Institut Arbeit und Wirtschaft
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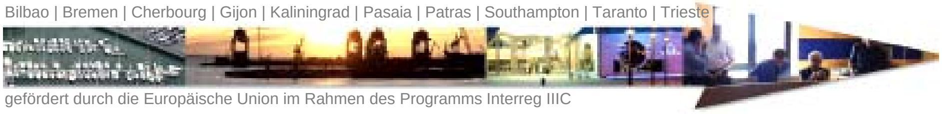
Günter Warsewa

The Transformation of European Port Cities

- Final Report on the New EPOC Port City Audit

Bilbao | Bremen | Cherbourg | Gijon | Kaliningrad | Pasaia | Patras | Southampton | Taranto | Trieste



gefördert durch die Europäische Union im Rahmen des Programms Interreg IIIC

NEW EPOC

North East South WEST INTERREG IIIC

IAW Forschungsbericht 11 | Juni 2006

Universität Bremen

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Summary

Globalisation, technological developments, increasing competition and climate change are some of the major challenges that currently affect all port-cities regardless of size or location. To answer these challenges, further efforts must be undertaken – particularly to improve the capacities for innovation, to enhance the efficiency of social inclusion and labour market integration and to intensify international relations. Dealing with these tasks, the European port cities have learnt to adjust to the conditions of the 21st century. Today they have become a European laboratory for the modern city in a globalised knowledge society.

So at the end of intense discussions and analyses involving 10 European port cities there is a good news story: Despite all problems with industrial decline and economic crisis the European port-cities are emerging as modern maritime cities with strongly performing ports, but also new economic sectors like high tech production, science and research, tourism, culture and other modern services.

Zusammenfassung

Globalisierung, technologischer Fortschritt, verschärfter Wettbewerb und Klimawandel sind große Herausforderungen, die aktuell die Hafenstädte, unabhängig von Standort und Größe, beeinflussen. Um diese Herausforderungen letztlich erfolgreich zu bewältigen, werden noch erhebliche Anstrengungen – insbesondere bei der Stärkung der Innovationsfähigkeit, bei der Effizienz der sozialen Integrationsmassnahmen (vor allem bei der Arbeitsmarktintegration) und bei der Verbesserung internationaler Beziehungen – erforderlich sein. Im Umgang mit diesen Herausforderungen haben die Hafenstädte Europas während der letzten 25 Jahre aber gelernt, sich an die Bedingungen des 21. Jahrhunderts anzupassen. Hafenstädte haben schon immer in der Geschichte besonders flexibel auf Veränderungen reagieren müssen und heute sind sie zu einem Europäischen Laboratorium für den Übergang der Städte in die globale Wissensgesellschaft geworden.

Am Ende von intensiven Diskussionen und Analysen, an denen 10 europäische Hafenstädte beteiligt waren, steht daher eine gute Nachricht: Trotz aller Strukturwandelprobleme und dem Niedergang der maritimen Industrien sind die europäischen Hafenstädte auf einem guten Weg, die Krisenperiode zu überwinden und neben den modernisierten Häfen andere Standbeine für ihre Entwicklung – hochtechnologische Produktionen, Wissenschaft, Tourismus, Dienstleistungen, Kultur – aufzubauen.

Contents

Acknowledgements

Anyone familiar with international research and comparative analysis can imagine the complicated and cumbersome nature of the process of defining statistical indicators, collecting data and producing comparisons when it involves partners from seven different countries. Therefore I feel obliged to express my gratitude to everyone in our partner cities for producing accurate figures for us so patiently. A special thanks goes to Anja Koutsoutos in the Institute of Labour and Economics, who again and again asked for new figures and explained indicator definitions without ever despairing.

Data and figures are hard to obtain but, once available, are easy to understand. Written text is often exactly the opposite – especially when it is written in a foreign language. So I am deeply grateful to Sue Mullan for “anglicising” my poor English in a way that makes this report readable and understandable. Many thanks also go to all the partners in the New EPOC project who submitted valuable hints and comments to improve the report.

Günter Warsewa

1. Introduction - The Crisis of the European Port City

Across the world port cities were the first to experience the reality of globalisation. They were wealthy, powerful and proud because of their function as hubs for incoming flows – of goods, of money, of communication and information, of people and of cultural influences – and this function was irreplaceable for a long time. Furthermore this hub role gave port cities a tremendous national importance and for this reason their development was strongly supported by national governments.

Today's port cities are in many cases no longer centres of globalisation; they have even become out-dated by new globalisation processes in which they are no longer a powerful player. Many different processes led to the decline of the port city in the 1980s and 1990s – from containerisation to the worldwide integration of markets and organisations that resulted from modern information and communication technologies.

Even the enormous growth of transnational trade and transportation that came about as a result of globalisation processes did not really solve the problems of port cities. The phenomena explaining this particular development in port cities are obvious and well known, both in literature and in our own experience:

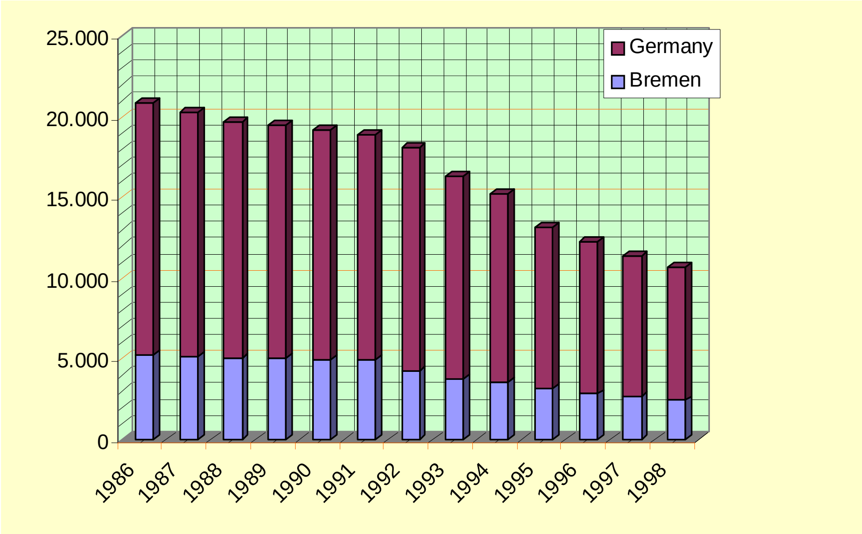
- Transport chains were concentrated and relocated;
- Maritime industries and their suppliers moved to other regions;
- Ports no longer need cities;
- Markets need ports, but no longer need port *cities*.

Many port cities have had to face the fact, that these processes had serious consequences for their economic, social and urban structures and in many cases the problems remain today:

- Loss of jobs and income;
- Unemployment;
- Movement of labour and local population;
- Redundant transport infrastructure;
- Deserted port areas;
- Rundown city quarters;
- Uncertainty of identity;
- Lack of political support.

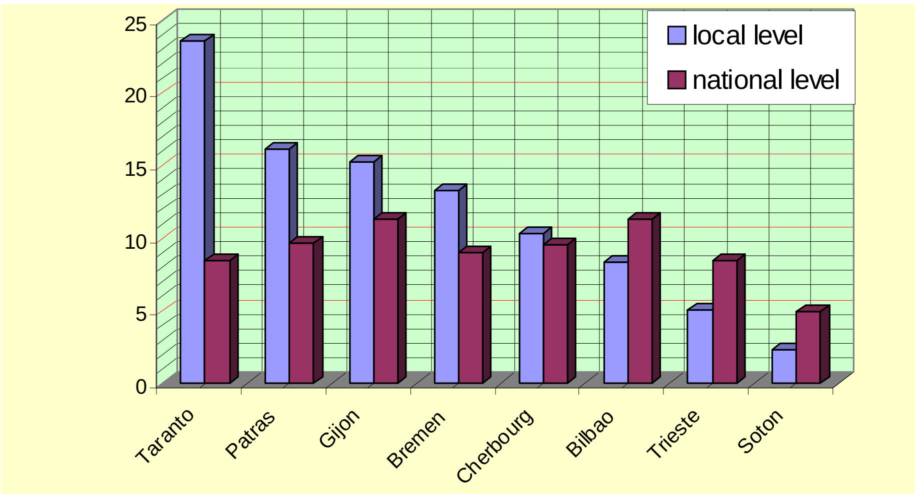
For some reason the general change from an industrial to a tertiary economy caused a constellation of problems in port cities, which, while not totally dissimilar from the impact of these changes on other cities and regions, was more intense and caused more dramatic problems than in these other cities and regions. In most cases the industrial maritime sector was - more or less - the sole base of wealth and social life, of attitudes and culture, of innovation and development. The following example may illustrate this process:

Dockers in German sea ports



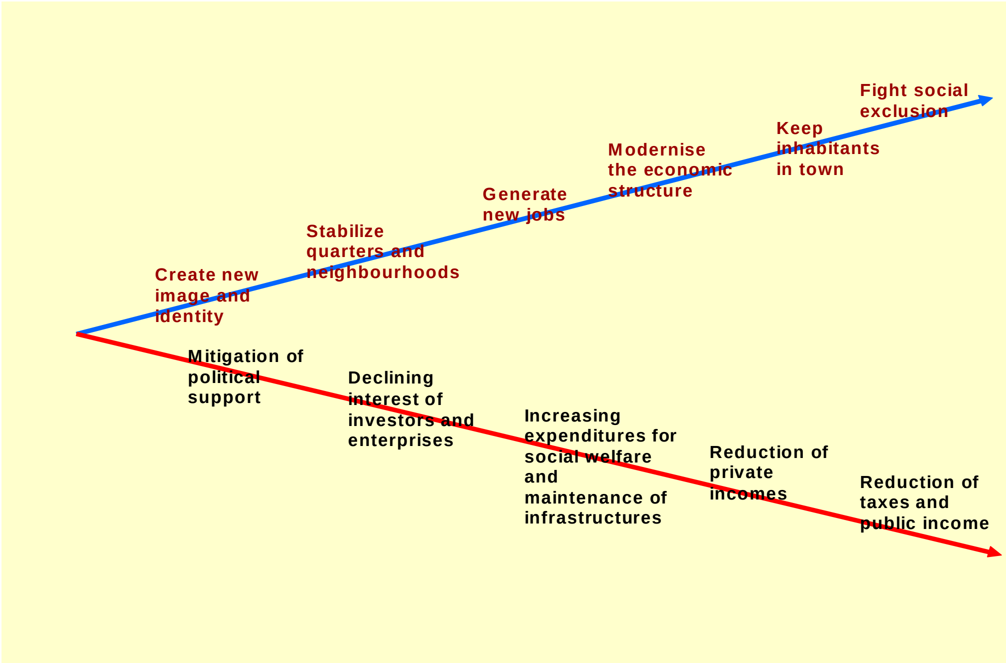
The number of dock-workers in German sea ports decreased from more than 20,000 in 1986 to about 10,000 in 1998 and in Bremen the development went from about 5,000 in 1986 to 2,000 in 1998. This is only one typical process but it represents developments across the whole industrial maritime sector – and we know that in other countries the picture was not very different. Our studies in the New EPOC project have shown that many port cities for example have higher unemployment rates than the national average:

Unemployment rates (2003)



The scissors representing challenges and resources steadily continues to open wider and wider. The sharper the increase the longer it takes to fight social exclusion, to retain local populations, to modernise the economy etc. and the smaller the resources – money, legitimation, support, identity – available for effective renewal strategies. So, in this situation there is an enormous demand placed on the cities, their governments and institutions to resolve a huge number of problems at the same time.

Challenges and capacities



Facing the steadily increasing lack of resources is like trying to square the circle and thus the highest priority for each town or region is to find out what are the most important and the most promising starting-points. Our experience shows that each of the port cities has developed its own strategies for dealing with the problems faced and that the differences between these are not as big as might be expected. In the many intensive discussions, enquiries and consultations that took place throughout the New EPOC project, three major challenges emerged as the most pressing for the regeneration of the port city:

- Revitalisation of the economic base;
- Maintaining the capacity for political action;
- Re-establishment of an appropriate identity.

To address these challenges, nearly all port cities are attempting to develop strategies and to implement measures and instruments in five key areas:

- Enhancing social inclusion (social inclusion).
- Developing strategies for urban regeneration processes (strategic regeneration);
- Improving the preconditions for innovation processes (innovation);
- Extending and intensifying international relations (‘internationality’);
- Modernising the maritime sector (port development).

2. Common findings – Strengths and Challenges in the Process of Transformation

The following findings and interpretations, as well as the final conclusions, are the summarized results of an analysis carried out during the New EPOC project on the basis of

- *Statistical data[1];*
- *Detailed questionnaires on strengths, weaknesses, opportunities, threats, strategies; so called "city profiles";*
- *Expert workshops and seminars;*
- *Site visits and on-site surveys;*
- *Other documents and materials from different sources.*

All this information and material has been systematically documented in the New EPOC tool-set, which is another outcome of the New EPOC project. This is accessible for public use under the web-address www.new-epoc.net.

After a period of about 25 years of change and profound upheavals, port cities slowly developed a new character and different structures. Much progress has been made, in particular during the 1990s and early 2000s, but the processes of transformation are far from being completed. Compared to the largest maritime centres in Europe, - for example like Rotterdam, Amsterdam, Barcelona, Lisbon, London or Hamburg - which never depended solely on port structures, shipbuilding industry and other port-related industries, Europe's often mono-structured, medium-sized port cities were badly affected by the decline of the traditional maritime sector. This is surely a major reason for the delayed development of such places. So, the transformation of port-cities like Bilbao, Bremen, Cherbourg, Gijon, Kaliningrad, Patras, Southampton, Taranto or Trieste still needs more intensive attention….. and is likely to take several more years.

With regard to those action fields, in which major challenges were identified by the New EPOC partner cities, the benchmarking scheme seems to confirm this insight very clearly. In all categories - *Social Inclusion, Strategic Regeneration, Innovation, 'Internationality' and Port Development* - the average index for all cities is far below the maximum[2] (see following table: The New EPOC Benchmarking Scheme). And nearly 50 % of all available city benchmarks are below the average indices. On the other hand there are only 8 out of 37 benchmarks (21,6 %), which are more than 50 % of the possible maximum and only very few (5 out of 37) single indices approximate to the maximum position (see following table: The New EPOC Benchmarking Scheme).

To better understand the kind of deficits and challenges, and also the opportunities and strengths that can be identified for this range of port cities, it is first necessary to focus on conditions and developments in various thematic areas.

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[1] For documentation of sources, explanations of indicators and methodology etc. see Methodological Annex at the end.

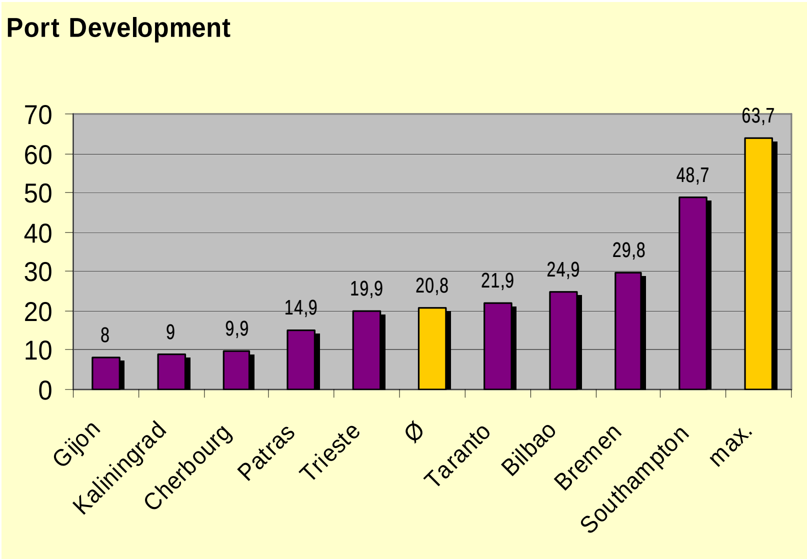
[2] The maximum means the highest value possible among the participating cities. Example: if for one city the crime rate, the unemployment rate and the rate of inadequately skilled persons was classified in the highest class (the classification system from 1 – 4 does not work with absolute values, because classes are defined by a classification of the indicators for the participating cities), the compiled social inclusion index would reach the maximum of 41,4 (see following table and also the methodological annex).

The New EPOC Benchmarking Scheme

	Social Inclusion	Strat. Regeneration	Innovation	Internat. Relations	Port Development	Inhabitants
Bremen	9,5	28,6	16,5	22,5	29,8	**544.900**
Kaliningrad	-	-	-	9,5	9,0	**435.000**
Bilbao	-	28,6	-	-	24,9	**310.500**
Gijon	12,1	22,5	9,6	13,9	8,0	**276.000**
Southamp-ton	7,8	28,6	20,7	13,0	48,7	**219.200**
Trieste	13,0	12,1	9,6	27,7	19,9	**211.500**
Taranto	12,1	7,8	12,1	4,3	21,9	**202.000**
Patras	-	-	9,6	4,3	14,9	**185.700**
Cherbourg	13,8	9,5	13,9	6,1	9,9	**113.100**
max.	**41,4**	**41,4**	**41,4**	**41,4**	**63,7**	
2/3 of max	27,6	27,6	27,6	27,6	42,5	5 out of 37 higher than 2/3 of max
1/2 of max	20,7	20,7	20,7	20,7	31,9	8 out of 37 higher than 1/2 of max
Ø	**11,4**	**19,7**	**13,1**	**12,7**	**20,8**	19 out of 37 higher than Ø

2.1 Port Development

The port development index in the New EPOC benchmarking scheme summarizes the quantity of goods and passengers handled in four different categories (containers, bulk, general goods and passengers) for the years 2003/2004. This does not really measure the economic performance of ports; but it does give a serious overview of the different characters and functions of the ports. So the low-ranking ports of Gijon, Patras, Cherbourg or Kaliningrad might be economically successful by specialisation (Gijon specialised in raw materials like ore, coal and steel related to the Asturian steel industry; Kaliningrad as a main port for raw oil and oil products; Patras and Cherbourg as ferry ports; see annex for indicator table) and the high-ranking ports of Southampton and Bremen are universal ports with a strong performance in several functions. The extraordinary position of Southampton, for example, is a particular result of its traditionally strong function as a passenger port and major destination for cruise liners combined also with a strong position in bulk goods. The ports of Bremen have in contrast to Southampton a very weak position in passenger traffic, but owe their good position to very competitive standards in handling general goods and containers in particular.



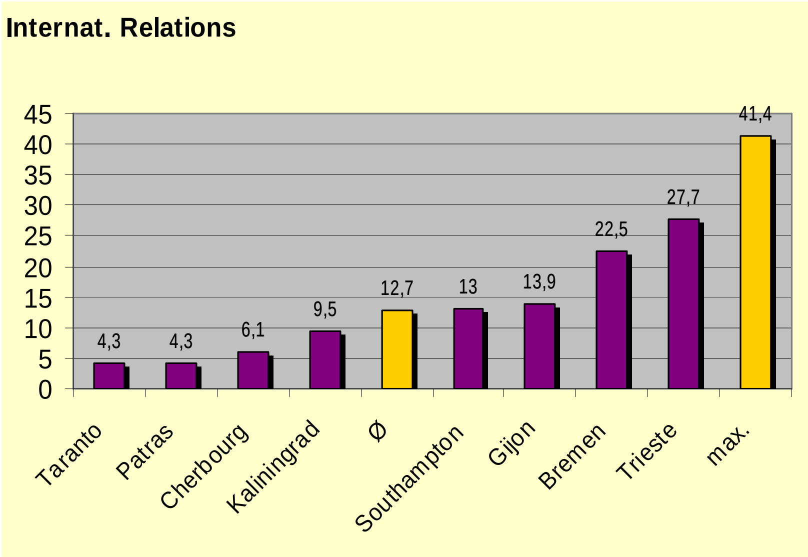
Taking a more general view, the modernisation of port functions seems to follow two different strategies often combined with extensions and spatial relocation processes:

Due to their geographic situation, traditional market positions and anticipated opportunities, some ports attempt to strengthen their existing functions and try "to modernise what they have". This seems to be the case in Gijon with a large port extension dedicated to the handling of raw materials and chemicals, Trieste or Cherbourg where expansion and modernisation strategies are also based on traditional port functions. In contrast to these specialisation strategies, other ports are going for a more diversified development. As a matter of course, this is the case in the universal ports of Bremen and Southampton, but also in Taranto, Bilbao or Patras extension strategies are directed towards adding new functions, aimed in particular at winning a share of the steadily expanding global container traffic.

Both kinds of modernisation strategy entail both special risks and opportunities. So for example, the success of the port expansion of Gijon strongly depends on the development of heavy industry in Asturias, or investment in new functions such as the modern container terminal at Taranto might also be a risky strategy, because in this part of the Mediterranean there is already strong competition on the container market. In other case the close proximity of different port functions may prove to be problematic: for example two particular assets of the Southampton ports – "dirty" bulk handling and cruise and passenger traffic – are not very compatible. The same problem might also occur in Trieste. In the case of Southampton the situation has already come to a head because the planned extension of port functions to an adjacent area failed for environmental reasons (for more information see the New EPOC data base under www.new-epoc.net).

2.2 'Internationality'

The integration of cities into European and global systems of transportation infrastructure, economic and financial markets as well as political and cultural networks and cooperation is of growing importance for their development. So the level and the quality of international relations seems to be a major condition successful regeneration strategies. The New EPOC benchmarking scheme tries to reflect this argument, measuring the accessibility of the partner cities (transportation infrastructure in relation to the five most frequented destinations in Europe; see methodological annex), the concentration of economic decision-making functions (number of international headquarters located in the city or in the agglomeration; see methodological annex) and its attractiveness as an international meeting place (number of international trade fairs and congresses; see methodological annex).



The combined “international relations index” for all partner cities shows very clearly that lack of accessibility puts peripheral regions at a strong disadvantage and, as a consequence of this fact, generally means a lack of ‘internationality’ and international activities. But, in terms of headquarter functions and attractiveness for international business activities, those cities which are in a better geographic situation and which have better access to the dominant centres in Europe still do not feature as strong international places either. The only exception is Trieste which is home to a remarkable number of international company headquarters, trade fairs and congresses.

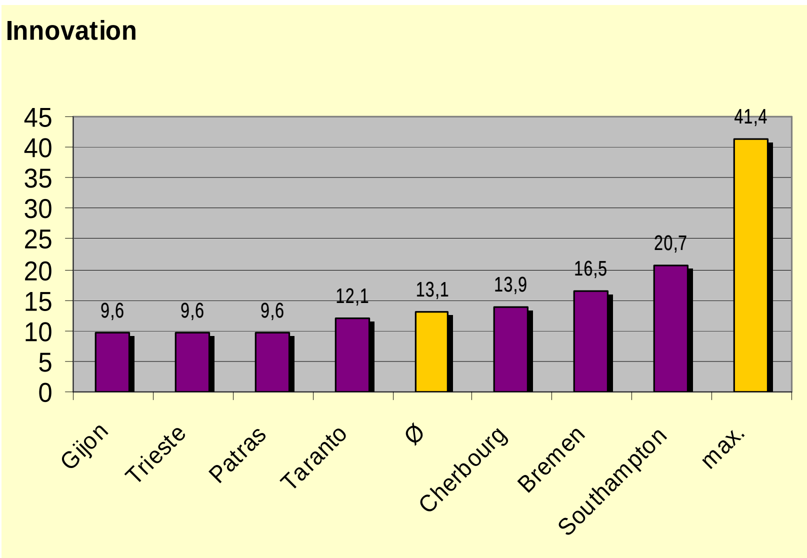
So, the improvement of international links appears to be one of the major challenges for the future development of all cities featuring in our analysis. One of the ways of using chances and opportunities for international cooperation - which has the added advantage of being influenced by local and political leaders and decision-makers - is involvement in European programmes and projects, but the opportunities and possibilities offered by EU activities do not appear to be fully utilised. Although all New EPOC cities strongly emphasize the significance of international relations, cooperation and networking, only few are putting this into practice as part of a strategic or conceptual framework. In detail the analysis shows some interesting differences between European involvement strategies (see *city profiles* in the New EPOC data base under www.new-epoc.net):

- A very clear strategic approach towards European projects and programmes seems to exist only in Gijon, where it is both the intention and the practice to use cooperation, participation in networks and deployment of resources for self-defined goals of local policy and development.

- The explicit use of EU-programmes as a framework for local development can also be identified in the case of those cities, which - like Taranto or Patras (Objective 1 regions) - try to compensate for their unfavourable peripheral situation in this way. However, this approach is limited and does not appear to be integrated into a comprehensive modernisation strategy. Participation in European programmes is also used by Kaliningrad as a means of intensifying international contacts, using networks for economic development and reducing its extreme peripheral geographic and political situation.
- For those cities which - like Bilbao, Southampton or Bremen - are more centrally located, participation in international networks and partnerships, involvement in European programmes etc. does not appear to be part of a deliberate strategy for internal development; international involvement is often seen as an instrument for marketing and part of modern image- and identity-building strategies.

2.3 Innovation

The "innovation index" combines indicators of the innovative potential of cities or regions (share of "high potentials" in the population) and for the output of innovative processes (registered patents and business start-ups; see methodological annex). With regard to these indicators and the relevant benchmarks, it is evident that the whole range of port cities in our study is (1.) rather far-off the maximum and (2.) rather homogenous around the average (see below, "Innovation" diagram).

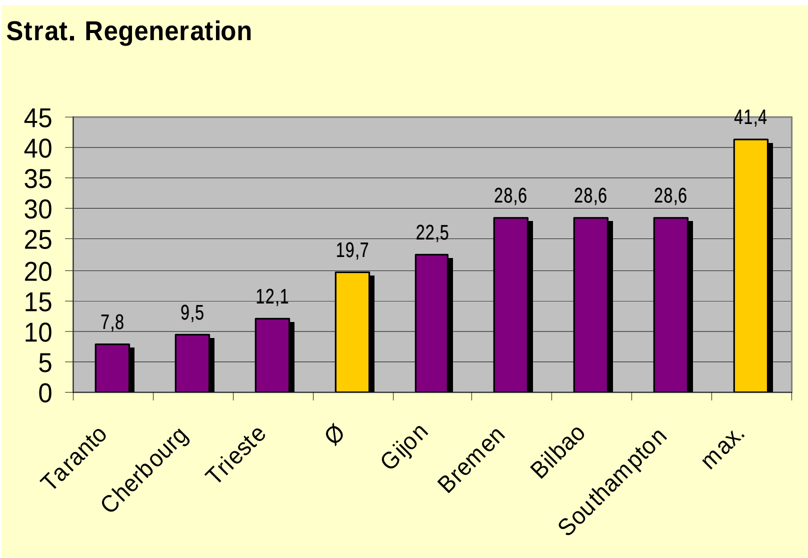


For all our cities support for and promotion of innovative processes is a major political objective and there is not a very great variation between the cities' performance. However, a more detailed analysis of individual indicators and additional information available (see city profiles in the New EPOC data base; www.new-epoc.net) shows that the conditions for innovative processes and particularly for the take-up of innovation are very different:

- The higher-than-average benchmarks for Cherbourg, Bremen and Southampton reflect the fact, that over a period of years the extension and improvement of scientific infrastructure and higher education institutions is a major feature of local and regional political strategies.
- Successful innovation is not only a result of infrastructure and capacities. Many of the cities are - in addition to the expansion of scientific and education institutions - developing specialised instruments for the promotion of technological and innovative initiatives such as technology parks, cluster- or network-management, specialised agencies for the promotion of entrepreneurship and small enterprise initiatives etc. Such initiatives, targeted on the social and economic conditions for innovation, seem to be of remarkable significance in Bilbao, Gijon, Southampton and Bremen.
- One of the visible positive outcomes of these initiatives is the relatively high number of registered patents in Bremen and Southampton as the output of research activities. However, the transformation of research activities and innovation into economic action and applications remains generally unsatisfactory: Where a modern and capable infrastructure for research and development has been established, the number of new enterprises and other transfer effects are still relatively low (Southampton, Bremen, Gijon) – and where higher rates of business start-up can be identified, these do not necessarily correlate with innovation processes in technology, research and development (Patras, Taranto, Trieste).

2.4 Strategic Regeneration

By “strategic regeneration” we refer to the totality of activities and conditions relating to the urban transformation from a traditional mono-structured industrial structure to a modern diversified tertiary one. In approximation to this process the New EPOC benchmarking scheme measures the availability of land resources for new economic activities, the (cultural) attractiveness for tourists, visitors, business people (overnight stays) and the significance of culture in local policies (public investment in culture per inhabitant).



The “strategic regeneration index” reveals a far better position than the benchmarks for innovation or international relations. All cities (except Taranto which has unfavourable conditions in several respects) appear to be focussing on improving attractiveness by strengthening maritime leisure facilities, cultural institutions and infrastructures. These activities are in many cases embedded into wider processes of change of image, attitude and identity and a considerable proportion of the public budget for culture is spent on such event- and ‘festivalisation’-programmes. So in Trieste, Taranto, Southampton and Bremen we see regular maritime events (like tall ship parades, maritime weeks etc.) and some of the partner cities use big international events for their marketing- and development strategies (e.g. Patras as European Cultural Capital 2006; Bremen’s application for European Cultural Capital 2010; Trieste’sh application for EXPO 2008). To some degree these activities are a response to recognition that (for example in Southampton, Cherbourg, Patras) the city itself and local businesses are not major beneficiaries of cruise and ferry passengers arriving in their port.

One of the most important “areas of change” in regard to the transformation of image and identity is the area of urban development, spatial structures and architecture. All the participating New EPOC partner cities have produced relatively comprehensive urban renewal programmes, master-plans etc. Moreover, everywhere these programmes include large or small-scale waterfront revitalisation projects, in which the principles and goals of regeneration strategies, or intended and unintended changes to structures and mentalities are expressed. Unfortunately mechanisms of collective identity-building take a long time to produce results and so the long duration of these processes is always a major problem. Many things change during this period: trade and business cycles, political majorities and preferences, knowledge and fashions etc. and nobody can really foresee over 20 or 30 years how the conditions and goals of projects may change, what kinds of effects and side-effects might really occur. This is why successful renewal strategies cannot be reduced to the construction of hardware or to material and economic changes. The revitalisation process must include intensive debate and controversial discussion, to explain the aims of the strategy and gather ideas for the future. This leads to the question of political processes and how to organise participation and consultation.

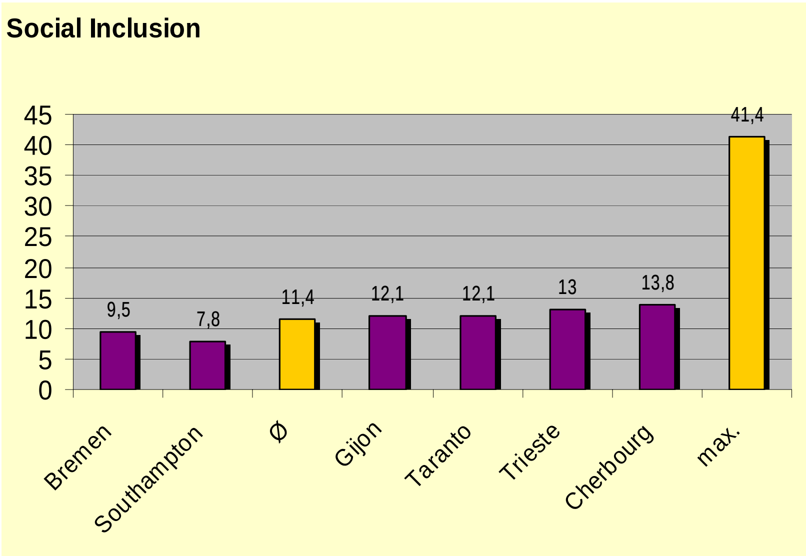
Our experience and analysis shows that the social and cultural effects of the physical processes of regeneration taking place in our partner cities can be intensified if new instruments for good governance (like stakeholder networks; public-private partnerships; “guiding visions” etc.) are put in place (see presentations and assessment of New EPOC Bremen seminar 2004; www.new-epoc.net).

So, the whole context of urban development, culture and governance would appear to be extremely important for any renewal strategy but this is complex and complicated and in none of our partner-cities has emerged as a coherent strategy - the City of Southampton for example has for years been experimenting with various key themes for marketing and identity (City in the World – World within the City; Learning City; Cosmopolitan City, Sea City) but still does not appear to have a clear understanding of what it is and what it wants to be. Guiding visions or ideas, master-plans, development programmes, real changes of urban structures or public debates are often contradictory or tend not to be inter-related and therefore many activities are not as effective as they could be.

One of the reasons for these problems with identity is without doubt the decreased and changed significance of all kinds of traditional maritime aspects. All port-cities know that they have to reinvent themselves but none of them has already found a new authentic combination of modern maritime and other key elements of identity and image.

2.5 Social Inclusion

Even more than in the case of “innovation” the values for the “social inclusion index” are concentrated around the average and lie far away from the maximum. The combination of poor levels of education and qualification (measured by the proportion of low skilled workers), delinquency (measured by the number of registered crimes per 1000 inhabitants) and unemployment (measured by the unemployment rate) is different in each of the cities, but all of them have typical problems indicating serious social risks. It also demonstrates clearly that the effects of the deep economic changes during the last two or three decades are far from overcome.



So in every case port-cities’ transformation processes have led to specific constellations of social risks, but although there are many different kinds of problems to be tackled – for instance integration of migrants or stabilisation of deprived neighbourhoods –, the most important key to solutions seems to lie in the renewal of economic structures and improved integration into the labour market. And even this causes different risks for the future and requires different coping strategies: Where unemployment rates are rather low - like in Southampton and Trieste -, the rate of ‘low potentials’ is extremely high. It seems as if the existence of today’s job opportunities prevent people from preparing for the qualification requirements of the upcoming knowledge society. So education and qualification will be the major challenge in those cases, whereas it can be assumed that the creation of job opportunities in the region - also for highly qualified persons - will be the most important task at Bremen, Patras, Gijon or Taranto.

The enquiries, expert workshops and debates that have taken place during the NEW EPOC project have shown clearly that irrespective of any differences political strategies for social inclusion should always consider two main requirements (see also the presentation “Globalisation and social consequences for port cities - Introduction to the seminar on new instruments against social exclusion" in Cherbourg, 12.5.2005, www.new-epoc.net):

- Supply and demand for a well-educated and qualified workforce will increasingly become a crucial element of regional inclusion strategies, and
- resources and responsibilities must be concentrated which means intensifying cooperation between public and semi-public institutions with private enterprises and economic actors.

It is clear that the need for closer collaboration between different players in this arena is an important and promising way to improve conditions for modernising the economy and creating new jobs. So cooperation becomes a decisive condition of success. If public authorities and agencies, enterprises, chambers of commerce and trade unions etc. do not cooperate at a regional level, or even possibly block one another, the quality and effectiveness of measures and strategies will inevitably be suboptimal.

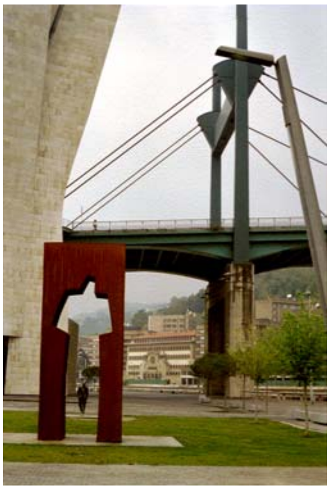
In many of the New EPOC partner cities encouraging experiments for cooperative labour market and inclusion strategies have been developed: In Southampton to achieve community benefit from public expenditure by using public procurement as an instrument for social inclusion strategies (see also the SITES-Plan, www.new–epoc.net); in Cherbourg, where the „Plan Local pour l'Insertion et l'Emploi (PLIE)" is a tool for organized cooperation between public and private bodies in inclusion and labour market projects or in Bremen, where the "bremer arbeit gmbh" was established as an institutional instrument for networking and cooperation in local labour market policy.

3. Port City Stories – Individual Developments and Strategies

Although port cities are affected by the same basic processes and face very similar problems there are a wide variety of combinations of approaches emerging from the individual patterns of risk and opportunity, resources and strategies. Each of the port cities has its own strengths and weaknesses and so application-oriented recommendations can only be given on an individual city level – and in many cases the issues covered need further and deeper analysis than was possible in the New EPOC project. Nevertheless the single city stories provide valuable hints and information on what lessons can be learnt for other cities' development.

Bilbao – Successful Change of Identity

For the City of Bilbao some essential data was lacking so the benchmarks for 'internationality', innovation and social inclusion could not be calculated. However the indicators presented suggest that Bilbao might perhaps be the only case with no explicit or strong weaknesses. Relatively balanced development might be the outcome of making an earlier start (compared to other cities) on regeneration initiatives and an intentional, consequent change of structures and character.



Located directly on the coast far outside the city, the port is expanding. It is strong in bulk and general cargo, but does not appear to benefit very much from the city's new character as an international place for business and culture. Bilbao hosts some cruise and ferry lines, but passenger traffic by sea could not be increased considerably.

In contrast to its position as a sea destination, Bilbao's accessibility by road, train and airplane seems acceptable and, although no other indicators for international relations were available to demonstrate clear effects, the city's new image as a centre for modern services, industries, science and culture is successful in attracting fairs and congresses as well as tourists and visitors. This positive impression is also reflected in the very high number of newly founded enterprises and a moderate unemployment rate.

One of the impressive successes of Bilbao's development is the revitalisation of the waterfront, implemented as a pearl necklace of high quality architectural developments on the sites of old shipyards and docks along the river – from the Guggenheim Museum over the university building, hotel, and shopping mall to the Euskalduna concert and conference building, all of which are connected by a new tram-line.

So, on the whole, the intended change of structure and character, for which one of the initial decisions was "to buy a new identity" with the iconic Guggenheim Museum, seems to be successful, although for example the number of overnight stays demonstrates that this new image and cultural attractiveness could possibly be used more effectively. There might also be a risk of a cultural "overload" by hosting a "rootless" global culture industry. The failure of the small maritime museum "Museo Marittimo del Ria" at Bilbao may be a typical indicator of the wide gap between a global and a local mentality and a global and a local level of cultural understanding. This is therefore one of the candidates for use as an example of failure, which is sometimes as valuable as the generally preferred good practice examples.

But there are also good practice examples in Bilbao:

- *More than the other cities Bilbao tries to support the implementation of good governance as a strategic element of renewing urban, social and economic structures by using a variety of specialised steering and controlling instruments. To monitor the effects of these transformation processes a "Revitalization Indicators System of Metropolitan Bilbao" was developed and regular public opinion surveys were conducted. Using the experience of this monitoring programme, training courses in new forms of metropolitan management were developed and implemented.*
- *A strong regional approach seem to be one of the reasons for success. Institutional cooperation involving many large companies, institutions, organisations, administrative and political bodies (> Bilbao Metropoli 30) in the field of urban and economic development is bridging particularism and seems to be reducing the dominance of any individual interests in the whole region.*

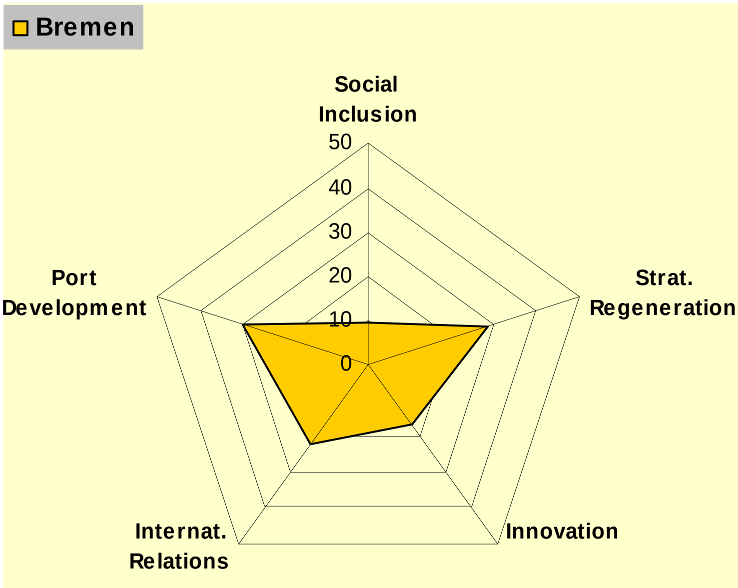
Bremen – From Port City to City of Science

The Free Hanseatic City of Bremen is also characterised by relatively balanced development; there are no extreme deficits, apart from serious problems of social exclusion (unemployment and delinquency).

The ports, which are strong universal ports, are still one of the key elements in the regional economic structure. In particular Bremerhaven's expanding ports have a competitive position in general cargo and containers. Nevertheless the high unemployment rate in the region is to a large extent the result of an inability to compensate for the decrease in old port-related industries.

Passenger transport is the only weak function and it is possible that the ports' economic potential and regional benefit could be improved if they were to be made more attractive as destinations for sea-travel and cruise-liners.

Global trade and the sea-faring tradition provides a base for international business connections which contributes to the 'internationality' of the place. Compared to the other port-cities, accessibility and transport links are excellent; all in all there is a good level of 'internationality', due in recent years to the development of high-technology industries like aircraft and space vehicle production and the growth of a modern science and technology sector. A strong infrastructure and many institutions for research and development also contribute to a high potential for innovation, but the local and regional economic structures do not yet stand to benefit from this in an optimal way. The transfer from research to economic application needs urgent improvement and more effective instruments for technology transfer need to be developed.



Because of the relocation of many important port functions from Bremen to Bremerhaven, strategic regeneration has a major role in Bremen's development. The regeneration of redundant port areas does not take place on exposed inner city sites like in Bilbao, but is also seen as a key project for modernisation ("Überseestadt") of the whole city.

For the City of Bremen the waterfront revitalisation process is - similar to Bilbao's - a process of strong and explicit change of structures and identity. The intentional transformation from a traditional port city to a modern "city of science" is progressing, but this needs more time. Another element of this strategy is the establishment of a strong service, leisure and culture sector which underlines the city's modern maritime character. In this field Bremen has experienced both success and failure. Two big initiatives - the application for European Cultural Capital 2010 and the installation of a giant entertainment theme park [Space Park] - failed.

Nevertheless there are at least two lessons or good practice examples which can be learned from the story of Bremen:

- *A promising transformation from industrial to a science-based structure accompanied by a change of identity and image has been successfully completed which led to the award of German "City of Science" in 2005 and the city's selection as one of the top ten research places in Germany in 2006.*
- *Cooperation and consultation were enormously important factors in two key development projects: The implementation of the old port areas' revitalisation project follows a master-plan which divides the whole area into eight districts with different functions, each of these districts to be developed in different permutations of partnership and collaboration between private and public developers and investors. This flexible model of cooperation makes it possible to handle a project, which would be too big for a coherently planned development. Also, the extension of the container terminals in Bremerhaven required close coordination between a huge number of various actors, e.g. public institutions and political bodies, environmental groups, private enterprises and local citizens. Through a successful strategy of consultation and cooperation, acceptable compromises were reached from major conflicts.*

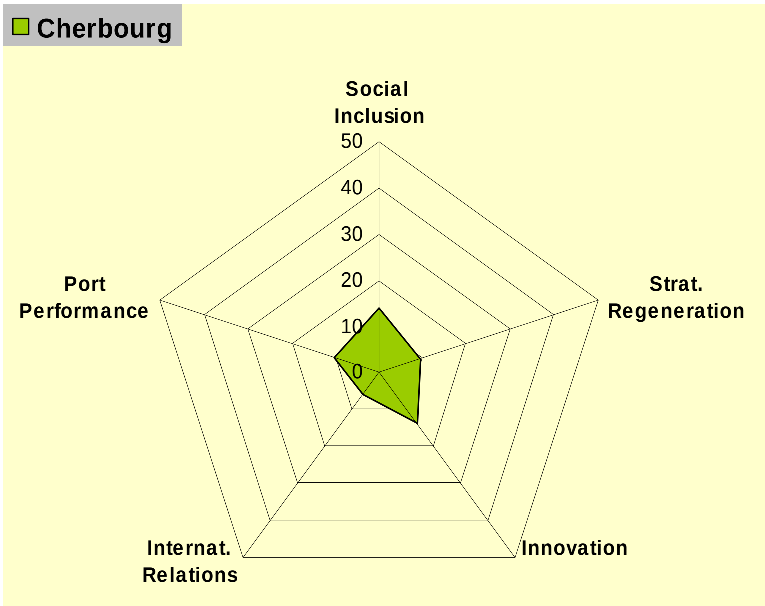
Cherbourg – A Maritime Location Lacking a Maritime Identity?

The City of Cherbourg is by far the smallest of the cities analysed. Moreover it is located in a rather peripheral situation in France. Like Patras or Taranto, Cherbourg has the character of a regional centre benefitting from one or two features of supra-regional significance – its proximity to the nuclear waste reprocessing plant at La Hague and its naval shipyard put it in a similar position to Taranto and its steelworks for example.

Therefore it comes as no surprise that Cherbourg is not a place of high ‘internationality’; the city is not home to any international headquarters and there are only a few international fairs and congresses.

In overall economic terms Cherbourg would appear to be a place with no explicit strengths. The commercial ports do not occupy a major position in the local economy and traditionally the naval port and shipyard appear to be of greater economic importance to the region. A remarkably high quantity of the goods handled is registered as general cargo and the ferry terminals, with nearly 1,5 Mio. passengers per year, have a significant function. However, even though a considerable number of passengers pass through the city, the relatively low rate of overnight stays indicates that the city is not very successful in attracting tourists or travellers to spend a few days in Cherbourg either before or after taking the ferry. This could be an opportunity for the future and a major goal for strategic regeneration.

In fact this would appear to be part of the rationale for the recent establishment of the maritime edutainment centre “Cité de la Mer”, as is the relatively high level of public investment in culture. As a result, the local cultural and artistic scene appears to be both interesting and productive, suggesting that one of the questions for further development should be how this could be made more visible to a wider public.



Another promising aspect of present developments seems to be the number of high potentials, correlating with some locally based interesting and specialist scientific and research institutions, which increase prospects for innovation in the region. However, as in Southampton or Bremen, this potential still needs ongoing support and improved transfer mechanisms because it has not yet had a strong economic impact in terms of the number of patents registered or newly-established enterprises recorded.

In terms of its tradition and geographic position Cherbourg still has the image of a maritime place, but recent regeneration plans for the city do not appear to strongly support or emphasize this maritime character. So, these plans actually risk separating the maritime image of the city from its actual development.

In juxtaposition to this example of a possibly problematic and inconsistent regeneration strategy, the following good practice example has been identified:

- *Although neither Cherbourg nor its surrounding region is economically prosperous, unemployment and crime rates are relatively low. As with all the other port cities in our study, education and qualification levels also need to be improved because a relatively high rate of high potentials coincides with an equivalent rate of low potentials among the employable population. However there are some very effective social integration initiatives. In particular the implementation of the PLIE-strategy (Plan local pour l'insertion et l'emploi) has established a functioning network of private and public actors and activities working together to stabilise personnel structures and integrate unemployed people into the labour market.*

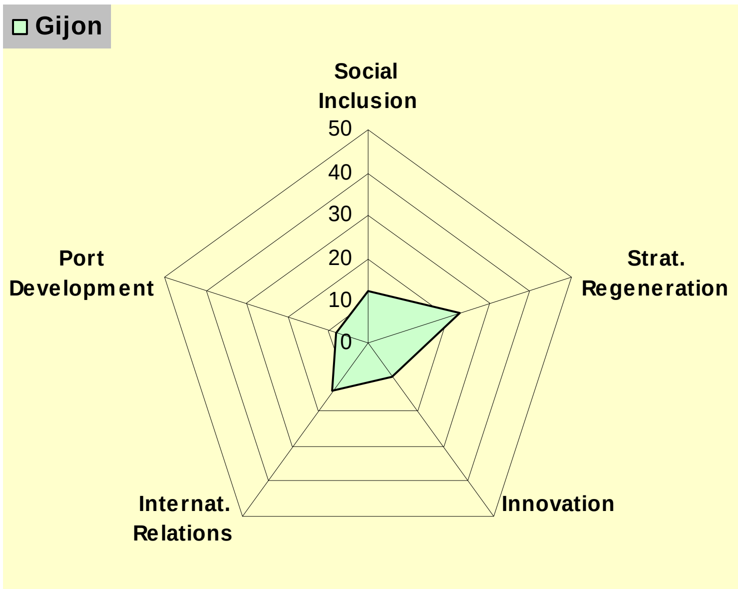
Gijón – Strengthening Existing Strengths

The City of Gijón would appear to be undergoing a more dynamic transformation than the other port cities: many changes are underway which has resulted in unbalanced development with good and weak values in all categories.

The development of the port is strongly linked to the Asturian steel and metal industry. It is therefore highly specialized in the handling of a few bulk materials, in particular ore, coal and steel, while the volume of passengers, containers handled or general cargo is very small. The development strategy of the Port Authority, the city and others would appear to be aimed primarily, not at diversification but at strengthening existing strengths: A huge port extension project is underway. However, this is focussed on features related to existing activities (new facilities for the handling of oil, chemistry, cement and the extension of facilities for ore and coal).

This kind of specialization carries risks as well as opportunities: Although there is enough space for the extension of the port (as well as for other commercial activities) land use and pollution could cause future risks and the economic function of the port will continue to be dependent on the growth of the steel and raw material industry in Asturias. Nevertheless the present-day situation is characterised by a positive development, enabling the responsible authorities to use revenue from the port for other development strategies.

Supported by a favourable geographic location with a very long waterfront, some smaller projects have been completed or are being planned with a view to diversifying the maritime character of the city and compensating for job losses caused by the decline of the shipyards and other traditional maritime industries. Service, leisure and culture projects like the planned Thalasso therapy centre on a city centre beach, the regeneration of historic Roman sites, the installation of a regional historic museum in an old lighthouse or the Parque Atlantico nature park, dedicated to the preservation of the typical botanic character of the region, are positive initiatives which will help to create a new maritime identity and attract tourists and visitors from outside.



These initiatives could perhaps be more effective if transport infrastructure and Gijón's accessibility were improved. But, despite its unfavourable location, both in Spain and in relation to the European metropolitan areas, Gijón hosts some international headquarters, fairs and congresses and tries to play an active and engaged role in international networks and in European relations (see below). This may be the reason for the number of overnight stays which reaches the average level.

For some years education and innovation have also been an important element of local development strategies and the potential for innovation appears to be rather promising: Some specialist research and higher education institutions are located in the city (although it has no university), a technology park has been established and there is a good rate of high potentials in the employable population, and yet the results – measured by the number of registered patents and newly-established entreprises – are less than satisfactory. As in nearly all cities analysed there are important deficits in the transformation of innovative potential into economic success.

Finally the high unemployment rate shows that all these different measures and strategies still need more time and more activities to produce clear results and possibly generate a considerable number of new jobs.

Compared to the other port cities there were two particular good practice examples identified, which might be helpful :

- *In Gijón a clear and focussed strategy for port development has been set out and it would appear that an effective innovatory approach has been found for regulating and moving the port forward. Integrating the traditional "Port Authority" into a flexible and strong network ("Port Community") would appear to be a good way of organising cooperation among various public and private port stakeholders and a fruitful method of concentrating resources and interests on common goals. As a result of this cooperation the city has derived real benefits from the economic success of the port.*
- *The highly systematic and strategic use of European programmes, funding and international relations provides strong support to local authorities and politicians to pursue their self-defined objectives for development of the city. This may also be one of the reasons for the number of good cultural projects, although public investment in culture is at a rather low level.*

Kaliningrad – Future Hinge Between Markets?

The City of Kaliningrad is in an extremely difficult position because of its marginal geographic and political situation. Its location at the edges of both the European Union, and of Belorussia and Russia may also offer excellent opportunities to work as a hub between these major markets in the future. This seems to be the perspective guiding the strategies and measures implemented by the political authorities in Kaliningrad.

One of these strategies is to improve international relations and to set up cooperative links with partners in the EU. That is why Kaliningrad participates in a large number of European projects, networks and partnerships and tries to build up strong political, economic and cultural relationships with partners in the European Union. The remarkably high number of international fairs and congresses and even some international headquarters may be a result of these initiatives. The development of headquarter functions seems to be untypical for the situation in Kaliningrad but, with the establishment of the SEZ (Special Economic Zone), many European and other international companies have set up assembly plants and/or branch offices (more than 150).

And, despite the many difficulties caused by an inadequate transport infrastructure and lack of accessibility, further progress is possible. This is not only true for road and rail systems but also for the commercial ports, which strongly specialize in bulk materials (handling raw oil and oil products). Furthermore, the port of Kaliningrad's only importance is as a military base and fishing port (Kaliningrad is a strong centre for fisheries and all kinds of fish products). So clearly, the improvement of all kinds of physical connections to the city is another basic need for future development. One of the important measures in this area is the extension of the canal linking the city ports with the Baltic Sea.

So, the trade-and-transport complex is the topmost priority for Kaliningrad's city development functions and challenges. but, as with the other port cities, there is also an understanding in Kaliningrad that modern services, research and innovation potential, education and qualification levels will be major challenges for the future.

Research is undertaken in some higher education and specialist research institutions focusing on aspects of the local and regional economy; e.g. research and design organisations related to sea navigation and fisheries and to the engineering and construction sector. The most important regional research trends are the monitoring of ecological conditions and environmental protection of the Baltic Sea, investigation of commercial fishing resources, development of catching gear and techniques for pelagic fisheries, development of space rocket and Sputnik technology, machinery and facilities, promotion of gas transportation automation, and creation of up-to-date means of electric-driven transport.

The current high priority given to ecological questions in the local research profile highlights one of the major risks for development of the Kaliningrad region: industrial, technical and other human activities have created a number of serious environmental problems and consequences which are likely to obstruct its positive and sustainable development.

This may not be the case for modern services such as leisure, culture and tourism which are still in need of further development. A rich cultural and political history, coupled with beautiful landscapes and coastal areas in the surrounding region, could be an appropriate basis for development of the tourist industry and services and this may be one of the opportunities for future development.

There is however a further associated risk which does not appear to be receiving either public or political attention: As in Southampton, the current low unemployment rate is an indicator of a sufficient number of jobs. Yet it is foreseeable that demand for a highly qualified and well educated workforce will increase strongly and, if this situation is not addressed, it is possible that the local labour market could end up with a mismatch of supply and demand in the future.

Because Kaliningrad's situation is (1.) not really comparable with the other port cities analysed and (2.) some important data and information was missing, it was not possible to identify any good practice examples.

Patras – Preparing to Take a Leap

The City of Patras is the main ferry port on the western coast of Greece and, as such, this is the port's specialism. Being strong in ferry traffic, the port has a considerable throughput of general cargo and passengers. Nevertheless Patras is considered a place of transit rather than a resort centre – which is shown by the relatively small number of overnight stays.

Beyond its function as a maritime entrance to the Peloponnes, Patras has lacked a strong maritime industry. This is the reason for the general industrial decline since the 1980s mainly affecting other important industrial sectors, causing significant job losses in the former textile, clothing and paper industries. The effects of industrial decline have not yet been overcome, as reflected in the unemployment rate of about 16%. Regeneration strategies in Patras have to take into account the very small industrial base, both in the city and the region, and need therefore to concentrate on services and even agriculture which still plays an important role in the area.

One of the most challenging problems for regeneration is Patras' poor accessibility apart from by sea. The city's peripheral geographic situation is striking in all other categories and for this reason some of the major development projects are designed to improve infrastructure: the Rion-Antirion Bridge (connecting Patras with mainland Greece, 2,250 meters in length) has already been finished, the construction of a new harbour, the Perimetric Highway and the modernization of the railway track to Athens have already started. The construction of a new extended port outside the city will produce future opportunities: The new container terminal will provide new space and facilities, the removal of ferry terminals from the inner city waterfront will provide the opportunity for waterfront regeneration and the installation of modern leisure and tourist facilities such as a marina.

All of these measures will help to improve local economic structures as well as enhance 'internationality' and connections which are currently weak. Some progress has apparently been achieved (a significant number of international fairs and congresses may possibly indicate an upcoming position as international meeting place) and the city's selection as Cultural Capital of Europe for 2006 and as an 'Olympic' city for 2004 constitutes further great opportunities for Patras and the surrounding region to develop as a significant cultural centre.

Another opportunity, which does not seem to be fully exploited, is the existence of one of the largest universities in Greece making Patras a very young city with a high proportion of young people in the population. Since these young persons will not have completed their education (and possibly will not stay in the region once they have done so), the rate of high potentials in Patras is rather low, but with many students and scientific institutions (for example the university, the Technological Educational Institution, the Hellenic Open University, the Patras Science Park) there are signs of promising potential for innovation.

A very low number of registered patents in the Patras region and the fact, that most of the numerous newly-established enterprises are not really innovative new enterprises (but rather more small agricultural, trade and retail businesses) suggest that this high potential is not currently being exploited, but there are some promising developments that might help to improve the situation in future: the university, in particular, has a specific role in trying to act as a motor for local and regional development.

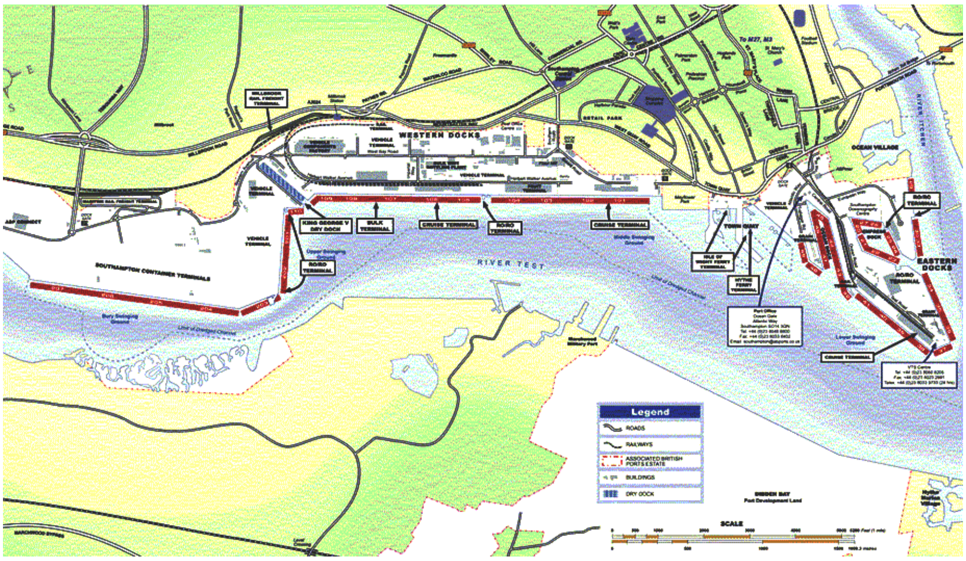
So, all in all and compared with the other port cities, the regeneration process began rather late in Patras, but, in spite of risks and barriers, and, assuming that recent opportunities are exploited, it does seem to be accelerating and moving forward in a promising direction.

Two interesting aspects of these developments can be identified as examples of good practice:

- *Patras' nomination as European Cultural Capital is being recognised as an opportunity for internal development, increased international awareness and a modernized image. All this could support initiatives to make full use of the untapped potential to modernise services, leisure and culture facilities. So, while Bremen and Trieste failed with their applications for big international events, Patras could be an example of how to use – or misuse – such an opportunity.*
- *Local authorities and other institutions expect the university to play a leading role in helping the city define its character in the early part of the 21st century. Therefore the University has a co-ordinating function in developmental initiatives that can benefit the Region of Western Greece, communicating the constantly generated scientific knowledge and know-how to industry and business. The university is very active on the international scene, participating in a significant number of European and international educational and research programmes and consortia and in many major academic associations.*

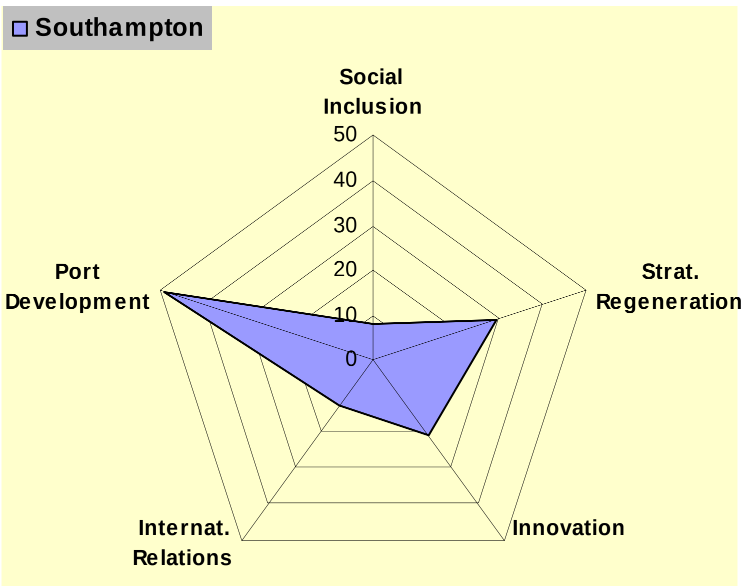
Southampton – In Search of a New Identity

At first glance the City of Southampton would appear to be a positive exception in the range of New EPOC partner cities. Economically it is a strong beneficiary of the prosperous development of London and the South East region of England in recent years and its port is the most important on the south coast of the UK. It has an exceptional advantage with the combination of a strong universal port and an outstanding tradition as a passenger traffic destination (cruise liners). The presence of a high number of cruise passengers may also be the reason for the high rate of overnight stays in the city. The city's two universities with more than 30,000 students, an excellent rate of high potentials and some specialist research institutes, provide strong potential for innovation – particularly innovation with a maritime focus.



So, the port's competitive position, a growing regional economy with low unemployment rates and a strong research infrastructure provide good preconditions for a regeneration strategy. And there is an urgent need for regeneration since there are also some considerable risks for future development.

Another particular strength of the Southampton ports, in addition to passenger traffic, is the handling of bulk cargo which often causes serious environmental problems. So, if both port functions - "dirty" bulk handling and "clean" cruise and passenger traffic - are expanding, these might not prove very compatible and lead to competition for use of limited space. In the case of Southampton, the planned relocation of port functions into a new adjacent area outside the city was intended to relieve this tension, but the expansion plans failed – in part for environmental reasons. So the problem remains unresolved and may require stronger collaboration between the privatized ports and the city's local authority.



Despite comparatively good traffic infrastructure and accessibility, the city's internationality in terms of international headquarters, fairs and congresses is not very high. International city partnerships, participation in international networks and projects are concentrated on a few key focal points, which contribute to improving the city's 'internationality'.

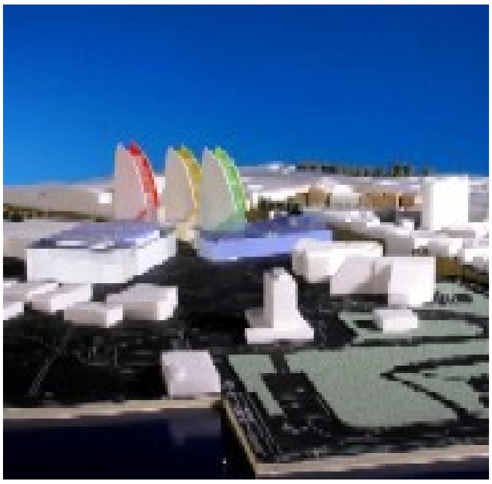
So, while the port is a maritime locus of "natural" internationality, the city itself seems more of a regional economic and administrative centre and the physical and mental separation between city and port may prove problematic for Southampton's identity and image. Despite having a clear maritime and port city tradition, the city's current image and real quality as a place which is more than a floodgate for goods and passengers is not quite clear and is in definite need of improvement, but the city seems unsure of itself and its maritime character.

This lack of a distinctive identity may be one of the reasons why public investment in culture, which is at a relatively high level, does not appear to be contributing to the development of a clear image. Instead, Southampton has for some years been experimenting with various key themes for marketing and identity (City in the World – World within the City; Learning City; Cosmopolitan City, Sea City) but has not yet come to a clear understanding of what it is and what it wants to be. This means that many initiatives are not as effective as they might otherwise be.

This also means that one of the major challenges for Southampton will be the creation of a balanced identity, which underlines maritime traditions and its modern maritime features as well as its character as a regional economic and cultural centre. The ongoing process of waterfront regeneration, which takes place on a number of different sites in the city and which has to be managed in parallel to the development and extension of the port itself, might help to find a new understanding of the city's maritime identity.

One of the most important fundamental factors to help in this process are the local scientific and research institutions, specialising to a large degree in maritime issues. They provide considerable productive potential for innovation (measured in terms of the number of registered patents), although - like elsewhere - levels of entrepreneurship and start-ups remain inadequate. Therefore, one of the tasks for regeneration strategies in Southampton is to develop more effective instruments for the transfer from research to economic application.

Taking account of the importance of qualification levels and their high significance for the performance of regions in the future knowledge society, Southampton runs some serious risks in the area of social inclusion and education: it has the highest level of low skilled and inadequately qualified persons and a high level of delinquency. Both facts are related to a lack of education and qualifications. Even today, the local labour market is characterized by above national average levels of labour and skill shortages – it is estimated that 1 in 4 adults have basic skill needs. Local skill shortages mean that the city is a net importer of labour, particularly for higher skilled occupa-



tions and, if this problem remains unresolved, it must be considered as the most important barrier to further growth and development.

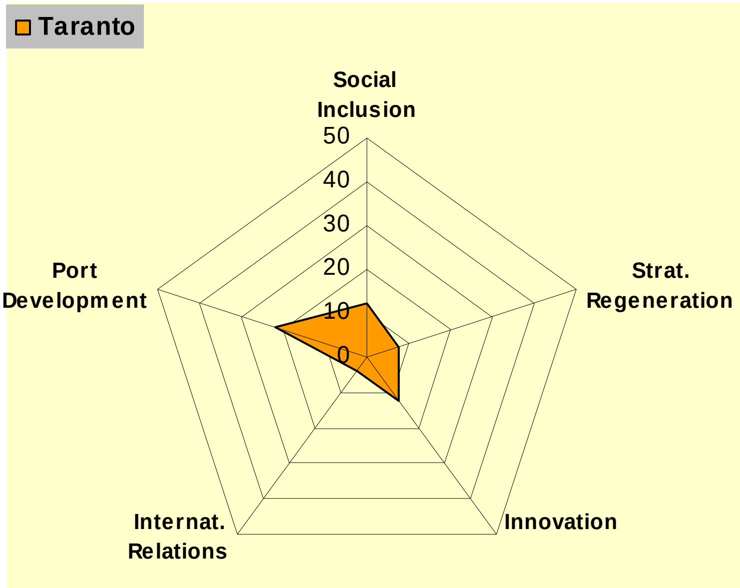
The recognition that improving conditions for social integration and qualifications is a major challenge for the city and the region and that concerted effort is needed by both public and private actors has led to a number of collaborative activities which may serve as good practice examples for local social inclusion politics:

- *In 2002 a Local Partnership was installed to oversee the strategic development of the city - www.southampton-partnership.com. The Southampton Partnership is a multi-sectoral/multi-organisational grouping involving representatives from business and commerce, health, housing, higher education and life-long learning, cultural organisations, environmental groups, transport, the police and the voluntary sector. The Southampton Partnership is coordinated by the City Council. Its goal is to set a strategic vision for Southampton for the year 2020 and secure partners' commitment and action to deliver that vision. 11 key challenges have been identified to realize the vision for the people of Southampton, with special attention being paid to socially excluded communities, younger people and older people. Sub-partnerships have been set up, or are in the process of being set up, to take a lead role in addressing these challenges. Two concrete examples of collaborative activities were the establishment of workforce pooling in the maritime sector as an instrument for economic and labour market stability and the use of public procurement as an instrument for the labour market integration of unemployed persons.*

Taranto – Diversification and Recalling its Past

Since the 1960s the City of Taranto has developed mainly as an industrial base, dominated by heavy industries such as steelworks, oil refinery and chemical industry. Accordingly, the ports of Taranto are handling huge masses of steel, coal, ore, oil products and chemicals and also load and unload considerable quantities of general cargo. Taranto is also a naval base and therefore the military port and the naval shipyard are important employers.

In the face of the industrial crisis of the last few decades, the Municipality and other local authorities came to the realisation that these heavy industrial mono-structures offered no further promising prospects for the future. So, during the 1990s it was decided to diversify port structures, return to the traditional means of local production, renew the fisheries and mussels cultivation activities, establish an industry for the transformation of sea products, revitalise cultural activities based on the city's rich historical background, reinforce tourism activities and provide space for small and medium-sized enterprises to replace the large industries.



However the earlier concentration on heavy industry also left a number of problems and risks for new developments:

Having focussed on developing only a few destinations for the supply and delivery of raw materials, Taranto Port was, and still is to a certain extent, located outside international shipping routes and this remains a problem, particularly for the new Taranto Container Terminal, which was planned and implemented as a "central gateway to Europe in the middle of the Mediterranean Sea". Therefore it was hugely important that this container terminal was constructed and installed in cooperation with one of the big international transportation companies (Evergreen) in the hope that the promising start made by the container terminal would contribute to turning Taranto into a real node for Mediterranean sea traffic.

Another huge problem preventing more diversified development in the region is the poor water quality and environmental situation (air quality) around Taranto, which in particular could prove a barrier for the development of high quality marine food production. The most important pollutants caused by industrial activities are an extremely high concentration of benzene in the coastal waters and the presence of fine dusts generated by the biggest steel plant in Europe, as well as the cement works and refinery located not far from the urban area.

So these legacies of heavy industry are likely to cause some serious problems for the proposed revitalisation of fisheries and aquaculture as well as for a significant growth in the tourism sector. However, since the 1990s there has been some progress in tourism and also in the aquaculture sector.

Although the geographic location of Taranto “in the middle of the Mediterranean Sea” could possibly be an advantage for the diversification of port functions, the more characteristic feature of the place is its peripheral location in relation to European and even national centres. So, Taranto is a place with unfavourable accessibility and weak ‘internationality’ and connections. Participation in international partnerships, European projects and networks is intended to compensate for some of the disadvantages of this unfavourable geographic situation and in some projects this strategy has proved to be successful – for example, the extensive renewal of the historic town centre.

Waterfront regeneration, renewal of the old urban centre and putting to good use the city’s history and culture, as well as traditional sea food production, may be effective starting points for attracting more tourists and visitors. However, until now, this has not translated into direct results: overnight stays are still at a very low level and it would seem that the strategic regeneration process will require much more time. Considering the extremely low level of public investment in culture, it is possible that giving a higher priority to cultural aspects might possibly support this process of change. On the other hand, Taranto has never had the problem of an uncertain identity: its maritime character and function as a port city was never jeopardized and modern developments will strengthen this identity still more. The bigger problem for Taranto would appear to be providing a way of combining its internal identity with an external image.

Using this maritime identity and trying to profile the maritime image is a major challenge because there are not many other assets to rely on: No other industrial or considerable scientific resources are available to serve as a basis for additional, innovative economic developments and so - although there is a promising rate of local high potentials - the chances for the development of modern services are very limited. This is also underlined by the very low number of registered patents.

With regard to its social situation, Taranto has been more affected by industrial decline than the other cities: it has the highest unemployment rate and a rather high crime rate indicating serious problems in the field of social inclusion and labour market integration. In contrast to some other port cities, there is not too high a level of problems in education and qualifications, so the major challenge is to create new jobs for unemployed persons – and this is where European projects and other instruments are also urgently needed.

Until now it is not possible to predict whether intentions and strategies for renewal are likely to be successful, nevertheless regenerating traditional marine businesses like fisheries and aquaculture could be seen as examples of good practice:

- *Taranto is the leading area in Italy for aquaculture, in particular for the cultivation of mussels and has a long tradition – starting at the beginning of the 20th century and going up to 1963. In this former period the city’s economy was based on the cultivation of mussels, on fisheries and other local maritime elements. Although today there* *are serious environmental challenges to be met, which are likely to be an important precondition for successful expansion, the regeneration of this business with modern means of production appears an appropriate strategy for developing a new and more sustainable economic sector in the city and the region.*

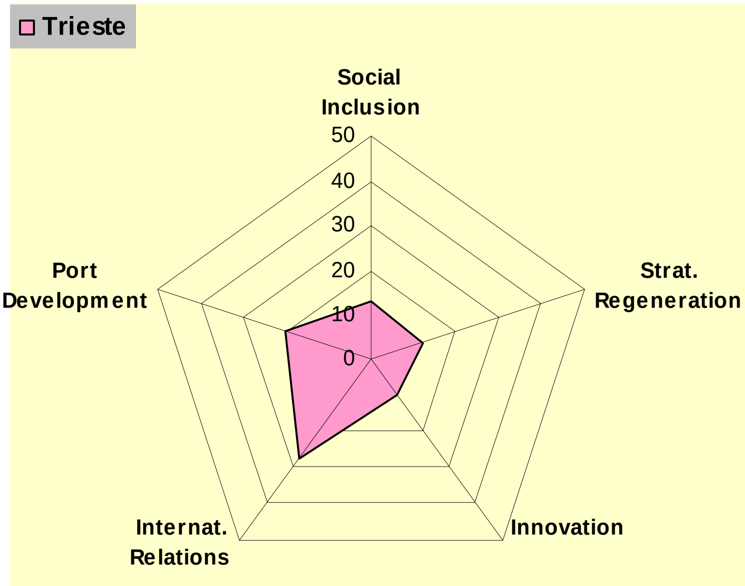
Trieste – International Centre for Services and Maritime Technologies

In contrast to Taranto, the other Italian port city, and also to some other NEW EPOC partner cities, the City of Trieste benefits from a favourable geographic location on the northern coast of the Adriatic Sea. Since the last century this has been the basis of Trieste's development as an international centre of trade and commerce. The city's character was always influenced by both the maritime elements of its urban and economic structure. but also by a strong service sector with international trade or insurance companies, banks etc.

The port function itself is clearly dominated by bulk cargo (raw materials, especially oil and oil products), whereas container-handling is of minor significance; general cargo and passengers are handled and transferred in quite considerable quantities. In addition to the port and related to the port infrastructure, Trieste is the home of one of the last big shipyards in Europe. The Fincantieri shipyard at Monfalcone hosts not only building facilities for big cruise liners but also the technological development centre of Fincantieri shipyards. So, this, combined with other technologically-oriented research capacities, provides a strong and competitive base for high-tech-oriented modernization and diversification of the maritime sector in the region.

One of the economic consequences of this positive situation can be seen in the relatively high level of newly-established enterprises. Nevertheless the city's innovative potential requires stronger support from education and qualification institutions, because the local supply of high potentials is very low and poor levels of educational attainment among the local population extremely high. As in the case of Southampton, there is no actual labour market problem (the unemployment rate in Trieste is one of the lowest), but it could prove an important threshold for future development of knowledge-based industries and services.

So, social inclusion problems seem to be less dramatic than in other port cities - indeed the rates of unemployment and delinquency are rather low. Even though there are serious social disparities arising from the very high number of people with a poor level of education and qualifications coupled with a rather high number of long-term unemployed or unemployable persons. Thus, one of the challenges for Trieste seems to be the establishment of instruments of social inclusion for those parts of the population who will possibly have no chance to participate in the normal labour market.



In line with its traditional role as a trading place, Trieste scores highly as an international location – although the accessibility of the city is at most average. A good number of international headquarters, fairs and congresses highlight the city's significance as an international business place. By contrast, Trieste does not appear an equally attractive a destination for tourists and visitors, as indicated by the rather low numbers of overnight stays and also of travellers coming to Trieste by sea. This area seems to be an appropriate focus for development of the city and is indeed the aim of a number of current strategies.

A key element in making full use of its location and traditional 'internationality' is the improvement of accessibility. Trieste still is too far (measured in terms of the duration of travel times) from the big agglomerations in western Europe. Another key measure for strategic regeneration is positioning Trieste as a modern centre for services, leisure and culture – particularly based on its maritime character. In addition to the implementation of some waterfront projects during recent years, the local authorities have allocated a high level of public investment in culture – probably in support of Trieste's application for EXPO 2008. These efforts failed (Trieste was not selected as location for EXPO 2008), but it can be assumed that Trieste's attractiveness and image benefitted from this international appearance.

Although the application for the EXPO failed (which could be added to the "New EPOC list of failures") Trieste does provide an example of good practice in another area:

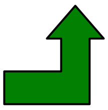
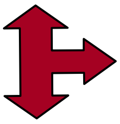
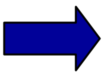
- *Unemployed persons over 45 years are increasingly at risk of becoming a disadvantaged social category because of their steadily decreasing chances of finding adequate jobs. In conjunction with research institutions, trade unions, employers associations and non-profit organizations, the Municipality of Trieste has built up a network to implement a comprehensive program for the re-integration of over-45s into the labour-market. Supported by the European EQUAL initiative, a successful integrated programme was put together which included detailed analyses of the local labour market and the target group, the establishment of a data bank to match employers' demands and the labour force, specific counselling procedures, a promotional campaign, and the implementation of training and empowerment courses.*

4. Conclusions

Patterns of Modernization

Regarding developments in 9 European medium-sized port cities it becomes very clear that there are only a limited number of options for the development of the maritime sector: all port cities are attempting to combine a variety of strategies to modernize the maritime sector of their economy; however, in terms of their maritime structures, there generally seems to be a single dominant focus: *specialization, diversification or concentration on new developments not directly related to the maritime sector*. But: in general maritime issues are losing their overall significance and this opens up a wide range of different pathways to the future in terms of the development of the whole city and its economic, social and cultural structures.

Regarding the categories of “economic regeneration”, “change of identity” and “social integration”, three different types or patterns of development can be identified overall:

„Change of Path“		• **Bilbao (successful change of identity)** • **Bremen (from port city to city of science)**
„Balanced Mixture“		• **Southampton (in search of a new identity)** • **Cherbourg (a maritime location lacking a maritime identity?)** • **Trieste (international centre for services and maritime technologies)**
„Modernizing Existing Structures“		• **Taranto (diversification and recalling its past)** • **Gijon (strengthening existing strengths)** • **Patras (preparing to take a leap)**

The *“Change of path”* pattern is mainly characterized by an obvious (and more or less sucessful) effort to support the process of economic and social renewal through a new identity. Some promising potentials (in culture or science for example) have been developed during recent decades which provide the basis for a new image on a national and international level. The port(s) are still factors of the highest importance, but this fact is no longer visible and perceptible within the city; the new maritime character, which is another important element of a new identity, is focussed on maritime services, sciences, leisure and tradition. Maritime history and the port-related elements of urban and economic structures are transformed in such a way that addresses not only “nostalgic” historical and educational goals, but also seeks to use these elements as economic potential. In such cases the maritime environment provides a particular scenery and backdrop for offices, promenades, restaurants and many other activities. The transformation process is driven by some big investments in “iconic” projects, which - on the other hand - demonstrates very clearly some of the risks attached to this process: Bilbao and, even more so, Bremen have had some experiences with the failure of related projects and as a consequence this may – both in economic and in public opinion terms - bring discredit upon a certain direction of regeneration processes.

In the *“Balanced Mixture”* type the port(s) and all the port-related activities within the city remain key elements both of economic and urban structures as well as in the minds of citizens and decision-makers. Nevertheless, there is an urgent need to readjust the port-city relationship, to diversify the economic structure and to engrave these changes on the local identity, but this is probably likely to be the biggest problem: although there are some good preconditions, promising structures and strong competitive potentials, Southampton, Trieste and Cherbourg appear not yet to have made a clear decision on their priorities for further development. Therefore specialist institutions, companies or other potentials (for example, research capacities in the case of Southampton or maritime technological capacities in the case of Trieste) have a high international reputation, but, outside the city, they fail to be identified with the city itself. Major initiatives are undertaken to improve physical structures including the image of the city (with different levels of success: port extension and waterfront regeneration in Southampton, city regeneration in Cherbourg, application for EXPO in Trieste; see “Chapter 3 - Port City Stories” above). But it would seem to be a particular advantage of this kind of “all-directions strategies”, that intensive efforts to address social inclusion problems, evident in all port cities, are also a feature of these cities rather than the other cities.

“Modernizing existing structures” is the pattern that describes the development of peripheral port cities, which in recent decades have had only limited opportunities to generate new potential in addition to the port(s), the port-related industries and some other traditional maritime or non-maritime potential. So, these elements of the economic and urban structure are still recognized as the backbone of developments, but are in need of a thorough renovation (port extension at Gijón, port extension and relocation at Patras, diversification and extension at Taranto). Despite extensive use of developments or other potential instruments for economic growth and EU-programmes, it is certainly likely to take some time before this historic, geographic, climatic potential can be transformed into a really significant contribution to the creation of new jobs in tourism or new services.

Conditions for success

Obviously the period of fundamental transformation still continues and the variation in developments and strategies being undertaken appears to be strongly related to the manner in which each city tries to regenerate the economic basis for development, to enforce a change of mentality and to find acceptable solutions for the serious social problems caused by industrial decline. These major challenges for all port cities refer back to the three components of the New EPOC Project, which have identified some good practice examples in the different areas (see above) and - although there are big differences depending on local conditions and traditional strengths as well as some typical conditions for success in the processes of change and diversification in all European port cities:

- The regeneration of the economic base benefits from a *new balance of competition and collaboration*. In this area almost all port cities are experimenting with new forms of cooperation: networking, cluster-management, public-private partnership, strategic alliances, international links, projects and partnerships. On a regional or sectoral level, institutional cooperation involving many relevant actors is bridging various kinds of special interests and seems to avoid the dominance of any particularism. Integrating those different interests into a flexible and strong network appears a promising way of organising collaboration between various public and private stakeholders and a fruitful method of concentrating resources and interests on common goals.

- *The change of attitudes, identity and image* is a major challenge in the process of transformation and another important precondition for success. Given the fact that a maritime character is no longer the natural and obvious basis for image and identity, the cities must find a way to reinvent themselves. Investigations undertaken in the port cites demonstrate that good governance, participation and the involvement of citizens in the sometimes painful, sometimes complicated decision-making processes are effective strategies for overcoming resistance and aversion among some groups and for modernisation. Appropriate instruments for monitoring and consultation help to improve communication between citizens and decision-makers. Profound change not only needs the transformation of physical structures but also the transformation of thinking. Culture and a sensible way of handling local or regional cultural heritage, which is mainly maritime, can therefore be another major instrument in this transformation process. In a majority of the cities involved, the necessity for these processes is understood and accepted, but only very few of them have already defined a clear direction for their transformation process.
- Large-scale problems with *social integration, the creation of new jobs and particularly the improvement of education and qualifications* are a legacy of industrial decline in recent decades – and, if these problems are not resolved, they will pose immense new risks for future development. The new knowledge-based economy will - far more than the former specialist maritime industries - demand well-educated, flexible “high potentials” and not very many port cities seem to be adequately prepared for this yet. While involving their citizens in a high quality education system and producing a well-educated workforce will be a challenge for all port cities, the majority of port cities also have the problem of high unemployment and need to create a considerable number of new jobs. While it is obvious that political and financial resources are limited on a local or regional level, nonetheless there are promising approaches to the problem in some of the cities analysed: Furthermore the experience of some of the partner cities shows very clearly that more cooperation and networking are needed in this area too. From workforce pooling to the creation of job-opportunities for disabled or long-term unemployed people to re-skilling to meet new skill requirements or techniques, the creation of new jobs can be supported by effective measures for labour market integration - and the efficiency of these instruments appears to be improved if they are developed and implemented in collaborative institutional arrangements which involve the relevant public and private actors.

Methodological Annex – The New EPOC Audit and Benchmarking System

1. Introduction

The NEW EPOC project seeks to identify key issues likely to affect the economic, social and environmental well-being of port cities over the foreseeable future. Globalisation, technological changes, increasing competition and new environmental legislation are just some of the challenges that currently face port cities. These pressures are having an impact on all ports regardless of size or location. From intense discussions between the project partners as well as from literature and current studies it became clear, that these challenges are deeply affecting the European port cities in the social, economic, cultural and political dimensions of their development. At least three major tasks are to be solved by the majority of port cities:

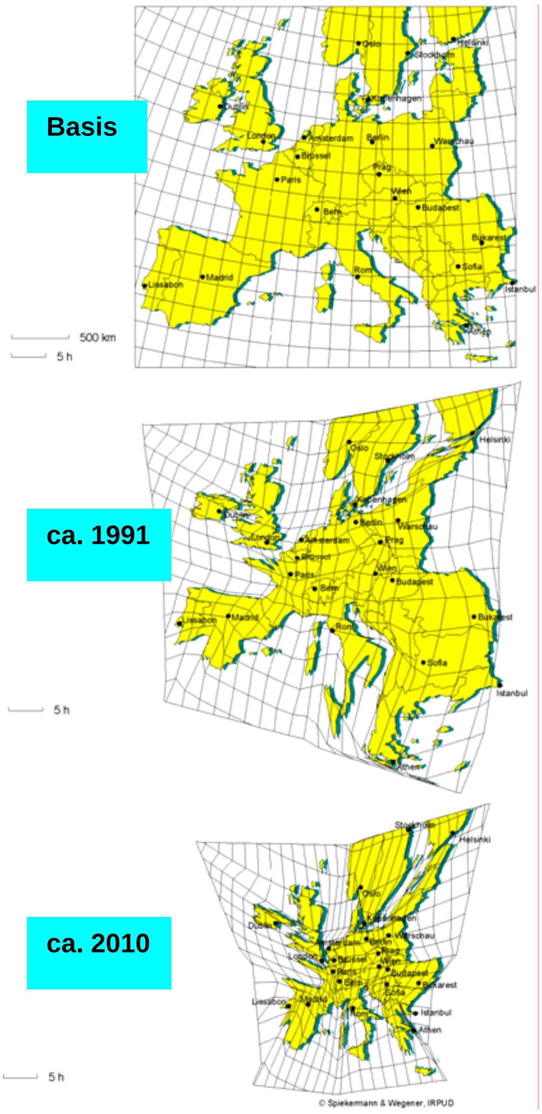
- Regeneration of the economic basis;
- Maintaining the institutional and financial capacity for political steering and regulation;
- Changing traditional mentalities and re-establishing an appropriate modern identity.

According to the similarity of problems faced, nearly all port cities are searching for successful answers and solutions in the same fields of action. The New EPOC partners agreed in their discussions that enhanced efforts are needed in five particular strategic fields of action (in detail the indicators serve to operationalise the five strategic action fields):

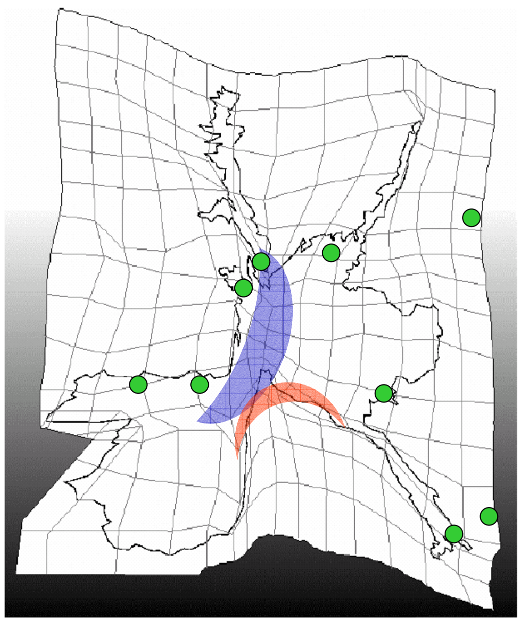
Development of the port: Regardless of all the technological, spatial and economic changes, the ports themselves will also retain an important role for the port cities in the future. But more or less closely linked to the old industrial structures, all port cities have to modernise their maritime sector through strategies of diversification, specialisation, tertiarisation etc. So, in this field two questions are to be adressed: How can the *traditional port sector* (port facilities, ship building, but also shipping companies, sea insurances etc.) survive in the face of growing global competition? Which new branches of a *modern maritime sector* (wind energy, off-shore techniques, blue bio-technologies, maritime tourism etc.) can be developed successfully?

None of the statistics available really gives an adequate indication of the performance of the ports and their economic and social relevance for the region and the people. Using very simple figures on the quantity of goods handled under these conditions has the advantage of being rather reliable and comparable and give a good impression of specialisations and differences between the ports.

International Relations: In the face of rapid development of information- and communication-technologies as well as changes in world-wide transport chains and the steadily increasing significance of information, *accessibility* and *internationality* become a major condition for economic success. Only locations with excellent physical and social, as well as virtual and communicative connections, are able to assume a good position in the new hierarchy of hubs between the streams of finances, persons, goods and information.



Multipolar anamorphosis



Multidimensional scaling (MDS) is the standard method used to create spaces from a distance (dissimilarity) matrix. In numeric terms, MDS techniques are iterative procedures converging towards a spatial configuration of objects minimizing an error funtion (usually called Stress).

The example in this page shows a twisted Europe as a result of the rail network. It was prepared by Colette Cauvin and Henry Reymond

The graphic shows that the areas of intense communication, short distances in terms of travel times and accessibility are concentrated in Western Europe and this is the reason, why in a Datar study[3] the Metropoles within the “blue banana” (London, Paris, Amsterdam, Milan, Madrid) are the most frequented destinations for persons and goods in Europe. Therefore the New EPOC benchmark for accessibility is compiled from the travel times by airplane, railroad and car from the New EPOC cities to these metropoles.

The number of international headquarters is an important indicator of the economic steering capacity located in a certain place and the number of international fairs and congresses reflects the attractiveness of locations in the national and international hierarchy of cities and as a meeting place for international business people.

In recent research works, networking and participation in international cooperation has been analysed as a success factor of growing importance[4]. This is the reason for including information about participation in international partnerships and networks, as well as involvement in European programmes and projects.

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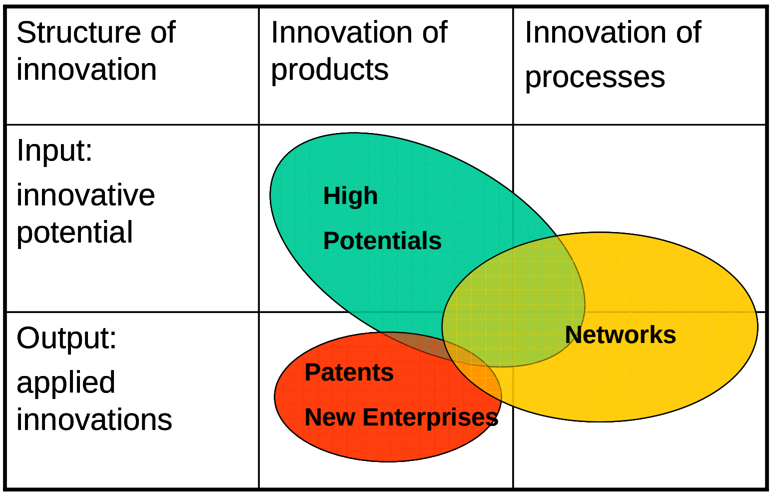
[3] Céline Rozenblat / Patrizia Cicille 2003: Les Villes Européennes. Analyse Comparative. Recherche réalisée à la demande de DATAR

[4] Roberta Capello 2000: The City Network Paradigm: Measuring Urban Network Externalities. In: Urban Studies, Vol. 37; No. 11, 1925-1945, 2000

Innovation: Old industrial structures need to be modernised and in part to be replaced by new products, new services and new processing techniques. This development seems to accelerate from year to year and therefore it must be one of the key elements of every regeneration strategy (1.) to build up strong *capacity for research and development* and (2.) to organise effective working methods for the speedy *transformation of inventions and research results into economic applications*. (Indicators: Number of high potentials, number of registered patents and number of newly established enterprises in relation to population).



Strategic Regeneration: Port cities like all other locations are competing not only for businesses and enterprises but also for welleducated and highly qualified manpower, for young persons as residents or for tourists. For the attraction of these groups it is necessary to develop services, education, culture and leisure. Urban development might support such initiatives by *providing appropriate areas* (e.g. regenerating redundant port areas) and other local policies could help to *create an attractive vibrant cultural life*. Indicators of the potential for planned development in the direction of a more tertiary economic and social structure are the size of available land for business and commercial purposes, the number of overnight stays and the amount of public investment in culture.

Social inclusion: Following recent research results[5] in addition to 'technologies' (innovation and economic performance) also 'talents' (well-educated, willing to learn and developable persons) and 'tolerance' (a supportive social and cultural climate for self-realisation and personal development) account for the difference between successful and less successful cities. To put the 'triple-t-strategy" into practice and to avoid social exclusion, port cities will need to find new sources of employment if they are to retain their economic vitality and the workforce will need a diversified skills base if it is to respond to the technological challenges ahead. Labour market and educational opportunities have to be improved considerably – particularly for migrants and other special target groups. Indicators for more or less successful integration strategies are the unemployment rate, the rate of low potentials and the local crime rate.

In these strategic fields the NEW EPOC project seeks

- to anticipate the impact of changes,
- to identify trends and new developments,

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[5] Richard Florida 2002: The Rise of the Creative Class And How It's Transforming Work, Leisure, Community and Everyday Life. New York;
Läpple, Dieter / Thiel, Joachim / Wixforth, Jürgen 2004: Chancen und Risiken in neuen Arbeitsfeldern der Informationsgesellschaft: Das Beispiel der Multimediabranche. - Abschlussbericht; Hamburg TUHH

- to learn from comparing strategies and experiences,
- to identify good solutions and practices and
- to give concrete recommendations for shaping a new understanding of the maritime character as a basis for the sustainable development of port cities.

For these reasons the New EPOC project combines a multitude of methods and instruments – from site-visits and expert workshops to questionnaires and analyses of statistical data. The final goal of these efforts will be to provide a comprehensive set of information on the various responses of European port cities to the challenges identified and a catalogue of concrete guidelines and recommendations: the New EPOC tool-box.

However – this kind of project always has to deal carefully with some typical traps and problems which might seriously interfere with the perception and the efficiency of the tool set:

- Comparing processes in different countries means more or less comparing the uncomparable, because - for example - the cities are of different sizes, have different traditions, are embedded in different legal systems or geographical and climatic situations;
- benchmarking often means simplifying complex constellations in a hardly admissible way;
- evaluation of strategies and developments are – particularly for those in a position of responsibility as decision-makers - sometimes perceived as a kind of censorship;
- and – in addition to such grave conceptual problems, there are a whole raft of practical difficulties to be overcome: lack of semantic clarity leads to misunderstanding of definitions and categories, essential statistics are either not available or not sufficiently up-to-date – among others.

Therefore, it must be clear that the aim of the project is not to allocate marks for politicians or for the performance of participating cities, but rather to provide incentives for learning and cooperation, to understand what kind of conditions are influencing the local situation and development and in which way political initiatives can be most efficient.

2. Methodological Explanations and Definitions

So, the New EPOC database provides nothing more nor less than a short overview of actual relative strength and weaknesses – always in comparison with other New EPOC partner cities, i.e. the reference for the assessment is always the best or maximum value possible within the range of the nine New EPOC partner cities. This method helps to avoid unrealistic benchmarks: for instance it makes no sense at all to compare the number of overnight stays or the cultural budget of a city of 200.000 inhabitants with those of a metropolis of 2 million. Even in the New EPOC-project city sizes range from about 120.000 to 540.000 and this fact – in addition to a lot of other important differences – makes any comparisons rather complicated. To simplify the understanding of the comparisons as much as possible, the original data and figures from various sources within the partner cities were standardised and all presented in the same shape as ‘radar charts’ (see below for detailed information about the applied methods of standardisation and calculations leading to the benchmarks).

To complete the picture and get a more realistic view on reasons, conditions, strategies, goals etc. statistical data have to be combined with and controlled by other sources and information. For this reason final results are the outcome of a cross-examination approach, in which extensive 'city profiles', expert workshops, documents and information materials, interviews and other sources were also worked up.

2.1 Indicators

Unfortunately the concept of the New EPOC project and the resulting needs for statistical information were not exactly compatible with any other existing studies or statistical data collections on a local (like the EU's URBAN AUDIT, the DATAR studies [2002] etc.) or a regional (EU Nuts III – statistics; EUROSTAT) level. It was therefore inevitable that many different sources for figures and information were used in all the partner cities (city administrations, port authorities, chambers of commerce, statistical departments etc.). The required statistics were not always available in every place. So it took a considerable amount of discussion and data collection to complete the list of 17 indicators (for definitions see following table) for each city. In its final state the New EPOC database now contains the most recent data available, i.e. all figures used cover a period between 2002 and 2004. Where serious international statistics were available, the data provided for the New EPOC cities or their regions were adopted (Eurostat NUTS III statistics on patent applications). Considering the difficulties of compiling statistics, the New EPOC database provides a reliable set of indicators and constitute a serious benchmarking system.

2.2 Benchmarks (Explanation of standardisation, ranking and radar charts)

The figures in the following indicators table reflect a wide variety of dimensions and quantities. In order to use expenses per capita, containers per year, rates of unemployment and many other different indicators in a homogenous system it is inevitable that all these measures are standardised. Standardisation is also a precondition for using these figures as a basis for rankings and benchmarking.

The first step in the New EPOC benchmarking system is to classify all available data for the partner cities in a range from 1 to 4, where 4 is always the highest and 1 the lowest class. Using this system each individual figure for every indicator and every city is transformed into a value between 1 and 4. Benchmarks for strategic fields are composed of three or four indicators and therefore we use the radar chart method to

1. transform a multitude of values into one single value;

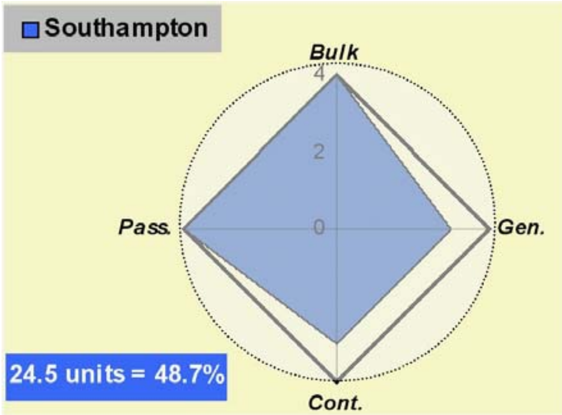
2. facilitate visualisation of the result of the operation;

3. retain information on each individual indicator.

Example: In the year 2004 28,23 Mio t of bulk cargo, 9,7 mio t of general cargo, 1,28 mio of standard container equivalents and 2,93 mio of passengers were handled in the port of Southampton. In relation to the other port cities in the New EPOC project, the quantity of bulk cargo and passengers qualified as 4, the amount of containers and general cargo as 3. These four values (2 x 4 units and 2 x 3 units) build the axes of a quadrangle which has an area of 24.5 units. The maximum size of this area could be 32 units (a quadrangle with 4 x 4 units as diagonals).

Ranking criteria for port development

	4	3	2	1
1.1	>25 Mio	25<15 Mio	15 Mio< 5 Mio;	5 Mio - 0
1.2	>20 Mio	20< 8 Mio	8 Mio< 500T;	500T - 0
1.3	> 3 Mio	3< 1 Mio	1 Mio< 300T;	< 300T
1.4	> 2 Mio	2< 1 Mio	1 Mio< 100T;	< 100T



To make the result of this operation comparable to other benchmarks which are compiled out of 3 or 4 different indicators, one more step is needed: If all rankings are made of values from 1 to 4, each of the special areas is a part of a circle with a radius of 4 units. So the reference is always a circle with the size of 50.265 units. In the case of Southampton the special area for port development is 24.5 units, which is 48.7% of the whole circle. In this example the best case could be 32 units (see above) which would cover 63.7% of the whole circle. So 63.7 is the highest value possible and the reference for all port cities in this category.

3. The NEW EPOC Indicator Table

No.	Indicator	South-ampton	Bremen	Cher-bourg	Taranto	Trieste	Patras	Gijon	Bilbao	Kalinin-grad
1 Development of the port										
1.1	Bulk cargo[1]	28,23	9,90	0,35	23,75	35,80	0,98	19,50	23,61	10,14
1.2	General cargo[2]	9,7	38,99	3,98	13,76	7,50	2,90	0,50	8,89	3,86
1.3	Containers[3]	1,28	3,19	0,004	0,47	0,17	0,305	0,01	0,47	0,072
1.4	Passengers[4]	2,93	0,06	1,44	0,001	0,31	1,26	0,01	0,15	0,086
1.5	Employees[5]	10.000	12.341	2.331	4.500	13.750	n.a.	2.400	9.267	n.a.
2 "Internationality"										
2.1	Accessibility[6]	16,7	17,3	16,0	6,2	9,6	2,6	8,6	12,4	4,3
2.2	International Headquarters[7]	5	5	0	3	14	0	3	n. a.	4
2.3	International fairs and congresses[8]	3	5	2	3	23	9	6	n.a.	9
3 Innovation										
3.1	High potentials[9]	23,7	18,14	20,0	21,7	6,0	10,3	19,92	n. a.	n.a.
3.2	Patents[10]	54,69	65,13	11,18	4,82	17,98	3,01	15,75	22,69	n.a.
3.3	New founded en-terprises [11]	2,40	2,25	3,45	4,11	6,10	8,08	1,73	12,29	2,8
4 Strategic Regeneration										
4.1	Availability of land for commercial purposes[12]	101	176	40	200	22	n.a.	170	169	n.a.
4.2	Overnight stays (in Mio)[13]	1,9	1,04	0,29	0,065	0,39	0,25	0,58	0,97	n.a.
4.3	Public investment in culture (€ per inhabitant)[14]	118	119	114	10	131	n.a.	48	77	n.a.
5 Social inclusion										
5.1	Unemployment rate[15]	2,3	13,3	10,3	23,6	5,1	16,1	15,2	8,7	3,0
5.2	Low potentials[16]	33,9	8,8	20,0	3,0	27,0	9,3	13,8	n.a.	n.a.
5.3	Crime rate[17]	165,3	144,0	55,4	111,2	44,32	n.a.	25,8	n.a.	23,8

INDICATOR DEFINITIONS AND SOURCES

No.	**Indicator definitions** (For all cities data for the years 2003 or 2004 was requested; where no data was available for these years, the most recent available data was used)
1	Bulk cargo in Mio tons of dry and liquid bulk
2	General cargo in Mio tons, containerised and non containerised, gross weight
3	Containers in TEU, twenty ft. equivalent unit
4	Number of passengers in Mio.
5	Employment directly and indirectly related to the port; estimated number of employed persons in fishery, fish farming and fish processing; ship and boat building; sea and coastal shipping; inland water transportation; cargo handling and storage, other suppliers and business activities related to the port
6	Accessibility by traffic infrastructure measured by travel duration (one way, reachability within 24 hours) to 5 European agglomeration centres (Paris, London, Madrid, Amsterdam, Milan) in hours by air, railway and car. The values in the indicator table are condensed results of a ranking system (see separate explanation for the methodology).
7	International headquarter means the location where most, if not all, of the important functions (administrative center) of a bigger organization with several affiliates in different countries are concentrated (not included are regional centres of companies).
8	Number of international fairs and congresses (bigger events with a significant number of international exhibitors and visitors)
9	Population with a tertiary education and with some form of post-secondary education in % of 25 - 64 years age class
10	Number of patent applications to the EPO by 2002 at the regional level (Nuts 3) by IPC, regional statistics EUROSTAT
11	Newly founded companies per year and per 1000 inhabitants in the city (new registered company in the trade register)
12	Availability of free land (in ha) for dedicated business sectors - developed and marketable
13	Number of overnight stays for business and private (in Mio).
14	Investment in cultural goods (share of city budget per capita; staff costs, investments, consumptive expenditures)
15	Unemployment rate in %
16	Share of persons with a low level of education in % of 25 - 64 years age class (no formal degree or educational degree below the lowest formal qualification in the national school system)
17	Total recorded crimes per 1000 population per year

Sources (Indicators were collected from several different sources for each city; data research was at the responsibility of each project partner)
Southampton: Southampton City Council, www.southampton.gov.uk, Euromaritime, Great Britain
Bremen: Institut für Arbeit und Wirtschaft, Universität Bremen, www.iaw.uni-bremen.de, Germany
Cherbourg: Cherbourg Comité de Bassin d'Emploi – Maison de l'Emploi et de la Formation (MEF), www.mef-cherbourg.com, France
Taranto: Comune di Taranto – Assessorato alle Politiche Comunitarie, Consultant SCUE, www.scue.it, Italy
Trieste: Comune di Trieste, Vice Direzione Generale - Ufficio Affari Europei, Internazionali e della Cooperazione, www.comune.trieste.it, Italy
Patras: University of Patras, Department of Mechanical Engineering and Aeronautics, Greece
Gijon: Autoridad Portuaria de Gijon, www.puertogijon.es, Ayuntamiento de Gijon, www-ayto.gijon.es, Spain
Bilbao: Bilbao Metropoli 30, www.bm30.es, Spain
Kaliningrad: Kaliningrad City Hall, Foreign Relations Department, http://www.klgd.ru/en/, Russia

4. Strategic Fields of Regeneration

4.1 Development of the Port

		South-ampton	Bremen	Cher-bourg	Taranto	Trieste	Patras	Gijon	Bilbao	Kalinin-grad
1.1	Bulk cargo (mio t)	28,23	9,90	0,35	23,75	35,80	0,98	19,50	23,61	10,14
	Ranking	4	2	1	3	4	1	3	3	2
1.2	General cargo (mio t)	9,7	38,99	3,98	13,76	7,50	2,90	0,50	8,89	3,86
	Ranking	3	4	2	3	2	2	1	3	2
1.3	Containers (mio teu)	1,28	3,19	0,004	0,47	0,17	0,305	0,01	0,47	0,072
	Ranking	3	4	1	2	1	2	1	2	1
1.4	Passengers (mio)	2,93	0,06	1,44	0,001	0,31	1,26	0,01	0,145	0,086
	Ranking	4	1	3	1	2	3	1	2	1
Benchmark (max. = 63,7)		**48,7**	**29,8**	**9,9**	**21,9**	**19,9**	**14,9**	**8,0**	**24,9**	**9,0**

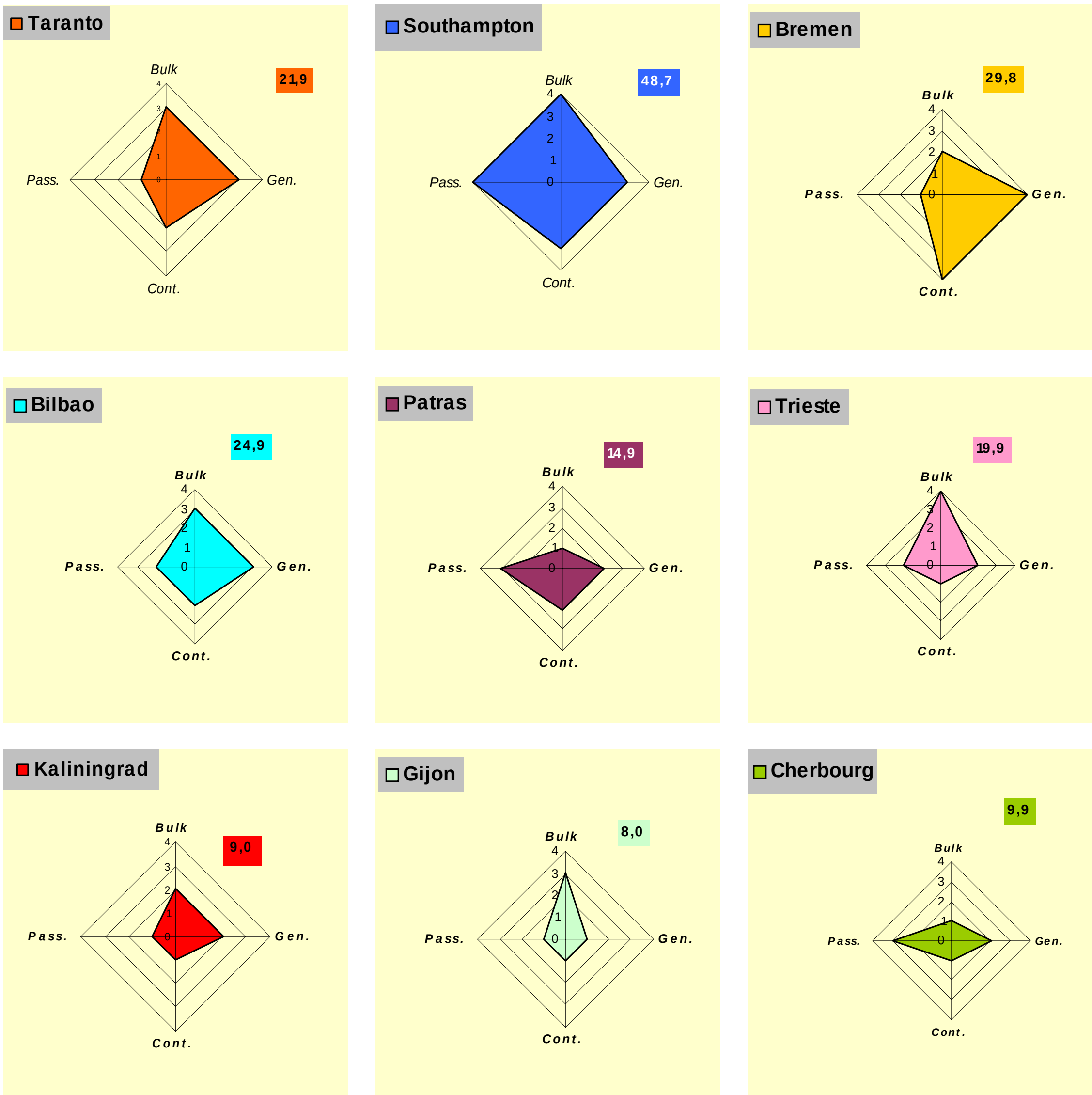
Ranking criteria

	4	3	2	1
1.1	>25 Mio	25<15 Mio	15 Mio< 5 Mio;	5 Mio - 0
1.2	>20 Mio	20< 8 Mio	8 Mio< 500T;	500T - 0
1.3	> 3 Mio	3< 1 Mio	1 Mio< 300T;	< 300T
1.4	> 2 Mio	2< 1 Mio	1 Mio< 100T;	< 100T

Benchmarks

	F (1-4)	Percentage share of the total
Bremen	15,0	29,8
Southampton	24,5	48,7
Cherbourg	5,0	9,9
Taranto	11,0	21,9
Trieste	10,0	19,9
Patras	7,5	14,9
Gijon	4,0	8,0
Bilbao	12,5	24,9
Kaliningrad	4,5	9,0
max.	**32**	**63,7**

(Pi x r^2 = 3,1416 x 16 = 50,265)

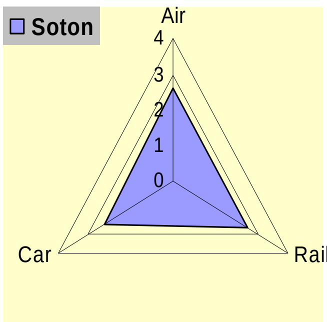

Taranto
21,9
Bulk
Gen.
Cont.
Pass.
Southampton
48,7
Bulk
Gen.
Cont.
Pass.
Bremen
29,8
Bulk
Gen.
Cont.
Pass.
Bilbao
24,9
Bulk
Gen.
Cont.
Pass.
Patras
14,9
Bulk
Gen.
Cont.
Pass.
Trieste
19,9
Bulk
Gen.
Cont.
Pass.
Kaliningrad
9,0
Bulk
Gen.
Cont.
Pass.
Gijon
8,0
Bulk
Gen.
Cont.
Pass.
Cherbourg
9,9
Bulk
Gen.
Cont.
Pass.

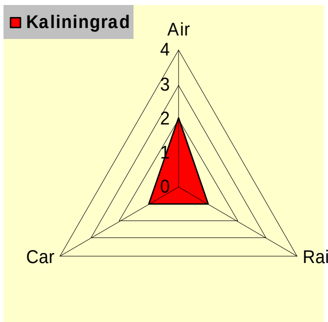
4.2 International Relations

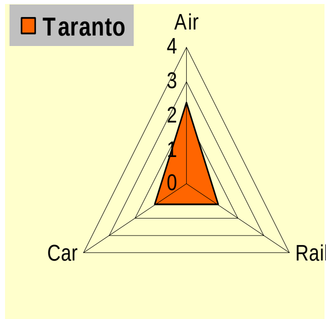
Step 1 : Accessibility

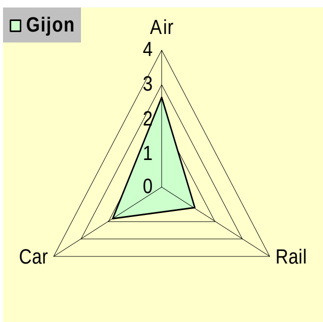
	Air	**Rail**	**Car**	**Size of triangle**	**Share of circle (%)**
Southampton	2,6	2,6	2,4	8,4	**16,7**
Bremen	3,2	2,2	2,4	8,7	**17,3**
Cherbourg	1,6	3,4	2,6	8,0	**16,0**
Taranto	2,4	1,2	1,2	3,1	**6,2**
Trieste	2,4	1,6	1,8	4,8	**9,6**
Patras	1	1	1	1,3	**2,6**
Gijon	2,6	1,2	1,8	4,3	**8,6**
Bilbao	3,4	1,4	2	6,2	**12,4**
Kaliningrad	2	1	1	2,2	**4,3**

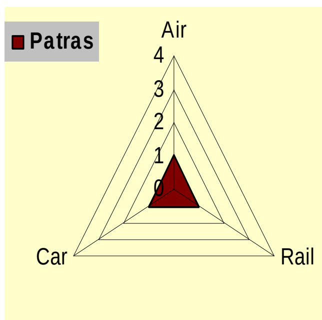
Measured were the travel times by plane, railroad and car to the five most frequented european metropoles (Amsterdam, London, Madrid, Paris, Milan):

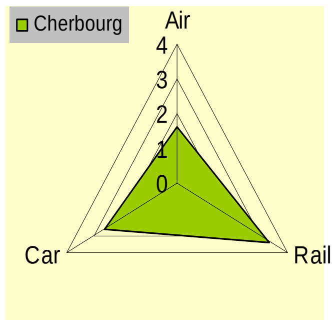


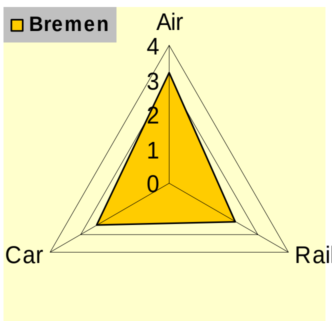


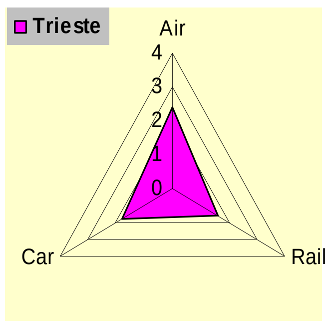


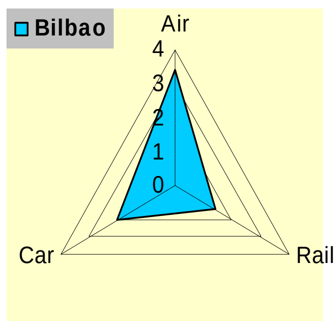












Step 2 : International Relations

		South-ampton	Bremen	Cher-bourg	Taranto	Trieste	Patras	Gijon	Bilbao	Kalinin-grad
2.1	**Accessibility**	16,7	17,3	16,0	6,2	9,6	2,6	8,6	12,4	4,3
	Ranking	3	4	3	2	2	1	2	3	1
2.2	**International headquarters**	5	5	0	3	14	0	3	n.a.	4
	Ranking	3	3	1	2	4	1	2	-	2
2.3	**Int. fairs and congresses**	3	5	2	3	23	9	10	n.a.	9
	Ranking	1	2	1	1	4	2	3	-	3
Benchmark (max. = 41,38)		**12,98**	**22,50**	**6,06**	**4,33**	**27,69**	**4,33**	**13,85**	**-**	**9,52**

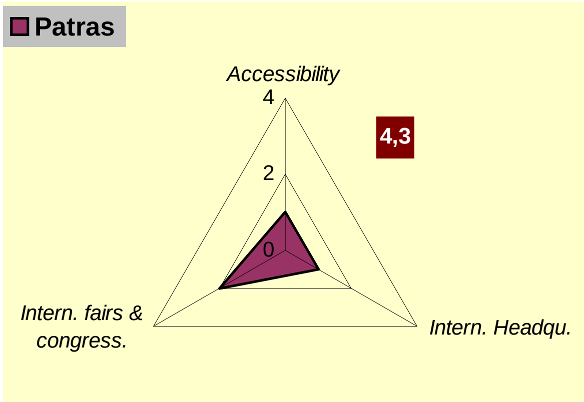
Ranking criteria

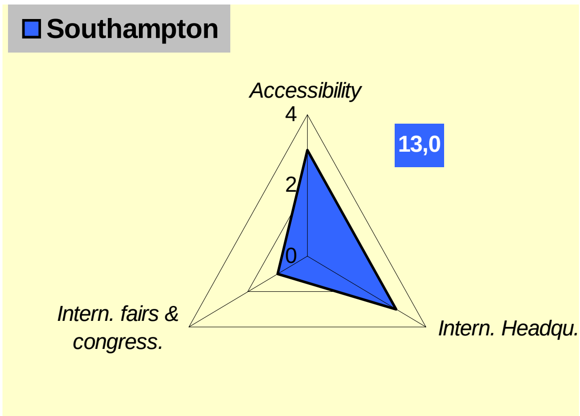
	4	**3**	**2**	**1**
2.1	>17	17 - 10	<10 - 5	<5
2.2	>10	10 - 5	4 - 1	0
2.3	>15	15 - 10	9 - 5	<5

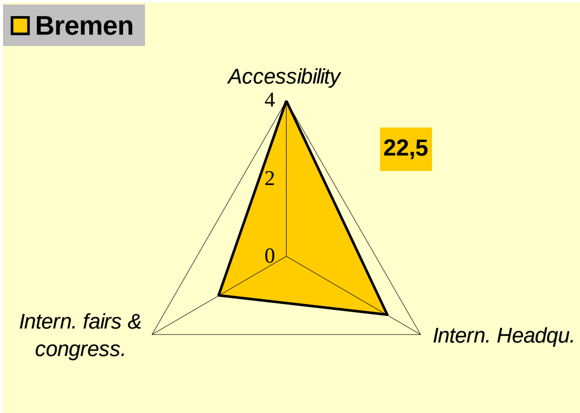
Benchmarks

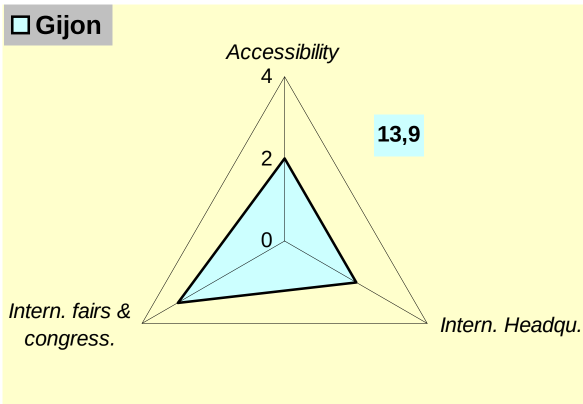
	F (1-3)	Percentage share of the total
Southampton	6,53	12,98
Bremen	11,31	22,50
Cherbourg	3,05	6,06
Taranto	2,18	4,33
Trieste	13,92	27,69
Patras	2,18	4,33
Gijon	6,96	13,85
Bilbao	-	-
Kaliningrad	4,79	9,52
max.	**20,8**	**41,4**

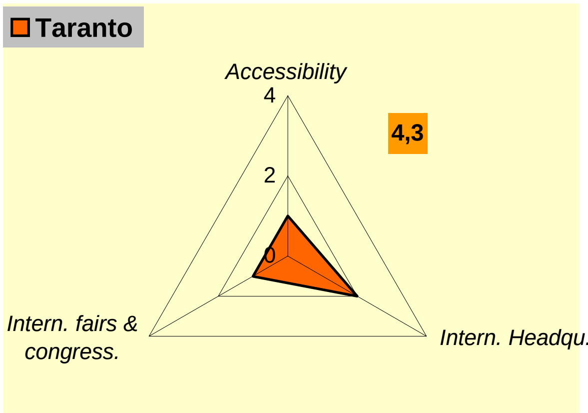
(Pi x r² = 3,1416 x 16 = 50,265)

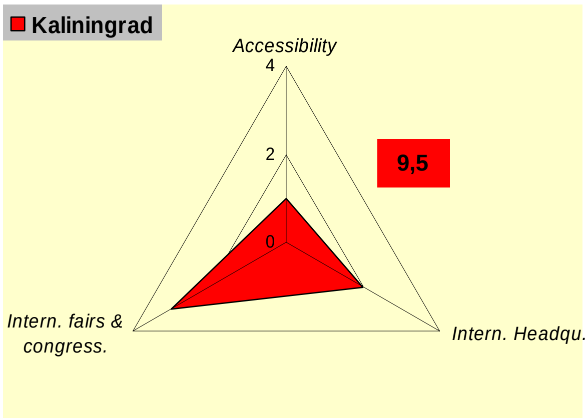

Patras
Accessibility
4
2
0
4,3
Intern. fairs & congress.
Intern. Headqu.

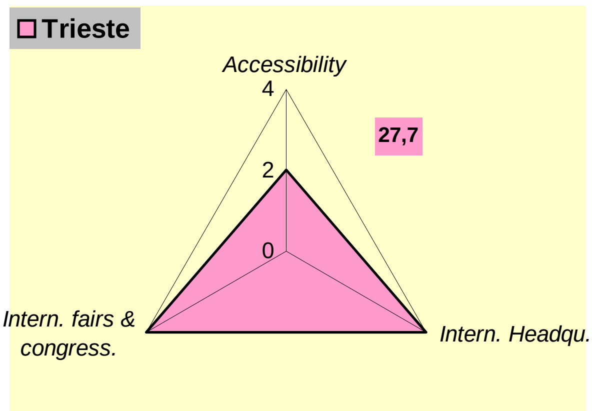

Southampton
Accessibility
4
2
0
13,0
Intern. fairs & congress.
Intern. Headqu.

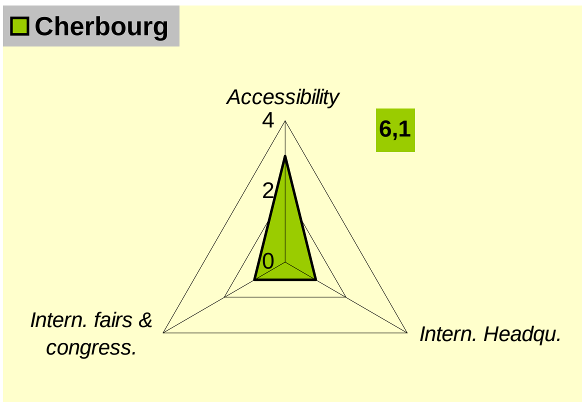

Bremen
Accessibility
4
2
0
22,5
Intern. fairs & congress.
Intern. Headqu.


Gijon
Accessibility
4
2
0
13,9
Intern. fairs & congress.
Intern. Headqu.


Taranto
Accessibility
4
2
0
4,3
Intern. fairs & congress.
Intern. Headqu.


Kaliningrad
Accessibility
4
2
0
9,5
Intern. fairs & congress.
Intern. Headqu.


Trieste
Accessibility
4
2
0
27,7
Intern. fairs & congress.
Intern. Headqu.


Cherbourg
Accessibility
4
2
0
6,1
Intern. fairs & congress.
Intern. Headqu.

4.3 Innovation

		South-ampton	Bre-men	Cher-bourg	Tar-anto	Trieste	Patras	Gijon	Bilbao	Kalinin-grad
3.1	**High potentials (in %)**	23,70	18,14	20	21,7	6	10,3	19,92	n.a.	n.a.
	Ranking	4	3	3	4	1	2	3	-	-
3.2	**Patents**	54,69	65,13	11,18	4,82	17,98	3,01	15,75	22,69	n.a.
	Ranking	4	4	2	1	2	1	2	3	-
3.3	**New founded enterprises** (per 1000 inhabi-tants)	2,40	2,25	3,45	4,11	6,10	8,08	1,73	12,29	2,8
	Ranking	1	1	2	2	3	3	1	4	1
Benchmark (max. = 41,38)		**20,69**	**16,51**	**13,93**	**12,14**	**9,55**	**9,55**	**9,55**	**-**	**-**

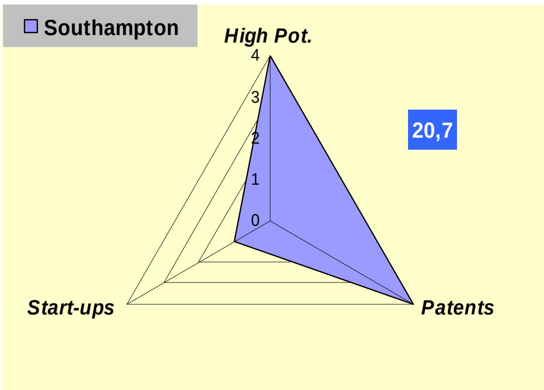
Ranking criteria

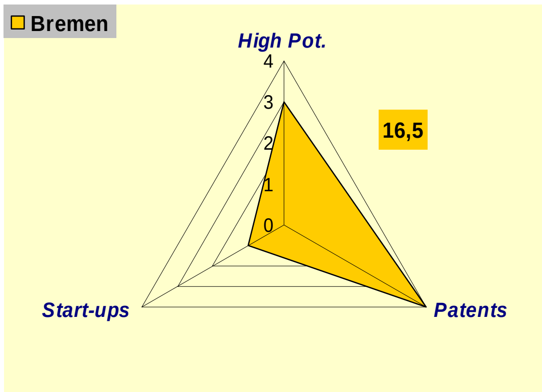
	4	3	2	1
3.1	>20%	20 - >15%	15 - >10%	</=10%
3.2	>40	40 - >20	20 - >10	</=10
3.3	> 10	10 - >6	6 - >3	</=3

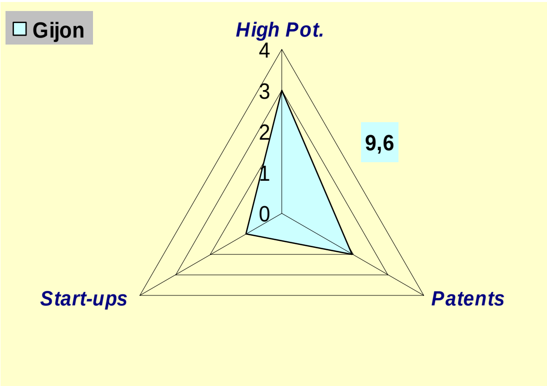
Benchmarks

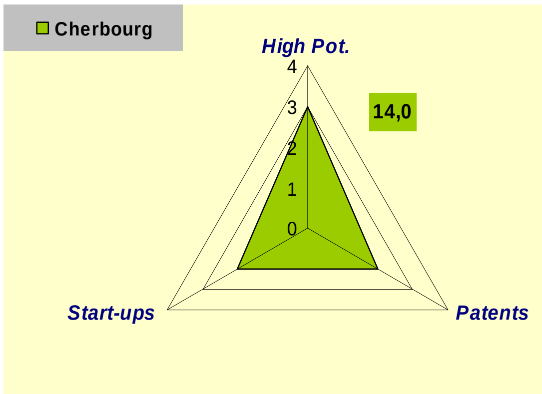
	F (1-3)	Percentage share of the total
Southampton	10,4	20,69
Bremen	8,3	16,51
Cherbourg	7,0	13,93
Taranto	6,1	12,14
Trieste	4,8	9,55
Patras	4,8	9,55
Gijon	4,8	9,55
Bilbao	-	-
Kaliningrad	-	-
max.	**20,8**	**41,4**

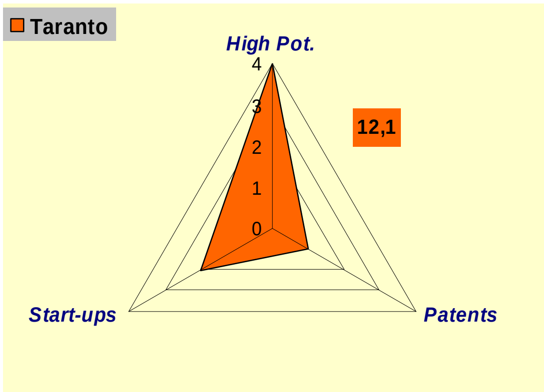
(Pi x r^2 = 3,1416 x 16 = 50,265)

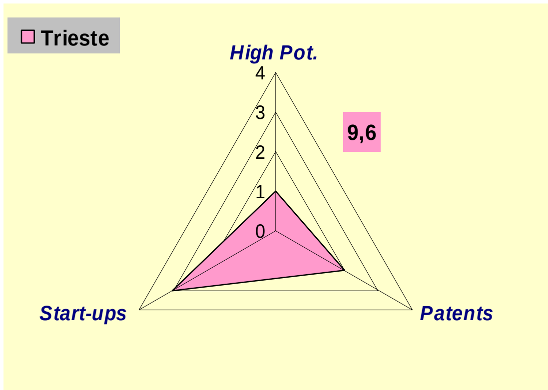

Southampton
High Pot.
4
3
2
1
0
20,7
Start-ups
Patents

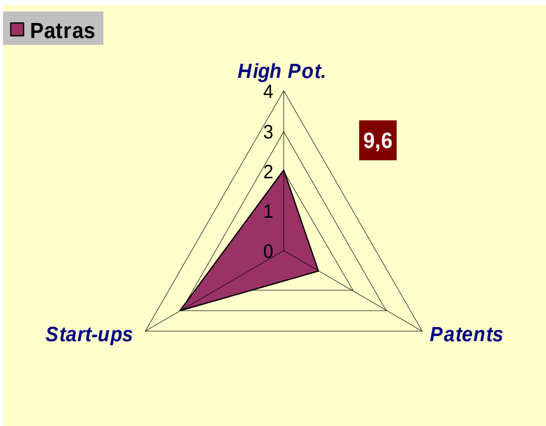

Bremen
High Pot.
4
3
2
1
0
16,5
Start-ups
Patents


Gijon
High Pot.
4
3
2
1
0
9,6
Start-ups
Patents


Cherbourg
High Pot.
4
3
2
1
0
14,0
Start-ups
Patents


Taranto
High Pot.
4
3
2
1
0
12,1
Start-ups
Patents


Trieste
High Pot.
4
3
2
1
0
9,6
Start-ups
Patents


Patras
High Pot.
4
3
2
1
0
9,6
Start-ups
Patents

4.4 Strategic Regeneration

		South-ampton	Bremen	Cher-bourg	Taranto	Trieste	Patras	Gijon	Bilbao	Kalinin-grad
4.1	**availability of land for commercial purposes (in ha)**	101,2	176,1	40,0	200,0	21,8	n.a.	170,0	169,0	n.a.
	Ranking	3	4	1	4	1	-	4	4	-
4.2	**overnight stays** (in mio)	2,00	1,04	0,29	0,065	0,39	0,25	0,58	0,8	n.a.
	Ranking	4	3	2	1	2	2	3	3	-
4.3	**public investment in culture** (€ per capita)	118	119	114	10	131	n.a.	48	77	n.a.
	Ranking	3	3	3	1	4	-	2	2	-
Benchmark (max. = 41,38)		**28,6**	**28,6**	**9,5**	**7,8**	**12,1**	**-**	**22,5**	**28,6**	**-**

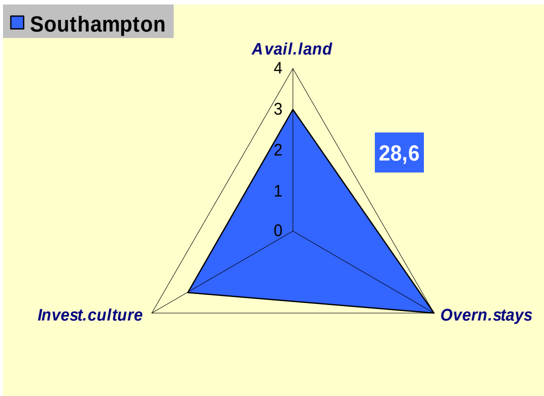
Ranking criteria

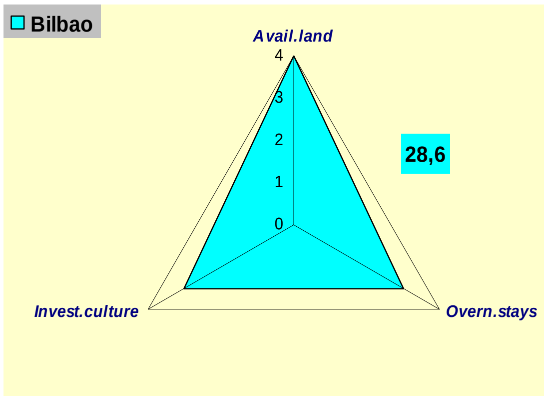
	4	**3**	**2**	**1**
4.1	>150 ha	<150 - 100 ha	<100 - 50 ha	<50 ha
4.2	>1,5 Mio	1,5 Mio - 500.000	<500.000 - 100 000	<100.000
4.3	>130	130 -100	<100 - 40	<40

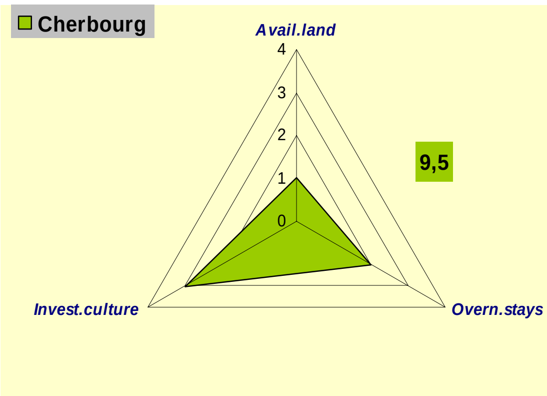
Benchmarks

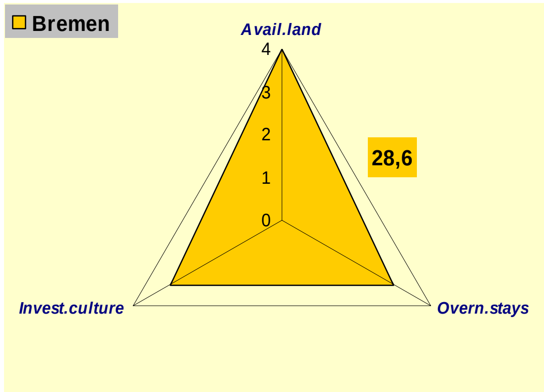
	F (1-3)	Percentage share of the total
Southampton	14,355	28,6
Bremen	14,355	28,6
Cherbourg	4,785	9,5
Taranto	3,915	7,8
Trieste	6,09	12,1
Patras	-	-
Gijon	11,31	22,5
Bilbao	14,355	28,6
Kaliningrad	-	-
max.	**20,8**	**41,4**

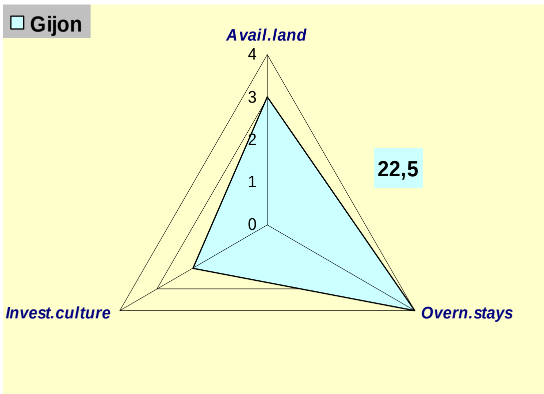
(Pi x r² = 3,1416 x 16 = 50,265)

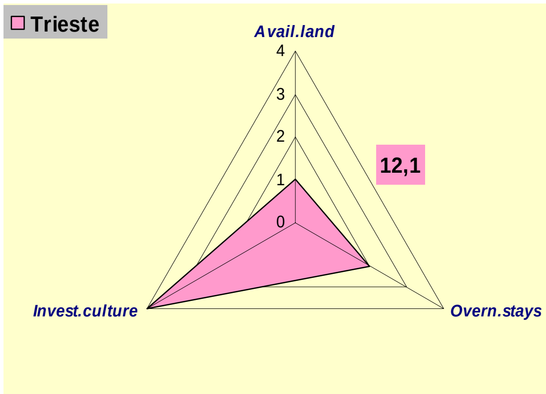

Southampton
Avail.land
4
3
2
1
0
28,6
Invest.culture
Overn.stays

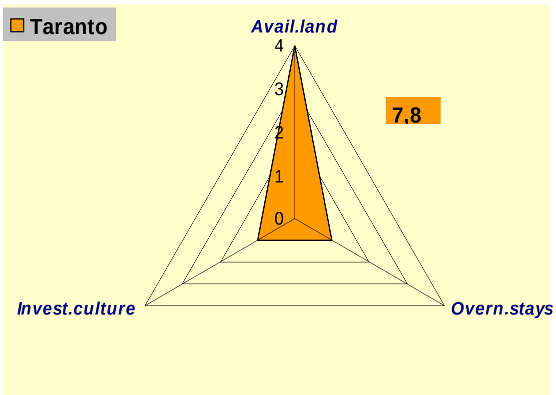

Bilbao
Avail.land
4
3
2
1
0
28,6
Invest.culture
Overn.stays


Cherbourg
Avail.land
4
3
2
1
0
9,5
Invest.culture
Overn.stays


Bremen
Avail.land
4
3
2
1
0
28,6
Invest.culture
Overn.stays


Gijon
Avail.land
4
3
2
1
0
22,5
Invest.culture
Overn.stays


Trieste
Avail.land
4
3
2
1
0
12,1
Invest.culture
Overn.stays


Taranto
Avail.land
4
3
2
1
0
7,8
Invest.culture
Overn.stays

4.5 Social Inclusion

		South-ampton	Bremen	Cher-bourg	Taranto	Trieste	Patras	Gijon	Bilbao	Kalinin-grad
5.1	**Unemployment rate (in %)**	2,3	13,3	10,3	23,6	5,1	16,1	15,2	8,7	3.0
	Ranking	4	2	2	1	3	1	1	3	4
5.2	**Low potentials (in %)**	33,9	8,8	20	3,0	27,0	9,3	13,8	n.a.	n.a.
	Ranking	1	3	2	4	1	3	2	-	-
5.3	**Crime rate**	165,3	144,0	55,4	111,2	44,3	n.a.	25,8	n.a.	23,8
	Ranking	1	1	3	2	3	1	4	-	4
Benchmark (max. = 41,38)		**7,8**	**9,5**	**13,8**	**12,1**	**13,0**		**12,1**	**-**	**-**

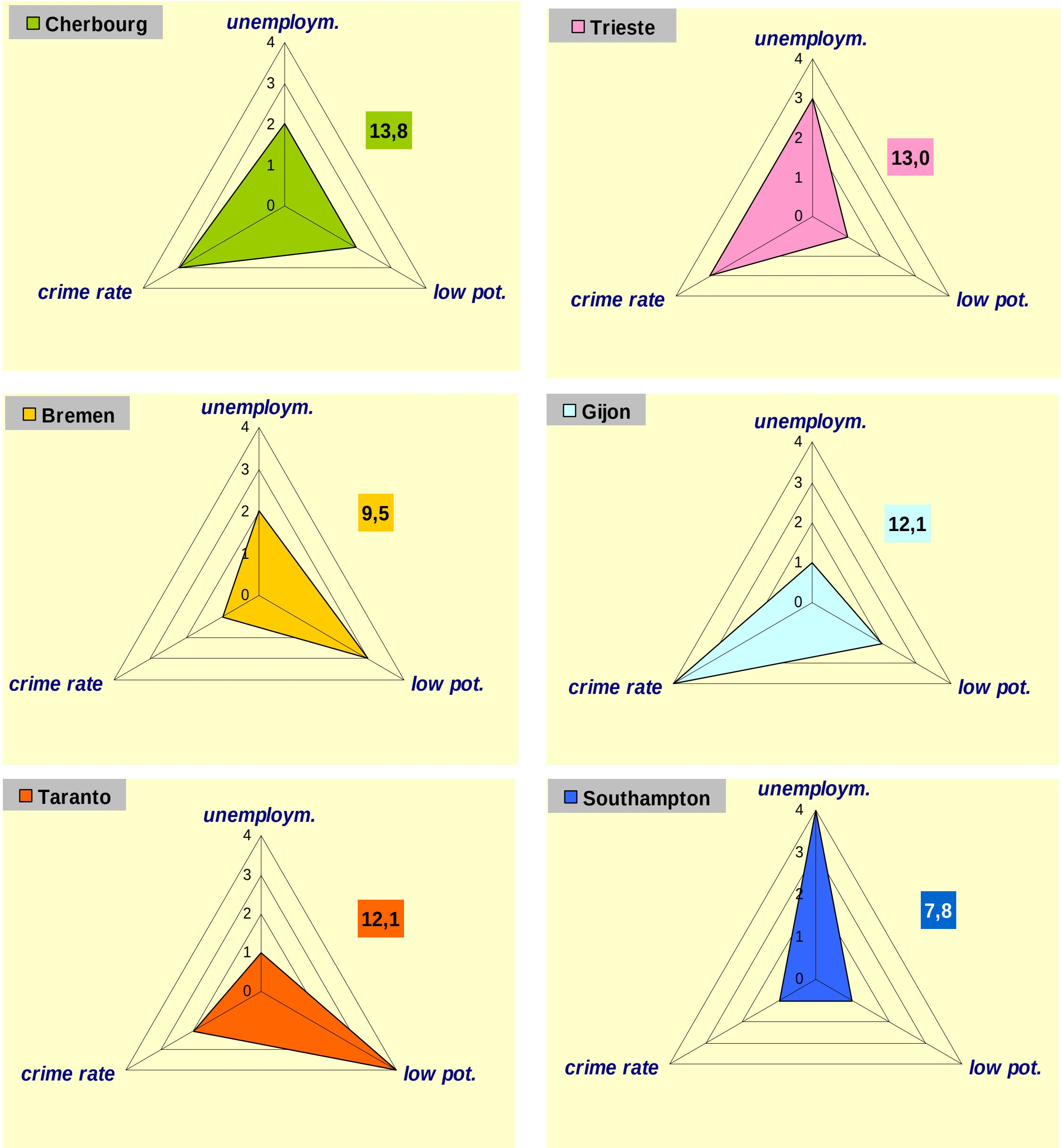
Ranking criteria

	4	**3**	**2**	**1**
5.1	<5%	5 - <10%	10 - 15%	>15%
5.2	<5%	5 - <10%	10 - 20%	>20%
5.3	<40	40 - <100	100 - 140	>140

Benchmarks

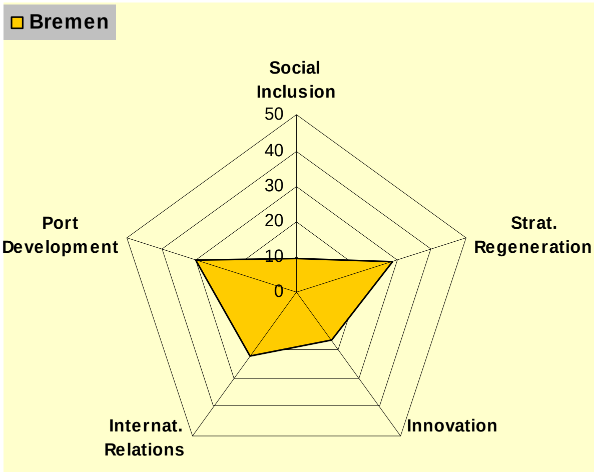
	F (1-3)	Percentage share of the total
Southampton	3,915	7,8
Bremen	4,785	9,5
Cherbourg	6,96	13,8
Taranto	6,09	12,1
Trieste	6,525	13,0
Patras	-	-
Gijon	6,09	12,1
Bilbao	-	-
Kaliningrad	-	-
max.	**20,8**	**41,4**

(Pi x r² = 3,1416 x 16 = 50,265)


Cherbourg
unemploym.
crime rate
low pot.
13,8
Trieste
unemploym.
crime rate
low pot.
13,0
Bremen
unemploym.
crime rate
low pot.
9,5
Gijon
unemploym.
crime rate
low pot.
12,1
Taranto
unemploym.
crime rate
low pot.
12,1
Southampton
unemploym.
crime rate
low pot.
7,8

5. Benchmarks

	Social Inclusion	Strat. Regeneration	Innovation	Internat. Relations	Port Development	Inhabitants
Bremen	9,5	28,6	16,5	22,5	29,8	**544.900**
Kaliningrad	-	-	-	9,5	9,0	**435.000**
Bilbao	-	28,6	-	-	24,9	**310.500**
Gijon	12,1	22,5	9,6	13,9	8,0	**276.000**
Southampton	7,8	28,6	20,7	13,0	48,7	**219.200**
Trieste	13,0	12,1	9,6	27,7	19,9	**211.500**
Taranto	12,1	7,8	12,1	4,3	21,9	**202.000**
Patras	-	-	9,6	4,3	14,9	**185.700**
Cherbourg	13,8	9,5	13,9	6,1	9,9	**113.100**
max.	**41,4**	**41,4**	**41,4**	**41,4**	**63,7**	
2/3 of max	27,6	27,6	27,6	27,6	42,5	5 out of 37 higher than 2/3 of max
1/2 of max	20,7	20,7	20,7	20,7	31,9	8 out of 37 higher than 1/2 of max
Ø	**11,4**	**19,7**	**13,1**	**12,7**	**20,8**	19 out of 37 higher than Ø


Bremen
Social Inclusion
50
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20
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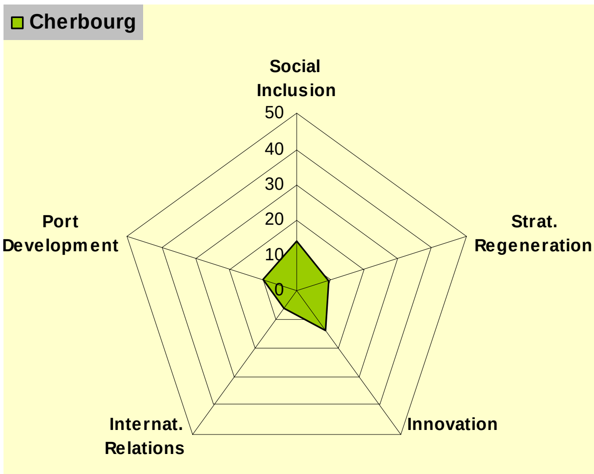
Strat. Regeneration
Innovation
Internat. Relations
Port Development


Cherbourg
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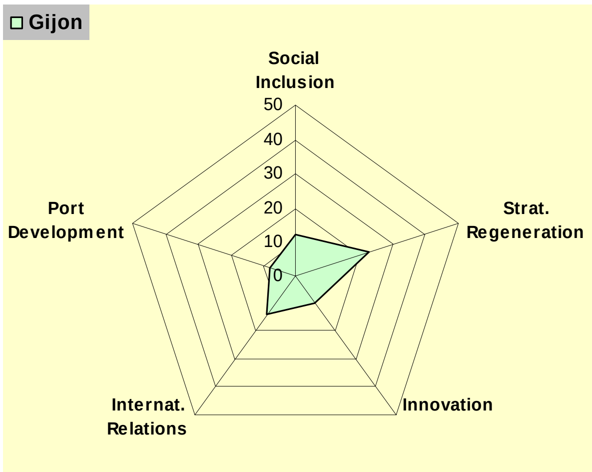
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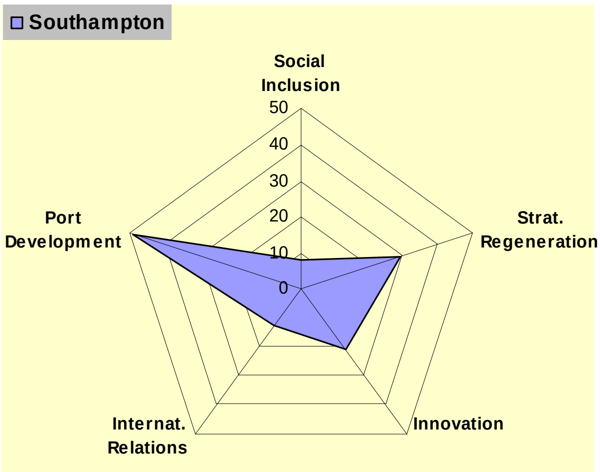
Southampton
Social Inclusion
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Strat. Regeneration
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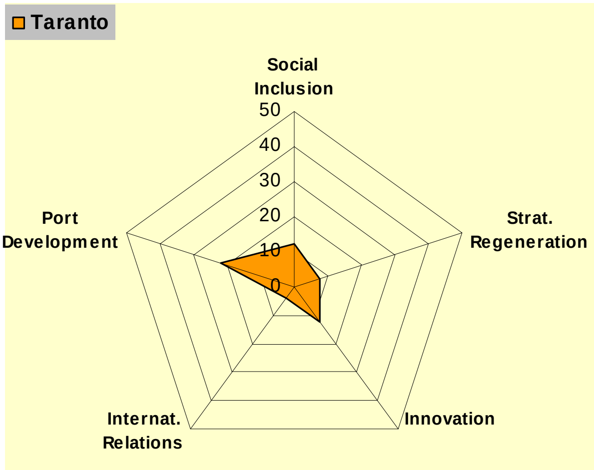
Port Development


Taranto
Social Inclusion
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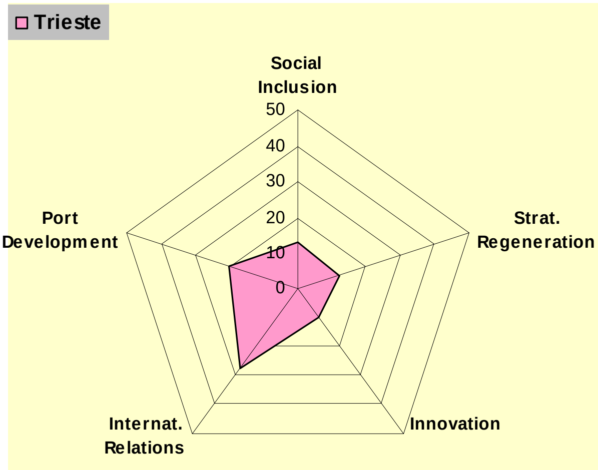
Trieste
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Port Development

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