feature box). In the course of the coming demographic shift, it will no longer be sufficient merely to demonstrate excellence as an educational and research location within national borders. As internationality increases, the future focus will need to lie more in the recruitment of students and scholars from abroad.

Baltic Sea Virtual Campus –
learning across national boundaries in the Baltic region

Lifelong learning is increasingly important to highly-developed, knowledge-based national economies. ‘E-learning’ has a particular part to play in this context. One project to build up sustainable e-learning structures in the Baltic region is the so-called ‘Baltic Sea Virtual Campus’. Under the auspices of the Fachhochschule Lübeck (Lübeck University of Applied Sciences), thirteen institutions from Germany, Poland, Russia, Lithuania, Latvia, Finland, Sweden and Denmark are taking part in this project, including the Fachhochschule Kiel (Kiel University of Applied Sciences), the Technical University of Riga (RTU) and the Universities of Gdańsk and Vilnius. They are joined by seven other partners, including businesses such as Volkswagen and local partners such as chambers of commerce and trade unions. The future aim of the project is to set up an equal provision of academic online education for all the Baltic nations. In its three-year project phase from 2002 to 2005, the ‘Baltic Sea Virtual Campus’ has created the international institutional and legal framework for the scheme, developed a technical platform for the provision of online education as well as a business model, and set up an online course in Trans-regional Management, which has been available since 2005. A Masters programme in Industrial Engineering is also being offered. Further courses in Information Management and Health Sciences are currently in the planning phase.

The European Union is supporting the project with funds from the INTERREG-IIIB programme: this financing amounts to around 2.85 million euros. As lifelong learning increases in importance, the project will contribute to equal development across the region.

44 Cf. oncampus (2008).
Action focus: implementing particular cultural concepts

High-quality cultural activities have an important role to play in enhancing the quality of life in cities and to make them more attractive to businesses, inhabitants and tourists. It is not so much the number of facilities as their particular profile that creates international attention. Events such as the Kiel Week, the Ruisrock rock festival in Turku46 and the Umeå International Jazz Festival47 are particular cultural events based on traditions, and they bring the respective cities to the attention of visitors from across the nation and abroad. The fact that medium-sized cities have extraordinary cultural potentialities is also shown by their increasingly frequent nomination for hosting the festival year 'European Capital of Culture' – an honour to be held by Vilnius in 2009 and Tallinn and Turku in 2011. In this respect, the cities under scrutiny are already quite consciously exploiting their potential and are aware of the valuable opportunities for urban development associated with this kind of cultural highlight, as the example of Tallinn strikingly demonstrates. (cf. 'Tallinn, European Capital of Culture 2011’ feature box).

Tallinn, European Capital of Culture 2011

Tallinn will hold the title of European Capital of Culture for the year 2011 jointly with Turku. Mikko Fritze, chief executive of the Tallinn 2011 foundation, discusses here the importance of culture in the development of Tallinn and Estonia.

What special cultural features does Tallinn have to offer? Where are the deficits and potentialities?
‘Tallinn has a particularly vibrant and wide-ranging cultural scene. Many of our cultural facilities are still very new, but are working at a high artistic level, developing innovative ideas and are involved in close international collaborations. Professional cultural management is brought increasingly to the fore and we hope that in the midst of this we can preserve the marvellous flexibility of our period of transformation. In terms of structure, one could point to the lack of infrastructure for the independent scene. In the fine arts in particular, there is a regrettable lack of support for independent curators and artists. However, there have been a number of recent initiatives which may improve the situation on an interdisciplinary basis. We could also do more to get citizens actively participating in cultural initiatives other than folklore.’

What is the significance of the cultural sector to urban development in Tallinn?
‘Culture’s significance is greater in political rhetoric than proves to be the case if you look at actual political decisions. This is particularly evident now, at a time of economic stagnation. It’s true that marketing in the tourist industry makes conscious reference to the cultural offering, but this potential could be better exploited in official image-building. Preparations for the year as European Capital of Culture offer good opportunities for this. In terms of locational strategy, Tallinn has for various reasons missed a trick in recent decades by not making the most of its especially desirable seaside location.’

To what extent is culture seen as an economic factor?
‘The “creative industries” have become a key idea in recent years, resulting in support programmes and public and private initiatives. Major entertainment events have a recognised tourist potential, both nationally and internationally.’

Do you think that culture is a locational factor which could help Tallinn in the competition for highly-qualified human resources?
‘Within Estonia, the broad cultural offering is a great attraction to young academics and professionals, who often do not return to their home towns after graduating. For foreigners too, the comprehensive cultural offering of this city is often a reason for spending more time here or even staying on.’

What does the accolade of European Capital of Culture 2011 mean to Tallinn?
‘This accolade enables the city to make permanent improvements to its cultural environment and image, to take a look at itself, to invite Europe in and present itself in an international way.’

To what extent will internationality and multiculturalism be a theme of the European Capital of Culture year?
‘International cooperation is crucial to the composition of our programme, and the EU also sets a clear target for the cultural capital initiative with the European dimension. We have implemented a programme of bursaries for foreign artists. Estonians engaged in the cultural sector will also receive support for networking activities. One major challenge for us will be to establish better communication between the various population groups within Tallinn. This programme must be accessible to all, and must address all the different interest groups.’

How is Tallinn working together with Turku, the other European Cultural Capital for 2011?
‘Tallinn and Turku have a unique opportunity to collaborate very closely, because never before in the history of the European cultural capitals have two simultaneous capitals been so close geographically and culturally. This fact is greatly valued by both sides. The structure of our foundation includes a special department for coordinating this collaboration. We want to identify possible joint projects at an early stage, because only by doing that can we coordinate them fully. We are having regular meetings to do this.’

What lasting effects do you hope to see for Tallinn as a result of this accolade?
‘Opening up to the sea would transform Tallinn’s competitiveness as an economic and cultural location, and would permanently improve the quality of life of its citizens. Using old industrial and military facilities for cultural events and building a seaside promenade with cafes and restaurants would be a huge boost for tourism in Tallinn. All citizens of the city would benefit from making the beaches more attractive. We hope that the creative economy will receive clear stimulus. The cultural infrastructure should also be improved, in tangible form by the construction of a major cultural centre by the sea and the beach promenade with parkland, cafes and so on. I also expect better cooperation between governmental institutions, creative workers and the private sector. Obviously tourist figures should rise permanently. It is also important to me that the activities should contribute to establishing new citizens’ initiatives and improving mutual understanding between the different population groups in Tallinn and Estonia.’

Interview with Mikko Fritze of the Tallinn 2011 foundation, 19.09.2008
Action focus: activating intercultural dialogue

In all the Baltic cities analysed, the integration of foreign populations needs to be intensified in the future because all cities show clear economic inequalities, for example in terms of income and unemployment figures between locals and foreigners. One crucial aim of future urban development policy must therefore be to enable the fulfilment of the potential offered by ethnic diversity. Active dialogue between cultures is needed in order to make use of the valuable opportunities presented by multicultural structures and to include incomers successfully in society to the benefit of all. Integrating migrants in the educational system, in particular giving incomers language tuition, is of great importance. This considerably increases their chances of attaining serviceable educational qualifications and becoming integrated into the labour market. In general, the integration of foreigners is an aspect increasingly dictated by regional policy. Because the specific history of the Baltic region calls for urgent action in many cities, they have often developed their own regional integration concepts further to measures on a national level. Initiatives seek in the first instance to raise awareness of the value of cultural and ethnic diversity.

Baltic cities may find the experience gained from the European Cities for Local Integration Policies (CLIP) network of interest to the further development of integration policies. This association, formed in the spring of 2006 by the City of Stuttgart, the Congress of Local and Regional Authorities of the Council of Europe and the European Foundation for the Improvement of Living and Working Conditions, has the aim of promoting international experience exchange on local and regional integration policy and gaining new scientific knowledge on successful integration tools. A total of 28 cities from 18 European nations currently participate. The foundation of the network derives from the realisation that economically strong cities in Europe already have wide experience of heterogeneous and culturally diverse population structures. This treasury of experience can be of great value especially to aspiring cities whose societies are continually increasing through immigration. Another interesting approach to promote integration might be the sponsorship of young schoolchildren with migrant backgrounds by senior citizens. The senior citizens would help the young people regularly with their homework and exam preparation, thereby creating encounters between different cultures and generations, from which personal attachments can also often develop.

Action focus: increasing family-friendliness

The reconcilability of family and career life is a highly relevant subject not just in the Baltic region. A city’s family-friendliness is increasingly a locational factor in attracting highly-qualified human resources and businesses. At the same time, demographic trends and the visible disadvantages for women on the labour market demand a thorough reassessment of family policies. Although national governments have passed many legal provisions in this area, so that individual regions and certain cities have only minimal opportunities to influence the legal framework conditions, local stakeholders can still do a certain amount to support families. Families’ desired living conditions in a city include not only a healthy and safe living environment, good educational opportunities and a low cost of living, but also diverse childcare provision, so that individual solutions can be found in order for parents to pursue their regular employment. Cities also need to deploy a comprehensive policy of public information so that proper use is made of regulations agreed on a national level. Parents must be able to claim maternity/paternity leave or to reduce their working hours for a certain period. In Germany, businesses and colleges which nurture family-friendly working conditions can now be certified as ‘family-friendly employers’. Since starting a family has thus far meant withdrawing from working life for many women due to the great difficulties often associated with returning after a long interruption, measures for women returning to work are a good approach for enabling mothers too to realise their professional ambitions and thus for raising employment levels. In this field in Germany, the action programme ‘Perspective Re-Entry’ is in the process of being launched by the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth and the Federal Employment Office, with a total subsidy of 30 million euros.

Action focus: creating a unique image

The diverse locational potentialities of the small and medium-sized Baltic cities should continue to be actively and confidently promoted. Often, city names are associated only with their geographical location, but not with their particular locational profiles or economic potential. To achieve international recognition, however, cities must carry a clear profile and a strong regional consciousness. What is needed is engaging and holistic marketing of cities in order to highlight their unique qualities in a targeted manner. For example, specific events, cultural highlights and notable architectural projects can create identification among inhabitants and at the same time achieve international attention. This further enhances the quality of life of a city; a decisive factor in the location choices made by highly-qualified people and it also has a positive impact on tourism.

The Baltic cities should further profile themselves, while at the same time appearing with international solidarity in the sense of a shared region. There are already joint projects running entirely in this spirit (cf. ‘Regional Identity in the Baltic Region’ feature box).

Regional Identity in the Baltic Region – the European Route of Brick Gothick

A city’s charm derives in no small part from the dominant style of its architecture. The heyday of the Hanseatic League left behind many buildings which attest to the wealth and power of the Hanseatic towns. The main building material used at the time was brick. Churches, town halls, office buildings and city gates of the period all still dominate the visual impression of these cities. In 2002, the ‘European Route of Brick Gothic’ network was founded to preserve this heritage, to open it to tourism and to exchange expertise in the field of historical monument conservation. 34 partners in Sweden, Estonia, Latvia, Lithuania, Poland and Germany are taking part, including the cities of Rostock, Gdańsk, Vilnius and Riga.52 The co-ordinating body is the German Association for Housing and Urban and Spatial Development. This collaboration, and its emphasis on shared historical roots, reinforces the identity of the Baltic region both internally and internationally.

As well as receiving funding from national and regional funds for tourism and preservation of historical monuments, the network also receives support from the INTERREG-IIIB programme.

Creative Future

We conclude with some forecasts based on current developments and future challenges facing the Baltic region. Small and medium-sized cities will need to expand their knowledge-based economic structures and focus their urban development on this direction. The approach of ‘creative minds’ can considerably accelerate transformation in all spheres of urban life. As yet, the cities are at different stages of progress on the path to the knowledge economy, and structural processes of adaptation present different dynamics. But all these Baltic cities have diverse, albeit typical potentialities. There are different recommendations for action for the various cities because of the specific configurations of the soft locational conditions ‘Innovation’, ‘Knowledge’ and ‘Openness’. These must be carried out with deliberately-designed concepts with suitable targets and practicable measures. Creative urban development approaches can be integrated into activities everywhere, but require attuning on a location-specific basis. An integrated and focused departmental and support policy is needed for the successful realisation of plans.
## Overview

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<td>Rostock</td>
<td>IHK Rostock / Mecklenburg-Vorpommern State Ministry of Finance, Labour and Tourism, Schwerin / Hanseatic Institute for Entrepreneurship &amp; Regional Development / Institut für demografischen Wandel und Beschäftigung e.V. / Gesellschaft für Struktur-, Unternehmens- und Personalentwicklung mbH</td>
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<tr>
<td>Gdańsk</td>
<td>Chamber of Commerce Gdańsk / University of Gdańsk, Faculty of Economics / Gdańsk Institute for Market Economics / Regional Development Bureau / Amberglobe</td>
</tr>
<tr>
<td>Vilnius</td>
<td>Lithuanian Ministry of Finance / Department of Vilnius Municipality</td>
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<tr>
<td>Riga</td>
<td>City of Riga, Department of Culture, Foreign Affairs Office / Latvian Chamber of Commerce / Stockholm School of Economics in Riga / Gateway Baltic / Contemporary Arts Center / Pareiza kimija SIA, Full Service Event Agency</td>
</tr>
<tr>
<td>Tallinn</td>
<td>Enterprise Development Department / Representative of Tallinn in Brussels / Estonian Institute for Future Studies / EVEA – Estonian Association of SME’s / Tallinn Cultural Heritage Department / City of Culture 2011</td>
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<td>Turku</td>
<td>Chamber of Commerce Turku / The Regional Council of Southwest Finland / European Capital of Culture 2011 / Abacus Diagnostica</td>
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<tr>
<td>Umeå</td>
<td>City of Umeå, Department of Culture / Västerbotten Chamber of Commerce / The Interactive Institute</td>
</tr>
<tr>
<td>Århus</td>
<td>Municipality of Århus, Department for City and Business Development / Retailers’ Association / Tourist Authority / Erhverv Århus, Business Århus / Kjer.com / Filmby Aarhus, Movie City Aarhus</td>
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