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**Supporting the Contribution of Higher Education Institutions to  
Regional Development**

**Peer Review Report**

***The Øresund Science Region: A cross-border  
partnership between Denmark and Sweden***

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The views expressed are those of the authors and not necessarily those of the OECD or its  
Member Countries.

*This report is based on the review visit to the Øresund Science Region in December 2005, the regional Self-Evaluation Report as well as other background material. As a result, the report is based on the situation up to that period. The preparation and completion of this report would not have been possible without the support of very many people and organisations. OECD/IMHE and the Peer Review Team for Øresund wish to acknowledge the substantial contribution of the region, particularly through its Coordinator, the authors of the Self-Evaluation Report, and its Regional Steering Committee.*

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## PREFACE

This report has been written with two main readerships in mind. The first is the higher education institutions and the representatives of the public, private and community sectors who are working together to enhance the development of the cross-border Øresund Science region through various networks and platforms, and particularly through the Øresund University. We hope that the report will help them in this partnership building process for the benefit of the development of the region.

Second, the report will be of considerable interest and benefit to other regions, higher education institutions and national governments that were not part of the project, where there is the opportunity for building cross-border regional collaborations.

We have attempted to present this Peer Review Report in a way that is useful to all stakeholders with a minimum of assumptions about local knowledge. We refer to and have drawn upon the region's Self-Evaluation Report (SER) which is available, along with this report, on the OECD website for the programme *Supporting the Contribution of HEIs to Regional Development*.<sup>1</sup> We have departed from the initial draft OECD reporting template only insofar as the particular characteristics of the region seemed to require this, but not so far as to make inter-regional comparison with other participating regions in the Programme problematic.

We were grateful for the generous hospitality given to the Peer Review Team (PRT) during its week long stay in the Øresund region and for the assistance of Mr Bengt Streijffert, the regional coordinator, as well as the Project Secretariat from the Øresund University. The PRT was also impressed by the sense of moving forward in a spirit of cooperation that characterised those with whom we met in the region in an intensive review week in December 2005. We believe there is a considerable future for the Øresund Science Region as a place that demonstrates how global competitiveness and better societal and environmental outcomes can be achieved through cross-border regional collaboration between nations. We also believe that the leadership work undertaken by the Øresund University in facilitating the cross-border science region provides a unique good practice demonstration to many other regions and their higher education institutions throughout the world.

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1. See [www.oecd.org/edu/higher/regionaldevelopment](http://www.oecd.org/edu/higher/regionaldevelopment) as well as the country pages of the OECD web site.

## EXECUTIVE SUMMARY

### ***Background: OECD/IMHE review***

This review of the Øresund Region is part of the OECD/IMHE programme entitled *Supporting the Contribution of Higher Education Institutions to Regional Development*. The programme includes 14 regions and their higher education institutions from 12 countries. The IMHE thematic review project was launched as a response to a multiplicity of initiatives across OECD countries to mobilise higher education in support of regional development. The aim was to synthesise this experience into a coherent body of policy and practice to guide higher education institutions, and regional and national governments. At the same time, the IMHE project was designed to assist with capacity building in each country/region through providing an opportunity for dialogue between HEIs and regional stakeholders and clarifying the respective roles and responsibilities.

### ***Review process***

This review drew on a self-evaluation process initiated and led by the Øresund University, a voluntary organisation of 14 higher education institutions.<sup>2</sup> The OECD review visit took place in December 2005. The Peer Review Team (PRT), under the leadership of Professor Steve Garlick (Australia), had around 25 meetings with more than 30 organisations.

### ***The Øresund Region and the Øresund University***

Øresund is a cross-border region between Sweden and Denmark comprising the Skåne county and Greater Copenhagen and three rural counties. It has a population of more than 3.5 million that is growing at a rate more quickly than the rest of both Sweden and Denmark. The Øresund Region includes some of the most advanced and most depressed areas in Denmark and Sweden, and the gap is increasing.

The Øresund University aims to make the region into one of Europe's foremost centres for higher education, knowledge production and knowledge transfer; to create a world leading science region, and to increase cross-border integration. The region ranks third behind London and Paris in biotechnological and medical research. It also has strengths in ICT, food processing and environmental technologies. These high-tech fields are sources of international competitive advantage, but represent only a part of the industrial activity. A large part of the economy is based on traditional, low-tech activities.

### ***Positive development...***

The Øresund University and the stakeholders involved in the Øresund Science Region have made progress in constructing a bottom-up cross-border science region with the objective of being internationally competitive. The project is unique because of leadership in the project by higher education, the lack of national government intervention, and the role of the platforms in providing a coordinating link between the HEIs and the community. It is innovative because it involves regional collaboration among HEIs, which is unusual when HEI policies advocate individual institutions being internationally competitive.

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2. The resulting Self-Evaluation Report is available at the OECD website:  
[www.oecd.org/edu/higher/regionaldevelopment](http://www.oecd.org/edu/higher/regionaldevelopment).

The Peer Review Team was impressed with the leadership shown by the Øresund University to be the facilitator in the cross-border initiative, demonstrating that collaboration at the regional scale can be effective in an intensely competitive environment. The PRT was convinced that the Øresund Science Region was fundamentally more than a collective branding exercise taking advantage of the new fixed link and that the region had the potential to be a significant global motor built on science, innovation and enterprise. This leadership could be a demonstration to other universities internationally as to the significant role HEIs can play in the collaborative processes required for effective cross-national regional development globally. The Øresund Region has therefore potential to become a significant motor for the two nations involved, and also a demonstration to other nations and their regions as to what can be achieved.

### ***...but more work is needed***

The Øresund University has successfully built a partnership network. There is a need to make these partnerships more inclusive and operational in a practical sense in order to achieve the region's competitiveness objectives and to realise the full potential of the region's human capital. This will require, for example, greater involvement with SMEs, low and medium technology firms, the social, cultural and environmental elements of the community and attention to some of the more peripheral communities in the region.

Although both businesses and public organisations in the region have organised a variety of cross-border associations, there is generally a lack of involvement of civil society organisations in cross-Øresund activities. In the next phase, the ØR project should be targeted towards community building and grounded in the lives of the citizens of Øresund. It needs to reach out to the community through a range of public access initiatives. There is a need to consider not just high level research and high tech industry, but also the design and delivery of services, culture and the environment, the plight of those at the margins of society, low and medium tech industry and other areas of education that are important in building stocks of human capital.

The underpinning strategic planning framework for the ØSR project needs to embrace dimensions of breadth and depth in its stakeholder integration process and to ensure regular progress evaluation involves these quarters of the region. A failure to put mechanisms in place to achieve this will cause the project to remain elitist and will prevent it from fulfilling its potential.

### ***Strengthen collaborative arrangements***

To strengthen collaborative arrangements to boost Øresund regional development outcomes, the PRT recommends the following:

- Integrate the partner HEIs in the Øresund University at operational levels below university leadership, particularly in terms of the design and delivery of teaching and learning programs, undertaking research projects, innovation and entrepreneurship initiatives, marketing and promotion, and staff employment and performance.
- Enhance the collaboration and integration amongst stakeholders within the Øresund Science Region, particularly in terms of business access and R&D opportunities.
- Support the platforms to build up their capacity to become a cross-sectoral and cross-disciplinary linking mechanism in the region.

- Engage students in the region building through internships, teaching and research projects. Enhance student mobility across institutions by supporting student travelling costs.
- Combine the local and regional governments and their various areas of responsibility to have an Øresund region focus as well as a focus on their own specific areas of responsibility.
- Integrate environmental, social and cultural objectives into the science region programme to give a more robust basis for the growth. Support the relevant platforms in this task.

### ***Remove impediments***

To remove the impediments, the PRT recommends the following:

- Encourage an intergovernmental agreement between the two national governments that recognise the requirements of the Øresund Science region as a cross-border place of special significance and sees the need for harmonisation of current policy differences impeding cross-border development.
- Reduce undue reliance on outside project funding mechanisms. Create a sustainable endogenous source of funding to progress the regional agenda.
- Improve joint marketing and promotion by all parties of the Øresund Science Region.
- Support the necessary cultural change that: (a) recognises the importance of realising enterprising human capital across all areas relevant to the future growth directions of the Øresund Science Region, alongside elite-based innovation; and (b) a culture that good regional outcomes can revolve around international connectivity.

## ABBREVIATIONS AND ACRONYMS

EU	European Union
GDP	Gross domestic product
GERD	Government expenditure on research and development
HE	Higher education
HEI	Higher education institution
HUR	Greater Copenhagen Authority
ICT	Information and communication technology
IMHE	Programme on Institutional Management in Higher Education
IPR	Intellectual property rights
OECD	Organisation for Economic Co-operation and Development
PRR	Peer Review Report
PRT	Peer Review Team
R&D	Research and development
RDA	Regional development agency
SER	Self-Evaluation Report
SME	Small & medium-sized enterprise
SWOT	Strengths, Weaknesses, Opportunities and Threats
Øresund DK	Danish part of the Øresund region (Sjælland and surrounding islands)
Øresund SE	Swedish part of the Øresund region (Skåne)
ØSR	Øresund Science Region
ØU	Øresund University

## 1. INTRODUCTION

### 1.1. Evaluation context and approach

This review of the Øresund Science region is part of the OECD/IMHE programme entitled *Supporting the Contribution of Higher Education Institutions to Regional Development* which involves the participation of 14 regions and their higher education institutions across 12 countries.

The IMHE launched the programme in spring 2004 as an initiative to mobilise higher education in support of regional development. The project involved: (1) evaluating the current contribution of higher education to regional development and identifying the strengths, opportunities, weaknesses and threats to creating a stronger role for higher education institutions (HEIs) in contributing to better regional development outcomes; (2) stimulating dialogue between HEIs and regional stakeholders; (3) assisting with identification of roles and responsibilities of stakeholders; (4) providing advice at a national and regional policy level; and (5) laying the foundations for an international network for further exchange of ideas and good practice.

The first stage in the review process involved each region undertaking a self-review of the contribution of HEIs to the region's development objectives. Participating regions designated Regional Co-ordinators and Regional Steering Groups to oversee this process of self-evaluation, culminating in the preparation of a regionally agreed Self-Evaluation Report (SER). It is hoped the Regional Steering Group in each region will continue its leadership work beyond the present project.

In the second stage of the review, an International Peer Review Team (PRT) with two International Experts, one being the Lead Evaluator, as well as a National Expert and Team Co-ordinator, carry out a complimentary but independent review of the region and its HEIs in the context of the conclusions reached by the region itself through the SER. The entire programme is coordinated and led through project management at the OECD secretariat and a Project Task Group which is also charged with the task of nominating the members of the Peer Review Teams.

All SERs and Peer Review Reports are published online on the OECD website for the benefit of the participating regions and a wider audience. An international workshop in autumn 2006 will be a forum for an exchange of regional experiences. A final OECD synthesis report – drawing on the experiences – and a comprehensive review of the literature will follow in 2007.

The focus of the IMHE project is on collaborative working between the higher education institutions and their regional partners. It seeks to establish a regional learning and capacity-building process through ongoing dialogue. The Øresund Science Region is the only cross-national border region participating in this IMHE project. Within the context of a maturing European Community, it suggests a potential new model for regional development that transcends national borders. It also suggests a significant leadership role by higher education institutions in developing such cross-border arrangements in a knowledge-intensive world. This report seeks to find answers as to how the region and its HEIs can generate stronger outcomes from this innovative approach to regional development cooperation.

## **1.2. The conduct of the evaluation**

### ***Self-evaluation process and Self-Evaluation Report***

The self-evaluation exercise of the cross-border Øresund region was a project that was initiated and coordinated by the Øresund University (ØU) for the Øresund Science Region (ØSR). While the OECD guidelines indicated that all tertiary education institutions should be included in the exercise, a decision was made in the region to focus the work on the ØU partner institutions only. The Peer Review Team has assumed the main reason the Øresund University and the Øresund Science Region sought involvement in the OECD Programme is because the cross-border initiative is a relatively new action and they wanted assistance with identifying new strategies to pursue as the project matures.

The Øresund University is a collaborative network of 14 member HEIs within the Øresund Science Region. The regional project is managed by a Regional Steering Committee of 11 comprising the vice-chancellor/rectors of HEIs (University of Copenhagen, Lund University, Roskilde University and Malmö University), local and national government in Denmark and Sweden, regional authorities from both countries, and business. The Steering Committee was chaired by Professor Linda Nielsen, then vice-chancellor of the University of Copenhagen and Chair of Øresund Science Region.

It is the role of the Regional Steering Committee in the project to guide the investigative work and to highlight areas of success as well as areas where more action could be undertaken in the contribution of the HEIs to the region's future. We have concluded, generally, that a good start has been made in this innovative initiative but there is a long road ahead that impinges on many areas of knowledge exchange and regional outcome. When the region was asked by the Peer Review Team what the themes for the next decade should be, the response from the Øresund University was that there needed to be a shift from cooperation to real operation. This is the regional question we have sought to address in this report.

The regional process for the OECD project was supported by a Regional Working Group comprising representatives of HEIs, non-governmental organisations, and the private sector. The Working Group met monthly between February and June 2005. Mr Bengt Streijffert, Director of Øresund University and Director of the Øresund Science Region, chaired the Regional Working Group. Writing of the report was undertaken by a Secretariat and drew upon interviews with key groups as well as a survey of Øresund University member HEIs. Details about the Øresund Region Steering Committee and Working Group are at Appendix Two of this report. The Øresund Self-Evaluation Report is available on the OECD website

### ***International peer review***

The international Peer Review Team (PRT) was established in 2005. Professor Steve Garlick (Australia) was nominated the Lead Evaluator, Professor Peter Kresl (USA) and Dr Peter Vaessen (Netherlands) the International Experts, and Jan Karlsson (OECD) the Team Co-ordinator, until he retired in February 2006. Jaana Puukka of the OECD Secretariat provided subsequent coordinating assistance for the Peer Review Team. Details about the PRT are at Appendix One of this Report.

The Lead Evaluator and the Team Coordinator met with the Chair of the Working Group and a member of the Secretariat in October 2005 to agree on the procedures for the review with the region and to give feedback on the draft of the Self-Evaluation Report. Separately, the Coordinator Jan Karlsson undertook a pre-visit and provided feedback to the Øresund Project Secretariat on priorities for consultations.

In November 2005 a revised draft of the Self-Evaluation Report was submitted to the Peer Review Team along with additional information. The OECD review visit took place between 6 and 12 December 2005. Prior to the visit the PRT received further supporting material such as university acts and national

government policy reviews for industry and education. During the visit the Review Team received additional material on particular initiatives the HEIs and other organisations in the region were undertaking.

A comprehensive programme of visitation was prepared for the Peer Review Team that included leadership of the higher education institutions, students, innovation bodies, local and regional government authorities, business and other non-government institutions. The Team was particularly impressed with the interest and involvement of students in the review programme. Unfortunately, the PRT did not have the opportunity to meet Swedish or Danish central government representatives. Details about the programme of consultation are at Appendix Three of this report.

*The Peer Review Team commends the work of the Board of the Øresund Science Region for bringing together the higher education institutions that make up the Øresund University and other key stakeholders of the Øresund Science Region to carry out a collective cross-border dialogue about regional development. The PRT was impressed with the leadership shown by the Øresund University to be the facilitator in the cross-border initiative, demonstrating that collaboration at the regional scale can be effective in an intensely competitive environment.*

*The PRT recommends the continuation of these arrangements during the formative period of this significant demonstration of cross-border cooperation. The PRT was convinced during the review that the Øresund Science region was fundamentally more than a collective branding exercise taking advantage of the new fixed link and that the region had the potential to be a significant global motor built on science, innovation and enterprise. The PRT was of the view that this leadership could be a demonstration to other universities internationally as to the significant role HEIs can play in the collaborative processes required for effective cross-national regional development globally.*

### **1.3. The Øresund Region – Key features of the region**

The Øresund Region comprises the Skåne county (33 municipalities) in the south of Sweden and, on the Danish side, Sjælland and surrounding islands, *i.e.* Greater Copenhagen (comprising the Municipalities of Copenhagen and Frederiksberg, and the counties of Copenhagen, Roskilde and Frederiksborg) and the rural counties of Vestsjælland, Storstrøms, and Bornholm. The Øresund Science Region has a population of more than 3.5 million (around 25% of the total combined population of Denmark and Sweden) that is growing at a rate more quickly than the rest of both Sweden and Denmark.

Key infrastructure in the region includes the fixed link bridge (16 km in length) opened in 2000, the longest cable stayed bridge for road and rail transport in the world. It now only takes 40 minutes to travel between the Copenhagen CBD on the Danish side and Malmö on the Swedish side of the Strait through the construction of new motorways and railways associated with the new fixed link. Traffic across the Strait increased by 34% immediately following the bridge opening. The most significant airport for the Øresund region is Copenhagen Airport (Kastrup) with 105 daily departures and 160 different destinations around the world. It is the tenth busiest passenger airport and the sixth busiest cargo airport in Europe.

Key industries in the Øresund region include biotechnology, pharmaceuticals and health; information technology and communications; food; tourism, culture and recreation; transport; building construction; and business and financial services. The region ranks third behind London and Paris in biotechnological and medical research. There are around 100 000 people employed in the region's IT industry, predominantly located around Copenhagen and in the Malmö-Lund area. Annual tourism turnover in the Øresund Region is around DKK 25 billion, compared to DKK 28 billion for the whole of Denmark.

There are around 20 higher education institutions in the Øresund Region. There are 14 that are participating in the Øresund University concept. The Øresund University is a voluntary collaborative venture designed to boost the research and human capital of the region through building synergies and partnerships in the design of teaching and research, and through economies of scale in programme delivery and through infrastructure sharing.

#### **1.4. The structure of this report**

In the next chapter we describe in more detail the socio-economic characteristics of the Øresund region, including its positioning within a European and global context, the structure of the higher education system and the local, national and European institutional arrangements, and the impediments that arise in integrating HEIs with the creation of the cross-border region.

In Chapter Three the Danish and Swedish higher education and regional policy framework as it relates to the development of the Øresund Science Region is discussed from the perspective of research and development. In Chapter Four we highlight the present role of higher education in the process of regional innovation and business and organisation growth in Øresund and the contribution of higher education teaching and learning to the process of adding value to the region's human capital.

In Chapter Five we discuss the wider approaches to development such as the social, cultural and environmental agenda. Chapter Six considers the HEIs' capacity building for regional cooperation in Øresund. In this chapter a number of general and specific points are raised that we feel, if given attention, could make a difference to the progression of the Øresund region initiative into its next operational phase. In the final chapter, Chapter Seven, we provide the conclusions and a collation of the recommendations.

Our report draws on interviews carried out during a week-long site visit at the end of 2005, on the findings of the Øresund Science Region Self-Evaluation Report, and additional information provided to the Review Team during its visit to the region. Any review represents a snapshot of an evolving process of development. This is particularly true in the Øresund Science region where the pace of change is rapid and the variables involved are many.

## 2. SOCIO-ECONOMIC STRUCTURE AND INTEGRATION BARRIERS IN THE ØRESUND ENVIRONMENT

### 2.1. Introduction

The goal of Øresund University is to make the Øresund Region a cross-border scientific and educational stronghold for regional development. It is a task of considerable magnitude, “a gigantic social experiment” (Maskell and Törnqvist, 1999). However, the Øresund experiment is not merely a common cross-border co-operation project. It is a unique cross-border *integration* project. The Øresund University is at the forefront of this process. This organisation intends to integrate the HEIs in the region into one of Europe’s foremost centres for higher education, knowledge production and knowledge transfer; to create a world leading science region and to increase cross-border integration.

The Øresund Science Region brings top-level business sector people together with regional politicians and HEIs, in a so-called triple helix approach to innovation, to create the best possible conditions for regional, knowledge-based growth. As the Øresund Science Region operates in two countries, the resulting regional organisation is a sort of “double triple helix network” (Øresund University, 2005). With this, the Øresund Science Region and the Øresund University are attempting to forge links between actors from a spectrum of different socio-economic, education and research, and institutional environments.

The purpose of the present chapter is to give some idea of these socio-economic circumstances and to provide an insight into the barriers that are being faced by the Øresund University as a path breaking leader driving cross-border regional integration. The Peer Review Team aims to identify where energies should now be directed in order to move to the next stage of boosting the operational aspects of this cross-border partnership.

### 2.2. Socio-economic environment

Øresund is home to around 3.5 million people. Øresund DK, *i.e.* Sjælland and its surrounding islands on the Danish side make up two-thirds of the region’s total population, while Øresund SE, *i.e.* Skåne in Sweden, accounts for the remaining one-third. The population of the Øresund DK constitutes approximately half of the total Danish population and Øresund SE about one-eighth of the total Swedish population. The region covers both rural areas and a large metropolitan area, consisting of the Danish Greater Copenhagen Area (with approximately 1.8 million inhabitants) and the city of Malmö (with 265 000 inhabitants) in Sweden. The central Copenhagen-Malmö axis is the biggest and most densely populated urban area in Scandinavia, with approximately 2 million inhabitants. The areas closest to the Øresund Strait are most attractive for settlement, while the northern and eastern parts of Øresund SE and the western and southern parts of Øresund DK have relatively low population density. The region thus consists of an urban area embracing the Øresund Strait and a more rural part in the hinterlands. A key difference between Øresund DK and Øresund SE is that the latter does not hold the national capital. Stockholm is situated 600 km north of Skåne. Hence, Øresund SE is located at the geographical periphery of Sweden.

In order to put the Øresund Region on the map, massive investments in infrastructure are being made. Most significant is the the Øresund Bridge, which was completed in 2000. This fixed link between Copenhagen and Malmö, which spans the Øresund Strait, is the longest cable-stayed bridge for either road

or railway in the world (16 km). It increases accessibility within the region drastically. With the bridge, the travel time between Malmö and Copenhagen is no longer than that between Copenhagen and one of its suburbs. The number of daily cross-border commuters has multiplied from 2 000 at the opening of the bridge to today where the figure is 10 000 a day. Also significantly important is the new railway to Copenhagen International Airport, a new metro in Copenhagen, and several highway projects in Skåne. These investments have turned the Øresund Region into a major logistic hub in Europe.

There has also been considerable investment in large scale urban development and restructuring in the Øresund Region. We would like to mention, in particular, the Ørestad Development Plan, located South of the old city centre within the Greater Copenhagen Region. Here a science city, called Ørestad, is being set up. When it is finalised – within about 30 years – tens of thousands of people will work here. The new district has been planned and built with university and residential areas, companies, restaurants and hotels, along with science parks and labs, all being integrated into one whole new town. Ørestad is to be a huge, living lab for the testing of new technologies. It is one of the largest, on-going, new town development projects in Europe. Similar developments, albeit on a smaller scale, are going on in Malmö on the Swedish side. Here the formerly desolate dock area has become the home of Malmö University, the Minc business incubator, attractive living and interesting architecture.

The Øresund Region is a prosperous area. Growth in Gross Regional Product has increased continually and is expected to follow this trend in the years to come (Øresund University, 2005). However, disparities exist between sub-regions. Urbanised areas are wealthier than rural areas. The Øresund Region includes both some of the most advanced and most depressed areas in Denmark and Sweden. This gap has tended to increase due to the negative backwash effects of growth (*i.e.* cities draining the peripheral areas in terms of population, industry and services), which outweigh its positive spill-over effects (*i.e.* the establishment of businesses, public services and new settlements in the peripheral region) (see OECD 2003).

The region as a whole has a relatively low unemployment rate of 6.4% of the total workforce. Øresund DK has an unemployment rate of 5.8%, while that of the Øresund SE is a little higher, reaching 7.8%. This difference derives from the central location of the Danish part of Øresund, whereas Øresund SE is a more peripheral area within Sweden and has struggled with the issue of unemployment for a longer period of time (Øresund University, 2005).

In relation to the region's production structure, Øresund has developed significant strengths in four knowledge-intensive activities: (a) medical, pharmaceutical and bio-technology industries; (b) certain segments of information and communication technology industries; (c) the food processing industry; and (4) environmental technologies (OECD, 2003). These areas of focus are strong sources of international competitive advantage, but they represent only a part of the industrial activity. A large part of the economy is still based on traditional, low-tech activities.

Both parts of the Øresund Region are heavily dependent on the knowledge extensive part of the service sector. For the Copenhagen Region, this includes mainly wholesale and retail trade, transport, storage and communications. In Øresund SE, the social and public health sector is particularly dominant (Maskell & Törnqvist 1999; Øresund University, 2005). In manufacturing, employment in R&D extensive activity industries far outweighs R&D intermediate and R&D intensive activities, both in Øresund DK and in Øresund SE (*e.g.* the construction industry). Furthermore, Maskell and Törnqvist (1999) note that because of agglomeration advantages, manufacturing firms in the Copenhagen Region tend to buy specialist expertise on the open market that similar firms in Øresund SE provide in-house. This is the reason why all sub-sectors of the manufacturing industry in Øresund SE generally have a higher proportion of university graduates than the same sub-sectors in the Copenhagen region. On both sides of the Strait,

firms are generally small. While the data is taken from 1995, according to Maskell and Törnqvist (1999, p.61), 90 per cent of all firms had less than 20 employees.

Some of the largest R&D corporations in Europe have a presence in Øresund SE. In 2003, Sweden spent 4.0% of its GDP on R&D, which is among the highest national R&D expenditure levels in the world. A very large part of the funding comes from Sweden's largest companies (such as AstraZeneca, Ericsson, Volvo, Saab, etc.), which account for three-quarters of the total sum. Part of this private R&D money flows to the Swedish side of the Øresund Science Region, as many of these companies run operations in Øresund SE (Øresund University, 2005).

The Øresund labour market has high levels of educational qualifications, which is expected considering the many HEIs in the region. However, the vast majority of employers (over three quarters) employ no university graduates in any capacity (Maskell and Törnqvist, 1999). In Denmark there is a relatively low participation rate for higher education (OECD, 2005). However, Denmark and Sweden are far ahead of Europe generally in terms of spending on supplementary training (Øresund University, 2005). This according to Maskell and Törnqvist (1999), using 1995 data, explains why despite the sectoral bias towards low R&D content, both countries maintain high standards of living. Low-tech companies are extremely competitive due to massive on-the-job training.

It is worth noting that in Denmark the labour market has been more successful in absorbing university graduates than it has in Sweden. Consequently, in Sweden the number of unemployed university graduates is increasing. There exists no common labour market in the region, but rather two different labour markets – one in Øresund DK and one in Øresund SE. Due to a number of differences in taxation and legislation between the two countries that impact on the operation of the labour market, many Danes move to Øresund SE to live, but keep their job in Øresund DK and commute on a daily basis (OECD, 2003).

The last 10 years has been characterised by an increase in the number of foreign citizens living in the region. The average number of foreign citizens in the region amounts to approximately 7% of the population. In the metropolitan area, the share of foreign citizens is approximately 9%, peaking in Copenhagen at 13% and in Malmö at 22%. The majority of foreigners are immigrants from countries outside the EU, mainly from the former Yugoslavia, Iran, Iraq and Pakistan (OECD, 2003).

Although both businesses and public organisations in the region have organised a variety of cross-border associations, there is generally a lack of involvement of civil society organisations in cross-Øresund activities (OECD, 2003). From the 18<sup>th</sup> century onward, people in Øresund SE have been influenced by Swedish culture and society, while people in Denmark have been oriented towards Germany in the south. Until well into the 20<sup>th</sup> century, the Øresund Strait constituted a mental barrier, as well as the more apparent physical barrier, between the two countries. Therefore it is likely that many residents view the Øresund integration project as, at best, irrelevant to their day-to-day activities and, at worst, a significant waste of public resources and attention. There are some indications that the effort to promote cross-Øresund integration is viewed in some quarters as a top-down initiative (*ibid*).

### **2.3. The scientific environment**

Øresund University (ØU) is a network consortium of fourteen universities and university colleges on both sides of the Øresund Science Region (ØSR). A major task of ØU is to integrate research and education between the partners in the consortium, as well as to increase their footing in the international and the regional community.

Together, the 14 participating universities in the Øresund University have 150 000 students with a further 11 000 researchers at the university departments. The Øresund Region is among the five top regions in Europe in relation to the production of scientific papers (Matthiessen, Winkel Schwarz and Find, 2005).

The Danish partners of ØU differ in five main respects from their Swedish partners. First, in Denmark the system for higher education is a plural system. Different types of education are provided in different types of institutions. There are three types of higher education: research based universities (providing scientific education), university colleges (providing higher or professional vocational education) and schools of art (providing education in fine arts and culture). In contrast, the Swedish system for higher education is a unitary system. The system comprises both universities and university colleges. Lund University, for instance, offers professional programmes for nurses, opera singers and pilots (of aeroplanes), as well as the more traditional academic disciplines. In Denmark, the university colleges would offer professional programmes like these.

Second, in Øresund DK there is an abundance of specialised universities (*e.g.* the University of Pharmaceutical Sciences, the Veterinary and Agricultural University, the IT University, Copenhagen Business School), whereas Øresund SE houses general universities. This is partly because of the “capital city effect” (Øresund University, 2005, p. 34), but it is mostly because of the different higher education legislative structure in each country.

Third, at the Danish HEIs, the so-called Bologna-system of degree offering has been almost fully implemented. The Bologna-system of degree offering introduces three levels for higher education, Bachelor’s Degree, Master’s Degree and PhD degree. In Sweden, however, the Bologna structure of tertiary education has not yet been implemented.

Fourth, the Danish universities have fewer links with the community than Swedish universities. According to the OECD (2005), the former have chosen to retain their historic tradition of pursuing excellence in teaching and research without significantly developing their links with the society and the economy. The OECD notes that in Danish universities, there seems to be little awareness generally of developments in private sector research. Universities don’t take explicit account of links with industry in allocating funds for research. Swedish university research, by contrast, is funded by private business companies to a considerable extent. Equally, university technology transfer offices are larger and more professionally run in Sweden than in Denmark, where they are under-funded and understaffed. Furthermore, Sweden is highlighted as a best practice country because of the large relevance of the public R&D for private companies and the efforts to transfer the results to the private sector (Øresund University, 2005). The Swedish higher education act specifically requires public reporting by HEIs on a regular basis against a strategic plan that details their regional and community linkages (OECD, forthcoming).

Finally, in Denmark the HEIs are the responsibility of the central government, whereas in Sweden HEIs enjoy a large degree of autonomy. Denmark has recently undergone HE reform introducing wider scope for decentralised decision-making.

## **2.4. The institutional environment**

To promote internal social and economic cohesion within the European Union, the EU has created the Structural Funds. One of the Structural Funds’ initiatives is the Interreg IIIA programme for the development of European cross-border regions. Through the Interreg IIIA programme, the EU is an important (co-)financier of cross-border co-operation projects in the Øresund Region. The ØSR itself was financed from 2001 to 2004 through this programme. With its strong economic base and its growing importance as a hub, Øresund is now perceived at the European Union level as a privileged testing ground in the process to achieve a “Europe of the regions” (OECD, 2003).

Both Denmark and Sweden are among the most administratively decentralised of OECD members, delegating many responsibilities to the local and regional levels. As a result, national governments are mostly indirectly involved in Øresund Science Region projects, apart from major infrastructure works, such as building and maintaining the fixed link. Nevertheless, this does not mean that national government policy has a limited impact on the Øresund integration process: national governance policies can interfere with regional cross border dynamics. Important examples of such interference can be found in the areas of fiscal policy, employment legislation and intellectual property right rules.

In relation to fiscal policy, in Denmark social security taxes are primarily collected from households, whereas in Sweden – like most European OECD countries – these contributions are based on payroll and paid by the employer. Another example is that in Denmark there is a tax reduction for business start-ups and innovation, while no such tax reduction exists in Sweden (Øresund University, 2005). Hence taxation in Øresund DK is much more entrepreneur friendly than in Øresund SE. Furthermore, in Denmark labour market rules and regulations are perceived as more flexible, both for employers and employees, while the Swedish market has more rules to protect both the employer and the employee. On the other hand, wages are much higher in Denmark.

National R&D and innovation policy is another area of institutionalism that impinges on the cross-border community integration project in the Øresund Region. In Denmark, public spending on R&D and innovation (0.73% of GDP) is smaller than in Sweden (1% of GDP). Furthermore, Danish national research funds are widely distributed to many different small actors, whereas Sweden has larger and more professional units. National research funds are usually not channelled to cross-border initiatives. What is more, administrative routines and application procedures differ. Both countries also differ with respect to intellectual property rights (IPR) rules. At public research institutions in Denmark, the commercial rights for research and inventions are given to the institutions, whereas in Sweden these rights are bequeathed to the researchers themselves. The OECD (2005) concludes that, compared to Sweden, Denmark is performing less well when it comes to the commercialisation of knowledge (FORA, *et al.*, 2004).

Investment rules for national agencies that supply venture capital to new and innovative firms or projects also affect cross border co-operation projects. On both sides of the Øresund Strait these venture capital investments are restricted to projects in the home country only and national investors are not allowed to or encouraged to invest in opportunities on the other side of the Øresund Strait. However, this issue is at present being dealt with in order to allow cross border investments to strengthen innovation ties across Øresund (Øresund University, 2005).

Finally, regional policy in both Denmark and in Sweden does not have enhanced national government policy involvement of a stimulatory kind. This is in line with the general trend followed by the majority of industrialised countries shifting from a regional cohesion focus to an economic growth focus. The Øresund Science Region is thus primarily a regionally-driven project, with limited involvement from national governments. Apart from a large public infrastructure, the respective national governments are concerned with ensuring there is no negative impact on peripheral regions. Given the growth of Copenhagen, the Danish government's interest is in supporting a re-balancing of the development in the counties on the periphery of Øresund. In Sweden the question of regional balance is even more delicate in the political debate. With the Øresund region building process in the South, the threat is that one third of the Swedish economy will become orientated towards Copenhagen rather than Stockholm (Øresund University, 2005). This field of tension may well influence decision making by the Swedish Government when it comes to approving specific development projects in the region.

The main involvement of government in the Øresund University and Øresund Science Region is at the local and municipal level. Recently, new “experimental” supra county-bodies have been formed. In Øresund DK, the Greater Copenhagen Authority (HUR) has been created, consisting of 11 regional

politicians who are nominated by the Copenhagen, Frederiksborg, and Roskilde counties, as well as by the Copenhagen and Frederiksberg city councils. Regional governance in Denmark is undergoing a major transition: As of January 2007, the present counties and HUR will be abolished and two new regions will be formed in Øresund DK. In Øresund SE, a new form of regional governance was developed in 1999 under the name Region Skåne. Skåne is the result of mergers of County Councils. In this experiment, tasks have been transferred from the appointed County Administration Board to the elected County Council/Region. Region Skåne acts as a co-ordinator in many important issues of regional development. Its work lies within the areas of trade and industry development, the environment, promotion of investment, town and infrastructure planning, public transport, culture and health. HUR and Region Skåne, whose purpose is to structure the governance of the metropolitan areas of Copenhagen and Skåne, are the main regional players in the regionalisation process of Øresund.

## **2.5. The integration barriers**

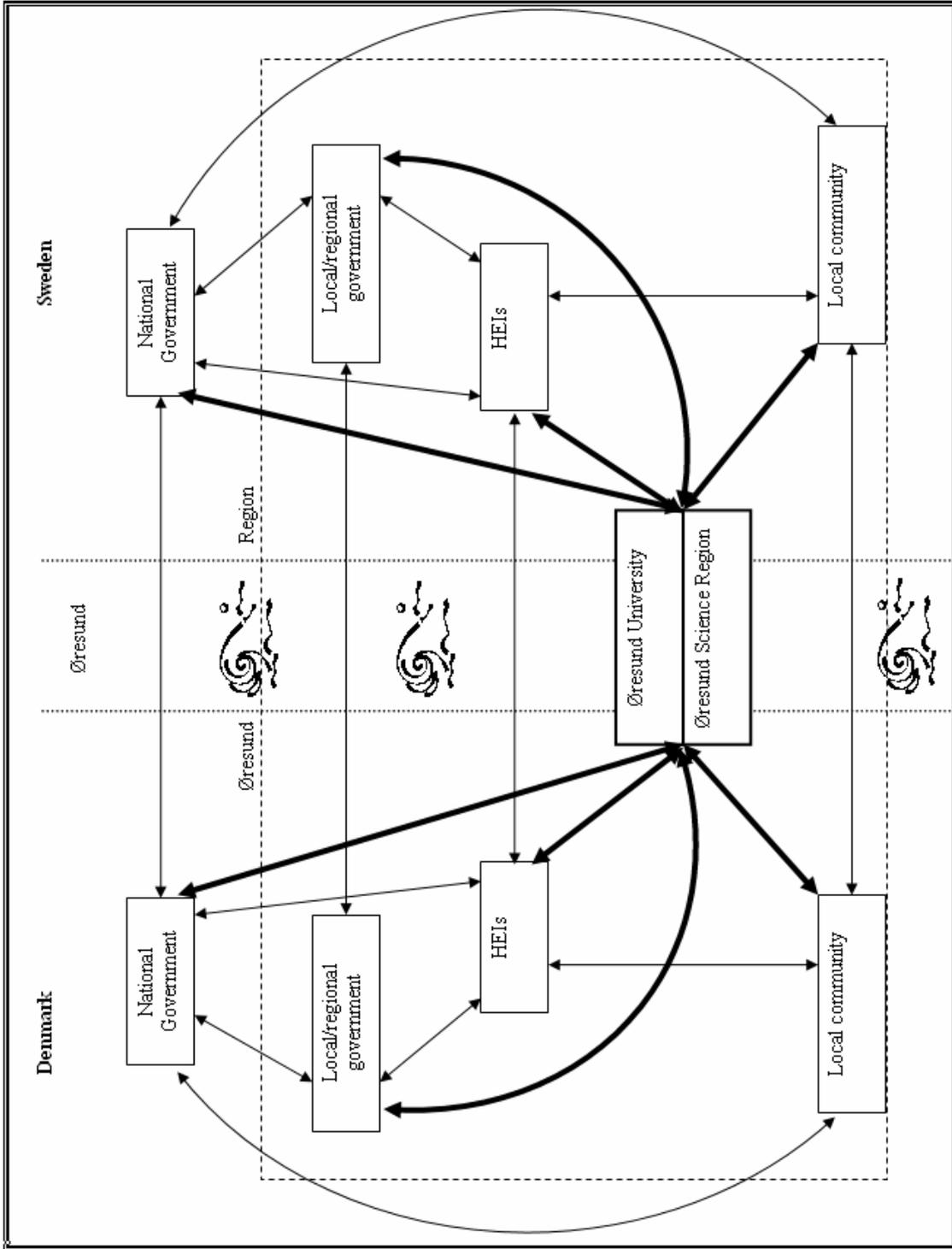
Figure 2.1, in a simplified way, portrays the different types of linkages that are involved in the Øresund integration process. In this section we will discuss some of the barriers to cooperation in the “task environment” of ØU/ØSR (see the bold lines in figure 2.1.) and the integration barriers in the wider environment (see the thin lines) (compare also Mc Dermott and Taylor’s “domain environment” [1982]). This discussion is useful in identifying the integration tasks that are required in the ØU/ØSR task of creating a collaborative cross-border science region of international significance.

### ***2.5.3. Integration barriers in the task environment of ØU/ØSR***

***Barriers between ØU/ØSR and national governments*** — The PRT heard about insufficient recognition from the two national governments for the ØU/ØSR work. There was a perceived lack of responsiveness of governments to policy advice based on research analysis and in terms of the funding provision to the ØSR/ØU.

Commitment from the National Governments is considered to be limited because the ØU/ØSR initiatives may be seen as a threat to the development in non-Øresund cities and regions. This appears to be particularly the case for the Swedish Government. Both governments are keen not to see domestic funds channelled outside of their country.

Figure 2.1. Integration barriers for the cross-border region



**Barriers between ØU/ØSR and Local Governments** — The PRT gained the impression that there was a lack of formal commitment to the Øresund University and the Øresund Science Region by local authorities. The Øresund University is not fully integrated into local government plans; there is a feeling that the local governments will only commit to the ØU/ØSR when other parties have done so. For their part, the local governments sometimes have doubts about the commitment of university researchers and professors in ØU/ØSR projects with which they are involved. These feelings contribute to the difficulties linked to the acquisition of funding for ØU/ØSR projects. At times, priority is given to initiatives from organisations other than ØU/ØSR.

**Barriers between ØU/ØSR and the HEIs** — Notwithstanding the fact that Øresund University is a consortium of universities, numerous difficulties occur in the interchange between ØU/ØSR and the affiliated HEIs. The PRT recorded the following comments:

- University researchers consider projects in the region parochial, and avoid becoming identified with them.
- The researchers, who think research is too “holy” for co-operation with the “real” world, do not appreciate the ØU.
- Researchers may view the region’s platforms as competitors rather than as partners and therefore apply for research funds themselves rather than in co-operation with the platforms.
- Researchers, teachers and students are not yet fully aware of the ØU.
- The work of the ØU/ØSR is sometimes fruitless, as researchers often do not know how to communicate with non-academic people in the region.
- Universities are predominantly interested in long term research, while commercial organisations in the region prefer short term research.
- Some research universities and faculties prefer to maintain their own carefully acquired reputation of scientific excellence rather than that of the ØU consortium, which does not yet have an international reputation.

Commitment to the Øresund University differs between different groups within the universities. Deans and managers show high commitment, while professors, researchers and students on the shop-floor tend to have only limited commitment. Young faculties prefer to be engaged in world wide international co-operation and competition more than older, well established, faculties do.

**Barriers between ØU/ØSR and the local community** — The PRT recorded several difficulties and biases in the interchange between ØU/ØSR and the local community. Financial uncertainty forces the (small) platforms to obtain project based funding, neglecting long term planning and action. There is a bias towards co-operation with big companies rather than with SMEs. ØU/ØSR is unknown among local companies and ordinary people.

### **2.5.2. Integration barriers in the wider environment ØU/ØSR (I): cross border barriers**

**Cross border barriers between the national governments** — An important characteristic of the Øresund integration project is the principle of “light institutionalisation”. This means that self-organisation by local actors in fostering the region’s development is considered important. As a consequence, the national governments are mostly absent in the integration process. The PRT did not have the opportunity to meet with representatives of the national governments. Our consultations, however, suggest that both governments have their regional development policy priorities elsewhere at present.

**Cross border barriers between the local/regional governments** — It was admitted by the Øresund Committee that local authorities on both sides of the Strait have, to date, failed to develop a common agenda towards the Øresund Science Region. Not surprisingly, there is no common spokesperson for the

municipalities in the Øresund Region. All authorities want to be visible in the project and are eager to leave their mark. The local authorities, as a group, could show more commitment to the Øresund project according to the Øresund Committee. This was corroborated by the Lund authority, saying that Lund sometimes competes with the Copenhagen administration where they should, instead, co-operate.

***Cross border barriers between the universities*** — The universities have fulfilled a pioneering role in the integration process and have also initiated the plan for turning Øresund into a science region. There are still difficulties in the cross-border co-operation between the universities as the following observations suggest:

- The Danish HEIs in the Øresund Region have a larger absorption capacity of students than the Swedish HEIs. Consequently, the exchange of students is unbalanced and there are more Swedish students studying at a university in Øresund DK than there are Danes in Øresund SE universities. This is the case, for example, in medicine.
- Differences in education systems are bigger than anticipated before the co-operation started. Denmark, for example, has adopted a system of “learning profiles” (the Bologna model) whereas Sweden uses a “supermarket model” for students’ choice of courses.
- There are differences in education practices. For example, external examinations are required on the Danish side but not on the Swedish, making reciprocity in course requirements difficult.
- Denmark and Sweden differ with respect to the organisation of the school year. Denmark uses a semester system, whereas Sweden operates with an annual system.
- Limited specialisation and division of labour between the universities, as well as insufficient cooperation in terms of provision of basic courses, have resulted to duplication and an overlap in course provision.
- Limited awareness among the students of the study gateway. The study gateway portal is not sufficiently advertised.
- The relatively high fees for students to cross the bridge provide a barrier to enhanced student mobility in the Øresund Region.

***Cross border barriers between the local communities*** — As with the integration of the universities, there is also slow progress in cross border integration of the local and business communities. Differences in formal systems between both countries impede integration of the labour market and discourage companies and organisations on both sides of the Strait from co-operating. There are differences in tax systems, legislation (*e.g.* employment legislation, intellectual property right regulation), social benefits, education systems, etc., which create uncertainty and extra expense on the part of economic actors, let alone the administrative burden involved in cross-border co-operation and labour intake. This is particularly important for small and medium sized companies (OECD, 2003).

The PRT also heard of cultural and mental barriers to cross-border integration. We heard of a lack of a sense of community and regional identity among people living in the Øresund Region and limited identification with the Øresund Region on both sides of the Strait. The cross-border region appears not to be in the minds of people yet. The Øresund Region is regarded as a top-down project, initiated by the economic, political and scientific elite. Co-branding with reference to Øresund appears to be difficult. Øresund Network, charged with this task, is a relatively small player, while other tourist organisations give priority to their own brand name and identity. When searching for foreign partners, Øresund-located organisations focus on distant countries like the United States and often disregard the opportunities available in the Øresund Region. This confirms the findings of the Territorial Review that relatively few cross-Øresund initiatives are initiated by civil society (OECD, 2003, p. 133).

Finally, the PRT points towards three frequently mentioned additional cross-border barriers. These are: (1) the high cost for crossing the bridge; (2) the lack of Øresund Region statistical data; and (3) the

requirement for co-financing with public money while governments are keen to prevent national funding from being channelled abroad.

## **2.6. Integration barriers in the wider environment of ØU/ØSR: within-nation integration barriers**

***Barriers between the Central and the Local/Regional Governments*** — The PRT in its consultations noted the unbalanced access by local and regional governments to their respective national governments on both sides of the Strait. The Øresund DK authorities have more easy access to their national government than the local authorities in Øresund SE. The Øresund SE administrators perceive the Swedish national government sometimes as distant and far away.

***Barriers between the Central Government and the HEIs*** — The PRT heard that national governments on both sides of the Strait tend not to favour cross-border HEI partnerships.

***Barriers between the Central Governments and the local communities*** — While funding the Øresund bridge removed an enormous barrier for cross-border integration, it raised new tensions about funding additional infrastructural projects, taxation and legal systems harmonisation, lowering the costs for crossing the bridge and so on, to realise the full integration potential of the fixed link. Government funding of projects in the Øresund Region is biased towards economic and technological development and at the disadvantage of other important points of attention like environmental interests. For example, in the massive investments in the city development project of Ørestad and the port redevelopment project in Malmö, our observations and consultations do not appear to show the level of innovation in environmental design and construction one might expect in a globally competitive science region. Such innovation should be covered by environmental planning legislation as well.

***Barriers between the local governments and the HEIs*** — Some local authorities are not responsive to initiatives from universities, e.g. students' research projects.

***Barriers between the HEIs and the local communities*** — A list of difficulties between HEIs and the local community were brought to the attention of the PRT. These included:

### *Communication and information barriers:*

- HEIs are not good in commercialising their knowledge.
- Staff and students do not know how to use their expertise in practical ways.
- Industry finds it difficult to gain an overview of the relevant research activities in the region.
- HEIs provide insufficient information about their potential to collaborate with industry.
- Business people and researchers do not know what to do when they meet; universities fail to distribute their knowledge to the private sector in a way that is useful.
- The Plan for the Øresund Science Region has been an intramural, elitist development.
- Universities have insufficient information on graduate flows and graduate employability. There is no alumni monitoring.

### *Engagement barriers:*

- There is no additional funding set aside by the HEIs to engage in community research.
- Universities are not active in making themselves known. For example, the PRT did not see HEIs involved in construction activities in Ørestad or Malmö.
- Some researchers consider regional research is parochial compared to international research.
- HEIs do not engage in short term projects, while businesses and other organisations prefer to have quick results.

*Matching barriers:*

- For their performances to be recognised within the HEI system, researchers have to produce basic, high level research while, on the other hand, companies ask for applied research.
- It is difficult for SMEs to adapt to the needs of student internships.
- SMEs have difficulties in finding resources to co-operate with the HEIs.

## **2.7. Summary**

Five barriers in the network relations in the Øresund Science Region stand out. These are: 1) limited engagement of individual HEI researchers, in particular in the Øresund DK, with local/regional community oriented research; 2) the reservation of the national governments to support the Øresund project; 3) communication barriers between the SMEs and the HEIs; 4) Øresund University and Øresund Science Region are concepts that are still unknown in the everyday lives of local communities; and 5) formal institutional barriers between the two countries, notably: differences in educational systems, taxation systems and legislation, and strongly limiting rules for public funding of cross border projects.

### **3. CONTRIBUTION OF RESEARCH TO REGIONAL INNOVATION**

#### **3.1. Introduction**

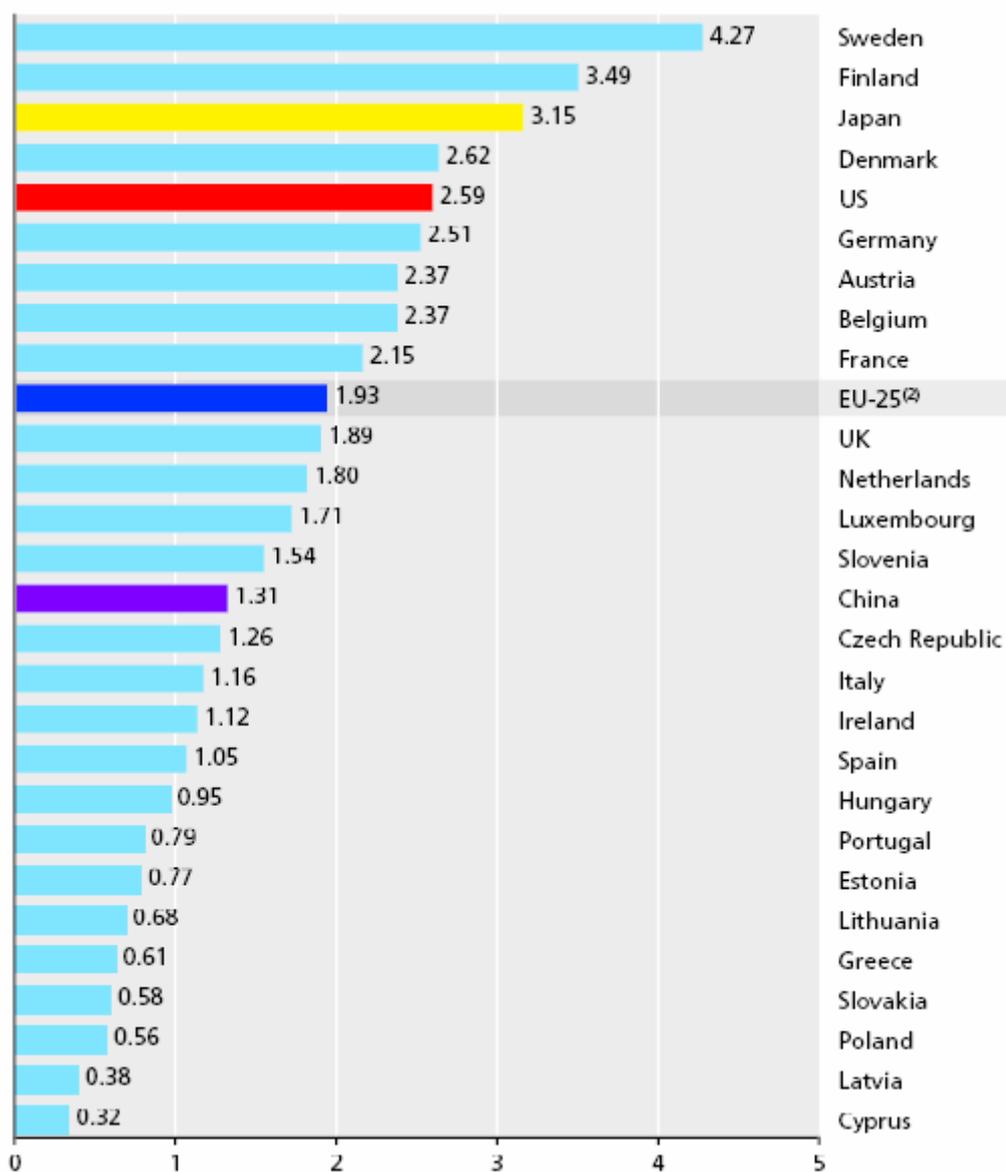
At least five conditions have to be met for research to contribute to an innovative regional economy. These are: 1) a large research capacity; 2) high quality research; 3) a focus on research applicability; 4) an effective infrastructure for knowledge transfer; and 5) a high knowledge absorption capacity in the regional economy. In this chapter we will consider each of these requirements with respect to the Øresund Region, discussing the bottlenecks in the context of an integrating region and the role of Øresund University in this respect.

#### **3.2. Research capacity and research quality**

With respect to research capacity, Denmark, as well as Sweden, rank among the top six OECD countries, both in terms of expenditure and number of researchers (see Figure 3.1 and Figure 3.2). Within Scandinavia, the Øresund Region is the largest knowledge centre, accommodating 10 000 university researchers, 150 000 students and 14 higher education centres.

Research quality is not a bottleneck when it comes to creating a knowledge economy in the Øresund Region. The number of publications in approved academic journals and conference proceedings has been a widely used measure of performance in recent years (Törnqvist, 2002). In bibliometrical studies, an estimate is made of the number of published articles in leading academic publications in different areas. It appears that the Øresund Region is among the five top regions in Europe as regards production of scientific papers. Another measure is the number of research publications cited. Table 3.1 shows the quality of publications on a national scale in selected European countries and the United States. Here, Denmark occupies a strong position as number three.

Figure 3.1. R&D intensity (GERD as % GDP), 2003 <sup>(1)</sup>

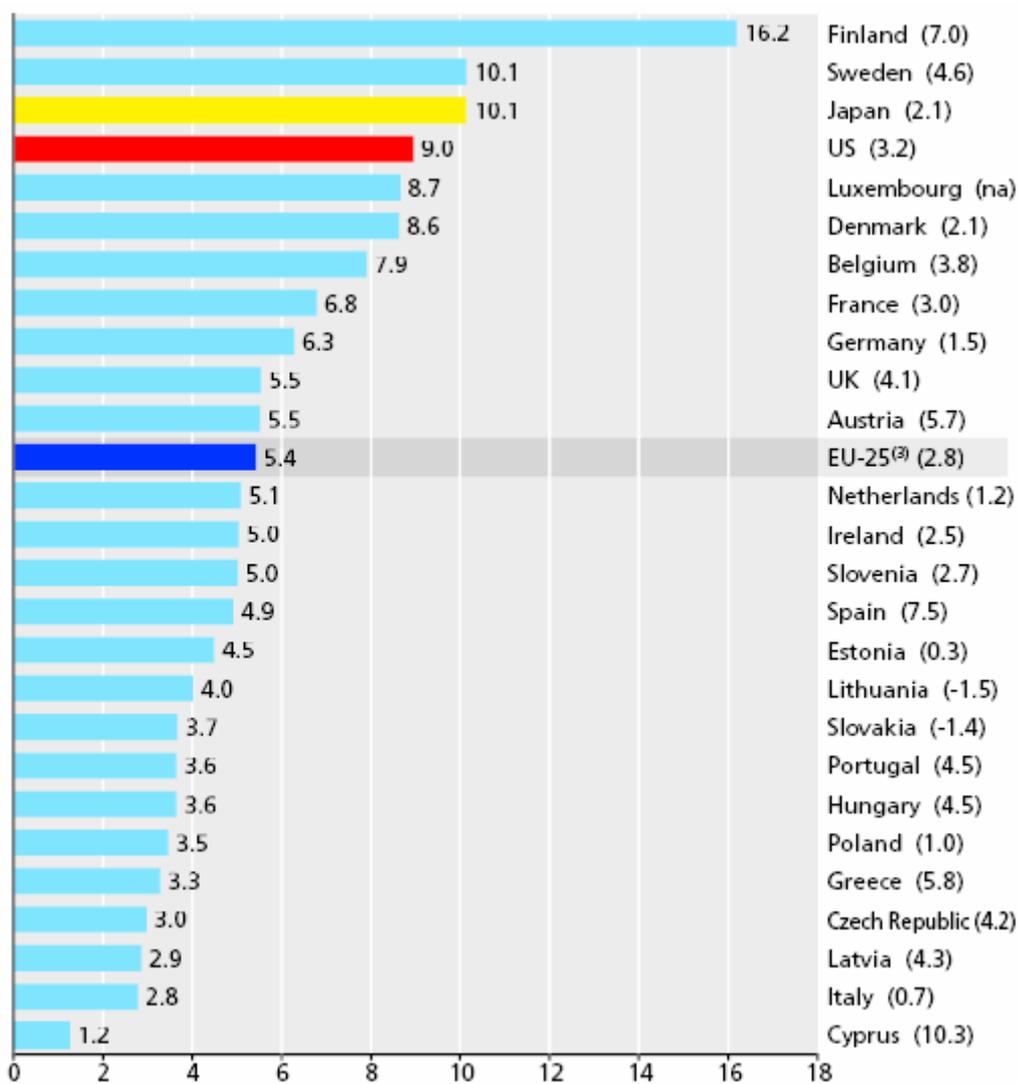


1. LU: 2000; SE: 2001; IE, IT, NL: 2002; BE: 2004; AT: 2005

2. EU-25 was estimated by DG Research and does not include LU and MT.

Source: European Commission, Directorate-General for Research (2005), *Key Figures 2005: Towards a European Research Area Science, Technology and Innovation*, Office for Official Publications of the European Communities, Luxembourg, Figure II.2.1, p. 25.

Figure 3.2. Number of researchers (FTE) per 1000 labour force, 2003<sup>(1)</sup>; in brackets: average number annual growth rates (%), 1997-2003<sup>(2)</sup>



1. UK: 1998; US: 1999; LU: 2000; EL, SE: 2001; FR, IE, IT, NL, AT: 2002; BE: 2004

2. UK: 1996-1998; US: 1997-1999; DK EL SE JP: 1997-2001; FR IT NL: 1997-2002; BE 1997-2004; AT: 1998-2002; EE CY: 1998-2003; IE: 2000-2002

3. EU-25 was estimated by DG Research and does not include LU and MT.

Source: European Commission, Directorate-General for Research (2005), *Key Figures 2005: Towards a European Research Area Science, Technology and Innovation*, Office for Official Publications of the European Communities, Luxembourg, Figure II.5.1.1, p. 49.

Table 3.1. Citations per publication (1993-2002)

	2002	1993-2002	Rank
Switzerland	1.70	1.59	1
USA	1.48	1.41	2
Denmark	1.48	1.33	3
United Kingdom	1.39	1.21	4
Netherlands	1.39	1.33	5
Germany	1.33	1.15	6
Sweden	1.21	1.25	9
Finland	1.18	1.20	11

Source: Danish Ministry of Science, Technology and Innovation (<http://www.videnskabministeriet.dk>)

### 3.3. Applicability of research

The determining factors for a university's or a scientist's focus on research application are both willingness and opportunities/resources. Furthermore, if a researcher is inclined or able to apply scientific knowledge, he is faced with the choice whether to utilise this know-how himself (*e.g.* creating a company) or to make it available to existing organisations (patenting, licensing, contract research, consultancy, etc.).

One indicator for measuring the propensity of researchers to exploit scientific knowledge for the benefit of regional actors is the pattern of co-authorship in a bibliometric analysis. The term "co-authorship" covers articles published by authors belonging to different institutions. Matthiessen, *et al.* (2005) find that there is a high degree of co-operation between private companies and the universities in the Øresund Region. While universities and private companies in the Øresund Region interact at a high intensity, the collaboration tends not to extend towards low and medium-tech SMEs. A specific example of how university researchers in the Øresund Region use their scientific know-how for the benefit of the local region is the Ørestad Living Laboratory (see Box 3.1 below).

#### Box 3.1. Ørestad Living Laboratory

In Greater Copenhagen, new town development is taking place in the form of the digital Ørestad district project. Once completed, people in Ørestad North will combine working and living in a wireless, knowledge intensive environment. Ørestad North is going to accommodate, among others, Copenhagen University, the IT University of Copenhagen and Denmark Radio (DR). The Living Laboratory is a research project on assessing human behaviour in this future high tech communication environment. Ethnologists, language, media and other researchers of the Humanities Faculty of Copenhagen University are co-operating with the DR, the IT University, major companies, inhabitants and workers in this area in order to assess how people will use new media and communication technologies and how these technologies will affect people's lives.

Here, we also need to mention the Øresund Academy of Entrepreneurship, which will be part of the Øresund University, with activities based at the Copenhagen Business School (CBS) and Lund University. It aims to convert the universities' in-house knowledge on entrepreneurship into entrepreneurship education for students. The Entrepreneurship Academy is a recent government supported initiative to stimulate entrepreneurship and to reinforce business competitiveness at an international level. Funding is available for four years. When established, the Entrepreneurship Academy will be the largest entrepreneurial programme in Europe.

Notwithstanding the positive development, the PRT heard of concerns from fieldworkers who attempt to connect university scientists to business people and civil servants. These concerns were linked to the inability or unwillingness of researchers to co-operate with regional actors. One way of beginning to address such problems is for HEIs to give more attention in their employment policy to attracting those with experience and an interest in regional engagement. This is discussed in more detail in the Chapter Four.

*The PRT recommends HEIs make regional engagement a more important requirement when hiring new researchers.*

Applicability of research is also affected by opportunities. There is a perceived tension between the need to evaluate academic performance based on the ability to conduct long-term basic research and the requirements to meet the short term applied research needs of the region and the society. Many business companies and other organisations do not have sufficient financial means to take advantage of the university research. In particular, individual SMEs find it difficult to find the resources to co-operate with the HEIs.

*The PRT recommends governments in both Denmark and Sweden further support R&D-investments in business organisations in such a way as to increase co-operation opportunities between the private business sector and universities for more basic, long term research. Furthermore, the PRT recommends stimulation of intensified co-operation between SMEs in order to generate greater R&D outsourcing capacity.*

The importance of opportunities created for research application is demonstrated by the success of the facilities made available to researchers and students of Lund University. They have been able to utilise research knowledge by creating companies of their own, even though Swedes are not well known for having a strong entrepreneurial attitude and graduates often tend to see their future in serving big companies. Nevertheless, self-employment and innovation services and facilities offered to students and researchers of Lund University have turned it into one the most entrepreneurial universities in Europe. Unlocking the research application potential can be attributed to a comprehensive set of resources – including venture capital during the very first phases of business development (OECD, 2005) – made available to university educated entrepreneurs at the Lund University science park (Ideon).

### **3.4. Knowledge transfer infrastructure**

Community engaged researchers and the availability of regional development opportunities may not be, in themselves, sufficient for research application to take place. Both elements need to be brought together. The Ideon Science Park at Lund University attempts to do this by scouting for new business ideas, stimulating academic entrepreneurship, and simultaneously finding seed and investment capital (*e.g.* Business Angels) for new start ups. Ideon has developed a very successful strategy in stimulating knowledge transfer and the creation of many spin-out companies from Lund University (see Box 3.2). This has been labelled the “Ideon Phenomenon” (Malmström, 2005).

#### **Box 3.2. Ideon Science Park**

In 1983, the idea for the Ideon Science Park was raised by Nils Hörjel. In response to the crisis in traditional industries he intended to develop entrepreneurship along new lines. He started a working group to develop the idea of a science park near Lund University, forming a bridge between the academic world and the modern entrepreneur. Originally there was no government or regional support. However, the working group found the IKEA company willing to invest 100 million SEK in the project.

Now, Ideon Science Park has become a forum for both open dialogue and informal networks between science

and business. Meetings with scientists take place on a frequent and regular basis, research projects at Lund University are listed, the screening of innovative ideas is organised, entrepreneurship among researchers is encouraged, entrepreneurship education is provided, and financial support and advice is provided at different stages of firm development. Furthermore, courses are offered to entrepreneurs in taxpaying, presentation skills, patents, etc. 500 companies have sprung out of Ideon over 20 years and the survival rate is 70%. More than 6000 jobs have been created by them.

*The PRT recommends that Danish institutions that want to teach entrepreneurship and increase their relations to industry and business, should study what has been done in Lund. Ideon offers a wide diversity of services and supporting infrastructure to potential and actual university educated entrepreneurs.*

Generally however, the knowledge transfer system in the Øresund Region is somewhat fragmented. There are many small knowledge transfer units that lack sufficient size and funding ability (Øresund University, 2005). Table 3.2 lists the many organisations in the Øresund Region involved in knowledge transfer. According to the self-evaluation report (Øresund University, 2005) the innovation landscape is poorly coordinated. The report posits that even in Lund at Ideon this is the case. *“Nearly 40 other actors are playing a part on the tech-trans and innovation scene in Lund, which makes the whole scene quite fragmented. At the moment co-operation between these different organisations and institutions could be improved, and it is believed that a streamlining of the efforts and closer collaboration on a great deal of the innovation matters will lead to increased success.”* (Øresund University, 2005 p. 87). The PRT feels this is a similar pattern to what occurs in many regions in Western Europe. Different small scale technology transfer units, mostly attached to a particular university, spontaneously appear and act independently from each other.

The PRT feels this fragmentation of research, innovation, and business formation outcomes in the Øresund Region requires more intervention by the Øresund University and the Øresund Science Region through the work of the platforms. The Øresund Science Region is a co-ordination device of network organisations in nine core competencies in the Øresund Region, so-called platforms (see Box 3.3). They have been established to create linkages and contacts within industry, HEIs and authorities (triple helix).

Table 3.2. Innovation players in the Øresund region

	Denmark	Sweden
<i>Technology transfer offices</i>	DTU, The Patent Office	LU Innovation
	Research and Innovation office at The Royal Veterinary and Agricultural University	Malmö University
	Tech Trans Unit at University of Copenhagen	Kristianstad University
	IT-University of Copenhagen Section for Innovation	The Swedish University of Agricultural Sciences (Alnarp)
	Copenhagen Business School, Career Centre	
	TechTrans Office. The Danish University of Pharmaceutical Sciences	
	Roskilde University	
<i>Other technology transfer offices and actors</i>	Tech Trans office Denmark	Teknopol
	CrossRoads Copenhagen	Lund University Technology Group
	Biotech Research and Innovation	Innovation Skåne

	Centre (BRIC) at KU	
	Greenhouse for ICT (IT-væksthuset 5te) at ITU	Technology Bridge Foundation in Lund / the Innovation Bridge
<i>Science Parks</i>	CAT Science park	Ideon Science Park
	Scio-DTU	Krinova Science park
	Symbion Science Park	Medeon Science Park
<i>Innovation milieus</i>	CAT-symbion Innovation	Ideon Innovation
	DTU Innovation	Malmö Stad Innovation / MINC
	Teknologisk Innovation	Brinova

Source : www.mva.org

The mediating capacity between science and community through the Øresund region platforms is much greater than “ordinary” technology transfer units because the ØSR is not linked to one single university but to 14 different HEIs. The organisation of the platforms along core competencies also creates a clearer view of what segment of the regional business community is addressed by scientific knowledge. Each platform has built a data base of the relevant (regional) businesses and organisations into its respective core competence, which makes it easier to assess the regional economic effectiveness of the ØSR. It also creates the possibility of directing specific knowledge streams from HEIs for the benefit of targeted areas of regional development. For example, the Diginet Øresund, the Øresund Food Network and the Øresund IT Academy are key sector areas for tackling regional development outcomes as they are mainly made up of small firms. Having different platforms under the umbrella of one single organisation also opens up an enormous potential to benefit from economies of scope. Learning advantages and cross-fertilisation between different platforms of the ØSR can be exploited. For example, the Øresund Food Network is linked to the Medicon Valley platform and the Diginet Øresund to the Øresund IT Academy.

Despite the potential of the platforms as a linking device for regional development, the PRT felt the uniqueness and advantages of the platform approach are not fully recognised by the governments, particularly not by the national authorities.

*The PRT recommends, therefore, that the authorities more fully support the Øresund Science Region approach of using the platforms as a linking device between HEIs and society, as this initiative might not only be of regional importance, but potentially might develop into a general new model for technology transfer for the benefit of more integral development of the knowledge economy.*

### Box 3.3. Øresund Science Region Platforms

#### ***Medicon Valley Academy:***

Medicon Valley Academy (MVA) is a member financed network organisation within the biotech and life science area in the Øresund Region. MVA works to improve the conditions for science and knowledge production, technology transfer and innovation for biotech business in the Medicon Valley-area in the Øresund Region. MVA has successfully created a network of 275 member organisations, including all the relevant university departments, healthcare organisations, and most of the biotech and meditech related companies and other organisations located in the Medicon Valley region. MVA has a budget of DKK 9 million and a PhD programme for 12 students. The content of the PhD projects is defined by the companies involved.

#### ***Øresund IT Academy:***

Øresund IT Academy is a not-for-profit network organisation uniting Danish and Swedish IT actors centred on the Øresund IT cluster. The aim is to combine the competencies from the Swedish and the Danish systems and make the region more attractive by facilitating access to knowledge and contacts. The IT academy has 43 paying members.

#### ***Øresund Environment Academy:***

Øresund Environment Academy is an organisation that forms a link between academic research, the business community and the public sector in the Øresund Region. The aim is to enhance environmental skills and to promote environmental research and innovation. Øresund Environment Academy arranges seminars and conferences, initiates and co-ordinates projects related to environmental business, education, policy and research. The platform is staffed by three employees.

#### ***Øresund Design:***

Øresund Design's mission is to create a platform for design activities in the Øresund Region. The platform is active within five different business areas. These are: to strengthen the competencies in purchasing and selling design, to promote networking where design is a key element, to market Øresund Design Society regionally and internationally, to promote and strengthen design education and research, and to promote design as a tool for innovation.

#### ***Øresund Logistics:***

The main aim of the Øresund Logistics platform is to support the logistic development in the region. Øresund Logistics functions as a Knowledge Hub in the Øresund Region, as the platform collects and provides access to the most recent knowledge and developments within the field of logistics. Øresund Logistics is formed and financed by public and private organisations in southern Sweden and in the eastern part of Denmark. In addition, Øresund Logistics is partly funded by the EU, Interreg IIIA. The Øresund Logistics network includes approximately 500 businesses such as infrastructure owners, logistics providers, manufacturing companies, local, regional and central government, consultants, and universities.

#### ***Øresund Food Network:***

Øresund food network provides a forum for research collaboration and knowledge exchange, supporting innovation and the exploitation of ideas. The platform organises seminars and workshops, identifies and initiates research projects, and disseminates information. Øresund Food Network has detailed databases of contacts in the region and it facilitates necessary interactions with the political and administrative levels. After initial Interreg funding, the Food Network is now a membership organisation. Seed money of about 100 million SEK has now been attracted. The platform has 85 member organisations. The service packages are mainly directed at small companies.

#### ***Diginet Øresund:***

Diginet is a network and forum for the digital entertainment industry (games, films, learning and entertainment) in the Øresund Region. The object of this network is to contribute to the economical growth by promoting the development, the production, the distribution and the selling of digital entertainment products, e.g. computer games, new film formats, interactive TV, mobile content, edutainment, e-learning, etc. Diginet is a bridge builder and a matchmaker between the universities and the business community. The platform publishes a newsletter that is sent to 700 members.

#### ***Nano Øresund:***

Nano Øresund aims to bring together nanotechnology strengths in innovation, education, research and laboratory infrastructure on the Danish and Swedish sides of the Øresund. The objective is to increase the application of nanotechnology in industry either through knowledge transfer or through new start up companies. The platform is financially supported by the European Union (Interreg) with DKK 2 million until 2007.

#### ***The Humanities Platform:***

The Humanities Platform aims at strengthening ties between the universities, the local, regional and national authorities, and the cultural arts institutions in the Øresund Region. In order to achieve this, conferences and events are arranged and even a yearly festival is organised – The Humanities Festival – where the faculties and departments arrange a large number of activities such as seminars, performances, art exhibits, film showings, etc.

### 3.5. Knowledge absorption capacity

Technology transfer is not useful unless there is sufficient knowledge absorption capacity, or take-up, on the part of business and institutions. Lack of knowledge absorption capacity is a major barrier in creating a knowledge economy. Maskell and Törnqvist (1999, p. 61-64) demonstrated that the industrial structure in the Øresund Region is biased towards small enterprises with low R&D content. These companies neither have direct links with HEIs nor do they employ highly skilled individuals, such as university graduates. In the Copenhagen region more than 75% of the firms employ no university graduates in any capacity or function whatsoever. Nevertheless, many of these low-tech companies are highly competitive. This, according to the authors (ibid, p. 72, 73), is at least in part associated with the accumulated effect of incremental but extensive investment in the workforce (*i.e.* on-the-job-training).

However, this kind of learning is rooted in the companies' routine activities (see Maskell and Törnqvist 1999, p.59). On-the-job learning is oriented towards problems emanating from the existing set of economic activities. The marginal returns from incremental knowledge accumulation might diminish and eventually dry up. Sooner or later, radical new knowledge might be required and the company has to move to a higher technology level. This might already be the case since Maskell and Törnqvist's analyses were based on data from over ten years ago. Hence, it is not likely that low-tech companies in a high cost economy can survive infinitely without applying new research knowledge. While the PRT noted how the ØSR platforms hit upon knowledge transfer to SMEs, the platform leaders did not provide solutions for tackling this problem of low absorption or take-up by SMEs in the region.

*The PRT recommends the ØU and the ØSR more fully investigate how to overcome the barrier of lack of knowledge absorption or take-up capacity of SMEs and systematically develop new ideas for solving this basic problem.*

### 3.6. Summary

In this chapter the PRT investigated five conditions for contribution of research to regional innovation in the Øresund Region. These conditions are: 1) research capacity; 2) research quality; 3) research applicability; 4) effective infrastructure for knowledge transfer; and 5) knowledge absorption capacity in the economy. The latter three conditions cause problems in the Øresund Region.

Two "good practice" examples have resulted from meeting two of the three problematic conditions: the Ideon Science Park, which triggers research application through entrepreneurship stimulation among students and researchers, and the platform concept of the Øresund Science Region, with its unique approach for transferring technology to existing business companies. The Ideon Science Park provides access to a comprehensive set of resources, and with that significantly reduces coordination costs for assembling these means. The ØSR multiple platform approach (potentially) thrives on the economies of scope and spill-over effects between the different platforms.

However, the PRT did not come across a "good practice" example targeted at solving the pivotal problem of enlarging the knowledge absorption capacity of many SMEs in the region. This involves a threat to the competitive growth of the region and limits the potential of the unique ØSR Platform approach.

## 4. THE UNIVERSITIES

### 4.1. Background

Chapter Two outlined a number of areas where more needed to be done to strengthen integration between key stakeholder groups to continue to build a cross-border science region of international competitive significance. In Chapter Three some good practice examples were highlighted that go a long way towards achieving this integration in some areas, particularly in relation to some of the links between the HEI and business. In this chapter, ideas for addressing other areas of integration are highlighted.

Based on the “learning region” concept, it was university scholars who were at the forefront in the late 1980s of promoting the idea of a cross-border integrated urban region encompassing the economic, political, social and cultural aspects of life in the Øresund. Research from the constituent HEI members of Øresund University continues to be important in developing understanding of the potential for further development of the region.

Two approaches appear to have underpinned the conceptual development of the Øresund Region. First, the industrial cluster approach to regional development that argues there are economic advantages for firms that cluster in close proximity to each other that are not otherwise available. Second, the “triple helix” model of regional innovation that involves the active cooperation of governments, universities and business entities – both firms and associations.

Using these concepts, regional “platforms” were developed which established the structures that resulted in clusters of firms in the following areas: medical/pharmaceutical research, food processing, logistics, information technology, environmental sustainability, humanities, games (film, animation and advertising), design and, most recently, nanotechnology. (See Box 3.3 above.)

The effectiveness of engagement by the Øresund University is determined by four factors: 1) the capacities and assets of the individual HEIs, *i.e.* structural factors; 2) the extent to which genuine institutional engagement is effected, *i.e.* behavioural factors; 3) the ease of access to information about those capacities to participants; and 4) the ease of access to the actual locations of the activities themselves, *i.e.* proximity.

Øresund University and its partners have made a commendable start in marshalling the resources of the region into an effective operating set of platforms and, thereby, engaging the region’s HEIs in participation in the economic development of the Øresund region.

### 4.2. The extent to which genuine institutional engagement is effected

Engagement in any initiative in higher education is dependent upon four primary elements: students, faculty, programmes and institutional commitment. The following recommendations are made by the PRT to strengthen the engagement of the Øresund University with its region:

- *Include Øresund engagement in HEI staff recruitment as well as recognition and reward incentives.*

To encourage greater staff involvement in contributing to the goals of the Øresund Science Region, it may be necessary for department chairs, deans and promotion committees to attach positive evaluation of Øresund-related activities in the criteria used for faculty staff evaluation for retention, tenure and salary. Øresund co-operation should be highlighted in advertisements for new staff, faculty as well as administrators. The responsibility of the university and its staff to promote development of the regional economy and its recognition throughout the EU should also be integrated into the hiring and induction of new staff.

- *Use the Øresund Science Region as a laboratory for various aspects of international interaction.*

The region can serve as a laboratory for faculty and students. For example, business and economics students could study the logistical, cultural, legal and political complexities in trade and capital movements between Sweden and Denmark, through Øresund as a small-scale model of what they will encounter when they work in the global market.

- *Learn from each others' best practice examples through collaboration.*

There is considerable interest among Danish institutions in the study of how to teach entrepreneurship and increase their relations to industry and business, but they have not as yet explored the Lund University's programme in entrepreneurship that is open to students in all disciplines. The Ideon Science Park has long been exemplary in the development of entrepreneurship and has over 500 start-up firms to its credit. More rapid progress with fewer mistakes could be made by learning from the Swedish example.

Further, Kristianstad, on the periphery of Øresund, would appear to be a minor player in comparison to the universities of Lund and Copenhagen, but it has specialties in ecology, food, agriculture and, more generally, the biosphere. Its work in these areas could be integrated into the environment and food platforms and with institutions such as the (Danish) Royal Agricultural and Veterinary University and the Swedish University of Agricultural Sciences.

- *Collaborate at faculty and department level around platform themes.*

While there is a strong ownership of the Øresund concept at the top level of the university administration, the faculty and students have not yet fully embraced the idea. The PRT found some examples that were promising. The Humanities Faculty at the University of Copenhagen has been active in promoting engagement with the public in activities such as conferences, speakers and the Humanities Fair which is done in cooperation with the University of Lund. Historians have studied the Øresund region and specialists in the arts have studied and contributed to its culture. Artists and musicians working with computer specialists have generated the games and animation platforms in collaboration with existing companies in the region or through business start-ups.

- *Support the role of the platforms in developing collaborative relationships between universities and business.*

The PRT believes there should be more support for the platforms for their intermediary role as well as urging Øresund University to continue to seek out new platform participants.

- *Support graduate students to participate in teaching and/or research projects in Øresund related topics.*

Linking university research with the entities of the platforms such as Medicon Valley, nanotechnology and IT is being promoted by both the firms and the HEIs. The Ideon Science Park has

strong links to the University of Lund in Sweden whereas the relationship to Danish HEIs is virtually non-existent. This is largely due to the present difficulty attached to spending money from the Swedish government on Danish-based entities and activities.

- *Encourage cross-linkage between the platforms.*

Humanities and social sciences could be involved to a greater degree than is now apparent, and interaction with small and medium-sized firms could be enhanced. Lessons learnt from good examples such as Medicon Valley and nanotechnology should be generalised.

- *Enhance co-operation between HEIs and cultural institutions throughout the Øresund region.*

The experience in Copenhagen seems to indicate that in this area it is the HEIs that must take the initiative. The University of Copenhagen, through the Faculty of Humanities, began several years ago to work with museums and other cultural institutions but after a short period of time found it was more or less by itself. Given the importance of cultural institutions to the competitiveness and attractiveness of an urban region, this should be taken to be an initiative of some priority.

#### **4.3. Access to information and ØU expertise**

Those students, faculty and members of the community who wish to participate in the activities of Øresund University must be kept aware of the full scope of the opportunities available to them. This requires a comprehensive effort to audit and publicise all activities in the region to enable the opportunities for HEI engagement to occur in areas of community priority. The PRT makes the following recommendations in this area:

- *Integrate course options to improve economies, quality and variety*

The PRT felt that the Asian Studies programme (see [www.sasnet.lu.se/ornast.html](http://www.sasnet.lu.se/ornast.html)) could serve as a model for integrating course options across HEIs in the Øresund University. This model could easily be applied to course offerings in core fields, for distance learning, and basic education, where HEIs have a growing need to achieve further specialisation and division of labour and to increase the course variety available to students. As budgets come under pressure this is an obvious and, given the availability of various readily accessible websites, also a low cost response. This should be done in a way that safeguards the quality and coherence in study programmes.

- *Include a commitment to the Øresund University and the Øresund Science Region in institutional plans, policies and strategy.*

One way of manifesting the commitment to co-operation in the Øresund region is to highlight it in the strategic plans or mission statement of the institutions. The PRT found it explicitly stated in the “result contract” of the University of Copenhagen that efforts to achieve division of labour by Øresund region co-operation will be reinforced. The PRT has no comprehensive picture as to how this is done at other institutions, but we are of the opinion that it would be useful if all HEIs emphasised this commitment in their mission statements and in public documents which promote the courses of study that are available at their institution.

- *Enhance student mobility across Øresund University affiliate campuses.*

It would be useful if there were some kind of inducement to encourage students to take advantage of the wider selection of courses that should be made available through an increased division of labour

between institutions. At present, if a programme is terminated on one side of the border, HEIs pay travel expenses for students enrolled in that course of study to take courses at another institution. Perhaps some sort of travel bursary for inter-HEI course-related travel could be introduced.

#### **4.4. Access to the actual locations of the activities**

The Øresund region presents local authorities and planners with a considerable challenge. Distances between points on opposite extremities of the geographic area can be up to 200 km, and the two key urban centres are divided by a 15 km waterway that has been spanned by a very expensive bridge-tunnel construction. These factors impose significant costs, in both time and money, to students and faculty who wish to participate in activities throughout Øresund. This has led to a call for policy that was enunciated to us by almost all of the individuals with whom we spoke, and which appeared to us to be a necessity if the potential for interaction throughout the region is to be realised.

- *Lower the travel costs.*

While this would seem to be a simple matter, in fact it is not. The railways are administered by the national governments, and other transport systems are the responsibility of regional and municipal authorities. An Øresund Pass, covering all elements in the regional transportation system or at least for bridge-tunnel travel, would seem to the PRT to be the solution, but national governments are concerned with precedent being set for other regions, or with the appearance of favouritism if this approach is taken only for Øresund. Furthermore, students in the two countries are treated differently with regard to their financial situation; it would be difficult to introduce this system for students in one country but not for those in the other.

There has been an enormous investment made in the Øresund region and it would be an opportunity foregone if relatively minor financial burdens significantly reduced the benefits that could be gained from the investment. We gained the impression that any subsidisation of student travel would have to be from the provincial governments of Øresund SE and Øresund DK. There was some anecdotal evidence to suggest that students are willing to travel the distances that are involved here to participate in activities elsewhere in the ØSR.

## **5. CONTRIBUTION TO SOCIAL, CULTURAL AND ENVIRONMENTAL DEVELOPMENT**

### **5.1. A balanced perspective**

The OECD Guidelines for Peer Review Reports suggests a section on the contribution of higher education institutions to social, cultural and environmental development at the regional level. It also suggests that such reports outline the strengths, weaknesses, opportunities and threats of the regional situation and the role of the HEI as a way of defining a way forward.

Society, culture and the environment provide an important supporting fabric for a sustainable regional community. HEIs, with other regional partners, can play a significant role in these areas of region building. This can occur through the actions of students, through specific research and learning programmes and through infrastructure, leadership, collaboration and service provision.

The Self-Evaluation Report and the programme for peer review visitation in the Øresund were both comprehensive. However, the amount of space and time allocated to exploring the connections between the HEIs and the social, cultural and environmental aspects of the Øresund region's development was miniscule in comparison to economic matters. This is concerning in a region undergoing a rapid change where the impacts on the environment, culture and society will be considerable.

The Peer Review Team was not made aware of the full scope and extent to which the HEIs in the Øresund region have been engaged in this type of region-building. We believe that the Self-Evaluation Report should be able to cover many more instances of regional activity in these areas and that there are opportunities to spread the higher education engagement agenda, and in particular the themes of innovation and entrepreneurship, throughout the region.

### **5.2. Social development**

We are aware of the special role of the state in the provision of services in Nordic countries, however, we are of the view that through their learning programmes, research, services, and infrastructure, universities can contribute to improving the health (geriatric care, hospital, nursing, medical, dental), safety, physical fitness and general social well-being (legal, counselling, sociology and welfare services) of the region's residents. This may involve partnerships with existing public health and welfare institutions or with the private sector in areas of R&D and technical innovation, and in the provision of information targeted at health and well-being objectives and welfare planning. It will also involve introducing programmes and demonstrations that seek to improve harmonisation across different ethnic and cultural groups and with those at the margins of society and in the distinction between urban and peripheral rural parts of the region.

In declining urban areas, HEIs can have a positive impact through their campus and other property assets for the provision, for example, of low-cost student accommodation, and low-cost student transportation initiatives. When linked in with the local and municipal authority, HEIs can add to the general amenity of the town centre. The contracting out of HEI services such as catering, cleaning, gardening, financial, and others can add to the employment base of the depressed urban and rural areas in which the university campus is located.

The Self-Evaluation Report describes in positive terms the society in the Øresund Region, drawing on surveys of national social capital, and studies of corruption to support this view. Few examples are provided along the lines of the opening paragraphs of this section on the potential role of the university in contributing through the development of human capital and research to social development. The Peer Review Team was exposed to few areas to judge the hypothesis that much is being done. In spite of the strong welfare state we believe that there is more to be done in future years through the knowledge and

expertise in university programmes to add value to the social fabric of the region. This will be important as the pace and complexity of change continues to pick up in the Øresund Science Region.

The Humanities Platform is one of the newer platforms of the Øresund University, and is a partnership between the Universities of Copenhagen, Roskilde, Lund and Malmö. The platform appears to operate on a project-specific basis, rather than a strategic basis tied to the agreed fundamental societal needs of the region.

There are thousands of potential dissertation and other projects dealing with the social concerns of the Øresund and they need to be engaged with. Such involvement does not need a “cheque book” approach but rather a long term agenda for dialogue and partnership.

*The PRT recommends that the Humanities Platform be given greater encouragement within the Øresund University framework to build integration across affiliate HEIs and to carry out regular dialogue across Øresund society to tackle some of the key social areas in a concerted way.*

### **5.3. Cultural development**

HEIs can make an important contribution to the cultural foundation of a region and to general quality of life of the community. It can do this through culturally-based learning programmes that increase awareness, provide policy advice, and effective service provision among culturally diverse groups. HEIs can engage with cultural groups to assist in building their capacity to better serve their members and to facilitate processes of harmonisation. They can also make available for public access a broad range of culturally-specific infrastructure such as museums, libraries, galleries, orchestras, auditoriums, sporting facilities, and community radio and television stations. HEIs might also sponsor local cultural festivals and performances, offer specialist expertise, and take part in specific community cultural initiatives. Finally, university students, particularly those from different nationalities and cultures, also add a richness to a region’s culture.

The Self-Evaluation Report refers to the schools of art and culture as an important element of the Danish HEI system. They cover architecture and design, music conservatories, visual and performing arts and film as well as conservation and librarianship. The University of Copenhagen, for instance, runs the Botanical Gardens in Copenhagen, the Museum of Zoology and the Museum of Geology. Only the Royal Academy of Fine Arts – School of Visual Art is a member of the Øresund University. Other schools were not included in the self-evaluation process, nor were they part of the programme provided for the Peer Review process, although perhaps they should have been. On the Swedish side, many of these cultural learning and research programmes are carried out by Lund University. For example, the PRT heard that the Malmö Academy of Performing Arts (Art Academy, Academy of Music and Theatre Academy), part of Lund University, provides public performances in Malmö.

Similarly the SER identifies a range of areas where HEIs contribute to the cultural life of the region, such as through public seminars and conferences, media, museums, science festivals and so on. In Lund for example, the Lund University plays an important role in the “Lund Carnival” in May every four years.

The Self-Evaluation Report argues that universities are most important providers of cultural product, and the bi-national nature of this culture in the cross-border Øresund Region gives the Øresund University added value in the provision of culture in the region within a European context. The SER argues that this “edge” in cultural provision is a competitive tool in attracting elite human capital and investment (p.97). A report by the Greater Copenhagen Authority in 2005 supports this contention to the extent that it has attracted new business development in the region.

The Peer Review Team heard about the increasing number of cultural minorities taking up residence in this part of Denmark and Sweden, predominantly from Eastern Europe, Arab nations, and North Africa, as the economy grows. For example we were informed that the population of Malmö comprised around 38% of people from other countries. We were not made aware of specific initiatives undertaken by the HEIs to tackle the matter of social cohesion and harmonisation among diverse endogenous cultures.

The nature of the Nordic welfare state means that most of the social and cultural services to communities are provided by the State. However, the role of the HEI is to offer knowledge and expertise to policy and programme providers as well as provide service based on research and specialist knowledge to community organisation in the area of cultural development. The welfare state should not cushion such inquiry and innovation by HEIs.

In 1997 the Swedish-Danish Fonden Kulturbro 2000 (Cultural Bridge Fund) came into being with the objective of strengthening cultural cooperation and awareness across the Strait. Kulturbro has become an annual event between September and December. More than 50 cultural arrangements are organised. Again, such initiatives were initiated by Interreg IIA. Kulturbro has been successful in its objectives, with 37% of Danes and 41% of Swedes saying they would visit cultural institutions on the other side of the Strait. Culture is thus demonstrated as an important tool for building a more integrated society across the Strait and within all parts of the region. While there is no doubt that the HEIs in the Øresund are major contributors to the culture of the region in many ways, we feel this role now needs to go to the next phase.

The Peer Review Team also heard from representatives of Crossroads Copenhagen, a kind of social broker between institutions and community social needs. Particular projects have included helping young people from different ethnic groups to learn Danish, and developing new digital learning processes for those with disabilities.

The Peer Review Team did not have full exposure to the ways the HEIs in the Øresund are contributing to the cultural development of the region beyond the more traditional and elitist approaches such as via key cultural infrastructure. There will be a need for HEIs to do more on matters that tackle cultural integration.

*The PRT therefore recommends that the ØSR work towards building a more integrated society across the Strait through cultural exchange and partnering among existing cultural institutions and programmes and address issues of cultural harmonisation among endogenous minority groups that take in a range of multi-cultural programmes.*

#### **5.4. Environmental sustainability**

HEIs can contribute to sustainable environmental development in their regions by being: (1) a source of regional expertise through research and demonstration; (2) through the use of infrastructure such as science parks, incubators, laboratories and IT facilities; (3) as amateurs in bringing together diverse regional actors and elements of capacity to the sustainability process; (4) as generators of human capital in the region through their curricula teaching and learning programmes in areas of sustainable development; (5) as demonstrations of good practice through their own on-campus management and development activities such as through strategic planning, building design, waste minimisation and water and energy efficiency practice, and by offering recognition and reward incentives for staff to be involved in sustainable development leadership groups in the regional community. (6) Universities can pursue “good citizen” type initiatives like “green campus”, responsible purchasing programmes, and by extolling the environmental virtues of the region through the HEI’s own marketing programmes; and (7) through their teaching and learning programmes universities can raise awareness and skills and the student body can be a significant contributor to volunteering and community activity in the area of sustainable practices.

The Peer Review Team was not made aware of the initiatives of a regional nature that were being undertaken by the HEIs in Øresund in this domain. The SER is also non-committal in this area. In fact there is virtually no commentary at all on this subject.

In 1994, the Swedish and Danish governments agreed on a joint Environmental Programme for the Øresund Region, which included a benchmarking initiative to gauge where the Øresund stood on key indicators for water and air quality. The Programme had two objectives, to increase cooperation across the Strait on environmental matters and for the Region to become one of the “cleanest” in Europe ([www.oresundskomiteen.dk](http://www.oresundskomiteen.dk)).

The Environmental Pilot Benchmarking Initiative compared metrics in five key areas of environmental sustainability (air and water quality, planning, resources energy, and waste) and health (groundwater quality, traffic injuries, children’s health) across a number of European regions. A compendium of good practice examples was compiled from the exercise, although the comparative analysis proved difficult and was not completed.

#### *The Øresund Environment Platform*

The best mechanism for delivering HEI outcomes for a sustainable Øresund region appears to be via the ØU/ØSR platforms, in this case the Øresund Environment Platform, also called the Øresund Environment Academy. The Environment platform is a small organisation of just three employees that has good contacts with some of the public authorities in the region, such as the City of Copenhagen, and with academics in some of the HEIs, particularly Copenhagen and Malmö when they have research monies. However, the experience of the platform is that they tend to be sidelined when the academics have a large research budget – any project in these circumstances tends to be controlled by the HEIs themselves.

The platform, founded in 2001, provides a forum to bring together more than 875 environment researchers working in the region’s HEIs and more than 3000 environment students with regional business leaders to generate and run knowledge exchange, networks, and seminars. The Environment platform put out a monthly newsletter to its members informing them of environmental research, upcoming seminars and other information to assist business and others adopt more sustainable practice.

One area of emerging priority related to the rapid growth of the region that has been taken on by the Environmental Platform is examining the sustainability of buildings in the light of standardised requirements for building having been put in place by the European Commission. The project is being financed by the Interreg IIIa Øresund fund. Such a project makes a lot of sense given the considerable change occurring in the built environment landscape of the region, particularly in relation to the development occurring around Ørestad. The Peer Review Team’s inquiries as to the extent that such knowledge permeates this development suggest, however, that there is a long way to go if the Øresund University and its affiliated HEIs are to influence sustainable outcomes of the growth and development process that is currently underway. Another project is being undertaken with Lund University on Bio-gas.

The Environment Platform also has underway a project “Optimal operation of urban environmental systems” which is concerned with waste minimisation and waste water treatment. The project involves researchers from Lund Institute of Technology and the Technical University of Denmark working together with private companies in the Øresund and with public authorities in Lund, Malmö and the City of Copenhagen.

Our sense is that the role of the platforms as an integrating and catalysing intermediary is not yet fully matured in this area of the region’s development and there may be a requirement to support the

Environment Platform to a greater degree both financially and in terms of its positioning in the system of HEIs as an intermediary with the region.

*The Peer Review Team recommends that greater emphasis be placed on integrating the efforts of affiliated universities of the Øresund University as it relates to the environmental objectives of the Øresund Region, through an enhanced environmental platform. The PRT feels more resources should be allocated to the Environment Platform to enable it to carry out its facilitation and networking effort and for the Øresund University to assist further by encouraging greater research numbers to contribute to the environment objectives of the Øresund Region through the Environment Platform. We feel the Øresund University needs to more fully explore the many possible ways that its affiliate members can pursue in building the environmental credentials of the Øresund Science Region, some of which have been highlighted at the beginning of the section. Such initiatives should be integrated into the normal business of the university and not be dependent on the receipt of additional specific-purpose exogenous funding, such as Interreg sources.*

## **5.5. Conclusions**

We agree with the conclusion of the first period of the Øresund Science Region experiment that “...the development of the cooperation in the Øresund Region up to now has been an elite project. It is however, crucial for the future to include non-governmental organisations and the social economy in the process. Promoting co-operation between organisations within sports, culture, youth organisations, etc are going to create a feeling of identity to the cross-border region among the population” (Interreg A after 2006, October 2003). It is now time to move away from an elitist view of regional development if it is to be sustainable over the long run, and recognise that the contribution of all the region’s endogenous assets, particularly human capital can be enhanced and realised beyond their current levels.

We feel the Self-Evaluation Report in this area of its inquiry is written as if to sell the concept of the Øresund Region to the rest of Europe and the world as a great place to come to rather than it being a self-diagnosis identifying strengths, weaknesses, opportunities and threats that could take the agenda to a higher level and be of assistance to local actors. The report does not ask the key question of what needs to be done in the social, cultural, and environmental agenda to take the region forward. We suggest this section be revised.

*In pursuing this next building phase the Peer Review Team recommends that the involvement of the HEIs in contributing to the region’s social, cultural and environmental objectives should not be dependent on additional exogenous specific-purpose funding availability. Rather, the achievement of these objectives should be a part of university core business of teaching, learning and research as opposed to being something additional or separate. They should naturally form part of the HEI and regional strategy goals and be pursued and evaluated with vigour.*

*The PRT is of the view that more support (financial and operational) needs to be provided to the Humanities and the Environmental platforms in their key role of being the intermediary in bringing the world of academia and the world of the Øresund Science Region closer together.*

## 6. THE CONTRIBUTION OF HEIS TO CAPACITY BUILDING FOR REGIONAL COOPERATION

### 6.1. Introduction

In this section we draw from the previous chapters a number of areas where we believe HEIs in the Øresund University can further build the development prospects of the Øresund Science Region. The progress to date has been impressive in establishing the fundamentals of cooperation for a unique cross-border economic region driven by the leadership of the HEI sector. Considerable progress has been made in a difficult agenda and we congratulate the Øresund University for their foresight and efforts. In this section we focus on areas in need of greater attention.

The structure of the science region and its participants is a collaborative, flexible and informal mechanism in comparison with more rigid and formal structures run by governments. In the PRT's view, these flexible structures will have an advantage in the evolving relationships nationally and regionally. Therefore, they deserve active support at all levels. In the same way, as it took many years for the idea of the fixed bridge link to mature, it will also take time for the concept of a collaborative cross-border region to mature.

As stated by the Øresund University itself, the next phase in the cross-border "experiment" will be to go beyond the collaborative structures and into the operation phase. We have identified some priority areas that need attention to ensure this second phase is focused in the right direction and built on a solid footing.

The priority areas for capacity-building we discuss are in two groups; general and specific. While there may be some overlap, the general areas address the integration concept as a whole while the specific areas are relevant to particular actors in the initiative such as the Øresund University, the constituent HEIs, governments, business, and students. In sections 6.2 to 6.10 the general observations about capacity building are highlighted and in sections 6.11 to 6.15 the specific matters are discussed.

### 6.2. Planning and evaluation – a strategic approach

The Øresund Committee compiled an Action Plan for 2005 to 2006 which specified three core objectives, viz: (1) Promoting economic growth; (2) Connecting the region; and (3) Promoting daily integration. It also specified five targets within these objectives. The document, *The ongoing development of the Øresund Region*, also summarises progress towards meeting these objectives and targets.

*The PRT recommends that an Action Plan for the Øresund Science Region needs to be prepared that specifies individual tasks, responsibilities, timelines, resources, and performance measures if it is to drive the agenda forward, be accountable and be comprehensively evaluated on a regular basis.* This is consistent with the requirements expected for example under the Swedish Higher Education Act where HEIs are meant to report every four years against their community engagement strategies and action plans. The PRT also recommends an evaluation of progress to date include input from a broad range of regional and HEI actors. In this way there can be learning and improvement from successful initiatives.

### **6.3. Audit of regional initiatives and HEI attributes**

Feedback provided to the PRT during its consultation was that the regional community did not know what the HEIs had to offer them in terms of expertise and information, thereby making potential regional project partnerships difficult to identify and progress.

*The PRT recommends an accessible knowledge audit of HEI expertise be completed as a useful tool in identifying where new partnerships could be built in the region. Similarly it appears that the HEIs had little knowledge on what opportunities exist in the region, and so an audit of regional projects would be also be useful.*

### **6.4. Changing HEI culture**

There is a culture in HEIs that suggests that HEIs are global players and that regional matters are of no interest, and that this is to some extent behind the hesitancy of academics to tackle research projects in the Øresund. The PRT is also of the opinion that there is no such thing as a “regional university”, but that an international presence can be achieved through the opportunities provided at the regional scale. This is particularly the case in the Øresund Region which has an emerging significant European and international presence. The PRT are of the opinion that this “culture” by many academics in HEIs is something that needs to be addressed head on.

Based on what we have seen being pursued by other universities around the world, and as highlighted in earlier chapters of this report, *we recommend for the HEIs, through their involvement in the Øresund University, to include regional engagement as an element in staff reward assessments (staff retention, tenure, promotion, etc.) along with the more traditional assessable areas of teaching and research. We also recommend Øresund regional engagement be a requirement to be addressed in HEI staff recruitment criteria.*

### **6.5. Processes of dialogue – reaching in and reaching out**

According to the SER, the Øresund Science Region concept has targeted the elite. In the next phase, the project should be grounded in the lives of the citizens of Øresund if it is to have long run resonance. Tacit knowledge pervasive at the regional scale is not confined to the elite. It needs to be harnessed to good effect. Such an approach will also be important for community building. The Øresund Science Region project needs to consider not just high level research and high tech industry, but also the design and delivery of services, culture and the environment, the plight of those at the margins of society, low and medium tech industry and other areas of education that are important in building stocks of human capital. The ØSR project needs to reach out to the community through a range of public access initiatives such as knowledge and science festivals, competitions and demonstrations in public places, public access lectures and so on.

The Swedish Higher Education Act (1997) states for example that universities should be cooperating with their surrounding communities to ensure they become a part of their research and teaching programmes, and that the university should be an important participant in regional growth agreements. A similar phrase is found in the Danish University Act (2003).

During its visit the PRT met with the Crossroads Copenhagen organisation. The organisation operates as a type of “marriage broker” to match up regional needs with university expertise that is outside the remit of the platforms. At the moment Crossroads is Denmark-specific, but the idea of brokering expertise in the myriad of areas outside the expertise and interests of the platforms along these lines across the whole of the Øresund may be worth pursuing.

*The PRT therefore recommends ØSR stakeholders explore the establishment of broker type services focussed on solving a range of problems in the community of immediate and short term concern across a plethora of issues not currently being dealt with by the established platforms.*

## **6.6. A focus on enterprising human capital, rather than entities – education pathways and innovation**

The PRT asked itself whether too many Øresund graduates wanted to be employees rather than employers? Sweden has many large companies compared to Denmark, and in Lund the team found an awareness of the need to change attitudes and culture of their graduates to one of being enterprising. Students shared this view, wanting more practical hands-on experience through internships. The PRT feels there is scope to introduce core course modules on creativity and enterprising that seeks to improve the employability and entrepreneurial skills of the graduates. This matter was raised in earlier chapters of this report.

*To facilitate greater student involvement in ØSR objectives the PRT recommends that graduates of the Øresund University should be granted an additional “honour” on their testamur, or similar recognition, which identifies the person as someone who has made a genuine contribution to the progress of the Øresund Region through their curricula studies.*

The PRT carried out interviews with the Innovation Bridge South in Lund, Ideon Science Park at Lund, Lund Innovation, MINC in Malmö, Seed Capital Denmark, the Chamber of Commerce for Southern Sweden, and the Confederation of Danish Industries. The PRT also met with the ØSR platform Nano Øresund as well as with BioInvent. The message from all of these consultations in relation to processes of innovation and entrepreneurship based on university research and teaching in the Øresund Science Region is that business formation and growth is still small.

Despite the considerable investment and involvement of HEIs in innovation centres (incubators and science parks) and the impact of national entrepreneurship schemes like Venture Cup there is still a low business formation growth outcome in the Øresund. A university researcher with a bright idea is not enough to generate much beyond a succession of small employment spin-off companies unless there are entrepreneurial skills added to the mix. The Copenhagen Business School and the University of Lund offer entrepreneurial undergraduate courses that involve a mix of classroom and practical industry work.

The Ideon science park reported that over the past 20 years, 500 companies with a total employment of 6000 and a survival rate of 70% have been generated. These figures are far in excess of other science parks and incubators in Øresund. The intermediary between university research and business formation through Ideon is Innovationsbron Syd (Innovation Bridge South). It believes there are three ingredients to university-based enterprise formation, viz: entrepreneurship courses for human capital, business support, and financial support.

*The PRT recommends that university-based innovation processes in the Øresund, to generate a greater number of sustainable business outcomes also need to build in “enterprising” human capital learning programmes alongside other support mechanisms such as business and financial support.*

## **6.7. Action beyond funding**

One of the observations of the PRT was that the key achievements in terms of building the cross-border region have been assisted by various EU funding programmes (e.g. Interreg). Our concern is the extent to which the various initiatives are sustainable without the benefit of this external funding and whether the concept should be seeking ways of building-in internal funding support mechanisms through innovative means, such as through a regional lottery scheme, internal Øresund regional engagement research funding programme supported by government and industry, and so on. This will be a challenge as

there are no specific arrangements in the higher education funding system to reward institutions for regional engagement, except through separate third party project-specific initiatives.

*The PRT recommends that ØU and ØSR leaders explore avenues for internal Øresund funding support for regional initiatives to reduce the dependency on the vagaries of EU and National Government funding.*

## **6.8. Marketing and promotion of the cross-border initiative**

Regional authorities could take a more active role in increasing the marketing and promotion of the Øresund idea beyond formal meetings and into the public fora within and beyond the region. The PRT also feels there is a need for joint badging by HEIs associated with the Øresund University. When a HEI markets itself outside the region, it should, in addition, identify itself as being part of the Øresund University and the Øresund Science Region. In the PRT's view, the growing significance of the Øresund Science Region on the international stage would make this a significant benefit for HEI marketing.

*The PRT recommends that there be more active marketing of the ØU and the ØSR at the grassroots level to boost awareness of their relevance in achieving outcomes of everyday concern.*

## **6.9. Some key trigger points**

### *Support for Platforms*

The Platforms have been created to give more precise attention to the key regional targets and to be a facilitative vehicle for the collaborative efforts of the HEIs, business, and the public sectors in the triple helix model approach to regional development (see box 3.3). The Medicon Valley platform is an entity of its own, the others are still "owned" by the Øresund University until they become viable enough to stand on their own.

During the PRT visit, seven platforms were interviewed (Medicon Valley, Øresund Environment, the Øresund Food Network, Diginet Øresund, Øresund IT Academy, Nano Øresund, and Humanities). An additional platform is Øresund Logistics. The PRT was also told there were prospects for platforms in less traditional areas such as leisure and entertainment as well as Design.

Currently Medicon Valley, the oldest and the largest of the platforms, has 275 members, a budget of DKK 9 million, and a PhD programme for 12 students. It concentrates in areas where there is a special regional competence (e.g. Diabetes, Bladder, and Alzheimer's disease). Medicon Valley has been in operation since 1997 as a cooperative project between the Universities of Lund and Copenhagen. The platform began with Interreg funding, but now relies on member subscriptions and competitive grants. More than 70% of Medicon Valley activity occurs on the Denmark side. Some large Danish-based corporations like Novo Nordisk and Lundbeck are involved in Medicon Valley.

The other platforms are much more recent and have limited resources with only a few staff. The Food Network seems recently to have made the switch from Interreg to other funding sources successfully.

The Humanities Platform is differently organised to the other platforms which sit outside the formal university structure. The Humanities Platform is a partnership of the relevant faculties working in the fields of culture in the Universities of Copenhagen, Roskilde, Lund and Malmö. They are just beginning to target their collaborative interests to areas of importance to the Øresund Science Region, e.g. the Living Lab project hopes to identify how local residents utilise new media. Difficulties with the Humanities Platform model are the differences in structures and approaches to humanities in the various partner

institutions and the constant pressure for faculties to compete for rankings rather than collaborate under existing competitive funding models in the humanities disciplines.

If the platforms are to function optimally as intermediaries, they should be more systematically supported financially and in relation to their integration into the learning and research programmes of the Øresund University constituent HEIs. Platforms suggested they were only guaranteed funding from the University on an annual basis and in some cases were competing with HEIs for project funding. They would prefer periods of three years funding from Øresund University, and the PRT would agree with this view on the basis of an agreed and detailed strategic plan. Each of the platforms should have a mission, a business plan, and a strategic plan for the next five years. The platforms are the critical glue that connects the HEIs with the Science Region community in key targeted areas. Newer platforms should be able to learn from the older ones (*e.g.* Medicon Valley) through regular fora at the board level. Such an approach was supported by Professor Nielsen, then Chair of the ØSR. There may be a tried and true model for the development of the platforms.

Our concern with the platforms is that in most cases their genesis began with Interreg funding to enable start up. They now need support to enable them to build their sustainability without a reliance on such external funding. Also, membership of the platform seems to be those from the outwardly innovative and entrepreneurial. We would suggest that the platforms seek a wider involvement to capture interest and expertise from those enterprises that are less prominent.

*Therefore, the PRT recommends there be greater support for the platforms to become viable and sustainable entities on the basis of detailed action and business plans that enable the platforms to involve a wider clientele within their areas of specialisation.*

#### *Student bridge fares*

Students were concerned about two matters in relation to integration between the Øresund University and the Øresund Science Region: the cost of travel across the bridge, and the lack of effective student internships with business.

The cost of student mobility between HEIs in the Øresund University was raised in several discussions with students and others the PRT met with. Students felt that they would be more mobile across institutions with a cheaper fare. Students were of the view that travel across the bridge should be no more expensive (road and rail) than for the same distance on either side of the Strait. The PRT have suggested there might be an Øresund University student card that enables a discounted fare to enable students to take advantage of courses being offered in different institutions without the additional burden of a high transport fare. The PRT understands there have been some discussions with the railway authority on the cost of student travel tickets and that they are not interested in negotiating a lower price for student travel because the trains are at full capacity. An alternative is for the HEIs to negotiate an agreement with bus companies for a competitive rate.

*The PRT recommends there be further investigation into the prospect of some kind of student card that enables a discounted fare for students travelling across the region to take advantage of courses being offered in different institutions.*

#### *Greater integration of courses and internships*

Following on from the above issue, the PRT believes there can be greater integration among courses to reduce the degree of duplication and overlap and to ensure students are provided with access to the best teaching and learning across the whole of the Øresund. It would also create economies in the individual institutions. This is consistent with national higher education policy in both countries. The Asian Studies

course was one that appeared to offer a model way forward, in association with more use being made of the Øresund gateway web portal.

Students also felt there needed to be greater opportunities for internships with business in an integrated Øresund University engaging with its Øresund Science Region. There should also be festivals, competitions and demonstrations that show in practical ways how the HEIs can have relevance in the every day needs of business.

*The PRT recommends there be exploration into achieving greater course synthesis across ØU HEIs to improve economies by reducing duplication and overlap and to provide a richer course selection for students. The PRT further recommends that programmes include greater student exposure to internships in the ØSR.*

#### **6.10. Greater recognition of social, cultural and environmental aspects**

As stated in the previous chapter, we are not convinced there is enough emphasis being placed on cultural, social and environmental aspects associated with the development of the Øresund region. These are activities HEIs can play a significant role in at the regional scale. The SER does not give much detail on what initiatives are being undertaken in this area and the peer review visit agenda also did not deal much with such issues.

*The PRT recommends that HEIs be encouraged to explore social, cultural and environmental matters in greater depth through their teaching, learning and research, as well as through their facilities and maintenance programmes. We believe the rapid growth in the Øresund makes it a useful laboratory to develop methodologies and solutions for other regions that are undergoing rapid growth. We recommend that these sections of the SER be reconsidered with a view to highlighting “good practice” initiatives and identifying opportunities for new areas of activity.*

#### **6.11. Øresund University**

The Peer Review Team noted from its review visit, as discussed in the earlier chapters, five integration challenges for the Øresund University for its next phase of development. These were:

- Better division of labour between the HEIs. This involves (1) rationalisation of teaching programmes and courses to ensure students have access to the best offerings without duplication; (2) greater collaboration between researchers on projects that are relevant to the future development of the Øresund Science Region; and (3) cooperation between science parks across the Strait.
- More crosslinks between the platforms around matters of direct importance to the development of the Øresund Science Region.
- Strengthening meaningful and productive links between the Øresund University and its affiliates and small business in the region.
- An increased emphasis on social, cultural and environmental aspects of the region’s development.

#### **6.12. HEIs**

The PRT’s sense is that the concept of the Øresund University is not fully embedded in the working arrangements of each of its HEI affiliates. There is a distinct gap between the attitude of key leadership in each HEI towards the Øresund University and those staff at the operational level. This was clear from several visits undertaken by the PRT. The PRT understands that the mission statements and business plans

of HEIs in the Øresund partnership do not specify the need for collaboration within the Øresund University context.

Apart from including specific reference to the Øresund University and the Oresund Science Region in the mission of each partner HEI, another simple recognition of the association would be to include a distinct reference to contributions and achievements of the HEI in the context of the Øresund University in each HEI's annual report.

### **6.13. Governments**

The PRT felt that the Danish and Swedish national governments were too distant in their dealings with the Øresund University and the development of the Øresund Science Region. The PRT felt there may be a need for some formal intergovernmental agreement recognising the region as something special (an economic development zone). The potential global significance of the concept of the region is such as to not be ignored by domestic governance and there was a need to more explicitly include the region and the university in policy design and programme delivery arrangements.

Our suggestion is that a review of national government policies and programmes be undertaken with a view to identifying those areas that currently impede the future development of the region through their inconsistency (*e.g.* fiscal and regulatory arrangements), to identify ways the Øresund experiment can be used to generate wider national benefit, and to ensure that Danish and Swedish policy are not working in opposite directions as it relates to Øresund.

The PRT believes that planning authorities at the regional level should engage more systematically with the Øresund Region platforms, particularly those associated with IT, Design and the Environment, in the same way as the Humanities Platform is engaged in the Ørestad Living laboratory.

*The PRT recommends that there be an intergovernmental agreement (heads of government) recognising the ØSR as a special zone of collaborative activity. Associated with this there should be a review of existing National Government policies and programmes to ensure they are not inhibiting the region through contradictory approaches in key areas of importance for the ØSR's development prospects. The PRT also recommends that the ØU and the ØSR be explored as means for the better delivery of certain national government policy and programme areas through a negotiated national/ regional agreement.*

Further to this, the PRT suggests the Øresund Region project be considered as a policy mechanism to achieve greater regional balance nationally through the stimulation of positive regional spill over effects and the management of negative regional backwash effects.

### **6.14. Business**

The PRT met with several business associations in the region, including the Confederation of Danish Industries and the Chamber of Commerce and Industry of South Sweden. The PRT feels there could be more in the way of integration across the border and across different industry types for the ØSR experiment to be successful. The platforms play this integration role around key region objectives to some extent, however the PRT feels there will be a role for the business associations to be proactive within the ØSR framework and extend the benefits of engaging with the region, and its objectives of linking with innovation and enterprise, to a range of less obvious players such as SMEs and low and medium technology business enterprises which should not be left out of the learning agenda.

*The PRT therefore recommends business associations on both sides of the Strait explore opportunities for extending processes of learning and entrepreneurship through the ØU and ØSR, in consultation with*

*the platforms, to a wider spectrum of SMEs and low and medium tech business members that either do not know about the ØSR concept or have a hesitancy about becoming closely involved with it.*

### **6.15. Students**

Cheaper travel across the fixed link with an Øresund card has already been mentioned, as has the question of business internships to increase the human capital value of Øresund graduates to the regional labour market, and a rationalisation of courses to deliver a better product based on specialisation among HEIs. Other areas that were raised by students included the need for scholarships and prizes for research and projects that are undertaken and based around Øresund issues of importance, the creation of an Øresund Press where students could publish their graduate work related to issues of importance in the Øresund Region, and the use of videoconferencing for some common courses to overcome the cost and time of moving between campuses in an integrated course/programme environment in the Øresund University. The PRT feels these ideas are worth exploring.

## 7. CONCLUSIONS AND RECOMMENDATIONS

In this concluding chapter we draw together the recommendations embedded in the earlier chapters. They are not summative judgements and hence should not be read in isolation from the argument in the earlier chapters. Our key conclusions deal with building stronger integration and engagement amongst key agencies and stakeholders in the cross-border region as a basis for an ongoing programme for the leadership of the ØU and ØSR establishing a platform for moving to the next exciting phase of operation.

### 7.1. Building integration for engagement in the Øresund Science Region

The PRT is in no doubt that the ØU and the ØSR are on the brink of successfully establishing a new approach to achieving competitive regional development outcomes in a global environment. It is innovative on a number of fronts. First, it is innovative because it is cross-border initiative.<sup>3</sup>

The Øresund experiment is also unique because it is being driven from the bottom-up, rather than being prescribed from the top-down. This is important, as many so-called bottom-up policy approaches to regional development involve a high degree of top-down government control. In other words, governments have devolved responsibility (in the form of “mutual obligations”) but have not devolved authority to regional governance. The PRT feels the case of the Øresund is different as it exhibits a definite “hands off” approach by government. While there may be certain pragmatic and policy reasons for this “hands off” approach, we feel it is appropriate in this circumstance of a cross-border approach. This does not, however, obviate the need for support from the governments across the region, as suggested in earlier chapters.

The second innovative characteristic of the Øresund model for regional development is that HE is taking the lead role. This is also important, vis a vis other institutions, as universities operate with more local autonomy than other institutions, including other educational institutions. HEIs may not always use this autonomy to realise local objectives, but in the case of the Øresund Region there is a commitment to do so. In our view this is a significant characteristic that distinguishes the ØSR from other examples of regional development.

The third innovative characteristic is that the Øresund University is attempting to be a coordinating mechanism for a range of different HEIs in the Øresund Science Region, with obvious economy advantages in operation, research and teaching programmes. This is a substantial achievement in a higher education policy environment that advocates and provides funding on the basis of international competitiveness and provides no financial support for regional engagement.

The fourth innovative characteristic is the creation and support of the platforms as an intermediary between higher education and business and other stakeholders in the Øresund Science Region. This is a significant innovation in creating effective and meaningful dialogue between HEIs and regional stakeholders.

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3. We recognise it is not the only cross-border regional development initiative in Europe or elsewhere as we have noted those in Maas Rijn (Belgium, Germany and the Netherlands), Oberrhein (areas in France, Germany and Switzerland), and region PED (Luxemburg and areas in Belgium and France).

As a package, these innovations present a significant new model for driving regional outcomes on a global scale. The Peer Review Team commends the efforts of the Øresund University and the Øresund Science Region in achieving this progress.

While a good start has been made on all of these connections, there is still however some way to go before these and other necessary links are firmly embedded. In this regard the PRT, from the earlier chapters, makes the following collated recommendations for consideration (in several cases the same recommendation will occur in more than one category).

## **7.2. Collation of recommendations**

### *General*

The Peer Review Team commends the work of the Board of the Øresund Science Region Steering Committee for bringing together the higher education institutions that make up the Øresund University and other key stakeholders of the Øresund Science Region to carry out a collective cross-border dialogue about regional development. The Peer Review Team was impressed with the leadership shown by the Øresund University to be the facilitator in the cross-border initiative, demonstrating that collaboration at the regional scale can be effective in an intensely competitive environment.

The Peer Review Team recommends the continuation of these arrangements during the formative period of this significant demonstration of cross-border cooperation. The Peer Review Team was convinced during the review that the Øresund Science region was fundamentally more than a collective branding exercise taking advantage of the new fixed link and that the region had the potential to be a significant global motor built on science, innovation and enterprise. The Team was of the view that this leadership could be a demonstration to other universities internationally as to the significant role HEIs can play in the collaborative processes required for effective cross-national regional development globally. [Chapter 1]

### *Planning and evaluation*

The PRT recommends that an Action Plan for the Øresund Science Region needs to be prepared specifying individual tasks, responsibilities, timelines, resources, and performance measures if it is to drive the agenda forward, be accountable and be comprehensively evaluated on a regular basis. [Chapter 6]

The PRT recommends that an accessible knowledge audit of HEI expertise and region's projects be completed as a tool in identifying where new partnerships could be built in the region. [Chapter 6]

### *Integration within the Øresund University and its programmes*

The PRT recommends that Danish institutions that want to teach entrepreneurship and increase their relations to industry and business, should study what has been done in Lund at Ideon, which offers a wide diversity of services and supporting infrastructure to potential and actual university educated entrepreneurs. [Chapter 3]

The PRT recommends incentives be provided to faculties to become engaged with the idea of the Øresund region. The PRT further recommends HEIs include regional engagement as an element in staff reward assessments (staff retention, tenure, promotion, etc.) along with the more traditional assessable areas of teaching and research. We also recommend Øresund regional engagement be a requirement to be addressed in HEI staff recruitment criteria. [Chapters 3 and 4]

The PRT recommends there be exploration into achieving greater course synthesis across ØU HEIs in order to improve economies by reducing duplication and overlap and to provide a richer course selection for students. The PRT further recommends that programmes include greater student exposure to internships in the ØSR. [Chapters 4 and 6]

The PRT recommends that the HEIs should use the Øresund science cross-border region as a laboratory for various aspects of international interaction. [Chapter 4]

The PRT recommends that greater cross-fertilisation is enhanced through collaboration at faculty and department level around platform themes and through learning from each others “good practice”. [Chapter 4]

To facilitate greater student involvement in ØSR objectives, the PRT recommends that graduates of the Øresund University be granted an additional “honour” on their *testamur* (certificate of passing university examination), and perhaps an additional stripe on their graduating gown or similar, that identifies the person as someone who has made a genuine contribution to the progress of the Øresund Region through their studies. [Chapter 6]

### ***7.2.1. Integration within the Øresund Science Region***

The PRT recommends governments in both Denmark and Sweden further support R&D-investments in business organisations to increase co-operation opportunities between the private business sector and universities for more basic, long term research. Furthermore, the PRT recommends stimulation of intensified co-operation between SMEs in order to generate greater R&D outsourcing capacity. [Chapter 3]

The PRT recommends the ØU and the ØSR more fully investigate how to overcome the barrier of lack of knowledge absorption or take-up capacity of SMEs and systematically develop new ideas for solving this basic problem. [Chapter 3]

ØSR stakeholders explore the establishment of broker type services focussed on solving a range of problems in the community of immediate and short term concern across a plethora of issues not currently being dealt with by the established platforms. [Chapter 6]

#### *Support for the platforms*

In recognition that the Øresund Science Region initiative might develop into a new model for technology transfer, the PRT recommends the authorities more fully support the Øresund Science Region approach of using the platforms as a linking device between HEIs and society. [Chapters 2, 3 and 4]

The PRT recommends that cross-linkage between the different platforms should be encouraged. [Chapters 3 and 4]

The PRT recommends there be greater support for the platforms to become viable and sustainable entities on the basis of detailed action and business plans that enable the platforms to involve a wider clientele within their areas of specialisation. [Chapters 3, 4 and 5].

#### *Support for students*

The PRT recommends there be exploration into achieving greater course synthesis across ØU HEIs to improve economies by reducing duplication and overlap and to provide a richer course selection for students. The PRT further recommends that programmes include greater student exposure to internships in the ØSR. [Chapter 6]

The PRT recommends assistance to enhancing student mobility across Øresund University affiliate campuses. [Chapter 6]

The PRT recommends there be further investigation into the prospect of some kind of student card that enables a discounted fare for students travelling across the region to take advantage of courses being offered in different institutions. [Chapter 6]

In order to facilitate greater student involvement in ØSR objectives the PRT recommends that graduates of the Øresund University be granted an additional “honour” on their *testamur* (certificate of passing university examination), which identifies the person as someone who has made a genuine contribution to the progress of the Øresund Region through their studies. [Chapter 6]

The PRT recommends that graduate students are supported to participate in teaching and or research projects in Øresund related topics. [Chapter 4]

#### *A focus on enterprising human capital*

In order to generate a greater number of sustainable business outcomes the PRT recommends that university-based innovation processes in the Oresund need to build-in “enterprising” human capital learning programmes alongside other support mechanisms such as business and financial support. [Chapter 5]

#### *A focus on cultural, social and environmental development*

The PRT recommends that HEIs be encouraged to explore social, cultural and environmental matters in greater depth through their teaching, learning and research, as well as through their facilities and maintenance programmes. [Chapter 5]

The PRT recommends that the involvement of the HEIs in contributing to the region’s social, cultural and environmental objectives should not be dependent on additional exogenous specific-purpose funding availability. Rather, the achievement of these objectives should be a part of university core business of teaching, learning and research as opposed to being something additional or separate. They should form part of the HEI and regional strategy goals and be pursued and evaluated with vigour. [Chapter 5]

The PRT recommends that co-operation is built between HEIs and cultural institutions throughout the Øresund region. [Chapter 5]

The PRT recommends that the Humanities Platform be given greater encouragement within the Øresund University framework to build integration across affiliate HEIs and to carry out regular dialogue across Øresund society to tackle some of the key social areas in a concerted way. [Chapter 5]

The PRT recommends that the ØSR works towards building a more integrated society across the Strait through cultural exchange and partnering among existing cultural institutions and programmes and addresses issues of cultural harmonisation among endogenous minority groups. [Chapter 5]

The PRT recommends that greater emphasis be placed on integrating the efforts of affiliated universities of the Øresund University as it relates to the environmental objectives of the Øresund Science Region, through an enhanced environmental platform. More resources should be allocated to the Environment Platform to enable it to carry out its facilitation and networking effort and for the Øresund University to assist further by encouraging greater research numbers to contribute to the environment objectives of the Øresund Region through the Environment Platform. The Øresund University needs to explore the possible ways that its affiliate members can pursue in building the environmental credentials of

the Øresund Science Region. Such initiatives should be integrated into the normal business of the University and not be dependent on the receipt of additional specific-purpose exogenous funding sources. [Chapter 5]

The PRT recommends that more support (financial and operational) needs to be provided to the Humanities and the Environmental platforms in their key role of being the intermediary in bringing the world of academia and the world of the Øresund Science Region closer together. [Chapter 5]

#### *Overcoming the cost impediments for students and staff*

The PRT recommends that travel costs must be lowered. [Chapter 6]

#### *Overcoming the reliance on external funding*

The PRT recommends that ØU and ØSR leaders explore avenues for internal Øresund funding support for regional initiatives to reduce the dependency on the vagaries of EU and National Government funding. [Chapter 6]

#### *Marketing and promotion*

The PRT recommends that there be more active marketing of the ØU and the ØSR at the grassroots level to boost awareness of their relevance in achieving outcomes of everyday concern. [Chapter 6]

#### *The role of all spheres of government*

The PRT recommends governments in both Denmark and Sweden further support R&D investments in business organisations in such a way to increase co-operation opportunities between the private business sector and universities for more basic, long term research. Furthermore, the PRT recommends stimulation of intensified co-operation between SMEs in order to generate greater R&D outsourcing capacity. [Chapter 3]

The PRT recommends that there be an intergovernmental agreement recognising the ØSR as a special zone of collaborative activity. Associated with this there should be a review of existing National Government policies and programmes to ensure they are not inhibiting the region through contradictory approaches in key areas of importance for the ØSR's development prospects. The PRT also recommends that the ØU and the ØSR be explored as a means for the better delivery of certain national government policy and programme areas through a negotiated national/regional agreement. [Chapter 6]

#### *Business*

The PRT recommends the ØU and the ØSR investigate how to overcome the barrier of lack of knowledge absorption or take-up capacity of SMEs and systematically develop new ideas for solving this basic problem. [Chapter 3]

The PRT recommends business associations on both sides of the Strait explore opportunities for extending processes of learning and entrepreneurship through the ØU and ØSR, in consultation with the platforms, to a wider spectrum of SME and low and medium tech business members that either do not know about the ØSR concept or have a hesitancy about becoming closely involved with it. [Chapter 6]

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## APPENDIX 1. THE OECD REVIEW TEAM

### Lead evaluator

**Dr Steve Garlick** has more than twenty years experience in the field of regional development as a policy developer and ministerial adviser, programme manager, regional practitioner, and researcher. He was a senior executive in the Australian Government for around twelve years in regional development, industry and local government. He holds Masters and PhD degrees in economics. He is currently Professor of Regional Engagement at the University of Sunshine Coast and an adjunct professor at Swinburne University of Technology in Melbourne. His research interests are in the fields of regional and community development, higher education, and institutional performance assessment. For the last eight years Prof. Garlick has researched and published particularly in the area of universities and regions. He also runs a research consultancy business. He also has a keen interest in ethics and in his spare time is the president of a large Australian native animal caring organisation and, with his wife, cares for injured and orphaned wildlife on their property near Canberra.

### International Experts

Dr. **Peter Karl Kresl** is Charles P. Vaughan Chair in Economics and Professor of International Relations at Bucknell University, Pennsylvania, where he joined the faculty in 1969. His Ph.D. in economics is from the University of Texas (Austin). Prof. Kresl has been visiting professor or researcher at McGill University, The University of Vermont, The Norwegian School of Economics and the University of Lund. Prof. Kresl's research and teaching interests are in Canadian-American economic relations, the economics of European integration, urban competitiveness, culture polity and international economic policy. His published books include the following: *The Urban Economy and Regional Trade Liberalisation*, *France Encounters Globalisation*, *The Urban Response to Internationalisation* and *Seen from the South*, and he is currently working on *The Cities Take Charge*, a study of economic strategic planning experiences in the EU. He has published dozens of articles in journals such as *Urban Studies*, *The American Review of Canadian Studies*, *International Organisation*, *The Journal of European Integration* and *Economía, Sociedad y Territorio*. Prof. Kresl has served as President of the Association for Canadian Studies in the US and as Executive Director of the International Council for Canadian Studies.

Dr. **Peter Vaessen** is a contract researcher at the Radboud University Nijmegen, department Nijmegen School of Management. At the Nijmegen University he also obtained his doctoral degree, in the field of Economic Geography with a thesis on small business growth in contrasting environments. Then he moved to the University of Utrecht, Department of Sociology, conducting basic research on trust relations between organisations. After four years he returned to the Radboud University of Nijmegen. His recent work elaborates on these two fields of knowledge. Since 1998 he has been measuring and analysing the interconnections and flows between the Nijmegen University and the external environment. Apart from research on external linkages of the Nijmegen University he carries out research on new and small businesses. He takes a special interest in the relations between new businesses and their incubator organisations, including, among others, university spin out companies. Among his research interest fields are also the relations within organisations and management teams.

### Team Co-ordinator

**Jan Karlsson** was analyst at the OECD programme on Institutional Management in Higher Education (IMHE) until his retirement in February 2006. After studying for a year a half in France and the US, he was trained as an economist specialising in Organisational theory at Lund University, Sweden. Before joining the OECD, he worked in Denmark at first as an administrator at the Secretariat of the Nordic Council of Ministers. He then held administrative positions at The Copenhagen Business School and at the University of Copenhagen, where he was head of the International Office.

## **APPENDIX 2. REGIONAL COORDINATOR, REGIONAL STEERING COMMITTEE, AND THE AUTHORS OF THE REGIONAL SELF-EVALUATION REPORT**

### **Regional Coordinator**

- Mr Bengt Streijffert, Director, Øresund University and Øresund Science Region

### **Regional Steering Committee**

- Professor Linda Nielsen, vice-chancellor, University of Copenhagen & chair, Øresund Science Region
- Professor Göran Bexell, vice-chancellor, Lund University & chair, Øresund University
- Professor Henrik Toft Jensen, vice-chancellor, Roskilde University
- Professor Lennart Olausson, vice-chancellor, Malmö University
- Mr Mads Lebech, mayor of Frederiksberg and chair, Greater Copenhagen Authority
- Ms Christine Axelsson, regionråd, Region Skåne
- Ms Lena Eriksson, Ministry of Education and Culture (Sweden)
- Mr Janus Krarup, director, National Agency for Enterprise and Construction (Denmark)
- Mr Bengt Mårtensson, director, ARLA Foods
- Mr Mikael Karlsson, Axis Communications
- Mr Mikael Ørum, General Partner, Ventac partners

### **Regional Working Group**

- Mr Bengt Streijffert, Director, Øresund University and Øresund Science Region
- Professor Christian Wichmann Matthiessen, Professor, Department of Geography, University of Copenhagen
- Professor Gunnar Törnqvist, Professor, Department of Social and Economic Geography, Lund University
- Mr Thomas Wohlert, Head of Secretariat, Greater Copenhagen Authority
- Mr Jan Lindelöf, Project Developer and Project Manager, Region Skåne
- Mr Henrik Andersson, Chamber of Commerce and Industry of Southern Sweden
- Mr Flemming G. Jørgensen, Chief Analyst, Confederation of Danish Industries
- Mr Carl-Erik Holmqvist, Confederation of Swedish Industries
- Mr Torben Aaberg, Deputy Director, Øresund Committee.

**APPENDIX 3. PROGRAMME FOR REGIONAL VISIT TO THE ØRESUND REGION:  
4-10 DECEMBER 2005**

**Sunday 4 December**

OECD Peer Review Team private meeting

**Monday 5 December**

Venue Øresund University at Ørestad

9.00 – 10.00 am **Øresund University Staff**  
Meet with Bengt Streijffert and Christian Michelsen on the Self-Evaluation Report, the programme etc.

10.00 – 11.45 am **Panel of academics**  
Professor Christian Wichmann Matthiessen, University of Copenhagen (member of the working group)  
Professor Gunnar Törnqvist, Lund University (member of the working group)  
Anders Olshov, CEO, Øresund Institute (an economist with specific knowledge on the economy in the Øresund Region).

11.45 am – 12.45 pm **Tour of Ørestad**  
One of the largest ongoing town-development projects in Europe (on foot).

1.30 – 2.15 pm **Øresund University & Øresund Science Region**  
Bengt Streijffert

2.15 – 3.00 pm **Medicon Valley Academy (Øresund Science Region Platform)**  
Stig Jørgensen, CEO of Medicon Valley Academy (MVA)

3.00 – 5.00 pm **Øresund Science Region and its platforms**  
Jørgen Holm, Øresund Food  
Jacob Juul, Øresund Environment  
Peter Höjerback, Øresund IT Academy  
Henriette Moos, Diginet Øresund  
Stig Jørgensen, Medicon Valley Academy

**Tuesday 6 December**

Venue University of Copenhagen, Copenhagen Business School & Malmö University

9.00-10.00 am	<b>Faculty of Humanities, University of Copenhagen</b> John Kuhlmann Madsen, Dean
10.15 – 11.00 am	<b>Crossroads Copenhagen</b> Pouline Middleton, Crossroads Copenhagen Trine Middelboe, Crossroads Copenhagen
11.30 – 1.00 pm	<b>Copenhagen Business School</b> Deputy President, Bente Kristensen Dean Jens Aaris Thisted Professor Peter Maskell Assistant professor Christian Vintergaard
2.00 – 2.45 pm	<b>Malmö University and its regional role</b> Lennart Olausson, vice-chancellor
3.00 – 4.00 pm	<b>From worn-down industrial areas to residential estates and HEI – Malmö city tour</b> Christer Persson, City of Malmö
4.00 – 4.45 pm	<b>Malmö Incubator</b> Christer Persson, City of Malmö
5.00 – 6.00 pm	<b>Malmö University – meet with vice-chancellors on Øresund University</b>
6.30 – 8.00 pm	<b>Dinner in Malmö with vice-chancellors, allowing for informal discussions.</b>

### **Wednesday 7 December**

Venue	The city of Lund
9.30 – 10.00 am	<b>Innovationsbron Syd</b> Sven-Thore Holm, Innovationsbron Syd
10.00 – 10.30 am	<b>Ideon Innovation</b> Hans Möller, Ideon Innovation
10.45 – 11.15 am	<b>Lund University Innovation</b> Sylvén Troedsson, LU Innovation AB.
11.15 – 11.45 am	<b>Biotech/lifesciences industry</b> Cristina Glad, Executive VP of BioInvent
12.30 – 1.30 pm	<b>Lund University and its regional role</b> Göran Bexell, vice-chancellor of Lund University
2.00 – 3.00 pm	<b>The Students' Association in the Øresund Region</b> Elisabet Månsson, Lund University Erik Stenberg, Lund University Stefan K. Madsen, Copenhagen Business School

3.00 – 4.00 pm	<b>Urban planning in Lund</b> Anders Tingvar, head of urban planning department, city of Lund
<b>Thursday 8 December</b>	
Venue	Confederation of Danish Industries (morning) & Technical University of Denmark, DTU (afternoon).
9.00 – 10.00 am	<b>University of Copenhagen and its regional role</b> Linda Nielsen, vice-chancellor of KU
10.30 – 11.15 am	<b>The Chamber of Commerce of Industry of South Sweden</b> Henrik Andersson, The Chamber of Commerce of Industry of South Sweden.
11.15 – 12.30 pm	<b>Business and industry in the Øresund Region</b> Flemming Jørgensen, The Confederation of Danish Industries (DI)/Øresund Business Council
1.15 pm – 2.00 pm	<b>DTU Innovation</b> Jakob Steen Jensen, DTU Innovation
2.30 – 3.45 pm	<b>Nano-DTU</b> Pieter Tellemann, Nano-DTU
<b>Friday 9 December</b>	
Venue	Øresund University at Ørestad
9.00 – 10.15 am	<b>Øresund Committee/Interreg</b> Torben Aaberg, Deputy Director, Øresund Committee
10.15 – 11.30 am	<b>Branding and marketing of the Øresund Region</b> O. Rolf Larssen, Copenhagen Capacity Peter Hansen, Wonderful Copenhagen Semmy Rülff, Position Skåne Cecilia Gyllenkrok, Øresund Network
11.30 – 12.30 am	<b>Regional policies etc.</b> Kristian Joensen, The Greater Copenhagen Authority (HUR)
2.00 – 3.00 pm	<b>Regional policies etc.</b> Mr. Ingvar Wiberg, Region Skåne Mr. Hans Henecke, Region Skåne
3.00 – 4.30 pm	<b>Feedback from the OECD Peer Review Team</b>
<b>Saturday 10 December</b>	
	<b>The OECD Peer Review Team private meeting</b>