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Regional Innovation Monitor

Regional Innovation Report (Stockholm)

To the European Commission Enterprise and Industry Directorate-General Directorate D – Industrial Innovation and Mobility Industries

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PREFACE

The Regional Innovation Monitor (RIM)¹ is an initiative of the European Commission's Directorate General for Enterprise and Industry, which has the objective to describe and analyze innovation policy trends across EU regions. RIM analysis is based on methodologies developed in the context of the INNO-Policy Trendchart which covers innovation policies at national level as part of the PRO INNO Europe initiative.

The overarching objective of this project is to enhance the competitiveness of European regions through increasing the effectiveness of their innovation policies and strategies. The specific objective of the RIM is to enhance the scope and quality of policy assessment by providing policy-makers, other innovation stakeholders with the analytical framework and tools for evaluating the strengths and weaknesses of regional policies and regional innovation systems.

RIM covers EU-20 Member States: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden and the United Kingdom.

This means that RIM will not concentrate on Member States where the Nomenclature of territorial units for statistics NUTS 1 and 2 levels are identical with the entire country (Estonia, Latvia, and Lithuania), Malta which only has NUTS 3 regions, Slovenia which has a national innovation policy or Cyprus and Luxembourg which are countries without NUTS regions.

The main aim of 50 regional reports is to provide a description and analysis of contemporary developments of regional innovation policy, taking into account the specific context of the region as well as general trends. All regional innovation reports are produced in a standardized way using a common methodological and conceptual framework, in order to allow for horizontal analysis, with a view to preparing the Annual EU Regional Innovation Monitor reports.

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¹ <u>http://www.rim-europa.eu</u>



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Executive Summary

1. Introduction: Main recent trends in the Regional Innovation System

With approximately 1.9 million inhabitants and 23% of the national population, Stockholm is the dominant city region in Sweden. Between 1997 and 2007, employment increased by roughly 20%, representing almost 30% of the national employment growth.

According to the "European Regional Innovation Scoreboard" in 2006, Stockholm was the top region of Europe in innovation performance. The superior figures for tertiary education (23% of the population) and numbers of researchers (27% of the national total) can be explained by the existence of several major universities within the region, along with a number of specialized university colleges. There is also a high percentage of knowledge intensive business services (KIBS) in local employment (roughly 25%).

In Stockholm, gross expenditure on R&D (GERD) as a ratio of GDP is high (4.3%), particularly in the private sector. This may be explained by the presence of several research-intensive companies, particularly in the sectors of ICT (Ericsson, IBM Svenska and Telia-Sonera) and life sciences (AstraZenec and Pfizer). The high count of patents can be traced to the strong ICT and life sciences clusters present in the region.

2. Major innovation challenges and policy responses

While Stockholm is performing well in a comparative perspective there is still reason to believe that the region does not perform according to its potential. There is no regional innovation strategy or policy in Stockholm and no actor is responsible for innovation coordination. Still, there is a broad range of support measures contributing to the development of the regional innovation system. In most cases, these measures have a broader objective than innovation in itself and are seeking to promote regional growth and development by all means possible. Many support measures are undertaken in cooperation with local, national or international actors.

Challenge 1: Regional coordination

The key challenge is the need for continued development of the regional governance system. Stockholm has a broad competence base for innovation, including a highly skilled labor force and numerous innovative actors from different sectors. However, since there are many strong, independent actors, and no public agency or authority with a mandate to coordinate innovation activities, cooperation has traditionally been limited.

However, recently, several forums for cooperation on regional development have been established. Yet there is still need for improvement. The recently initiated project Innovation Power Stockholm may provide a platform for increased coordination of innovation activities between different forums and stakeholders, and a basis for developing a regional innovation strategy.

Challenge 2: Broader innovation base

Stockholm has a strong innovation structure, based on academic and scientific research, particularly in the ICT and life science sectors. However, the high levels of business R&D and patents in the region are to a large extent traced back to just a limited number of large, global companies, such as Ericsson and AstraZenca, which makes the Stockholm region vulnerable to decisions taken elsewhere. Thus, an important challenge for the Stockholm region is to broaden the base of innovation activities, for example in services and the public sector.

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There is already evidence of efforts to broaden the region's innovation base, with several recent initiatives being launched targeting innovation in the services sector. In Stockholm, the service sector, and particularly the knowledge intensive services and the creative sectors, constitute a larger share of the regional economy than is the case in other Swedish regions, which might provide a future opportunity for Stockholm. There have also been initiatives to increase public innovation in the healthcare sector.

Challenge 3: Stimulate human knowledge dynamics

The knowledge created in the Stockholm region does not wholly correspond to the need for business development and innovation. To improve this, a dialogue between the private sector and regional knowledge providers is required. This may become easier in the future, due to the increased focus on development of cluster initiatives in prioritized sectors.

There is also the question of how to attract skills and how to keep skilled individuals in the region. Even if various initiatives to market Stockholm to foreign investors and skilled people have been initiated, it is still a challenge to address the problem of supplying housing and infrastructure, which may otherwise reduce the attractiveness of the region.

3. Innovation policy governance

The overall level of institutional autonomy for regional innovation policy in Stockholm is at a medium level. In Sweden, the national level of government has the main responsibility for funding of research and higher education, while responsibility for basic civil services is administrated at the municipal level. Besides, as a capital region, Stockholm is characterized by a complex institutional setting, with a large number of rather independent actors.

Responsibility for regional development in Stockholm is shared between the County Administrative Board of Stockholm (Länsstyrelsen) and the Stockholm County Council (Landstinget). The County Administrative Board is the government body, responsible for developing a Regional Development Program (RUP). Their level of funding for regional development is low. The County Council is a politically elected regional organization, responsible for developing the Regional Development Plan for the County of Stockholm (RUFS), focusing on planning, regional (spatial) development and health care. During recent years, the two regional authorities have cooperated in the development of RUFS 2010, integrating the regional (business) development program (RUP). The process initiated a broad dialogue among many agents, including public as well as private stakeholders at the local and regional level.

In 2007, a national strategy for competitiveness, entrepreneurship and employment 2007-2013 was developed by the government to coordinate various policy areas and increase cooperation between the local, regional and national level. For Stockholm, funding from the European Structural Funds offered the opportunity for implementing publicly coordinated regional development initiatives. Even if the amount of funding was limited, particularly the ERDF programme has had an important impact on policy development since the regional partnership decided to prioritize a limited number of strategic projects.

4. Conclusions: future actions and opportunities for innovation policy

Sweden does not have a national innovation strategy, but regions have been encouraged to develop regional innovation strategies. So far, no regional innovation strategy has been developed for Stockholm. One of the key regional development challenges for Stockholm is the need for regional coordination on innovation activities. Since Stockholm has been performing well, the understanding for the need of public policy measures fostering innovation is sometimes limited. This indicates a need for increased knowledge on the importance of innovation for regional development, as



well as an inclusive process to better understand and develop the role of various actors in the region, as a basis for developing a regional innovation strategy.

According to national guidelines, each region was to develop a regional partnership, prepare decisions and prioritize between different projects in structural funds programmes. To avoid the problems experienced during former ESF periods, the implementation of ERDF in Stockholm has focused on a limited number of larger projects. Due to this, the decisions taken by the partnership have been of strategic importance for the development of the Stockholm region.

Even if Stockholm does not have a specific cluster programme, six of the 16 larger projects prioritized by the partnership for the ERDF in Stockholm may be characterized as cluster development projects. Many of these are found in research intensive, technology based sectors, such as the life sciences, ICT and environmental technologies, but activities have also been directed towards less research dependent sectors, such as the creative sector.

There have also been several interesting attempts to restructure the business and innovation support system of Stockholm. Innovation Stockholm, Entrepreneur Sthlm and ALMI Invest are examples of regional initiatives providing advisory services or early stage funding to entrepreneurs, innovators and small companies. These initiatives have contributed to strengthening the partnerships among actors and building a more structured way of working with advisory services in the region.



1. Main Trends and Challenges in the Regional Innovation System

1.1 Recent trends in regional economic performance

With approximately 1.9 million inhabitants and 23% of the national population, Stockholm is the dominant city region in Sweden. The average annual GDP in Stockholm during the period 2000-2008 was €79.4b, or more than 27% of the national total. Between 1997 and 2007, employment increased by roughly 20%, generating almost 30% of the national employment growth. The geographical borders of the Stockholm NUTS2 level (region) corresponds to the Nuts3 level (län), but Stockholm is also part of the larger Stockholm-Mälardalsregion.

Throughout the 1990s, Stockholm has experienced consistent and impressive growth, while GDP growth in the period 2000-2006 averaged 3.5% (with the per capita equivalent mirroring this trend at 3.2%).

It has drawn on its role as national capital, its research and development strengths, the concentration of advanced business such as logistical and financial services, as well as its specialization in high tech sectors, including biotechnology and ICT. Stockholm also stands out for its high quality of life, as evident in its strong public health performance, high educational attainment indicators and low poverty ratings (OECD, 2006).

While Nordic countries experienced, on average, modest economic growth close to the EU27 average, prior to the economic crisis, large regional differences were evident. Capital regions, such as Stockholm performed considerably better than the EU27 average.

Stockholm (SE11) is, in its own right, a highly heterogeneous region if one is to consider a more detailed regional breakdown. However, some general characteristics are the high percentage of the population with higher education $(23\%)^2$, the low level of unemployment (6.8% in 2009)³ and a high level of employment in the service sector (85%).

The financial crisis had a significant impact on external demand for small open economies such as the Swedish one, but thanks to strong public finances Sweden was able to cushion the blow and recover rather fast. With a more limited dependency on export industries and a higher level of employment in the services sector, the region of Stockholm was affected the least in Sweden, with peripheral rural areas facing the largest problems⁴. A similar pattern of adaptation and rapid recovery of Stockholm was found after the last two recessions, caused by the downturn in the financial sector in the 1990s and the ICT crises during the 2000s.

According to Figure 1 Stockholm's (SE11) GDP per capita is roughly 60% above EU27 average but growing at a slower pace compared (roughly 10%) to the average. The slower growth of better-performing by no means constitutes evidence of economic under-performance. The unemployment rate in Stockholm (SE11) is correspondingly lower but exhibiting a tendency to approach the EU27 average.

 $^{^2}$ The percentage is higher at roughly 34% when considering the ratio of highly educated in the economically active population (16-64+) rather than the whole population (see Appendix F)

³ Source: Statistics Sweden. The figure is even lower (roughly 5%) according to Eurostat.

⁴ See Nordregio Report (2010:2) for more details on the economic performance of Stockholm (SE11) and its surrounding regions.



1.2 Recent trends in regional innovation performance

According to the "European Regional Innovation Scoreboard" in 2006, Stockholm was the top region of Europe in innovation performance. In the "European Entrepreneurship Ranking" in 2009, Stockholm was ranked second. Based on these indications, the conditions for innovation in Stockholm appear to be very good. Turning to Figure 1, Stockholm performs well above the EU27 average for each of the five (of eight) innovation indicators where data are available for the Stockholm region.

The superior figures for tertiary education (23% of the population) and numbers of researchers (27% of the national total) can be explained by the existence of several major universities within the region (Karolinska Institute, Stockholm University, Royal Institute of Technology, Stockholm School of Economics), along with a number of specialized university colleges. There is also a high percentage of knowledge intensive business services in local employment (roughly 25%)⁵.

From a national (Swedish) perspective, the research universities and the internationally renowned university hospital of Karolinska in Stockholm receive a major share of total national and international research funding. Approximately 31% of national grants for research funding to higher educational institutions in the Swedish State Budget for 2010 was directed to Karolinska Institute, KTH Royal Institute of Technology and Stockholm University⁶. In 2007-2009, Stockholm's universities and university colleges received an average of 45% of all funding from the European framework programmes in Sweden⁷.

In Stockholm, the gross expenditure in R&D (GERD) as a ratio of GDP is 4.3%, which is higher than both the national average of 3.7% as well as the EU27 average of 1.8% (2003-2006 averages). Moreover, the share of GERD that represents private rather than public investments is higher in the Stockholm region than the EU27 average (72.1% and 63.6% respectively). This high level of expenditure in business R&D may be explained by the presence of several research-intensive companies, particularly in the sectors of ICT (Ericsson, IBM Svenska and TeliaSonera) and life sciences (AstraZenec and Pfizer). The high count of patents can be traced to the strong ICT and life sciences clusters present in the region, coupled with a thriving entrepreneurial culture.

⁵ The figure was calculated based on data from Statistics Sweden and a detailed industrial decomposition at 5-digit level. Eurostat estimations are considerably lower at 10.1%.

⁶ Based on statistics from the Swedish State Budget 2010, Swedish Government, (2009) Förslag till statsbudget 2010, finansplan och skattefrågor, mm. proposition 2010/10:1.

⁷ Based on statistics from the Swedish Agency for Higher Education



Source: Eurostat.

1.3 Identified challenges

However, while Stockholm is performing well in a comparative perspective of economic development and innovation performance there is still reason to believe that the region does not perform according to its potential.

Challenge 1: Regional coordination

The main challenge, raised by most regional stakeholders, is the need for continued development of the regional governance system. Stockholm has a broad competence base for innovation, including a highly skilled labour force and numerous innovative actors from different sectors. However, since there are many strong, independent actors, and no public agency or authority with a mandate to coordinate innovation activities, cooperation has traditionally been limited. In 2006, the OECD Territorial Report of Stockholm criticised the regional governance structure of Stockholm (OECD, 2006).

According to a follow-up on the OECD-study in 2010, the situation has improved in the period since (Stockholm City, National Agency for Economic and Regional Growth, County Council of Stockholm, County Administrative Board of Stockholm, 2010). Several forums for cooperation on regional development have been established, yet there is still need for improvement. First, many initiatives are at an early phase, and it takes time to develop cooperative ventures. Second, there are many different forums, sometimes lacking the necessary coordination from a regional systems perspective. Third, even if the question of innovation is integrated in several initiatives, Stockholm does not have a specific regional innovation strategy.

Challenge 2: Broader innovation base

Stockholm has a strong innovation structure, based on academic and scientific research, particularly in the ICT and life science sectors. However, the high levels of business R&D and patents in the region are to a large extent depending on a limited number of large, global companies, such as Ericsson and AstraZenca. This makes the Stockholm region vulnerable, as decisions that influence its regional innovation potential are often taken elsewhere. Thus, an important challenge for the Stockholm region is to broaden the base of innovation activities, for example into services and the public sector.

Over the last decade, the services sector has expanded rapidly in Sweden and there are ongoing discussions on how to increase services innovation. Two important services technopolis

sectors where the Stockholm region has a dominant role in Sweden are the knowledge intensive services sector and the creative sector. Some initial discussions on how to support innovation and development in these sectors have just started and need to be monitored over time. There are also discussions on how to increase innovation in the public sector; for example in health care.

Challenge 3: Stimulate human knowledge dynamics

According to the Lisbon Agenda and the new vision of Europe 2020, the ambition of Europe is to become a competitive and dynamic knowledge-based economy. Generation and exploitation of knowledge is important to create wealth and innovation. However, due to path dependency and the independence of universities and higher education institutions, the knowledge created in the Stockholm region does not wholly correspond to the need for business sector development and innovation.

To improve the correspondence between knowledge provided and the need for competences in the knowledge triangle – including education, research and innovation – an improved dialogue between the private sector and regional knowledge providers is required. This includes the whole system of education for lifelong learning – including basic education, secondary education and vocational training, as well as higher education institutions.

There is also the question of how to attract skills and to keep skilled persons in the region. In the recent past, various initiatives to market Stockholm to foreign investors and skilled people have been initiated. However, due to the rapid growth during the period, Stockholm has seen increasing problems with housing supply and infrastructure capacity, which might reduce the attractiveness of the region to inward investors and the global talent pool more generally. From October 2010, it became mandatory for foreign students to pay tuition fees at Swedish higher education institutions, which may reduce the regional HEIs ability to attract the best foreign students.



2. Innovation Policy Governance

2.1 Degree of institutional autonomy

In Sweden, the national level of government has the main responsibility for funding of research and higher education, while responsibility for basic civil services (e.g. basic education, care for the disabled and aged and child care) is administrated at the local, municipal level (kommun). The main responsibility at the regional level in Stockholm has traditionally been related to public health care, traffic and infrastructure, which have been handled by the Stockholm County Council. Regional authority issues, and to a lesser extent regional (business) development, have been handled by the County Administrative Board of Stockholm.

The overall level of institutional autonomy for regional innovation policy in Stockholm is at a medium level. During recent years, innovation and renewal have become increasingly important in Swedish regional growth policy and responsibility has partly been decentralized to the regional level. Sweden does not have a national innovation strategy, but in the latest government proposition on research and innovation, regions were encouraged to develop regional innovation strategies (Swedish Government, 2009).

Even though a substantial share of national funding for education and research is allocated to actors in the region, funding for regional decisions on business development and innovation in Stockholm is limited (about $\bigcirc 0.8$ million per year for Stockholm County Administrative Board). Today, all Swedish NUTS3 regions (län) are required to present a Regional Development Program (RUP). In some regions, this plan is supplemented with a voluntary action plan for regional growth (RTP) or a regional innovation strategy. In 2010, several regional innovation strategies had been developed in Sweden, although not yet in Stockholm.

In 2007, a national strategy for competitiveness, entrepreneurship and employment 2007-2013 was developed by the government as a guideline for the regional development programmes (RUP) and the regional structural funds programmes (ERDF and ESF). One ambition was to coordinate various policy areas and increase cooperation between the local, regional and national level. At the NUTS2 level, all Swedish regions have developed Operational Programmes for the European Structural Funds. These strategies have been developed in regional partnership with actors in different sectors, e.g. business, public sector, universities and non-profit organizations.

For Stockholm, funding from the European Structural Funds has offered an increased opportunity for implementing publicly coordinated regional development initiatives. The Operational Programme had a total funding of about €8.5m in Stockholm, which is higher than development funding derived from Stockholm's regional authorities. Even if the amount is limited compared with national funding for research and education performed within the region, the ERDF supported programme has had an important impact on policy development in Stockholm during recent years.

2.2 Institutional-set up, co-ordination and implementation mechanisms

As a capital region, the innovation structure of Stockholm is complex, with many strong yet independent actors in both the public and the private sectors. Various national public entities (government, ministries, research funding bodies and agencies) are also located in Stockholm, which further compounds the complexity of governance in the region.

However, there is no single body responsible for regional innovation in Stockholm and the level of cooperation is still at a moderate level. Responsibility for regional development in Stockholm is shared between the County Administrative Board of Stockholm (Länsstyrelsen) and the Stockholm County Council (Landstinget). The

County Administrative Board is the government body responsible for overseeing national goals, as outlined by the Swedish parliament and government, but is also responsible for developing a Regional Development Program (RUP). The County Council is a politically elected regional organization, which is responsible for developing the Regional Development Plan for the County of Stockholm (RUFS). It has specific planning and policy responsibilities related to regional (spatial) development, health care, transport and infrastructure.

During recent years, an extensive process has taken place to develop a new RUFS that integrates the regional (business) development program (RUP) within the broader regional plan. The process was run in cooperation between the two regional authorities, in an open dialogue that included public as well as private stakeholders at the local and regional level. The objective was to develop a shared knowledge platform for strategic discussions and prioritization of activities, including regional innovation support measures. The new RUFS 2010 was presented and approved by regional politicians in 2010.

During this process, the County Administrative Board and County Council of Stockholm have together taken an increased lead in the development of the regional innovation system. Since there are many actors present in the region, with a local, regional or national focus concerning innovation, a need for increased cooperation was identified. In early 2011, an initiative was taken to make a functional analysis of the innovation structure of Stockholm. The ambition was to invite regional stakeholders into a process to identify needs for development activities and strategic prioritization concerning innovation. The project, Innovation Power Stockholm (Innovationskraft Stockholm), is coordinated by the County Administrative Board of Stockholm, and co-funded by the County Council of Stockholm (€0.55m) and Vinnova, the Swedish National Agency for Innovation Systems (€1.75m).

National agencies and research councils do not have a specific regional perspective on innovation. Still, Vinnova and Tillväxtverket, the Swedish Agency for Economic and Regional Growth, were commissioned by the government to support the development of regional innovations strategies (Swedish Government, 2009). From a national perspective, the Innovation Power Stockholm project was inspired by previous experience on developing regional innovation strategies in other Swedish regions, e.g. Skåne and Västra Götaland. If the project is successful, it may contribute to the future development of a regional innovation strategy in Stockholm. At a national level, initiatives have also been taken to develop a national innovation strategy for the services sector and for regions to create competitive platforms for competence development. In 2010, the County Administration Board was commissioned by the government to develop a competence platform (Competitive Stockholm) to make sure that the Stockholm region attracts and retains people with higher-level skills, knowledge and competences. Further, higher educational institutions have been encouraged to increase their collaboration with the surrounding society and to develop regional innovation offices.

At the international level, Stockholm has previously participated in the European Social Funds programme (ESF), but the period 2007-2013 was the first time Stockholm received financial support through the European Regional Development Funds (ERDF). For Stockholm, the 2007-2013 Operational Programme for ESF has total funding of about €1b while the 2007-2013 Operational Programme for ERDF has total funding of about €8.5m. To prepare decisions and prioritize between different projects a joint partnership was established for both structural funds programmes.

The partnership is made up of policy makers from local (municipality) and regional (Stockholm County Council) level, civil servants from the County Administrative Board of Stockholm, the Employment Agency and the Social Insurance Office, and representatives of the labor unions, Stockholm Chamber of Commerce and a non-profit organization for the social economy in Stockholm. Through this partnership, local and regional stakeholders from different sectors have increased cooperation on regional development in Stockholm.



Based on the experience from former ESF periods, the implementation of ERDF in Stockholm has focused on a limited number of larger projects, to avoid the administrative burden and fragmentation of many small projects. Due to this, a more strategic prioritization of regional development activities has developed, thus indicating that even if the regional dependency on ERDF funding is limited, it has had an important impact on regional coordination. Even if there is no explicit cluster policy in Stockholm, most ERDF projects have been directed towards cluster initiatives in the traditional high tech sectors of life sciences and ICT, as well as new cluster initiatives and in new sectors, such as environmental technology and the creative sector. These sectors are all characterized by a strong regional involvement of public and private actors, as well as a perceived potential for international competitiveness.

In recent years, *life sciences* have received increased attention from regional policy makers. The Stockholm - Uppsala region is one of the leading regions in Europe within research and education in life sciences. The aim, Vision 2025, is to become the world's most attractive center for life sciences. Along these lines, the Stockholm Science City Foundation (SSCI) was founded in 1990 by the three leading universities KTH Royal Institute of Technology, Karolinska Institute and Stockholm University, together with private actors, Stockholm County Council and the municipalities of Solna and Stockholm. SSCI has been commissioned to develop the life science sector around Karolinska Institute (Hagastaden) by attracting academia and business. A number of development projects, including the ERDF project Powerhouse Life Science, are administered by SSCI. In 2010, the Foundation Flemingsberg Science was established in cooperation between KTH Royal Institute of Technology, Karolinska Institute and the University College of Södertörn, the Stockholm County Council and the municipalities of Huddinge and Botkyrka, to develop the life science sector in the south of Stockholm. Besides, two joint initiatives with the Uppsala region have been taken, the first to develop a research center (Science for Life Laboratory), and the second to market the region (SULS).

Another prioritized sector in Stockholm is *ICT*, which is highly concentrated around Kista, in the North West of Stockholm. An important actor for the development of the sector is the Electrum Foundation. The role of the foundation, commissioned by representatives of the ICT sector (Ericsson, IBM, Packetfront), a real estate company, the research institute Acreo, KTH Royal Institute of Technology and Stockholm Municipality, is to stimulate growth and cooperation in research based and innovative growth companies in the ICT sector. The mission is supported by six strategic councils focusing on various aspects, including education, competence development and entrepreneurship, research, marketing and innovation. Operational activities are administered by two subsidiaries; Kista Science City AB and the business incubator STING AB.

Still another priority is the development of the *environmental technology* sector. One strategic initiative in the regional development plan (RUFS 2010) is the planning and future re-construction of the Stockholm Royal Seaport (Norra Djurgårdsstaden). This is part of an ambitious vision to develop an environmental profile in Stockholm, the 2010 European Green Capital. The project involves a consortium of regional authorities and national agencies, as well as researchers and private companies; and it may become an important platform for developing and demonstrating various innovations in energy and resource efficient building technology. A second initiative is the Stockholm Environmental Technology Centre (SMTC); an association established in 2005 to increase cooperation between business, research and public actors in this growth sector. Among the members are private companies, two non-profit business associations, three municipalities, KTH Royal Institute of Technology and Stockholm Business Region. With co-funding from ERFD, SMTC runs the project Environmental Technology for Growth (Miljöteknik för tillväxt), focusing on the development and internationalization of small and medium sized firms (SMEs) providing solutions for a sustainable future.

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Within recent years, various initiatives have been launched to stimulate the development of the *creative sector*. In 2004, the not-for-profit organisation Filmpool Stockholm-Mälardalen (later Filmregion Stockholm Mälardalen) was established to support the film sector in the greater Stockholm area. In 2009, the organization received project funding from the ERDF. Other initiatives have taken place concerning fashion and design. There is also ongoing work to develop an action plan to stimulate development of the creative sector.

As indicated above, cooperation with regional universities and university colleges on education, research and innovation is important for most sectors. During the last few years, participation in regional development and cooperation between the leading universities in Stockholm has developed considerably, partly as a result of an increased demand from the government for collaboration with the surrounding society. Together with business representatives, KTH Royal Institute of technology Technology and Karolinska Institute are active in several cluster initiatives. Many of the universities are also providing different types of support for innovation and commercialisation. Around Karolinska Institute, for example, several measures are available, including a private business incubator (Karolinska Innovation AB), a science park (Karolinska Institute Science Park) and a risk capital company (Karolinska Development AB). There are also the newly established innovation offices at KTH and KI.

Furthermore, 19 universities and university colleges are cooperating on education, student information, marketing, analysis and networking in the Stockholm Academic Forum. Another cooperative initiative to foster entrepreneurship among students is the Stockholm School of Entrepreneurship; a joint initiative between KTH Royal Institute of Technology, Karolinska Institute, Stockholm School of Economics and Stockholm University. SSES is a membership-based, non-profit organization that gathers the innovative and entrepreneurial competencies of all members in a joint education programme. The Unit for Bio-Entrepreneurship (UBE), for example, is an academic unit at the Karolinska Institute (KI) with the mission to inspire, educate and facilitate contacts and interactions for undergraduates and PhD candidates, researchers and clinicians within the fields of innovation and entrepreneurship. Among other activities, UBE provides courses, seminar series and master thesis projects. It is also the Karolinska Institute's node within the Stockholm School of Entrepreneurship (SSES) and the first proactive link with the Karolinska Institute Innovation, a support system for commercialization and technology transfer.

There are also other types of intermediaries, supporting the development of the innovation system of Stockholm, including the regional offices of ALMI Business Partners and the Innovation Bridge, and Stockholm Business Alliance (SBA), a partnership between 50 municipalities in the Stockholm Nuts 2 area and the surrounding Stockholm-Mälardalen region. SBA was established in 2006 in order to coordinate marketing activities of Stockholm under the trade mark "The Capital of Scandinavia".

2.3 Availability and use of policy intelligence tools

As indicated above, policy measures related to competence, innovation and research in Stockholm are often based on a combination of local, regional and national initiatives. As such, innovation is often integrated into various regional development initiatives. Since many of those are partially funded publically, they are subject to regular evaluations in order for public actors to obtain information when deciding whether to develop, continue or discontinue a specific initiative. In some cases, evaluations are publicly available or discussed with regional stakeholders.

Evaluation of previous periods of European Structural Funds programs indicated a limited impact on regional development in Sweden (ITPS, 2004). When Operational Programmes for the ongoing period of European Structural Funds 2007-2013 were developed, the European Commission indicated a need for a more flexible, demand driven approach to evaluation during the program period; it was decided to replace



traditional midterm evaluation with ongoing evaluation (European Commission, 2007). The aim was to improve the potential for a more functional learning process. In Sweden, ongoing evaluation (följeforskning) became mandatory for all larger projects and a guideline was developed by the Swedish Agency for Economic and Regional Growth (Nutek, 2008). In Stockholm, several ongoing evaluation projects have been initiated, but they are still in an early phase.

There is a high level of analytical competence in the Stockholm region. The County Administrative Board in Stockholm and the County Council of Stockholm both have their own analytical services units, providing policy makers with background material for strategic decisions⁸.

The Board and Council have also participated in several stakeholder dialogues to discuss and develop reports on regional development potential. One example was the process of Foresight in the Stockholm-Mälarregion, a project carried out in 2007-2008 as part of a programme on Urban Development, run by Swedish National Agency for Economic and Regional Growth (Tillväxtverket). More than 200 people from the private and public sector and higher education institutions participated. The process was based on a combination of analysis, seminars and focus groups where issues such as knowledge intensive business services (KIBS), high tech industries, ICT, life sciences and products for the 55+ segment were discussed⁹.

Another example was the project Innovation Place Stockholm-Uppsala that focused on analysis of the growth and innovation potential in the greater Stockholm-Uppsala region. The project was run in 2007-2008 by Stockholm County Council, in cooperation with the County Administrative Board, Regionförbundet Uppsala, the municipalities of Stockholm and Uppsala, and the Swedish National Agency for Economic and Regional Growth. The focus was on physical and strategic planning as a tool for developing innovative environments, involving communication and transport infrastructure, as well as the role of real estate managers and universities (Stockholm County Council/Region- och Trafikplanekontoret, 2008).

A third example was the process for developing the last RUFS 2010, when a large number of background reports were produced and discussed in a broad dialogue with local and regional stakeholders. Some of the reports had a specific focus on innovation and provided valuable input into the process.

Apart from public analysis and evaluations, there are also several not-for-profit organizations that provide analysis on business needs and perceived business climates at the local, regional and national level.

⁸ County Administrative Board of Stockholm, (2009) Competitive Stockholm, Stockholmsregionens förmåga till förnyelse och utveckling

⁹ Framsyn Stockholm-Mälarregionen – resultat och slutsatser

technopolis

Figure 2-1 Governance, policy, and innovation performance factors for Stockholm



Source: RIM survey.

2.4 Key challenges and opportunities

As indicated above, the Stockholm region has a strong track record in terms of innovation performance, with a highly skilled labor force, many strong research universities and institutes and several internationally competitive high tech clusters. A large share of national funding for higher education and research is distributed to actors in the region. However, the key challenge concerning innovation policy governance in Stockholm is the need for regional coordination.

In recent years, the Country Administrative Board and the County Council of Stockholm have together taken a more pronounced role in coordinating regional development activities, including initiatives for innovation, competence and entrepreneurship. At the same time, universities such as KTH and KI have increased their involvement in regional development and several forums for cooperation have developed. Even if the focus is not specifically on innovation, questions on competence and innovation are often part of regional development discussions. Some of the forums are partly a result of national and international initiatives. Still, many cooperative initiatives are at an early phase and it is too early to predict the outcome. In comparison with other Swedish regions, the funding available for regional coordination and business development in Stockholm is limited. Besides, since Stockholm has been performing well, the interest in public policy measures fostering innovation has been rather limited. From a political perspective, there is a general expectation that the market will handle these questions.

For the future, it is important for the Stockholm region to broaden the base for innovation to include new sectors, for example the services sector and the public sector. This, in turn, may provide an opportunity for developing new collaborations and governance structures. Traditionally, national as well as regional research and innovation activities have focused on high tech manufacturing industries. In early 2011, a report commissioned by the government, was presented as an input to a future national strategy on services innovation. Since the services sector, particularly the knowledge intensive services sector, constitutes a larger share of the regional business structure in Stockholm than in other Swedish regions, this may provide a future opportunity for Stockholm. Besides, there has been a national trend towards privatization in the Swedish health care sector during the last decade. However, public actors such as County Councils and municipalities are still dominating the funding and the overall provision of Swedish health care. This complicates the question of innovation. First, there is a great potential for using public procurement as a driving



force for innovation, but experience in using it to stimulate innovation is limited. Second, there are few initiatives to stimulate individuals to participate in innovation within the publicly provided health care system. However, Knowledge Navigator (Kunskapslotsen) is a project administered by the Stockholm Academic Forum, with the ambition to stimulate transfer of knowledge between higher educational institutions and small and medium-sized companies in the health care sector.

Another challenge for the Stockholm region is the possibility to create the knowledge dynamics required to compete for competence on an increasingly global market. Today, the level of education in Stockholm is high. Still, one of the major growth obstacles of many firms is lack of competent personnel, indicating a need for a better match between supply and demand for various educational programmes (Nutek -National Agency for Economic and Regional Growth, 2009). According to a recent study by the Employer and Trade Organization for the Swedish Service Sector (Almega), for example, there is a need for more general soft skills, such as project management and cooperating skills among companies in the rapidly expanding services sectors (Almega, 2010). Even if the interest for regional cooperation has increased among representatives of higher education institutions over the last ten years, there are still few formal incentives for business cooperation - in terms of funding or academic qualifications. This indicates the importance of creating platforms for dialogues on the needs for education and competence between private sector and knowledge providers.



3. Innovation Policy Instruments and Orientations

3.1 The regional innovation policy mix

As noted above, there is no regional innovation strategy or policy in Stockholm and no actor is responsible for innovation coordination at the regional level. Still, there are a broad range of support measures contributing to the development of the regional innovation system. In most cases, these measures have a broader objective to contribute to regional growth and development, but questions concerning research, innovation and human resources are often included. Many innovation measures are undertaken in cooperation with local, national or international actors due to the limited amount of regional funding available for business development and innovation. Programmes directed to individuals or companies are seldom launched by agencies at the regional level, but more often by national agencies.

Over the last decade, the potential for *regional governance and horizontal research and innovation policy* has developed in Stockholm. As a result of an increased cooperation between the Administrative Board of Stockholm and the County Council of Stockholm, RUFS 2010 was developed in a cooperative process that integrated the Regional Development Program (RUP). Further, the implementation of the European Structural Funds is based on prioritizations made by a broad regional partnership. Since responsibility and funding of innovation policy measures among public authorities in Stockholm is limited, many initiatives have been developed in cooperation between actors from the public, private and academic sector. Today, there are several forums established with the ambition to support competence development, research and innovation.

The major policy documents concerning future development in Stockholm is the regional (spatial) development plan, RUFS 2010, and the Operating Programmes for the European Structural Funds. Yet since the majority of funding is provided from national or international sources neither of these programmes include a specific research or technology policy. However, even if Stockholm does not have a specific cluster programme, six of the 16 larger projects prioritized by the partnership for the ERDF in Stockholm may be characterized as cluster development projects. Many of these are found in research intensive, technology based sectors, such as life sciences, ICT and environmental technologies. For example, Environmental Technology for Growth (Miljöteknik för tillväxt), focuses on the development and internationalization of small and medium sized firms providing solutions for a sustainable future. A test facility for research and tests on water purification has been developed, which has received international attention and stimulated company cooperation for internationalization. Further, a test facility and showcase for renewable energy sources has been established in the city of Stockholm. However, cluster activities are also directed towards less research-dependent sectors, such as the creative sector.

Many projects have an ambition to support *creation and growth of innovative enterprises*. Some measures are valuable for all actors in a particular cluster or sector, but the main target groups of publicly co-funded initiatives are individuals and small or medium-sized companies. The above mentioned MedTech Growth is a project to stimulate growth and internationalization in medtech companies. Powerhouse Life Science, administered by SSCI, is a project designed to stimulate business development, new firms, research, innovation, attraction of competence and inward investment in life science.

Important activities for stimulating creation and growth are advisory services and the provision of early stage funding. Innovation Stockholm is a department of ALMI Business Partner Stockholm, one of 19 regional offices of a state owned company. The



organisation is financed by ALMI, Stockholm County Council and Stockholm Business Region, a marketing and tourism company owned by the municipality of Stockholm. Innovation Stockholm offers complementary expert advice and guidance on innovation to individual companies, entrepreneurs and inventors in Stockholm.

Entrepreneur Sthlm and ALMI Invest are two other initiatives, co-funded by the ERDF, that focus on the creation and growth of firms. Entrepreneur Sthlm is a collaborative platform to increase entrepreneurship and innovation by providing support and advice to entrepreneurs, innovators and business owners. ALMI Invest Stockholm is one of seven regional venture capital companies, founded in 2009 by ALMI Business Partner together with regional investors. It receives 50% of its funding from the ERDF. Even if these initiatives do not have a specific focus on innovation, individual innovators and innovative enterprises are invited to participate.

Particularly in high tech sectors the question of *human resources* is of importance for the development of competitive regions. Since responsibility and funding for basic education and training is allocated to the local level (kommun) while higher education funding is directed by the national level, regional policy makers have limited possibilities to influence education and competence development in the region. Similarly, regional universities and university colleges have a great deal of freedom to develop educational programmes in line with the challenges or opportunities they perceive. Notwithstanding this landscape, several regional initiatives have been taken to attract into the region people and organizations with particular types of skills and competence deemed to be in short supply, often as part of activities for developing the regional clusters, e.g. the MedTech growth project and the new initiative Competitive Stockholm, with the purpose to develop competence platforms for discussing competence needs in Stockholm.

There have also been some initiatives from regional universities to influence and contribute to a strong *innovation culture* with positive attitudes towards cooperation. For example, KTH Royal Institute of Technology has taken a strategic decision to participate more in regional development. Since 2005, the KTH management team has run an initiative under the heading "The Entrepreneurial University". The goal was to raise interest in business cooperation, for example though benchmarking, study visits and cooperation with leading international universities, but also to become more involved in regional development activities. As mentioned, there is also the joint initiative called the Stockholm School of Entrepreneurship (SSES) that stimulates entrepreneurship between students in the region.



Table 3-1 Existing regional innovation support measures

Title	Duration	Policy Priorities	Budget	Organisation responsible	More information
Creative Business Region Stockholm	2009-2011	 4.1.2. Support to innovation in services 1.3.1. Cluster framework policies 5.3.3. Support to the innovative use of standards" 	n/a	Stockholm Business Region Development	http://www.stockholmbusinessregion.com/
Entrepreneur STHLM	2008-2011	 4.3.1. Support to innovative start ups incl Gazelles 4.2.1. Support to innovation management and advisory services 	n/a	County Administrative Board of Stockholm	http://www2.lansstyrelsen.se
Innovation Stockholm	2008-not fixed end date	 4.2.1. Support to innovation management and advisory services 4.3.1. Support to innovative start ups incl Gazelles 	n/a	Stockholm Business Region Development	http://www.stockholmbusinessregion.com/
Karolinska Institute Innovation	1996-not fixed end date	 4.3.1. Support to innovative start ups incl Gazelles 4.3.2. Support risk capital 	n/a	Karolinska Institute Innovation AB	http://www.karolinskainnovations.ki.se
Powerhouse Life Science in Stockholm Life Solna-Stockholm	2010-2013	2.2.2. Knowledge Transfer2.2.3. R&D cooperation	n/a	Stockholm Science City Foundation	http://www.kista.com
STING - Stockholm Innovation and Growth	2001- not fixed end date	 4.3.1. Support to innovative start ups incl Gazelles 4.3.2. Support risk capital 	n/a	Electrum Foundation	http://www.kista.com/ http://www.stockholminnovation.se/ servlet/FileDownloadServlet?id=554
Stockholm MedTech Growth	2009-2012	 2.2.3. R&D cooperation 4.2.1. Support to innovation management and advisory services 4.3.1. Support to innovative start ups incl Gazelles 	n/a	Stockholm Business Region Development	http://www.stockholmbusinessregion.com/



Title	Duration	Policy Priorities	Budget	Organisation responsible	More information
Strengthening Stockholm's ICT- cluster – Kista Science City	2009-2011	 2.2.3. R&D cooperation 2.2.2. Knowledge Transfer 2.3.1. Direct support of business R&D (grants and loans) 	n/a	Kista Science City	http://www.kista.com/

Source: Regional Innovation Monitor repository

Note: The information presented in this table include the support measure templates published on the Regional Innovation Monitor website.



Based on the former analysis, there are some regional innovation policy measures that are likely to become important in the future, since they address some of the main challenges of the region.

1. Innovation Power Stockholm (Innovationskraft Stockholm) is a recently launched initiative, run by the County Administrative Board of Stockholm in collaboration with other public actors at regional and national level. If successful, the project may provide a platform for increased coordination of innovation activities between different forums and stakeholders, and a basis for developing a regional innovation strategy.

2. During the last decade, the life sciences sector has become a core economic development strategy in Stockholm. Stockholm Science City Foundation is responsible for administering several projects to develop the life science sector around Karolinska Institute (Norra stations området/Hagastaden), including Power Centre Stockholm Life (Kraftcentrum Stockholm Life). Stockholm Academic Forum is responsible for Knowledge Navigator (Kunskapslotsen), a project to stimulate transfer of knowledge between academia and small and medium-sized companies in the health care sector. Both projects have co-funding from ERDF. Since these projects focus on life science and health care, there is a potential to contribute to broadening the innovation base of the public health care sector in Stockholm.

3. Another sector that has received increased attention in recent years is the creative sector. Creative Business Region Stockholm is a project running between 2009 and 2011 that aims to increased growth and attractiveness in Stockholm by strengthening the culture and creative industries, e.g. design, moving pictures, dance, art and performing arts. The project has a total budget of approximately $\xi_{1.2}$ millions, provided mainly by the municipality of Botkyrka and ERDF. In parallel, several initiatives have been taken to develop the film industry, as well as the design and fashion sectors in Stockholm. These projects are interesting since they have a potential to contribute to broadening the innovation base of Stockholm.

4. Environmental Technology for Growth (Miljöteknik för tillväxt) is a 3-year project to stimulate growth and internationalization of small and medium-sized companies providing environmental technology and other solutions for a sustainable development. The project has received international attention and has an interesting potential in the new and growing area of green technology, adding to the environmental profile of Stockholm as the 2010 European Green Capital.

3.2 Appraisal of regional innovation policies

As mentioned, the Stockholm region does not have any explicit regional innovation policies. Rather, the questions of innovation, research and competence development are integrated into other regional strategy documents; mainly the Regional Development Plan (RUFS 2010). Still, several projects and processes have taken place with an ambition to develop a better understanding of regional innovation capacity. The recently initiated project Innovation Power Stockholm (Innovationskraft Stockholm), which is co-funded by regional and national authorities, may provide a platform for the development of a future regional innovation strategy.

What is interesting to note is the increased cooperation between different stakeholders in the Stockholm region. This may partly be a result of a national demand for increased cooperation, but also a result of the increased globalization and need to develop regional competitiveness in order to compete for funding, skills and investments. Over the last five to ten years, the cooperation between the County Administrative Board of Stockholm and the Stockholm County Council has developed considerably. Similarly, regional universities have developed their cooperation, as they have become increasingly involved in regional development activities.

Since 2007, the strategic decision to focus on a limited number of larger projects with ERDF-funding has also created a need for more explicit prioritization among stakeholders in the regional partnership. Increased prioritization has resulted in a



focus on certain areas of the region, including for example ICT, life science, environmental technology and the creative sector. Even if there is no explicit cluster or innovation systems strategy, many initiatives have similarities with successful cluster initiatives in other regions.

3.3 Good practice case

The period 2007-2013 was the first time Stockholm received part of the European Regional Development Funds (ERDF). According to national guidelines, each region was to develop a regional partnership, prepare decisions and prioritize between different projects in structural funds programs. To avoid the problems experienced during former ESF periods, the implementation of ERDF in Stockholm has focused on a limited number of larger projects. Due to this, the decisions taken by the partnership have been of strategic importance for the development of the Stockholm region.

One of the prioritized projects was Entrepreneur Sthlm, a collaborative platform to increase entrepreneurship and innovation by providing support and advice to entrepreneurs, innovators and small or medium-sized companies in all parts of Stockholm. The project was established as a three-year initiative (2008-2010) by the County Administrative Board of Stockholm, ALMI Business Partner Stockholm, Innovation Bridge and Stockholm Business Region Development. Administration was handled by the County Administrative Board. The total budget over the period was about $\mathcal{C}4m$, supplied by ERDF and the national programme to promote female entrepreneurship at the Swedish Agency for Economic and Regional Growth (Tillväxtverket). Six out of 26 municipalities in Stockholm were participating in the initiative; Järfälla, Sundbyberg, Södertälje, Upplands-Bro, Upplands Väsby and Vallentuna.

The ambition was to develop a coordinated, long-term structure for efficient advisory services and financing, regardless of gender, background, sector or corporate form. In early 2010, Entrepreneur Sthlm set up a panel of 22 delivery organizations to provide advisory services on start-ups, female entrepreneurship, business development, internationalization, innovation (researcher and health care) and mentorship. By using a process of public procurement, service providers were recruited and appointed through open competition. In an effort to make finding the right advice easier all organizations were marketed together at the project website. There, visitors could choose between advisory support concerning start-ups, innovation or business development.

The outcome of the project was positive. A customer survey was undertaken in spring 2010, indicating a high level of participation particularly among women; people aged 40-65, people with a foreign background and small companies (less than five employees). The survey indicated that more than 70% of the participants were satisfied or very satisfied with the services. The demand for services was higher than expected. After the first three years, a total of approximately 17,000 persons had received advisory services and, based on approximations, as many as 2,000 new jobs may have been created (not necessarily full-time) and 3,500 companies established (County Council of Stockholm, 2010). The project also resulted in a strong partnership and a more structured way of working with advisory services in the region. A formal evaluation is presently ongoing.

In 2011, the initiating partners are satisfied with the outcome, but for organizational reason, the project is likely to be split in two parts in the future. Entrepreneur Sthlm, operated by the Country Administrative Board, will continue to provide competitive advisory services in the region. A new organization, StartUp Sthlm, based on the existing organizations Stockholm Startup Center (Stockholm Nyföretagar-Centrum) and Innovation Stockholm (a department of ALMI Business Partner Stockholm), will provide advice in the early phases. Stockholm Startup Center will administer an application for the ERDF 2011-2014, in cooperation with ALMI Business Partner Stockholm Business Region.



3.4 Portfolio of innovation support measures

The Stockholm portfolio consists of a large number of support measures, where regional innovation policy initiatives are intertwined with initiatives focusing on other policy areas, including private as well as academic initiatives, and measures at local, national and international level.

The level of funding for regional development, including research and innovation, from regional sources in Stockholm is very small, compared to other sources of funding. For example:

- Regional development funding through Stockholm Administrative Board (€0.8m)
- National grants for HEI research and research education 2010 (€357m)
- European Regional Development Fund 2007-2013 (€8.5m)
- European Social Fund 2007-2013 (€1b)
- EU RTD Framework program, yearly average 2007-2009 (€43.3m)

Over the last ten years, the Swedish government has issued a number of different policy initiatives to be implemented at regional level. Many of these require cooperation between public actors and other stakeholders at the regional level. Some examples are the guidelines concerning regional development programs (RUP) and European Structural Funds, and the more recent initiative concerning regional innovation strategies and competence platforms.

From national agencies, such as the Swedish Agency for Innovation Systems (VINNOVA) and the Swedish Agency for Economic and Regional Growth (Nutek), strategies to develop regional innovation strategies and clusters or innovation systems initiatives have been encouraged. For several years, these agencies have run different projects to provide regional policy makers with knowledge and support for the development of clusters and innovation systems.

Even if Stockholm does not have a specific cluster programme, several strong cluster initiatives have developed over time. However, the level of public funding from regional actors has often been limited. During the last years, funding has been received through the ERDF programme. Today, there are several ongoing projects related to the well-established high tech clusters of ICT (Kista) and life science (Norra Station and Flemingsberg). In parallel, some new cluster initiatives have developed; for example, related to creative sectors and environmental technology. In most cluster initiatives, actors from private and public sectors as well as academic institutions are collaborating.

Over the last ten years, the national demand for higher education institutions to be involved in regional development activities and commercialization of research results has increased. In the Swedish Higher Education Act of 2009, the expectation is that cooperation in higher education institutions should increase quality in education and research, as well as the use and commercialization of research results on a broad basis. Further, education institutions are required to make yearly reports to the Swedish National Agency for Higher Education (Högskoleverket) on how they cooperate with society. Still, the incentives for individual researchers to participate in cooperation in terms of national funding and academic merits are, in many cases, rather limited. It is therefore important for higher education institutions to find other motives for collaboration with the surrounding society, for example, a greater potential for attracting students and research funding.

In the Research and Innovation Proposition 2008, the Swedish government suggested that Innovation Offices were to be established to stimulate innovation and commercialization of research through qualified advisory services (for example, relating to patenting, licensing and contract research). In 2010 eight universities received funding for developing innovation offices. Two of those offices were located in



Stockholm, at Karolinska Institute (€0.5 million per year) and at KTH Royal Institute of Technology in Stockholm (€0.7 million per year).

3.5 Towards smart specialisation policies

Since Stockholm has been performing well for many years, the interest from policy makers to interfere with market development has been limited. Besides, the level of funding for regional development has been low and Stockholm has often been perceived as part of the national system rather than as a region. When national agencies approached regional authorities in Stockholm in the early 2000s to discuss clusters or innovation systems as a tool for regional development and smart specialization, it became clear that no formal prioritization had been made. In contrast, internationally competitive high tech clusters in ICT and life science had developed with limited interference from the regional level.

Over the last few years, however, the interest in stimulating growth and innovation has increased. This may be a result of demands from national and international actors, but it is also due to an increased awareness of the need to compete in a global market. Besides, the open process for developing the regional development plan RUFS2010 and the development of a regional partnership for prioritising among projects of strategic importance for receiving funding from the European Structural Funds has increased the level of cooperation between different stakeholders.

Today, several regional development initiatives have been prioritized in the traditional high tech sectors, such as ICT and life science, as well as in new developing sectors, such as healthcare and the creative sector. At an international level, the introduction of the ERDF in Stockholm has had an important impact, in spite of limited funding. The programme has made it possible to introduce various development initiatives related to the prioritized clusters. Besides, the European Institute of Innovation and Technology (EIT) is an initiative with the ambition to stimulate innovation in Europe by increased cooperation between research, education and innovation. KTH Royal Institute of Technology is a leading part in two out of three winning Knowledge and Innovation Communities (KICs), on ICT and renewable energy. These initiatives are also closely related to prioritised high tech sectors in the Stockholm region.

3.6 Possible future orientations and opportunities

As indicated above, the potential for innovation in the Stockholm region is high. For many years, the region has had a strong innovation performance and a high level of GDP growth. There are many internationally competitive actors, in the private as well as in the public sector.

In recent years, however, globalization and an increased level of international competitiveness have made regional actors more aware of the need to develop competitive regional innovation systems and governance structures. Still, like most large urban regions, Stockholm is characterized by a complex institutional setting, with a large number of rather independent actors. Besides, the resources for regional coordination have been limited. The question of governance and regional prioritizations is therefore of great importance. Several cooperative forums have been developed in Stockholm during the last years, but there is still a need for an inclusive process to better understand and develop the role of various actors in the region.

Traditionally, the Stockholm region has been heavily dependent on a few high tech sectors, such as the life sciences and ICT sectors. However, to remain competitive in the future, several initiatives have been taken lately to broaden the bases of innovation into new sectors.

During the last decades, the services sector has expanded rapidly in Sweden and in Stockholm in particular. Today, the Swedish government is discussing the potential for developing a national services innovation strategy. Two important services sectors



where the Stockholm region has a dominant role in Sweden are the knowledge intensive services sector (KIBS) and the creative sector. Some initial discussions on how to support innovation and development in these sectors have just started and need to be monitored over time.

There are also national discussions on how to increase efficiency and innovation in the public health care sector, in order to handle the challenge of an aging population. This provides an interesting future opportunity to the Stockholm life sciences sector, with internationally established actors such as Astra Zeneca, Karolinska Institute and Karolinska university hospital.

To succeed in global competition, it is necessary to attract and retain relevant competence in the region. During the last years, various initiatives to market Stockholm to foreign investors and skilled people have been initiated. Traditionally, Stockholm has been able to provide a high quality of life, in terms of strong public health performance, high educational attainment indicators and low poverty rating. However, to remain competitive in the future, the challenge of providing housing and infrastructure has to be addressed.

The analysis indicates some areas that need attention also in the future.

- First, it is important to use the ongoing analysis of the Stockholm innovation system to develop a broad dialogue with relevant stakeholders, to identify ongoing activities, needs and roles of various actors and to develop a regional innovation strategy.
- Second, there is a need for developing competence on how to use public procurement as a tool for stimulating innovation and development, for example in the health care sector and for environmental technologies.
- Third, the knowledge on clusters and innovation systems as tools for smart specialization and regional development has to be further developed and spread in the region.
- Finally, there are well known regional bottlenecks in terms of housing and infrastructure that have to be addressed in order not to prevent future development of the Stockholm region.

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Appendix B Stakeholders consulted

Göran Reitberger, Senior Advisor, Royal Institute of Technology (date of interview 17 01 2011).

Charlotte Hansson, Analyst, Regional Growth and Planning, Stockholm County Council (date of interview 28 01 2011).

Susanna Rockström, Program Manager Stockholm, EU Regional Structural Funds, Swedish Agency for Economic and Regional Growth (date of interview 01 02 2011).

Göran Andersson, Program coordinator, Swedish Agency of Innovation Systems (date of interview 03 02 2011).

Björn Axelsson, Almega, Project Manager, Almega - employer and trade organisation for the Swedish service sector (date of telephone interview 04 02 2011)

Berit Pettersson, Head of Unit, Unit for Business, Competence and Infrastructure, County Administrative Board of Stockholm (date of interview 07 02 2011).

Maria Lönn, Project coordinator, Unit for Business, Competence and Infrastructure, County Administrative Board of Stockholm (date of interview 07 02 2011).

Folke Snickars, Dean of Faculty, Royal Institute of Technology (date of interview 07 02 2011)

Appendix C RIM Repository information

Baseline regional profile

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Regional Profile

Introduction

The NUTS 2 region Stockholm has approximately 1.9m inhabitants. It is dominated by Sweden's largest municipality Stockholm, with almost 804,000 inhabitants. Stockholm is the capital of Sweden and the national centre for policy making and public administration. The Stockholm region is part of the larger Mälardalsregion, which also includes parts of the NUTS 2 region Östra Mellansverige.

Repository

Support mesures

- Stockholm MedTech Growth
- Entrepreneur STHLM
- <u>Start-up Stockholm</u>
- Moving Pictures, Stockholm Mälardalen
- <u>Strengthening Stockholm's ICT-cluster Kista Science City</u>
- Powerhouse Life Science in Stockholm Life Solna-Stockholm
- <u>Knowledge Navigator</u>
- Environmental Technology for Growth
- Innovation Power STHLM
- STING Stockholm Innovation and Growth
- <u>Karolinska Institute Innovation</u>

Policy documents

- <u>Regional Strategy for Entrepreneurship in Stockholm County 2007-2013</u>
- RUFS 2010 Regional Development Plan for the County of Stockholm
- <u>Regional Structural Funds Programme for Regional Competitiveness and Employment in Stockholm –</u> 2007-2013

Organisations

- <u>Stockholm Science City Foundation</u>
- <u>Stockholm New Business Centre</u>
- <u>Stockholm Academic Forum</u>
- <u>STING Stockholm Innovation and Growth</u>
- <u>Stockholm Environmental Technology Centre</u>
- IVL Swedish Environmental Research Institute
- <u>Electrum Foundation</u>
- <u>Filmregion Stockholm-Mälardalen</u>
- KTH Royal Institute of Technology
- <u>County Administrative Board of Stockholm</u>

- Office of Regional Planning, Stockholm County Council
- <u>Stockholm Business Region Development</u>

Economy

There are considerable differences within the region. The percentage of inhabitants born abroad is well above the national average of 14.3%, particularly in the southern and western municipalities. Economic prosperity is highest in some Northern municipalities, e.g. Danderyd, Nacka and Lidingö. Approximately 23% of the population has a higher education, which is the highest level in Sweden, particularly among females. The region had the lowest level of unemployment in Sweden at the end of 2009, only 6.8%, indicating that the region was not as much affected by the economic crisis as other parts of country.

Average gross domestic product (GDP) during the period 2000-2008 was €79,405m, or more than 27% of the national total. About 85% of employment was in the services sector, which is well above the national average of 68%. In 2008, the percentage of gross value added (GVA) from information and communication, and law and economy was well above the national average, while manufacturing industry was below the average level.

Research, Development & Innovation

According to the "European Regional Innovation Scoreboard" in 2006, Stockholm was the top region of Europe in innovation performance. The conditions for innovation in Stockholm are good. There are several strong research universities, e.g. the Royal Institute of Technology, Karolinska Institutet, Stockholm University, the Södertörn University, Stockholm School of Economics and a number of specialised university colleges. 19 of these are cooperating on student information, marketing, analysis and networking (Stockholm Academic Forum). There is also the internationally awarded university hospital of Karolinska, several research institutes, incubators (STING, KIAB and SUIAB) and science parks (Kista Science City and Karolinska Science Park).

The business environment of the region is diversified, but increasingly dependent on the services sectors. The region has a strong position in knowledge intensive sectors such as ICT, life sciences, financial services, business consultants and transportations. There are strong regional clusters, e.g. the ICT cluster in Kista, dominated by the large multinational company Sony Ericson, and the biotech cluster centred around Astra Zeneca and Karolinska Institutet.

Sweden is one of the countries with the highest proportion of research in terms of GDP, and the majority of the investments in research and development (R&D) are made by industry. Average yearly business expenditure on R&D in the region over the period 2000-2008 was 3.4%, which is higher than the national average of 2.8%.

The innovation support structure consists of a variety of organisations and measures to support the development of innovations and business ideas. Many of the organisations work closely with higher education institutions.

Governance

The national public entities involved in the system can be grouped into four categories, i.e. developing

policies on national and regional level (parliament, government, ministries, local authorities and county councils), supporting implementation of policies and financing innovation and R&D (e.g. research funding institutes, the agency for innovation systems - VINNOVA, sectoral agencies), implementing research and development (e.g. universities and research institutes) or supporting commercialisation and entrepreneurship (e.g. the agency for economic and regional growth - Tillväxtverket, ALMI, Innovation Bridge, incubators). Many of these are located in Stockholm.

The Stockholm region is part of the larger national innovation system and the regional governance structure is a mixture of public and private initiatives, involving actors at different levels. The level of autonomy for regional innovation policy is at a medium level. Responsibility for regional development is shared between the Regional Administrative Board and the Regional County Council. The Regional Administrative Board is responsible for developing a regional development program (RUP). In 2010, the programme was integrated with the regional development plan of Stockholm (RUFS), developed by the Regional County Council of Stockholm and with a stronger focus on aspects concerning health care and infrastructure. Both programmes were developed in a dialogue process including different actors.

In 2006, the OECD Territorial Report of Stockholm criticised the regional governance structure. Since then, several initiatives have been taken to increase cooperation and, according to a recent OECD evaluation, the situation has improved. According to national instructions, a Structural Funds programme was developed in a broad partnership, with different types of actors, focusing on strategic areas. However, the amount of funding was limited and the impact on regional innovation policy is still at a medium level.

Policy

During the recent years, innovation and renewal has become increasingly important in the regional growth policy in Sweden. Today, all NUTS 3 regions are required to present a regional development plan (RUP). In some regions, this plan is supplemented with an action plan for regional growth (RTP) or a regional innovation strategy. These strategies are often developed in partnership with actors of different sectors, e.g. business, public sector, universities and non-profit organisations.

In Stockholm, there are several strong business sectors, e.g. ICT, life sciences, environmental technology and medical technology, but there is no explicit regional innovation or cluster strategy. However, in life sciences, two joint initiatives with the Uppsala region have been taken, the first to develop a research centre (Science for Life Laboratory), the second to market the region (SULS). There is also ongoing work to develop an action plan to stimulate development of the creative sector.

To increase entrepreneurship and innovation, a collaborative platform, Entrepreneur Sthm, was established as a three-year initiative by the County Administrative Board, ALMI Företagspartner Stockholm, Innovation Bridge and Stockholm Business Region Development. The objective is to provide support and advice to entrepreneurs, innovators and business owners. The initiative has financial support from European Regional Development Fund and the Agency for Economic and Regional Growth (Tillväxtverket).

Support measure

- <u>SVERIGE</u>
- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Stockholm MedTech Growth

Full title

null

Duration

From: 2009 To: 2012

Policy objectives

- 2.2.3. R&D cooperation
- 4.3.1. Support to innovative start ups incl Gazelles
- 4.2.1. Support to innovation management and advisory services

Presentation of the measure

Stockholm MedTech Growth is a project which offers tailor made support for selected medical technological companies with high potential of growth, especially in exports. One aim of the project is to stimulate strategic partnerships by enabling interactions and matching with foreign companies, another is to intensify international marketing of the region's overall skills in the medical technology sector and to promote foreign investment. There is also an ambition to develop a structure for cooperation on clinical testing. The main activities are:

- project management and administration;
- export promotion;
- assisting medical technology companies on internationalisation;
- international marketing and inward investment; and
- collaborative platform for industry, universities and university hospitals

The project is administered by the Electrum Foundation and financed by a broad consortium, including Kista Science City AB (KSC AB), Stockholm Business Region Development (SBRD), Invest Sweden, STING, The Centre for Technology in Medicine and Health (CTMH), Stockholm-Uppsala Life Science (SULS) and Danderyd University Hospital.

The project runs from 2009 to spring 2013 and has a total budget of about $\in 3.2m$. About $\in 1.3m$ of the budget has been provided by ERDF, about $\in 0.3m$ by the national agency Invest in Sweden and the rest by regional actors, including the two universities of Danderyd and Karolinska, the subsidiaries of Electrum Foundation, the Royal Institute of Technology, the County Council of Stockholm, Stockholm-Uppsala Life Science and Stockholm Business Region Development.

Keywords

- Innovation networks
- Public-private partnership

Budget, source and type of funding

Currency: EUR

- Grants
- Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

There has been a positive response by beneficiaries to the measure (e.g. over-subscribed in terms of requested versus available budget) but it is too early to judge results or impact

Evidence of outcomes based on evaluation and other evidence

Success factors have been to bring together a relatively fragmented medicine technology industry in the Stockholm-Uppsala region. The project has created a more cohesive network within the medical technology industry and made the industry more observable.

Do's and Don'ts

The project includes many actors, which is positive as it has reinforced the industry. At the same time, the involvement of many actors has resulted in slower progress in the project and sometimes made it less mobile.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

Yes

Organisation(s) responsible

<u>Electrum Foundation</u>

Support measure
- <u>SVERIGE</u>
- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Entrepreneur STHLM

Full title

Entreprenör STHLM

Duration

From: 2008 To: 2010

Policy objectives

- 4.3.1. Support to innovative start ups incl Gazelles
- 4.2.1. Support to innovation management and advisory services

Presentation of the measure

Entrepreneur STHLM is collaborative platform to increase entrepreneurship and innovation by providing support and advice to entrepreneurs by providing support and advices to entrepreneurs, innovators and small or medium-sized companies. The project was established as three-year initiative by the County Administrative Board of Stockholm, Innovation Bridge, ALMI Business Partner Stockholm and Stockholm Business Region Development,

The ambition was to develop a coordinated, long term structure for efficient advisory services and financing, regardless of gender, background, sector or corporate form. In early 2010, Entrepreneur Sthlm purchased advisory services on for example start-ups, female entrepreneurship, business development, internationalisation, innovation (researcher and health care) and mentorship from approximately 22 different organisations. By using a process of public procure, organisations were selected in competition. To make it easier to find the right advice, all organisations were marketed together at the project website. At the website, visitors could choose between advisory support concerning start-ups, innovation or business development.

The total budget over the period was about $\in 8m$, supplied by ERDF ($\in 2m$), Almi Business Partner Stockholm ($\in 1.2m$), the Innovation Bridge of Stockholm ($\in 1.2m$), The Country Administration ($\in 2m$), Stockholm municipality ($\in 1.4m$) and the national programme to promote female entrepreneurship at the Swedish Agency for Economic and Regional Growth (Tillväxtverket). Six out of 26 municipalities in Stockholm were participating in the initiative.

Keywords

- Gazelles
- Start-ups/spin-offs
- Entrepreneurship

Budget, source and type of funding

Currency: EUR

Source of funding2008National public funds2008Regional public funds3,760,000EU Structural funds2,000,000Private fundsOtherForm of funding provided

- Grants
- Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

There has been a positive response by beneficiaries to the measure (e.g. over-subscribed in terms of requested versus available budget) but it is too early to judge results or impact

Evaluation report(s)

• rapport_kundundersokning_slutlig.pdf

Evidence of outcomes based on evaluation and other evidence

The outcome of the project has been positive. A customer survey was undertaken in spring 2010, indicating a high level of participation particularly among women; people aged 40-65, people with a foreign background and small companies (less than five employees). The survey indicated that more than 70 percent of the participants were satisfied or very satisfied with the services. The demand for services was higher than expected. After the first three years, a total of approximately 17 000 persons had received advisory services and, based on approximations, about 2000 new jobs had been created (not necessarily full-time) and 3 500 companies established. The project also resulted in a strong partnership and a more structured way of working with advisory services in the region.

In 2011, the initiating partners are satisfied with the outcome, but for organisational reason, the project is likely to be split in two parts in the future. Entrepreneur Sthlm, operated by the Country Administrative Board, will continue to provide competitive advisory services in the region. A new organisation, StartUp Sthlm, based on the former organisations Stockholm Startup Center (administered by Stockholm NyföretagarCentrum) and Innovation Stockholm (a department of ALMI Business Partner Stockholm), will provide advice in the early phases.

Do's and Don'ts

Through the launch of the measure it was considered significant to include representatives from all municipalities, which were covered by the measure. This was done in order to provide everyone involved with the opportunity to participate in the process, and thereby not to leave some municipalities feeling excluded.

The initiating partners are satisfied with the outcome, but for organisational reason, the project is likely to be split in two parts in the future. Entrepreneur Sthlm, operated by the Country Administrative Board, will continue to provide competitive advisory services in the region. A new organisation, StartUp Sthlm, based on the existing organisations Stockholm Startup Center (Stockholm Nyföretagar-Centrum) and Innovation Stockholm (a department of ALMI Business Partner Stockholm), will provide advice in early phases. Stockholm Startup Center will administer an application for the ERDF 2011-2014, in cooperation with ALMI Business Partner Stockholm Business Region.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

Yes

Organisation(s) responsible

<u>County Administrative Board of Stockholm</u>

Support measure

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Start-up Stockholm

Full title

Start-up Stockholm

Duration

From: 2011 To: 2014

Policy objectives

• 4.3.1. Support to innovative start ups incl Gazelles

Presentation of the measure

As a spin-off from the previous project Entrepreneur STHLM, co-funded by the ERDF, a new application concerning innovation and start-up support was submitted and approved by the European Regional funds for the period 2011-2014. The project is administered by Stockholm Nyföretagarcentrum, the largest business support provider in Sweden, in collaboration with Stockholm Business Region and ALMI Business Partner Stockholm Sörmland AB.

The long term objective is to contribute to economic growth by increasing new business establishment and commercialisation of new ideas in the Stockholm region. The goal is to coordinate innovation and start-up advisory services, in order to facilitate the process for the clients and to increase quality of advisory services.

The project has an ambition to develop new methods, to support all individuals, independent of age, sex and ethnic background. ERDF-funding is mainly used for providing start-up advisory services free of charge. Other activities in the project are a Knowledge Centre and Stockholm Business Club, funded by other sources.

The project has been granted $\in 1.5$ m and is co-funded by Almi Business Partner Stockholm Sörmland AB ($\in 0.7$ m), the County Administrative Board of Stockholm ($\in 0.3$ m) and Stockholm Business Region Development ($\in 1.2$ m).

Keywords

- Skills for innovation
- Small and medium-sized enterprises
- Start-ups/spin-offs

Budget, source and type of funding

Currency: EUR

Source of funding2011National public fundsRegional public fundsRegional public funds1,030,933EU Structural funds1,500,000Private fundsOtherForm of funding provided

- Grants
- Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

It is too early to judge the success of the measure (e.g results of first call for proposals still not known).

Evidence of outcomes based on evaluation and other evidence

It is too early to evaluate positive and/or negative factors impacting on the degree of success.

Do's and Don'ts

It is too early to evaluate policy learning.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Organisation(s) responsible

• Stockholm New Business Centre

Support measure

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Moving - Pictures, Stockholm Mälardalen

Full title

Moving - Picture, Stockholm Mälardalen

Duration

From: 2009 To: 2011

Policy objectives

• 1.3.1. Cluster framework policies

Presentation of the measure

For about 15 years ago 90 percent of all Swedish film was produced in the Stockholm region. Then the figure fell dramatically and in 2004 it was down to 20 percent, mostly due to large investments in film producing in other parts of the Sweden. Moving - Pictures, Stockholm Mälardalen aim is now to strengthen Stockholm Region as a location for filming and producing movies. The main activities are:

- Creating "movie cluster", involving stakeholders in Stockholm movie industry;
- Marketing of Swedish films and locations to international markets; and
- New forms of investment in movie industry.

The main purpose for developing cluster collaboration is to establish meeting places for technical companies, producers, project leaders and other professionals in the movie industry. The project involves 250 companies in network meetings, growth programs and shared marketing activities. The plan is to realize 85 activities during 36 months. The goal is as well to attract at least twelve Swedish or international film productions per year to Stockholm Region. For this reason the marketing activities will be focused on attracting international film productions. The main actor coordinating marketing activities will Stockholm Film Commission.

Keywords

• Innovation networks

Budget, source and type of funding

Currency: EUR

Source of funding2009National public fundsRegional public fundsRegional public funds1,244,851EU Structural funds829,892Private fundsOtherForm of funding provided

- Grants
- Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

It is too early to judge the success of the measure (e.g results of first call for proposals still not known).

Evidence of outcomes based on evaluation and other evidence

It is too early to evaluate positive and/or negative factors impacting on the degree of success.

Do's and Don'ts

It is too early to evaluate policy learning.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Organisation(s) responsible

• Filmregion Stockholm-Mälardalen

Support measure

- <u>SVERIGE</u>
- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Strengthening Stockholm's ICT-cluster - Kista Science City

Full title

Förstärkning av Stockholm ICT-cluster – Kista Science City

Duration

From: 2009 To: 2011

Policy objectives

- 2.2.3. R&D cooperation
- 2.3.1. Direct support of business R&D (grants and loans)
- 2.2.2. Knowledge Transfer

Presentation of the measure

The objective of the project is to develop and strengthen Kista Science City as a world-leading cluster in ICT by stimulating co-operation between information and communications technologies (ICT) companies. The project is run by Kista Science City AB, a subsidiary of Electrum Foundation, and involves about 60 companies and nine business networks. The target group is primarily smaller ICT companies in Kista Science Park, but larger companies are also involved in the project. Within the project, three types of networks will be established:

• executive networks, including dialogue, problem solving, knowledge development through regular

meetings, coaching and support;

- expertise networks in different thematic fields, in order to develop and exchange interdisciplinary knowledge;
- network between ICT industry and the audiovisual industry, to initiate business development and growth in the multi media sector.

The project is running during 2009-2011 and has a budget around $\notin 1.4m$, provided by the ERDF ($\notin 0.57m$), Kista Science City ($\notin 0.79m$) and the Interactive Institute ($\notin 0.06m$)

Keywords

- Information and communication technologies
- Innovation networks
- Cluster

Budget, source and type of funding

Currency: EUR

Source of funding2009National public fundsRegional public fundsEU Structural funds541,600Private funds0ther812,400Form of funding provided

• Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

There is evidence of an impact of the measure based on verifiable indicators or an evaluation (e.g. sales generated from new products, jobs created, etc.)

Evidence of outcomes based on evaluation and other evidence

Half-way evaluation indicated that approximately 40 CEOs are involved in the network and in total there are as well approximately 60 people involved in the specialist and experts network.

Do's and Don'ts

It is too early to evaluate policy learning.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Organisation(s) responsible

• Kista Science City

Support measure

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Powerhouse Life Science in Stockholm Life Solna-Stockholm

Full title

Kraftcentrum Life Science i Karolinska - Norra Station

Duration

From: 2010 To: 2013

Policy objectives

- 2.2.3. R&D cooperation
- 2.2.2. Knowledge Transfer

Presentation of the measure

The project Power Centre Life Science in Stockholm Life Solna-Stockholm is part of the development of the life science sector in the new city area developing around Karolinska Institute (Hagastaden) in Solna-Stockholm. The project is administered by the Stockholm Science City Foundation, in partnership with Karoliska Institute Science Park (KISP) and the Royal Institute of technology (KTH).

The project aims to develop tools and processes for collaboration and knowledge transfer between the life science industry and academia. The goal is to develop soft infrastructure in order to support co-operation between actors in the life science sector and to stimulate growth and innovation. The target group is actors within the geographical area of Stockholm Life Science City, such as universities, companies and public organisations.

The project is running between 2010 and 2013. Of a the total budget close to \notin 2.3m, almost \notin 1m is provided by the ERDF. Regional co-funding of \notin 1.3m is provided by the partners and national funding of \notin 0.5m by the cluster programme of the National Agency for Economic and Regional Growth (Tillväxtverket).

The project is still in an early phase, but an on-going evaluation has been initiated.

Keywords

- Science-industry cooperation
- Innovation networks
- Knowledge transfer

Budget, source and type of funding

Currency: EUR

Source of funding2010National public fundsRegional public fundsEU Structural funds979,651Private funds1,460,000Form of funding provided

• Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

It is too early to judge the success of the measure (e.g results of first call for proposals still not known).

Evidence of outcomes based on evaluation and other evidence

It is too early to evaluate positive and/or negative factors impacting on the degree of success.

Do's and Don'ts

It is too early to evaluate policy learning.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Organisation(s) responsible

<u>Stockholm Science City Foundation</u>

Support measure

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Knowledge Navigator

Full title

Kunskapssamarbeten

Duration

From: 2008 To: 2011

Policy objectives

- 2.2.3. R&D cooperation
- 3.1.1. Awareness creation and science education
- 2.2.2. Knowledge Transfer

Presentation of the measure

The Stockholm area is today hosting numerous colleges, universities and businesses. Together, they are not only a valuable knowledge bank for the region but they are also strengthening the region's ability to create growth. One problem is that the knowledge is not disseminated, exchanged and developed in a sufficient extent, seen from a growth perspective. In 2008, the project Knowledge Navigator was launched in collaboration between five universities; the KTH Royal Institute of Technology, the Karolinska Insitute, Stockholm University, University College of Arts, Crafts and design, and Södertörn University. The aim was to create a working model for knowledge transfer between academia and businesses. In the longer term the objective is to establish a permanent sustainable structure for knowledge transfer between academia and businesses.

During 2008-2010, a first phase of the projects was running, focusing on small and medium-sized companies in the health care and care sector for the elderly in the Stockholm region. The project had a total budget around $\in 1.3$ m, and was funded by the ERDF ($\in 0.5$ m), universities, other regional actors, a private real estate company and the National Agency of Economic and Regional Growth.

The outcome of the project was positive and an application for a second phase of the project was submitted and approved for funding from the ERDF during 2011-2013. The project has the ambition to become a forum for discussion about university-business collaboration, providing the following activities:

• test and evaluate a model during phase 1 for matching company development needs with higher

education competencies and collaboration needs;

- identify and evaluate cost efficiency and value of different meeting places;
- increase the number of cross-sectoral collaborative projects between business and academy and between different universities;
- develop tools, e.g. standard agreements, checklists and information material that supports the process of knowledge transfer;
- identify good practice and incentives for collaboration

Keywords

- Science-industry cooperation
- Knowledge transfer
- Public-private partnership

Budget, source and type of funding

Currency: EUR

- Source of funding2008National public funds100,000Regional public funds603,183EU Structural funds488,985Private fundsOtherForm of funding provided
 - Grants
 - Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

There has been a positive response by beneficiaries to the measure (e.g. over-subscribed in terms of requested versus available budget) but it is too early to judge results or impact

Evidence of outcomes based on evaluation and other evidence

It is too early to evaluate positive and/or negative factors impacting on the degree of success.

Do's and Don'ts

It is too early to evaluate policy learning.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

Organisation(s) responsible

<u>Stockholm Academic Forum</u>

Support measure

- <u>SVERIGE</u>
- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Environmental Technology for Growth

Full title

Miljöteknik för tillväxt

Duration

From: 2008 To: 2011

Policy objectives

• 1.3.1. Cluster framework policies

Presentation of the measure

Environmental Technology for Growth (Miljöteknik för tillväxt) is a three year project (2009-2011) to stimulate growth and internationalisation of small and medium-sized companies providing environmental technology and other solutions for a sustainable development in the Greater Stockholm Region (Stockholm-Mälardalen). The project is funded by Swedish Environmental Research Institute (IVL), Stockholm Business Region Development, the Swedish Agency for Economic and regional growth, and the ERDF.

Important activities are exports, product development, business development and financing. A test facility for research and tests on water purification has been established, which has received international attention and stimulated company cooperation for internationalisation. Another test facility and showcase for renewable energy sources has been established in the city of Stockholm.

The project is administered by the Swedish Environmental Research Institute (IVL) and the Stockholm Environmental Technology Centre (SMTC). The projects had a total budget of \notin 2.25m. About \notin 0.9m were provided by the ERDF, \notin 0.6m by IVL, \notin 0.15m by Stockholm municipality and \notin 0.6m by the National

Agency for Economic and Regional Growth.

Keywords

- Innovation networks
- Small and medium-sized enterprises
- Eco-innovation

Budget, source and type of funding

Currency: EUR

Source of funding 2008 National public funds 600,000 Regional public funds 750,000 EU Structural funds 900,000 Private funds Other Form of funding provided

• Grants

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

There has been a positive response by beneficiaries to the measure (e.g. over-subscribed in terms of requested versus available budget) but it is too early to judge results or impact

Evaluation report links

• Enviromental Technology fo Growth - Reports

Evidence of outcomes based on evaluation and other evidence

From 2011, the project is in a final phase. Over three years, about 140 companies have participated in the project. Of these, about 30% have increased their exports and 22 new products have been tested and developed. The project has also contributed to 32 new jobs being created, 14 new companies established, and 14 collaborative development projects with academia initiated.

The measure has so far contributed to:

- 9 new companies;
- 21 development projects between researcher and small companies;
- 15 new jobs;
- 16 investment decisions;
- 1 organisation for coordinating study visits;

- 30% of the companies has increased their turn-over; and
- 46% has participated in some form of business network or other collaborations platform, facilitating business advantages.

Do's and Don'ts

It is too early to evaluate policy learning.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Organisation(s) responsible

- IVL Swedish Environmental Research Institute
- <u>Stockholm Environmental Technology Centre</u>

Support measure

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Innovation Power STHLM

Full title

Innovationskraft STHLM

Duration

From: 2011 To: 2012

Policy objectives

- 2.2.3. R&D cooperation
- 2.2.2. Knowledge Transfer
- 1.2.2. Innovation strategies

Presentation of the measure

During the last years, regional stakeholders had highlighted that there was insufficient knowledge of how public capital is used for business development in the region. In early 2011, an initiative was taken to make a functional analysis of the innovation structure of Stockholm. The project, Innovations Power Stockholm, was initiated in collaboration between the County Administrative Board and the Country Council of Stockholm. The mission was to establish a regional arena for innovation development. The objective was to invite regional stakeholders in a long-term strategic development process, with a focus on the region's capacity for innovation and renewal.

The first step will be to analyse the regions innovation conditions and to identify how knowledge intensive environments, such as universities, could facilitate innovations. A goal is also to provide regional and national stakeholders with a common view and facilitate discussions concerning strategic options and innovation development. If successful, the project could be a basis for developing a regional innovation strategy in the Stockholm Region. The project will also include a platform for dialogue and conferences meetings, stimulating collaboration between both private and public stakeholders. In this process, future needs for development activities and strategic prioritisation concerning innovation will be identified.

The project, running during 2011 and 2012, is coordinated by the County Administrative Board of Stockholm, and co-funded by the County Council of Stockholm ($\notin 0.55$ million) and Vinnova, the Swedish National Agency for Innovation Systems ($\notin 1.75$ million).

Keywords

- Science-industry cooperation
- Innovation networks
- Knowledge transfer

Budget, source and type of funding

Currency: EUR

Source of funding 2011 National public funds 175,000 Regional public funds 55,000 EU Structural funds Private funds Other Form of funding provided

• Grants

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

It is too early to judge the success of the measure (e.g results of first call for proposals still not known).

Evidence of outcomes based on evaluation and other evidence

It is too early to evaluate positive and/or negative factors impacting on the degree of success.

Do's and Don'ts

It is too early to evaluate policy learning.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Support measure

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

STING - Stockholm Innovation and Growth

Full title

STING - Stockholm Innovation and Growth

Duration

From: 2001 To: No fixed end date

Policy objectives

- 4.3.1. Support to innovative start ups incl Gazelles
- 4.3.2. Support risk capital

Presentation of the measure

STING is assisting entrepreneurs and innovators from academia, research institutes and the business sector. STING works primarily with start-ups within information and communications technologies, media, medtech and cleantech. Preselected projects receive comprehensive business and financial support. The overall objective is that STING shall actively support the formation and growth of 12 new technology companies per year in Stockholm. The companies selected should also have good commercial prospects and a great potential to be a exporting company. The goal is that companies should have the ability to grow to 15-30 employees and leave STING's support program within five years. STING's business process offers innovators and entrepreneurs four different programmes:

- start-ups training programme that verifies the business idea;
- business -lab from idea to industry, including business testing and coaching;
- business accelerator preparation for market launch; and
- Go Global Medtech expansion international.

The main target group are innovators, entrepreneurs, researchers and newly started companies.

Keywords

- Business angels
- Start-ups/spin-offs
- Early stage-financing

Budget, source and type of funding

Currency: EUR

 Source of funding
 2005
 2006
 2007
 2008
 2009

 National public funds
 2,500,000
 5,000,000
 10,000,000
 15,000,000
 20,000,000

 Regional public funds
 EU Structural funds
 7,500,000
 20,000,000
 40,000,000
 55,000,000
 62,500,000

 Other
 Form of funding provided
 40,000,000
 55,000,000
 62,500,000

- Venture capital (including subordinated loans)
- Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

There is evidence of an impact of the measure based on verifiable indicators or an evaluation (e.g. sales generated from new products, jobs created, etc.)

Evaluation report links

• STING Annual Report (2009)

Evidence of outcomes based on evaluation and other evidence

An evaluation of the measure is not yet available. Comments are expected from regional representatives and project managers.

Do's and Don'ts

Comments are expected from regional representatives and project managers.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

Yes

Organisation(s) responsible

<u>Electrum Foundation</u>

Support measure

- <u>SVERIGE</u>
- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Support Measure

Title of measure

Karolinska Institute Innovation

Full title

Karolinska Institutet Innovation

Duration

From: 1996 To: 1996

Policy objectives

- 4.3.1. Support to innovative start ups incl Gazelles
- 4.3.2. Support risk capital

Presentation of the measure

Karolinska Institutet Innovations AB (KIAB) was established by Karolinska Institutet in order to improve commercialisation of academic research in the medical field. Karolinska Institute Innovations AB (KIAB) is a life science incubator specialising in early stage support, creating start-up companies based on academic

inventions. It's a vital part of the KI innovation system and annually reviews a significant number of inventions and innovative ideas from a large number of leading Nordic academic institutions. KIAB's main purpose to commercialise research projects based on medical research and in so doing contribute to improved public health. The innovation system is based on KIAB's Model, which includes Accelerated Business Development, Business Plan and Product Development. The KIAB Model offers a range of supporting activities, such as: evaluation, patenting and business development; and start-up and seed capital by Karolinska Development AB. The prime target group is researchers in life science, both locally from Karolinska Institute and other Nordic universities and research centers.

Keywords

- Gazelles
- Incubators/science parks
- Early stage-financing

Budget, source and type of funding Form of funding provided

- Venture capital (including subordinated loans)
- Other

Policy learning

Extent the measure can be considered as a success and worthy of policy learning

The measure has achieved its intended targets in terms of results (e.g. number of enterprises investing in innovative projects, people trained)

Evidence of outcomes based on evaluation and other evidence

An evaluation of the measure is not available. Comments are expected from regional representatives and project managers.

Do's and Don'ts

Comments are expected from regional representatives and project managers.

This measure is recommended as an example of regional good practice to policy-makers from other regions:

No

Organisation(s) responsible

• Karolinska Institute Innovation AB

Policy document

- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Policy Document

Regional Strategy for Entrepreneurship in Stockholm County 2007-2013

Regional Strategi för entreprenörskap i Stockholms län 2007

Organisation responsible

County Administrative Board of Stockholm

Other organisation(s) involved

Office of Regional Planning, Stockholm County Council

Content

The Regional Strategy for Entrepreneurship outlines how Stockholm intends to stimulate and support the innovation system in Stockholm County. The strategy defines visions, goals, and priorities for the region during the period 2007-2013. The strategy focuses on the system of advisory and financial support and how it can evolve to better meet the needs of entrepreneurs and innovators. The strategy is aimed at the county's politicians, policy makers and the actors and organisations involved in advisory and financing services.

The strategy has been developed as part of the Entrepreneurship without Borders project and in the context of the Swedish agency of economic and regional growth (Tillväxtverket) national entrepreneurship programmes. The regional strategy includes five important sub-strategies: promote entrepreneurship and innovation; provide support and advice for entrepreneurship and innovation; financing and venture capital; support the development of business and commercial synergies; and the region's business environment.

Year of publication

2007

Link to website

Link: <u>http://entrepreneursthlm.nu/images/stories/pdf/regional_strategi_for_entreprenorskap_sept_07.pdf</u>

Policy document

- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Policy Document

RUFS 2010 - Regional Development Plan for the County of Stockholm

RUFs 2010 - Regional Utvecklingsplan för Stockholmsregionen 2010

Organisation responsible

Office of Regional Planning, Stockholm County Council

Content

The basis for regional development activities in Stockholm County is The Regional Development Plan for the County of Stockholm, RUFS 2010. RUFS 2010 defines the region's visions, objectives and future strategies. The shared vision for the Stockholm region is to become one of "Europe's most attractive metropolitan regions" and this is supported by four objectives:

- an open and accessible region;
- a leading growth region;
- a region with a good living environment; and
- a resource-efficient region.

The visions and objectives are also supported by six strategy areas, which serve as benchmarks for the regions development. One important strategy area is to develop ideas and capacity in order to stimulate renewal and innovation. The strategy area includes several activities to promote innovation. Examples of such activities are:

- formulation of long-term business policy;
- use public procurement to encourage innovation;
- make entrepreneurship a basic skill in the educations system; and
- stimulate dense, knowledge-intensive environments.

Year of publication

2009

Link to website

Link: http://www.regionplanekontoret.sll.se/english/RUFS-2010/

Policy document

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Policy Document

Regional Structural Funds Programme for Regional Competitiveness and Employment in Stockholm – 2007-2013

Regionalt Strukturfondsprogram för Regional Konkurrenskraft och Sysselsättning i Stockholm 2007-2013

Organisation responsible

County Administrative Board of Stockholm

Other organisation(s) involved

Office of Regional Planning, Stockholm County Council

Content

The Regional Structural Funds Programme of Stockholm focuses on four key areas:

- development of the city's innovative environments; business development;
- accessibility; and
- technical support.

The focus area of innovation environment aims to develop collaboration and structures for knowledge development, commercialisation of product and services, taking charge of all residents' skills, and support to resource efficiency. One of the key goals in the area of innovation environment is to develop competitive clusters and innovation systems. Various measures are implemented in order to strengthen this area of development and to stimulate increased collaboration between university, trade and industry, and public sector.

The main aim of entrepreneurship policies is to contribute to a support system of entrepreneurship and business development, in order to create more companies and to stimulate growth of existing companies. Various activities are implemented to stimulate innovative environments and entrepreneurship in the region. The performance of these activities is evaluated against the pre-set indicators.

Year of publication

2007

Link to website

Link: http://publikationer.tillvaxtverket.se/Download.aspx?ID=1250

Organisation

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Organisation

Stockholm Science City Foundation

Stockholm Science City Foundation

Link: http://www.stockholmsciencecity.com/en

Wenner-gren Center, Sveavägen 166, 12 Tr Stockholm, SE-113 46

Mission

The Stockholm Science City Foundation (SSCi) was founded in 1990 by the three leading universities, the Royal Institute of Technology (KTH), Karolinska Institute and Stockholm University, together with private actors, the Stockholm County Council and the municipalities of Solna and Stockholm. SSCI has been commissioned to develop the life science sector in the new city area developing around Karolinska Institute (Hagastaden) by attracting academia and businesses. The aim of the region, Vision 2025, is to become the world's most attractive centre for life sciences.

Activities

The organisation is a tool for its stakeholders in order to facilitate the implementation of joint projects and marketing of Stockholm Life, to create attractiveness for academic and industrial life science, in a regional, national and an international context. A number of development projects are administered by SSCI, including the large ERDF-funded project Power Centre. The organisation had 12 employees in 2011, many with a doctoral degree.

Organisation

- <u>SVERIGE</u>
- <u>Östra Sverige</u>
- Region Stockholm
- NUTS Code SE11

Organisation

Stockholm New Business Centre

Stockholms Nyföretagarcentrum

Link: http://www.nyforetagarcentrum.org/system/visa.asp?HID=899&FID=853&HSID=14416

Drottninggatan 97 STOCKHOLM, SE-113 60

Mission

Stockholm New Business Centre (SNC) is a non-profit foundation, established in 1987 to provide individuals who wanted to start a company with advice, free of charge, and independent of industry or industrial sector. The purpose is to support company establishment and development, to create growth and employment in the Stockholm region.

Activities

SNC provides about 9 500 advisory services each year, resulting in approximately 2 000 new companies yearly. In a year, the foundation has access to about 60 advisors and about 30 collaborative partners. Since May 2011, innovation advice is coordinated by SCN in the project Start-Up Stockholm.

Organisation

- <u>SVERIGE</u> Östra Sverige
- Region Stockholm
- NUTS Code SE11

Organisation

Stockholm Academic Forum

Stockholms Akademiska Forum

Link: http://www.staforum.se/Hem.aspx

Klarabergsgatan 33 Stockholm, se-111 21

Mission

Stockholm Akademic (StAF) forum is a co-operative organisation for 19 of Stockholm's colleges and

Universities. The City of Stockholm is also involved as a partner. The Stockholm Academic Forum intends to develop Stockholm as an international and national centre for students, international actors and the business world. StAF's work should generate awareness of Stockholm as an attractive and stimulating region. One important mission is as well to increase awareness among regional stakeholders concerning the importance of higher education for skills supply. In summary, their work should reflect the overall vision of "Stockholm - a world leading knowledge region".

Activities

Stockholm Academic Forum (StAF) approach is based on doing analysis and co-ordinating projects between universities, colleges and the business world. StAF creates new knowledge about universities and their importance for Stockholm region development. StAF also strives to influence public opinion and to develop relations with actors in the region. The main activities are organised by three working fields:

- Analysing- StAF initiate, analysing and spreading analysis and investigations concerning Stockholm as an knowledge region;
- Influence StAF is influencing by participating or creating meeting places, where they elucidate Universities' significance for an attractive knowledge region: and
- Co-ordinate, StAF is a cohesive link between centres of learning and between other actors in the region.

Organisation

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Organisation

STING - Stockholm Innovation and Growth

Link: http://www.stockholminnovation.com/stockholminnovation/EN/11/sting-stockholm-innovation-growth

Growhouse, Isafjordsgatan 39B Kista, SE-164 40

Mission

STING is assisting entrepreneurs and innovators from academia, research institutes and the business sector. STING works primarily with start-ups within information and communications technologies, media, medtech and cleantech. Preselected projects receive comprehensive business and financial support.

The official mission is that STING shall actively support the formation and growth of 12 new technology companies per year focused on exports in Stockholm. The companies should have good commercial survival prospects and a good chance of having 15-30 employees and export sales within the five years of leaving STING.

Activities

STING's business incubator helps entrepreneurs to build international growth companies faster. By offering

support within business development, financing, and networking, STING wants to create the right conditions for startups competing in global markets. STING is offering innovators and entrepreneurs four types of business processes:

- start-ups training programme that verifies the business idea;
- business -lab from idea to industry, including business testing and coaching;
- business accelerator preparation for market launch; and
- Go Global Medtech international expansion.

All the programmes focus on individual and international development of companies business concept. The programmes are designed for entrepreneurs and innovators from academia, research institutes and the business sector.

Organisation

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Organisation

Stockholm Environmental Technology Centre

Stockholms Miljöteknikcenter

Link: http://www.smtc.se/

PO Box 210 60 Visiting address: Valhallavägen 81 Stockholm, SE-100 31

Mission

The Stockholm Environmental Technology Centre (SMTC) is a business network, established in 2005, representing new concepts within green technology in the Greater Stockholm Region.

The Stockholm Environmental Technology Centre aims to enhance co-operation between businesses, research bodies, and public actors in the environmental technology area. That includes a broad range of services and international co-operation in strong collaboration with two of the leading environmental research centres: IVL Swedish Environmental Research Institute and the Royal Academy of Technology.

Activities

In order to stimulate enhanced co-operation between private and public actors, SMTC is contributing to:

- knowledge development for business and other actors;
- distribution and selling of environmental solutions;
- cost-effective co-ordination of regional resources; and
- new contacts and synergies among actors and levels.

SMTC is also an operative platform for interested actors in the Swedish environmental technology sector

offering various services tools for companies, such as:

- illustrations of demo objects, including online booking;
- meeting places online, e.g. IVL Campus KTH
- qualified research and development support for new environmental solutions;
- help for creation of consortiums and financing;
- seminars and training in environmental technology; and
- resource pools for knowledge, facilities and support service.

In order to realise these services, the SMTC intensely co-operates with companies in the region as well as other regional partners, such as the Stockholm Business Region, the Stockholm Business Alliance and the Vallentuna Business Centre.

Organisation

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Organisation

IVL Swedish Environmental Research Institute

IVL Svenska Miljöinstitutet

Link: http://www.ivl.se/english/ivlstartpage.4.360a0d56117c51a2d30800064380.html

Box 21060 Stockholm, SE-100 31

Mission

The IVL Swedish Environmental Research Institute is an independent research body that has been involved since 1966 in the development of solutions to environmental problems on behalf of the business sector and the community. IVL deals with environmental issues from a holistic perspective with the aim of contributing to sustainable growth.

Mission: IVL Swedish Environmental Research Institute works with applied research and commissions for an ecologically, economically, and socially sustainable growth within the business world and society at large.

Core values: Credibility, foresightedness and holistic approach are core values that permeate all operations.

Activities

IVL is divided into six administrative units: Research, Business Development & Marketing, Organisations, Products & Processes, Natural Resources & Environmental Effects, Air Pollution & Abatement Strategies, Climate & Sustainable Cities.

These six units co-operate in the areas of Sustainable production, Sustainable building, Products and waste, Water, Climate and energy, and Air and transport. Research and development is the foundation for IVL's

operations. Research and development stands for more than half of all operations. A large part of the research is co-funded by the Government and industry under special agreements. The aim of this research is to pursue issues of great interest to industry and that have relevance for society in general. In these cases, the funding provided by industry is matched by public funding.

In addition, IVL pursues appropriation funded research, where Mistra and the Swedish EPA are two examples of granters. Commissioned research is conducted on assignments by external clients that can be companies or entire lines of businesses.

Organisation

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Organisation

Electrum Foundation

Stiftelsen Electrum

Link: http://www.kista.com/adimo4/Site/kista/web/default.aspx?p=1344&l=en&t=h401

Growhouse, Isafjordsgatan 39 B Kista, SE-164 40

Mission

An important actor for the development of the ICT sector in Stockholm is the Electrum Foundation in Kista. The role of the foundation, commissioned by representatives of the ICT sector (Ericsson, IBM, Packetfront), a real estate company, the research institute Acreo, the KTH Royal Institute of Technology, and the Stockholm Municipality, is to stimulate growth and cooperation in research based and innovative growth companies in the ICT sector.

Activities

The mission is supported by six strategic councils focusing on various aspects, including education, competence development and entrepreneurship, research, marketing and innovation. Operational activities are administered by two subsidiaries; the Kista Science City AB, and the business incubator STING AB.

The Electrum Foundation is active in issues concerning higher ICT training, global growth and innovation and its board comprises leading representatives from Ericsson, Acreo, IBM, Atrium Ljungberg, PacketFront, KTH and the City of Stockholm. The Electrum Foundation is responsible for developing a growth model in accordance with the Triple Helix principle - The Kista Model.

Organisation

 <u>SVERIGE</u> <u>Östra Sverige</u>
 Region Östra Mellansverige

• NUTS Code SE12

Organisation

Filmregion Stockholm-Mälardalen

Link: http://www.fpsm.se/

Greta Garbos Väg 11 Solna, SE-169 40

Mission

The main mission is to stimulate and contribute to a viable film industry in the Stockholm-Mälardalen region. Filmregion Stockholm-Mälardalen is owned by the Filmpool Stockholm-Mälardalen business association, which represent its members, including the Botkyrka Municipality, Gotland Municipality, Nyköping Municipality, Nynäshamn Municipalicity, the City of Solna, the City of Stockholm, the Örebro Regional Development Council, and the industry association Film alliance Stockholm-Mälardalen.

Activities

Filmregion Stockholm-Mälardalen operates in three business areas in order to stimulate and contribute to a viable film industry in the Stockholm-Mälardalen region:

Development

Filmregion Stockholm-Mälardalen engages development of the film industry by organising seminars and other conferences, with the purpose of stimulating knowledge development and networking in the region.

For example, the Filmregion Stockholm Mälardalen organised a festival (TEMPO). The aim is to provide a professional and informal forum for inspiration, discussion and debate, facilitating new creative collaborations. Another important activity is to simplify permits for filming in the region.

Film Commission

Filmregion Stockholm-Mälardalen is marketing the region as a production site for filming, both nationally and internationally. Filmregion Stockholm-Mälardalen also strives to make filmmaking more flexible and is coordinating collaboration between actors involved in filmmaking. Stockholm Film Commission also provides contacts for location scouting, permits management and other services relevant to professional film productions.

Film investements

Filmregion Stockholm-Mälardalen co-finance and finance motion pictures and documentaries. They also mediate financing from private actors.

Organisation

• <u>SVERIGE</u>

Östra Sverige

Region Stockholm

NUTS Code SE11

Organisation

KTH Royal Institute of Technology

KTH Kungliga Tekniska Högskolan

Link: <u>http://www.kth.se/?l=en_UK</u>

KTH - Royal Institute of Technology Stockholm , SE-100 44

Mission

KTH is responsible for one third of Sweden's capacity for technical research and is the country's largest organiser of technical/engineering education at university level. KTH education and research covers a broad spectrum - from natural sciences to all branches of engineering plus architecture, industrial economics, urban planning, work science and environmental technology. In addition to the research underway at KTH schools, there are a large number of national and local competence centres located at KTH, as well as research programmes financed by various research foundations.

Activities

The research, education and activities at KTH are starting from five different research platforms with the aim of stimulating multidisciplinary research. The KTH platforms have been created to enhance research cooperation in five key areas, together with external partners and stakeholders:

- Energy
- Information and Communication Technology
- Materials
- Medical and Biomedical Technology
- Transport

The main role of the platforms is to work as a catalyst for large multi-disciplinary research initiatives carried out by research groups at KTH together with external partners. The initiatives can involve more than one platform.

One of KTH key priorities is to contribute to renewal and innovation in the society and for that reason KTH is collaborating with the business world and firms in various development projects. For example KTH Business Liaison creates good relationships with companies, alumni, foundations and organisations that are interested in, or committed to, supporting KTH. On campus, KTH Innovation offers researchers and students support to innovation development, intellectual property issues, business development, agreements, early financing etc. The innovation system associated with KTH includes everything from training in entrepreneurship to project financing via external actors. KTH Innovation also collaborates with Stockholm Innovation and Growth (STING) in the programme Entrepreneurial Startup in the medicine sector.

Organisation

- <u>SVERIGE</u> Östra Sverige
 Region Stockholm
- NUTS Code SE11

Organisation

County Administrative Board of Stockholm

Länsstyrelsen i Stockholms län

Link: http://www.ab.lst.se/templates/InformationPage 6361.asp

Box 220 67 Stockholm, SE - 104 22

Mission

The County Administrative Board is a government body responsible for overseeing that the national goals, outlined by the Swedish parliament and government, are realised in the County of Stockholm. The County Administrative Board is a public authority with a broad sphere of responsibility. The County Administrative Board manage issues concerning the environment, nature, the business community, social care, animal protection, gender equality, integration, transport, infrastructure and housing. The County Administrative Board's task is to coordinate these and other areas of public responsibility to ensure a sustainable society in which economic development, the environment and social welfare are interlinked.

The County Administrative Board co-ordinates various interests in order to promote the development of the Stockholm region. The goals are growth, a good environment, quality of life and equal opportunities for all.

Activities

The County Administrative Board in Stockholm County aims to generate growth in the region. The objective of the regional growth policy is to facilitate well-functioning labour markets with good service in all parts of the county. The County Administrative Board has the task to implement government decisions, but also to coordinate all the government's activities in the County. The County Administrative Board follows the development through measurements, analyses and reports, and is responsible for the compilation and publication of factual information on the county's development.

The County Administrative Board is involved in the design of the regional development programme, which is a comprehensive strategy for growth. The Development Programme is integrated into the Regional Development Plan for Stockholm County (RUFS 2010), which is produced by the Office of Regional Planning, Stockholm County Council. The integrated document provides a comprehensive and overall objective and strategy paper for the county's development issues and geographical aspects.

The County Administrative Board stimulates entrepreneurship and business development through programme support, funding and evaluation. It encourages businesses to work with gender issues, the environment and integration issues, in order to contribute to sustainable development and growth. Therefore, there are specific measures to support women's and migrant's entrepreneurship.

Examples of priorities for action during the years 2010-2012:

- knowledge of entrepreneurship and industry in the County will be gathered and analysed continuously;
- national programmes on business areas are monitored and disseminated;

- co-financier and initiator to the cooperation project "Entrepreneur Sthlm", which aims to reinforce and quality assure entrepreneurship and innovation in the region; and
- a programme for product development will be implemented in small companies.

Organisation

- <u>SVERIGE</u>
- Östra Sverige
- Region Stockholm
- NUTS Code SE11

Organisation

Office of Regional Planning, Stockholm County Council

Regionplanekontoret, Stockholm Läns Landsting

Link: http://www.regionplanekontoret.sll.se/english/

Box 4414 Stockholm, SE - 102 69

Mission

The Office of Regional Planning manages regional planning and regional development within the County of Stockholm. The work of the Office of Regional Planning is commissioned by the Regional Planning Committee, a politically appointed committee under Stockholm County Council. Together with the committee, the office is responsible for realising the vision and focus of the Regional Development Plan for the County of Stockholm, RUFS 2010. The Regional Planning Committee is responsible for physical planning and produces information on the environmental, social, economic and physical conditions in the region. The committee is also responsible for co-ordination with other planning bodies and takes the initiative on structural issues in the county and the Mälardalen region.

The office also handles issues such as land use, housing, the environment, nature conservation, energy, sparsely populated areas, the archipelago, integration, social perspectives and international co-operation.

Activities

The basis of the regional development work is the Regional Development Plan for the County of Stockholm, RUFS 2010. The regional development plan defines the regions visions, objectives and future strategies. The shared vision for the Stockholm region is to become "Europe's most attractive metropolitan region" and this is supported by four objectives setting out the values and characteristic the region needs to develop to make it more attractive:

- an open and accessible region,
- a leading growth region;
- a region with a good living environment;
- and a resource-efficient region.

The vision and objectives are also supported by six strategy areas, which serve as benchmarks for the region's development. They provide guidance for how the region's challenges should be handled. The

strategy areas are as follows:

- increase sustainability capacity and quality in strategic areas;
- develop ideas and capacity for renewal and innovation;
- safeguard assets to meet future needs;
- develop a polycentric region with high density cores;
- strengthen cohesion; and
- promote personal growth potential.

The strategy of Developing ideas and capacity for renewal and innovation includes several activities to promote innovation. Examples of such activities are:

- formulation of a long-term business policy;
- guarantee long-term and systematic interaction between the public sector and the business community;
- use public procurement to encourage innovation;
- make entrepreneurship a basic skill in the education system; and
- stimulate dense, knowledge-intensive environments.

In addition to the strategies the Regional Planning Office monitors developments in the region's innovative environments, analysing key stakeholders in innovation environments and investigating how theses sites can best be supported through planning. The Regional Council also monitors research in terms of innovation.

Organisation

- <u>SVERIGE</u>
- Östra Sverige
- Region StockholmNUTS Code SE11
- NUTS Code SET

Organisation

Stockholm Business Region Development

Link: <u>http://www.stockholmbusinessregion.se/templates/indexpage___34115.aspx?epslanguage=EN</u>

Box 162 82 Stockholm, SE - 103 25

Mission

Stockholm Business Region Development (SBRD) is the official investment promotion agency of Stockholm. Stockholm Business Region Development is operating on a long-term basis with marketing and development of Stockholm and Stockholm as a business destination. The overall goal of the organisation is to become the leading growth region in Northern Europe. SBRD is a subsidiary to Stockholm Business Region. Stockholm Business Region is fully owned by the City of Stockholm. The Group also includes the Stockholm Visitors Board, which markets and develops Stockholm and the Stockholm region as a tourist destination.

SBRD assists and informs investors about business opportunities in the Stockholm region. SBRD also

provides advice and practical guidance, free of charge, to companies setting up or expanding business operations in Stockholm.

Activities

Stockholm Business Region Development offers various activities related to business development, entrepreneurship and innovation. In the area of business developmentSBRD operates together with industry and other public actors, to develop Stockholm as a business location. It concerns improving everything - from general conditions such as traffic, parking, sanitation and provision of premises, to a more industry-specific development issues such as education, regulation and marketing.

Investment promotion is one of SBRD's main tasks and is therefore working to increase the number of foreign businesses in Stockholm. SBRD offers potential investors information and advice on establishment matters, and arranges contacts. SBRD support investments and business opportunities by offering support services and activities, such as:

- comprehensive information on business-opportunities in Stockholm, its key business sectors and the Swedish economy;
- tailor-made information and practical advice on how to proceed when setting up a business in Stockholm;
- assistance in arranging visiting programmes to the most suitable locations in Stockholm;
- support in finding companies for possible joint ventures or other forms of cooperation;
- introductions to relevant contacts among authorities, utility providers and professional service companies such as lawyers, accountants and relocation specialists; and
- practical assistance in finding facilities, land and other essentials issues for establishing new companies.

SBRD also offers information and support to local entrepreneurs and guide them to appropriate actors, such as innovations centres, business advisers and authorities.

Appendix D Explanation of factors of Innovation Performance, Governance and Policy

D.1 Innovation Performance Factors

After having normalised all indicators to a common range of 0 to 1, a factor analysis or principle component analysis has been used to identify the main patterns, reducing the eight indicators into three main factors or components of innovation performance. The resulting factors can also be seen as composite or summary indicators.

	Innovation performance factors					
	Innovative entrepreneurship	Technological innovation	Public knowledge			
Non-technological innovators	0.91					
Technological innovators	0.86					
Higher education R&D	0.52					
Non-R&D innovation expenditure		-0.84				
Business R&D		0.77				
Patents		0.71				
Government R&D			0.89			
Tertiary educated			0.64			

The first factor can be labelled as 'Innovators or **Innovative entrepreneurship**'. It is mostly based on a high score on the share of both non-technological innovators (those introducing market- and or organisational innovations) as well as technological innovators (product and or process innovations) among SME's in the region. This factor therefore identifies those regions where a large share of all SME's are innovators.

The second factor is labelled '**Technological innovation**' because it mostly refers to patent generating business R&D with relative low score on non-R&D innovation expenditures as share of their turnover. In regions where this factor shows a high score, technology generating firms are well represented.

The third factor is labelled **'Public knowledge'**. This component of innovation performance is based on the co-location of R&D expenditures at government research institutes and to a lesser extent on the share of population with tertiary education.

D.2 Governance Factors

The first distinctive governance characteristic is labelled '**Autonomy**'. For regions where the regional innovation strategy is politically binding and containing fixed targets, we also find the highest degree of both general institutional autonomy as well as autonomy regarding innovation policy. In essence, formalisation contributes to the autonomy factor and autonomy is associated with an assessment of innovation policy as effective.

The second distinctive characteristic is named: '**Relying on Structural Funds**'. It is based on the similarity in the answers regarding the strategic relevance and significance in terms of funding of EU Structural Funds for regional innovation policy. At the same time these regions report a low level of cooperation with other regions and the innovation system can be characterised as more public-driven.

A third distinctive factor is made up of the similar answers to the two other questions on coordination, namely the existence of vertical and horizontal coordination mechanisms. Finally, a fourth factor is labelled **'Central, top-down'** because they combine a centralised policy delivery and top-down approach in policy design.

	Governance Factors					
	Autonomy	Relying on Structural Funds	Coordina- tion mecha- nisms	Central, top-down		
-How formally binding is the regional innovation strategy document on the regional public authorities ?	.84					
- The general degree of institutional autonomy of the regional authorities in the region	.73					
-To what degree is priority setting, design and monitoring of innovation policy subject to the design and of formalisation of the general set-up of institutions tasked with the development of innovation policy in your region (1=informal, 3= formal)	.68					
- Degree of institutional autonomy of regional authorities in your region with regard to the design and implementation of regional innovation policies	.68					
- How effective is the regional governance process?	.58					
- The relevance of the EU Structural Funds for regional innovation policy, for strategy development		.79				
- The significance of the EU Structural Funds for regional innovation policy, in terms of funding		.70				
- Inter-regional co-ordination projects and mechanisms (e.g. co-operation between agencies in different regions)		68				
- Characterise the regional innovation system according to key drivers of innovative activities (1=private, 2=different, 3=public)		.68				
- Horizontal coordination projects and mechanisms between regional players (e.g. inter-departmental working groups, council or multi-sector platforms)			.80			
- Vertical co-ordination projects and mechanisms between local, regional, national and European authorities involved in designing or implementing innovation policy			.73			
- Regional system of policy delivery is centralised (3), mixed (2), or de-centralised (1)				.81		
- Design of regional innovation policies follows a top-down approach (as opposed to bottom-up)				.80		

D.3 Policy Factors

The first distinctive factor regarding the innovation policies is labelled **'Public innovation policies'**. A high contribution to this factor comes from the survey questions regarding: policies for public sector innovation, for open innovation, public procurement, and theme based policies aiming at societal goals.

The second policy factor is labelled: **'Demand & service innovation policy'** because of the co-existence of demand-side policies and service innovation policies.

The third policy factor is named: **'Cluster & S-I partner-ship policy'** since it is based on the frequent combination of Cluster policies and policies promoting new forms of public-private-partnerships for Science-Industry (S-I) co-operation and in addition the implementation of eco-innovation policies contributes to this factor.

The fourth factor is labelled **'Research supply policy'** because it is based on the positive answers to the question on supporting research efforts (the supply side), in combination with an opposite negative answer to the question on 'market and innovation culture (which is more on the demand side).

'Policy making support' is the name we have given to the fifth policy, similar to the main indicator. The last policy factor is **'HR, creation & growth innovators'** which combines human capital development with policy aimed at creation and growth of innovative firms.

	Innovation Policy factors								
	Public innovatio n policies		Cluster & S-I partner- ship policy		Policy making support	HR , creation & growth innovato rs			
Policies for public sector	.72		poncy			18			
innovation	• / _								
Policies for open innovation	.66								
Public procurement policies	.64								
Theme-based policies aimed at broader societal goals	.62								
Demand-side policies		.79							
Policies for innovation in services		.50							
Support for the internationalisation of innovation policy.		.47							
Cluster policies			.70						
Policies promoting new forms of public-private-partnerships for science-industry co-operation			.61						
Eco-innovation policies			.58						
Innovation related tax policies			.57						
Support research efforts				.74					
Market and innovation culture policies				62					
Support to policy making and horizontal policies					79				
Support human capital development						.82			
Support creation and growth of innovative enterprises						.67			

Appendix E Statistical data

Indicator	Stockholm (2000)	Stockholm (2008 or most recent)	EU 27 (2008 or most recent)
Per Capita GDP (in Current EUR)	41,926.7	47,477.7 (2006)	25,131.9
Growth of Regional per Capita GDP (in %)	9.4	4.1 (2006)	0.7
Unemployment Rate (in %)	3.2	5.2	7
Gross Expenditure on R&D (GERD; in current EUR)	N/A	3,929.6 (2007)	237,000.2
Share of Business Expenditure on R&D in GERD (in %)	N/A	74.7 (2007)	63.9
EPO Patent Applications (by Priority Year)	710.69	411.24 (2006)	37,689.12 (2006)
Share of Population Involved in Life-long Learning (in %)	N/A	10.22	9.34
Non-R&D innovation expenditures of all enterprises as a percentage of turnover (normalised scores within a o (lowest) to 1 (highest) range)	N/A	N/A	0.41 (2006)

Source: Eurostat and Community Innovation Survey

Appendix F RIM survey responses

	Charalde also			1				
	Stockholm (SE11)	Average	Categories					
	(3211)	Average	0	1	2	3	4	5
			Ŭ		-	5		<u> </u>
Governance Please indicate the governance level that is most important for the design and implementation of innovation policy in the region (1 = regional level, 2= national								
level, 3 = sub-regional level)	3	1,52		50%	48%	2%		
Please assess the general degree of institutional autonomy of the regional authorities in the region (1 = regional authority is an administrative appointee of the								
national government, 2 = regional authority including elected council but no legislative powers and no or minor tax raising powers, 3 = federated entity with legislative power in some but not all fields, limited or no tax raising powers)	2	2,11		23%	43%	34%		
Please assess the degree of institutional autonomy of regional authorities in your region with regard to the design and implementation of regional innovation	2	2,11		23%	43%	34%		l
policies (1 = very low, 2 = low, 3 = average, 4 = high, 5 = very high)	4	3,10		7%	18%	39%	31%	5%
The design of regional innovation policies follows a (1 = bottom-up approach, 2 = input from both sides, 3 = top-down approach, 4 = strong top-down approach)	2	2.25		11%	57%	28%	4%	570
To what degree is priority setting, design and monitoring of innovation policy subject to the design and of formalisation of the general set-up of institutions tasked	2	2,25		11/0	5778	2070	476	
with the development of innovation policy in your region (1 = informal, 2 = mixed, 3 = formal)	2	2,19		18%	45%	37%		
Is there a regional innovation strategy in the form of a published document $(1 = yes, 2 = no)$	2	1,34		66%	34%			
How formally binding is this document on the regional public authorities ? (1 = an own initiative document of a non-public body or partnership with no binding	-	2,5 .		0070	51,0			
constraints on regional authorities, 2 = a 'pact' signed by a broad-based public-private partnership, 3 = a politically binding policy containing fixed targets)	3	2,21		25%	29%	46%		
Please indicate if there are horizontal coordination projects and mechanisms between regional players (e.g. inter-departmental working groups, council or								
platforms with actors from different sectors): (1 = not yet very developed, 2 = somewhat developed, 3 = quite well developed)	2	2,26		13%	49%	39%		
Please indicate if there are inter-regional co-ordination projects and mechanisms (e.g. co-operation between agencies in different regions) (1 = not yet very								
developed, 2 = somewhat developed, 3 = quite well developed)	2	1,88		27%	59%	14%		1
Please indicate if there are vertical co-ordination projects and mechanisms between local, regional, national and European authorities involved in designing or	2	2.02		200/	F.99/	220/		
implementing innovation policy (1 = not yet very developed, 2 = somewhat developed, 3 = quite well developed)	3	2,02		20%	58%	22%		
Please characterise the regional innovation system according to key drivers of innovative activities (1 = private-driven, 2 = mixed, 3 = public-driven)	2	2,26		12%	50%	38%		
Please indicate if the regional system of policy delivery is centralised or de-centralised (1 = rather decentralised, 2 = mixed form, 3 = rather centralised)	2	2,47		5%	42%	52%		
Please indicate the significance of the EU Structural Funds for regional innovation policy, in terms of funding (1 = <10%, 2 = 11-24%, 3 = 25-49%, 4 = 50-75%, 5 = $\frac{1}{2}$	2	2.05		4.40/	2004	4000	4000	1000
>75%)	3	2,96		14%	30%	19%	19%	18%
Please indicate the relevance of the EU Structural Funds for regional innovation policy, for strategy development (1 = very low, 2 = low, 3 = average, 4 = high, 5 = very high)	3	3,27		11%	17%	25%	28%	19%
Is there a specific Structural Funds' regional operational programme for the region (1 = yes, 2 = no)	1	1,10		90%	10%	2570	20/0	1570
If 1, is this Structural Funds ROP administered at the regional level. (1 = yes, 2 = no)	1	1,12		88%	12%			l
Involvement of the Region in Hot Innovation / RTDI Policy Topics (0 = none, 1 = planned, 2 = implemented)								
Support for the internationalisation of innovation policy.	2	1,09	34%	24%	43%			
Cluster policies	2	1,28	31%	10%	59%			
Policies promoting new forms of public-private-partnerships for science-industry co-operation	2	1,21	28%	22%	50%			
Policies for open innovation	0	0,68	58%	15%	27%			
Demand-side policies	0	0,55	64%	18%	18%			
Policies for innovation in services	1	0,77	52%	19%	29%			
Policies for public sector innovation	1	0,64	60%	17%	24%			
Public procurement policies	1	0.39	72%	17%	11%			
Innovation related tax policies	0	0,33	72%	9%	11%			
	-							
Eco-innovation policies	1	0,80	50%	19%	30%			
Theme-based policies aimed at broader societal goals	2	0,72	53%	22%	25%			
Priorities on which regional innovation policy is most strongly focused (1 = very low, 2 = low, 3 = average, 4 = high, 5 = very high)								
Support to policy making and horizontal policies	1	2,71		21%	24%	32%	12%	12%
Support research efforts	2	3,94		1%	12%	20%	25%	42%
Support human capital development	4	3,41		3%	17%	29%	39%	12%
Support creation and growth of innovative enterprises	5	3,85		2%	9%	23%	37%	30%
Market and innovation culture	3	2,84		13%	24%	37%	16%	10%
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