

# Country Report: Sweden

## Introduction

This report has been written as a part of the Europe INNOVA Cluster Mapping Project. One part of the project is a mapping of cluster policies, cluster institutions and cluster programmes in European Countries.

For each country, a separate report has been written. Oxford Research AS in Norway has been responsible for the mapping of cluster policies. Oxford Research has developed the structure of the mapping and prepared the final reports. Most of the work has however been done by research institutes or consultancies in the different countries. These organisations are members of “The European Network for Social and Economic Research – ENSR” or partners in the Europe INNOVA Cluster Mapping Project.

Based on the national reports, the main findings have been summarised by Oxford Research in a separate report.

The Europe INNOVA Cluster Mapping Project has been financed by the European Commission. The views expressed in this report, as well as the information included in it, do however not necessarily reflect the opinion or position of the European Commission and in no way commits the institution.

Kristiansand, Norway, December 2007.



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Please find more information about the Cluster Mapping Project and the Authors of this report on:

[www.clusterobservatory.eu](http://www.clusterobservatory.eu)

[www.oxfordresearch.eu](http://www.oxfordresearch.eu)

[www.ensr-net.com](http://www.ensr-net.com)

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Main ministries responsible for implementing cluster policy	Finance/ Economy	Science/ Research	Trade/ Industry	Interior	Other
			x		
Key agencies responsible for implementing cluster policy	Nutek, Vinnova, Invest in Sweden Agency				
	Is cluster policy their only task?	Yes		No	x

Are there any national cluster programmes?	Yes	x	No		Number of programmes	3
Are there any regional cluster programmes?	Yes	x	No			2

Source of financing	National programmes	Regional programmes
National ministries	x	x
EU structural fund		x
Regional budget		
Business		
Other	x	

Importance of cluster policy		Low	Medium	High
	National level			x
	Regional level			x
Policy papers on national level	Yes	x	No	
Cluster policy over time	Increased importance	Reduced importance	Shifted	
			x	
Since when has cluster policy been used?	1990-95	1995-2000	2000-05	2005-
	x			
Cluster development related to a particular person/organization?	Yes	x	No	
	Individual	x	Business org.	
	Political party		Agency	
	Research inst.	x		
Successful cluster programmes	Vinnväkst, ReFine, Öresund Science Region			

Is there a cluster or competitive council?	Yes	No	A general council exists
	x		
Degree of obstacles when building cluster policy	No/Low	Medium	Important
General assessments of competitiveness?	Yes		No

Role of clusters as framework in policy areas	Low	Medium	High
Business network policy			
FDI attraction policy			x
Export promotion policy			
Sectoral industry policy			
Science and education policy			x
Competition and marked integration			
Source: Oxford Research			

## Introduction

This report aims at mapping direct actions in support of innovation systems and clusters in Sweden, and embraces activities both on national and regional levels. It is of utmost importance to bear in mind that the present work has no intention to neither map out, analyze nor evaluate innovation systems/clusters at any point in their life cycle; it is a mere mapping of programme support actions. There are strong innovation systems/clusters in Sweden that are not focused specifically upon in this report, such as for example “ICT” in the Stockholm Region and “automotive” in the Göteborg Region (West Sweden), although they also enjoy strong political support both from national and regional levels.

## 1.1 Terminology

In each country there will be one or possibly several **terms** or **phrases** used to describe clusters. In some cases, different terms represent “competing” perspectives on clusters and, as perspectives change over time, one term may gradually replace another.

When it comes to terminology, actors on both national and regional levels in Sweden make frequent use of the term “innovation system”, which has overlaps with the term “clusters”. As can be appreciated, this term implies a stronger focus on the system level more than does the term “clusters”. Another difference between the two is that an “innovation system” requires participation of research establishments/the academic sector, while “clusters” do not, although the eventual involvement of such actors within clusters is also viewed upon as beneficial.

### 1. National language: Kluster

Geografiska koncentrationer av relaterade företag och aktörer som präglas av ett ömsesidigt beroende och påverkan på varandra, utan direkta krav på samspel med forskning och andra kunskapsmiljöer (source: Nutek).

### 1. English translation: Cluster

Geographical concentrations of related companies and actors that are characterized by mutual interdependence, without direct requirements on teamwork in research and know how (source: Nutek)

### 2. National language: Innovationssystem

Enligt ISA, Nutek och Vinnova krävs deltagande av FoU-aktörer i innovationssystem, och som namnet implicerar så är fokus på systemnivån.

### 2. English translation: Innovation system.

According to the definition by ISA, Nutek and Vinnova, an “innovation system” requires participation of research establishments/the academic sector, and a focuses on operation on the system level.

### 3. National language: Klusterinitiativ

Samarbete mellan privat och offentlig sektor för främjandet av kluster- och klusterbildning

### 3. English translation: Cluster initiative

Cooperation between public and private sector to promote clusters and clustering

4. National language: Agglomerationer

4. English translation: Conglomerations/ agglomerations.

Term used to describe to what degree companies are geographically concentrated, without stating anything about their cooperation or interdependence

5. National language: Industriella distrikt

5. English translation: Industrial districts

Regions with a high level of small companies intertwined by social capital and mutual trust

### What is a region in Sweden?

Sweden and its nine million inhabitants are currently divided into 21 counties. This is the regional level in Sweden. However, there are far-reaching plans to consolidate these counties into a smaller number of bigger regions, with more resources to deal with ambitious regional economic development. Until this has been realized however, we deal with 21 counties. The regional extension of the national government, “länsstyrelserna” (the county administrative) are to implement the government’s policies on regional level. However, much of this responsibility is handed over to the counties themselves.

To make things even more complex, EU looks at Swedish regions in a completely different manner. EU has divided itself into NUTS 1, 2 and 3 regions. NUTS 3 match the counties in Sweden, but a lot of EU policies go through NUTS 2, in Sweden eight regions. From 2008 there will be three NUTS 1 regions in Sweden, until then the whole country is one.

Sweden has 290 municipalities, representing the local level in the country.

Nutek has also made a division of Sweden into 72 regions for functional analysis. Each region is determined by the inhabitants’ possibility to live and work without being submitted to extensive travel. The main purpose of this is to enable and facilitate regional statistical comparisons.

## 1.2 Cluster development programmes and cluster organisations

In many countries, there are **programmes** set up specifically to promote cluster development. Such programmes can be carried out by existing **actors** (for example a government agency), or new actors can be set up to run them. Often, one of the purposes of such programmes is to help initiate **cluster organisations**, that is, the programme provides financing or otherwise promotes the formation of cluster-specific organisations, typically in some form of public-private partnership. A country can have many (even hundreds) of such cluster-level organisations in operation.

Here is presented the identified cluster agencies and cluster programmes at national and regional level in Sweden.

### 1.2.1 Agencies for cluster policy implementation

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Näringsdepartementet (Ministry of Enterprise, Energy and Communications) has the overall responsibility for cluster policy in Sweden.

Under this level, there are two authorities that work with the implementation of the cluster policies. Nutek and Vinnova. The latter has more of a focus on innovation and knowledge spill over and the like, while Nutek work with entrepreneurship, business development and regional development.

Also the Invest in Sweden Agency, ISA (under Ministry of Foreign Affairs), has dealt to some extent with cluster policy. These three authorities together formed a program organization called Visanu, which between 2002 and 2005 worked to promote clusters. Visanu was an ambitious program in cooperation with several actors and about thirty clusters, and had a budget of 70 million SEK. We will have reason to come back to Visanu in more detail in the boxes below.

Vinnväxt is the label for innovation system and cluster policies under Vinnova. Vinnväxt is a competition focusing on regions that have presented the best opportunities to become internationally competitive within 10 years. It has connections to innovation system and cluster policies in its focus on regional economic dynamics. It is a successful and internationally the best known Swedish programme relating to regional growth and innovation systems/clusters.

Source: [www.regeringen.se](http://www.regeringen.se), [www.nutek.se](http://www.nutek.se)

Visanu, which now is terminated, had innovation system and cluster development as its only task. It was established 2002 and worked until 2005. It had the explicit target to promote clusters in Sweden to sustain and develop Swedish ability to compete on the international arena.

Source: <http://www.nutek.se/sb/d/725/a/2779>

Several counties have projects to promote clusters. Sometimes, as in Dalarna, all municipalities and the county have formed an organisation called Region Dalarna, who, among other things, works with cluster promotion.

Region Dalarna has in cooperation with Vinnova and Nutek found four clusters in the region with potential to strengthen their competitive ability with the help of public support.

A similar approach has been taken in Värmland, a region that focuses on seven clusters, in Øresund, and in other regions.

No organisation on the regional level work only with cluster development, apart from the Swedish-Danish cross-border organisation Øresund Science Region, on which more details will follow below.

### 1.2.2 National cluster programmes

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National cluster programs can consist on the one hand of support for national clusters, and on the other hand of support for regional clusters. There are no signs of a focus on the former. In cases where Sweden promotes clusters, it promotes regional clusters. A special case is the Øresund region, a region made up of parts of two

countries, that is, Sweden and Denmark. This region has a special committee for research and development, and has internationally known clusters in biotech (Medicon Valley Alliance) and ICT.

There are several national initiatives to promote regional clusters. The already mentioned Visanu is now terminated. A new programme is in its starting phase. It is called Transforma. However, information about this programme is still lacking, but it will be very similar to Visanu.

Source: [http://www.region.sormland.se/BilagorBilder/RTP/Bilagor/På\\_gång\\_050913.pdf](http://www.region.sormland.se/BilagorBilder/RTP/Bilagor/På_gång_050913.pdf)

### 1.2.2.1 Programme name: Vinnväxt

Vinnväxt is by far the internationally best known Swedish initiative for the support of innovation systems and clusters, due to its overall success. It has some similarities with Nutek's regional programme, but it is more elaborate and more extensive both time wise and financially.

The aim of the programme is to promote regional sustainable growth through the development of internationally competitive research and innovation environments, within specific areas of growth.

Financing:

- Source of programme financing: VINNOVA.
- Budget: 75M SEK/year
- Time horizon: 2003-2005 and at least 10 years onward.

Actor:

- Programme initiator: VINNOVA
- Vinnväxt was formed for this purpose 2001.
- The actor does not have other tasks apart from this programme.
- Organisational set up at programme and project level: Programme council with representatives from the business world, R&D and public authorities. Panels for judging applications in each of the fields; business, R&D and public administration. Each VINNVÄXT-process has their own regional organisation with for instance an operative process stream and steering boards.

Scope and target:

- Geographic coverage: National.
- Policy focus: Science and technology policy; new approach (i.e., financing of collaborative research involving networks with industry and links with commercialisation).
- Clusters in a certain stage of the lifecycle targeted: In the first two competitions more mature innovation systems were selected and the last one targeted very new ones.

Programme contents:

- Short description:

Focus on innovation systems. It is a competition where the best region wins financial support for up to ten years. Financial support means up to 10 million SEK per year. Regions should have established cooperation within the Triple Helix. Apart from funding, the clusters receive additional support (see below).

Activities – prioritised areas:

Ambitions/goals: The aim is that all the winning clusters should be very powerful innovation systems when the support period is over, that is, after 10 years. They should be able to fully compete on the international innovation arena.

Each of the components within the innovation system should develop into powerful institutions. The infrastructure of innovation systems should be built up, i.e., support for new companies, venture capital, and specialized work force, etceteras.

The total effect after the programme is aimed at increased economic growth, both within the winning regions and on the national level.

- Target group: Regional Innovation systems with growth potential.
- Focus on SMEs: No.
- Level of R&D involvement: Very high, this is one of the main focuses of the programme.
- What the programme offers the projects: Financial support during maximum ten years. Renewal of the VINNVÄXT-winners' contracts and action plans every 3.5 years. Also supporting substantial activities such as seminars, training, research assistance, and exchange of experiences.

The financial part seeks first and foremost to support the development of the innovation system, e.g., research activities, research development strategies, to improve the specialisation of staff, and to improve the conditions for know-how.

Process:

- Based on applications.
- Main elements in applications: The clusters/regions have to be able to finance at least 50% of the funding. The winners have to hand in a status report of different dignities every sixth month. Then they also have to show that the money is used as was planned.

Evaluation:

- Results so far/conclusions from evaluations:
  - The VINNVÄXT-processes are evaluated every third year by an international panel
  - VINNOVA carries out yearly follow-ups of the winners
  - Other studies within specific questions, for instance: One examination that has been done is on the effects of the competition notification. It showed that the competition had effect even on the non-winners, although not as big as on the winners.
- Planned future: Programme will continue for each winning region up to 10 years.

#### **1.2.2.2 Programme name: Visanu**

Visanu was active between 2002 and 2005 and was cooperation between three Swedish authorities, VINNOVA, ISA and Nutek.

#### Financing:

- Source of programme financing: The Swedish government.
- Budget: 70 million SEK.
- Time horizon: 3 years

#### Actor:

- Programme initiator: VINNOVA, ISA and Nutek.
- Carried out by: Visanu
- The actor was formed for this purpose, initiated 2001 but formed during 2002. Started to work with a kick-off the 21st of February 2003.
- The actor does not have other tasks apart from this programme.
- Organisational set up at programme and project level: Visanu had a group of coordinators, representing the three initiating authorities. Decision-makers consisted of the director generals of each of these three authorities. Each project had a project leader and a work group consisting mainly of personnel from the three authorities. In total, around 40 people were connected to the program.

#### Scope and target:

- Geographic coverage: National coverage but mainly regional focus. Visanu's aim was to strengthen the sustainability and abilities of Swedish clusters, no matter where in the country they were situated.
- Policy focus: Science and technology policy and regional policy with a focus on the engagement of actors.
- Clusters in a certain stage of the lifecycle are not targeted.

#### Programme contents:

- Short description:

Process support for innovation system and clusters, spreading of knowledge, international marketing of innovation systems and clusters.

- Activities – prioritised areas: A) Process support: To mobilize actors and resources in a region, along the particular needs and interests of that specific region. Projects have been aimed to generate cooperation and mutual trust among companies in a certain region. Focus has been on companies and all the projects should have results that are easy to control and evaluate.  
B) Spreading of knowledge: To create new knowledge based in the experiences of existing clusters and to spread it to other clusters and national authorities. To extend the usage of existing information. Develop tools to analyse and evaluate clusters in Sweden. One project worth mentioning is the Swedish cluster map, a statistical model of Swedish clusters.  
C) International marketing of innovation systems and clusters: To promote the image of Sweden and Swedish regions to generate investments in clusters. Visanu prioritised clusters that they thought were the ones most able to compete in the international arena.

Ambitions/goals: The main ambition for the program was to create good conditions for innovation system and clusters, and knowledge of how to create sustainable economic growth. More specific goals included: a) Important actors, like companies, are to create improved knowledge and competence surrounding innovation systems and cluster processes. b) Financed activities in the area are to be self-improving by priori-



tising process leadership and learning. c) Create conditions so that important clusters are internationally marketed.

- Target group: SMEs and R&D institutions, existing clusters, the academic world, regional and national politicians, international actors.
- There is not a particular focus on SMEs.
- Level of R&D involvement: Knowledge transfer was very central to the programme. Dialogue seminars including representatives from R&D actors were an important part of the program. Strong focus on developing methods to improve the R&D sector.
- What the programme offers the projects: Financial support, improved connections and knowledge.
- Cross-country/interregional activity: International marketing of Swedish clusters was one of the pillars in the program, interregional spreading of knowledge also one of the basic ideas.

Process:

- Based on applications or appointments: Broad dialogue with hundreds of key persons.
- Top down or bottom-up approach in selection of clusters to support: Visanu started up with several seminars with representatives from many different interest spheres as partakers, including as regional authorities, academia, private enterprise, established clusters, and so on.

Evaluation:

- Results so far/conclusions from evaluations: Generally, a lot has been accomplished with relative small resources, new clusters have been created and existing ones have been improved. Jobs have been created. Each of the many projects has been evaluated.
- Planned future: Program terminated.

### **1.2.2.3 Programme name: Regional Cluster Program (Nutek)**

Despite its name, this program is a national initiative. But it acts mainly on the regional level. It could be said to be a continuation of Visanu.

Financing:

- Source of programme financing: Nutek, demands on part financing from clusters.
- Budget: 70 million SEK
- Time horizon: 2005-2010

Actor:

- Programme initiator: Nutek.
- Carried out by: Nutek
- The actor was not formed for this purpose.
- The actor has other tasks apart from this programme.
- Organisational set up at programme and project level: Program formed as a competition between cluster initiatives. Applications approved or denied.

Funding between 200 000 SEK to 2 million SEK. Project leader during time span.

Scope and target:

- Geographic coverage: National coverage but mainly regional focus. Program aims to strengthen the sustainability and abilities of Swedish clusters, no matter where in the country they were situated.
- Policy focus: Regional policy, broad approach to sector and innovation targets.
- Clusters in a certain stage of the lifecycle targeted (embryonic, emerging, mature, declining): All except declining.

Programme contents: The programme seeks to promote the following:

- Networking between SMEs, R&D institutions such as universities and public actors.
- Commercial cooperation such as export promoting actions and strategy analysis.
- Cluster expansion with activities concerning establishment promoting, spinoffs, marketing and increase of member countries.

Activities – prioritised areas:

Ambitions/goals: To improve:

- 1) Cooperation and relations.
- 2) Innovation and renewal.
- 3) Attraction on external actors.
- 4) Internationalisation.
- 5) Growth and profitability.

- Target group: Emerging and mature cluster initiatives.
- Level of R&D involvement: Focus on widening the use of existing R&D institutions, improve their cooperation within the Triple Helix and to increase spill over effects.
- What the programme offers the projects: Financial support, with demands on part financing from the clusters.
- Cross-country/interregional activity: International marketing of Swedish clusters.

Process:

- Based on applications.
- Bottom-up approach in selection of clusters to support.
- Main elements in applications: The initiative has to be market-driven with a focus on competition ability, it has to be founded in a support from the region in their RTPs (Regional Growth Plan), the initiative has to be clearly focused and of national interest.

Evaluation:

- Results so far/conclusions from evaluations: A number of cluster initiatives have been stamped as successful and has been given support. No major evaluation has been carried out.
- Planned future: Programme continues until 2010. Programme director states the last three years might have increased funds, i.e., more than 10 million SEK per year.

#### 1.2.2.4 References/websites for the national data

<http://www.vinnova.se/Verksamhet/Starka-forsknings--och-innovationsmiljoer/VINNVAXT/> - Vinnväxt

[http://www.nutek.se/content/1/c4/27/79/Slutrapport\\_Kent\\_verstva.pdf](http://www.nutek.se/content/1/c4/27/79/Slutrapport_Kent_verstva.pdf) - The final report from the Visanu program.

<http://www.nutek.se/sb/d/138> - Nutek's site on clusters.

<http://www.vinnova.se> - VINNOVA

### 1.2.3 Regional cluster programme

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There are several programmes for cluster policies on regional level in Sweden. We provide a list region by region. The government has given the regions a mission, to set up Regional Growth Programs for 2004-2007 (Regionala tillväxtprogram, from now on called RTPs). These are to be set up by a coalition of the Länstyrelsen (the county administrative) and the autonomous administration in each region. One of the three strategic areas in the RTPs are Innovation Systems and Clusters. Hence, the government has given the regions a very strong sign to focus their growth policies on clusters. And because of this, all the regions mention clusters in their RTPs. This is discussed in greater detail under each of the regions. Nutek has the task to evaluate the RTPs.

The heading in this part might seem a bit arbitrary. It is a mix of NUTS 2 and NUTS 3 regions, and in one case, two NUTS 2 regions. This is to save some space and enable us to cover the entire country.

As mentioned, Sweden discusses to consolidate their counties into bigger regions, with more resources for economic growth commitments. Two experiment regions have been established, namely Västra Götaland (formerly three counties), and Skåne (previously two counties).

An extensive publication from Statskontoret<sup>1</sup> (Swedish Agency for Public Management) has investigated whether or not the two new regions have been better to support clusters than other regions (counties). It states that Region Skåne have prioritized their funding to what they call “winning clusters” to some extent. The region has tried to improve the connections between companies, universities and the public sector. Although, this is a less narrow bid on clusters than in many of the smaller counties even, according to the report. Skåne tries to make their support to the business world as general as possible, instead of focusing a great deal on clusters, which has become the trend in Sweden.

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<sup>1</sup> <http://www.statskontoret.se/upload/Publikationer/2004/200432.pdf>

Västra Götaland has set aside a great deal of resources to support innovation systems, incubators and emerging clusters. It has had a more focused work on clusters than Skåne, and many of the smaller counties. One prominent actor on the local level in Västra Götaland is Business Region Göteborg, which has put quite some effort into cluster development.

### **1.2.3.1 Västra Götaland**

#### **Program 1: Industrial Dynamics**

Source of programme financing: EU structural funds, national public budget.

Budget: 26 265 000 SEK

Time horizon: 2002-2005

*Actor:*

Programme initiator: Västra Götaland Region

Carried out by: Network of several colleges, research centres and incubators.

The network was established for this purpose, in 2002.

The network has no other task, but the organisations that belong in the network have many different tasks.

Organisational set up at programme and project level: Head secretary responsible for marketing and public relations, head committee responsible for decisions concerning projects. The committee consists of three representatives from each sub region (the former counties), one of these from the business world and two representing the public administration.

*Scope and target:*

Geographic coverage: Västra Götaland.

Policy focus: Improving innovation systems in existing clusters.

Mainly mature clusters are targeted.

*Programme contents:*

Short description: Improve the knowledge among companies about the surrounding conditions regarding trends, possibilities and threats. Aiming to improve the innovation power in the companies. Develop regional support system to provide companies with qualified specialized services. Improve the cooperation in existing clusters concerning innovation systems.

Ambitions/goals: To help industrial SMEs to improve their ability to compete on the international arena by providing them with top notch knowledge. Making Västra Götaland one of the top regions in Europe.

Target group: Industrial SMEs.

There is a particular focus on SMEs.

Level of R&D involvement: High, this is one of the cornerstones in the program.

What the programme offers the projects: Seminars, individual training, access to a wide network of experts.

Cross-country/interregional activity: International exchange of knowledge is one of the ten projects in the program.

*Process:*

Based on applications.

Bottom-up-approach with applications.

Main elements in applications: Depending on the project, general criteria are; long term sustainability, possibility to transfer method to structural goals, originality and creativity regarding relationship between centre and periphery in the region, connection to other growth strategies in the region.

Planned future: Program terminated

Source: [http://www.vgregion.se/vgrtemplates/Start\\_27901.aspx](http://www.vgregion.se/vgrtemplates/Start_27901.aspx)

## **Program 2: DISTRICT**

Financing: DISTRICT is an Interreg IIIC Program. Four regions in EU are concerned and share the funds.

Source of programme financing: EU regional funds.

Budget: 6 646 575 €

Time horizon: July 1st 2005 – June 30th 2008

*Actor:*

Programme initiator: Lead region Tuscany, members are also West Midlands, Saxony and Västra Götaland, all members of ERIK (European Regions Knowledge based Innovation Network) - a specific network within the Regional Program of Innovative Actions (RPAI) funded by the European Commission (DG Regional Policy).

Carried out by: A central program secretariat under the lead of Tuscany has been formed for administration.

The program secretariat was formed for this purpose.

The actor does not have other tasks apart from this programme.

Organisational set up at programme and project level: The four regions have divided the responsibilities for projects between themselves. In Västra Götaland, a steering group has been established, along with a management group to handle the projects that are under their responsibility. A regional partnership network including the Västra Götaland region and different R&D institutions have been established as well. An administrative secretariat exists in Västra Götaland along with the central one in Tuscany.

*Scope and target:*

Geographic coverage: Västra Götaland.

Policy focus: Creating networks between clusters in regions in different countries, improving connections within the Triple Helix with a particular focus on SMEs. DISTRICT has produced a lot of documents, conferences and seminars.

Clusters in a certain stage of the lifecycle targeted: More focus on mature clusters, but also on emerging innovation systems.

#### *Programme contents:*

Short description: DISTRICT focuses on three specific areas (thematic components): Connecting clusters and business networks to innovation, within the global context. This component - lead by West Midlands - aims at developing regional abilities through innovation, knowledge management and economic and technological intelligence techniques, enabling firms from local clusters and business networks to develop, test and provide new ground-breaking approaches and services. SMEs innovation projects, in collaboration with Universities and Research and Transfer Centres. This component - lead by Sachsen - analyses difficulties in accessing knowledge - one of the main obstacles for SMEs. A closer relationship between SMEs, Universities and Technology Centres would foster innovation. There is a definite need for improving the quality of research and stimulating the creation of stronger links between research institutions and SMEs. Innovation in financial engineering, seed venture capital, start-ups and spin-offs. This component - lead by Västra Götaland - focuses on encouraging creation of new technological enterprises by stimulating business ideas and spin-offs by Universities, Research Centres and SMEs, as well as improving support services and financial support to new enterprises - especially through an increased role of business angels.

Target group: Industrial sector in the four regions, R&D institutions.

There is a particular focus on SMEs.

Level of R&D involvement: Very high.

The programme offers the projects: Financial support.

Cross-country/interregional activity: International interregional activity is a fundamental part of the programme. All projects are trans-regional.

#### *Process:*

Based on applications.

Top down or bottom-up approach in selection of clusters to support: Bottom up based on applications.

Main elements in applications: Proven cooperation with partners in some of the other participating regions. Public institutions must be involved.

Planned future: Program terminates 2008.

Source: <http://www.district-rfo.eu/>, [http://www.vgregion.se/vgrtemplates/Start\\_45382.aspx](http://www.vgregion.se/vgrtemplates/Start_45382.aspx)

### **Network of incubators**

Västra Götaland has since it was created put some emphasis on incubators. There are ten in the region, and all are receiving support from the regional public administration. Furthermore, the region supports a network between all the incubators, financially and in other ways. This can be seen as a competence cluster, although it is not marketed as such.

#### **1.2.3.2 Skåne and Blekinge**

Region Skåne has listed a number of strong clusters on their webpage; these are also mentioned in the region's growth program 2004 to 2012. Furthermore, the region is

to support, promote and market upcoming clusters according to this general growth program. However, Region Skåne focuses more on new companies and entrepreneurs in general than on cluster development.

Region Skåne has some smaller programs focused on clusters. For example Business Arena Imaging, a project focused on smaller companies. Another project is Vinnvinn, aimed to increase the connections between highly educated persons and companies in growth sectors, mainly in life sciences. Both these programmes terminated 2006. One institution, ik2, works with innovation systems, within clusters but also in the business world in general. It focuses on companies with less than 50 employees. Ik2 provides the companies mainly with assistance in R&D, by training and by help to find financing.

Source: [www.ik2.se](http://www.ik2.se)

Blekinge and Skåne have together (forming one NUTS 2 region) been involved in an EU-programme called TANGO, a programme aiming to increase the cooperation within the Triple Helix, in certain industrial sectors. However, this programme ended 2005 and the county administrative states that the cooperation with the companies has not worked out as well as they hoped. Only in two sectors an arena has survived as a result of the programme. However, there seems to be some increased overall cooperation as a result of the programme, according to the county administrative authority in Blekinge.

Source: <http://www.k.lst.se/k/Pressrum/Nyheter/2005/TANGO.htm>.

Another programme in Blekinge that has some connections to clusters is MERIPA, an EU-project mostly focused on innovation policies. For closer information on this programme, see:

<http://www.regionblekinge.se/?regionblekinge=523177e>

Skåne has of course also been deeply involved in the work with the Øresund region, which we deal with below.

### 1.2.3.3 Øresund

Øresund is a politically constructed intranational region covering part of Sweden and Denmark. It has a committee that works with integrating the region in economic, social, and other aspects. However, the usual authorities in both Sweden and Denmark make all decisions.

The region has a few internationally known clusters, among which the so called Medicon Valley (one of the largest pharmaceutical/biotech industrial clusters in Europe) and Øresund IT (the ICT and telecom cluster) are probably the best known. Apart from these two, food, logistics and environment are stated to be other specialities of the region.

The region itself states that it works explicitly with the Triple Helix, to improve the interaction of the parties involved. For this purpose, a new organisation called Øresund Science Region has been formed: *Øresund Science Region is a cross-border initiative that aims to bring together regional authorities, businesses and universities. This so-called 'triple-helix' model is a focused approach to cooperation between universities and the surrounding society.* The ØSR focuses on the specialities in the region already mentioned.

ØSR has been in function since 2001. It is an umbrella organisation for several “cluster alliances” for each of the sectors mentioned, for example Medicon Valley Alli-

ance. Each of the cluster alliances has their own organisation, webpage and budget. And each has their own projects and plans for improving their cluster. The umbrella organisation, Øresund Science Region was evaluated by OECD 2006 and received a review with very positive comments.

Source: [www.oresundscienceregion.org](http://www.oresundscienceregion.org)

#### 1.2.3.4 Stockholm

The capital region of Sweden, and a county, Stockholm appears as a powerful actor among the regions of Sweden. In their Regional Growth Program, the RTP for 2004 to 2007, what they call growth clusters make up a big part. In the RTP, they state that they have already strong clusters in the region, clusters that work as engines for growth. Kista Science Park is one prominent example.

The way forward according to the RTP is to promote new modern clusters is through “science parks”. Rapid support to embryonic and emerging clusters with infrastructure and education suited for new needs is prioritized. The ability to market the clusters internationally is also to be developed.

The clusters in Stockholm have to form their own network administration, so that the Stockholm region gets a partner to work with. Stockholm works extensively to increase the cooperation between themselves, the universities and the clusters, to better cope with the increasingly more complex demands of the clusters. In this ambition, focus is clearly put on mature clusters<sup>2</sup>.

OECD has evaluated the region’s growth policy and state that their work with clusters is good. However, Stockholm’s clusters are very dependent on one or two dominating companies; the level of competition within the clusters is low. Policy ought to be focused on this problem, according to OECD<sup>3</sup>.

Business Region Stockholm is one local actor that works to promote clusters and Triple Helix in Stockholm. It has not institutionalised its cooperation with the business world to the same degree as Business Region Göteborg has.

#### 1.2.3.5 Värmland

Värmland is recognized as one of the best regions with regards to cluster policies. In Värmland, several big clusters have institutionalised cooperation. A number of initiatives have been made to improve the internal cooperation of these.

In the RTP of Värmland, clusters are prioritized more than in other region’s RTP. Clusters are seen as fundamental to sustainable growth in the region. Important clusters are in paper and packaging sector, but there are also steel and heavy industrial agglomerations. Representatives for the major clusters in the region meet regularly, meetings that also the regional public administration and the academic world send representatives to. In this manner, cooperation is improved. Human capital demand, marketing and infrastructure are important issues. The lion’s share of the cluster policies in Värmland is however implemented together with individual clusters, re-

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<sup>2</sup><http://www.d.lst.se/NR/rdonlyres/FDF241E6-A4FC-4B8B-AF59-742AE617A55/0/KlusterRTP20042007.pdf>

<sup>3</sup>[http://www.benchmarkingregions.se/malardalsradetwww/mbm.nsf/0/212D39C6085B9132C12573590045C58B/\\$FILE/OECD-rapport%20sammanfattn%20-%20svensk.pdf](http://www.benchmarkingregions.se/malardalsradetwww/mbm.nsf/0/212D39C6085B9132C12573590045C58B/$FILE/OECD-rapport%20sammanfattn%20-%20svensk.pdf)



garding their specific needs, rather than with the entire cluster economy in the region.

The initiatives are often bottom-up in character, where clusters have crystallized and formed institutions capable with cooperation with the public sector and education institutions. It has the interests of the member companies in mind, rather than the region as a whole. It is not necessarily a contradiction in goals though, the interests of the industry in the region seems to coincide with the interests of the regional public authorities.

Source: <http://www.varmland.se/tillvax/index.asp?id=1324>

As the only region in Sweden, Värmland participates in CLOE - Cluster Linked over Europe, an EU project to create networks between clusters and policy makers across Europe. CLOE has many similarities to the DISTRICT program in Västra Götaland, but CLOE is even narrower in its focus on clusters. It has an explicit SME-focus and it is partly financed by EU. It consists of seven partner regions across Europe: *The objectives of CLOE are to enable those regions with a common interest in cluster-building techniques and in fostering of cluster relationships (i) to meet and jointly develop processes and methodologies for the establishment and management of clusters and networks; and (ii) to develop business opportunities for companies within and between the clusters. CLOE focuses on regional authorities, managers of clusters, companies in the clusters, other clusters and international investors within, as well as beyond, the borders of Europe.*

CLOE has a budget of 1.8 million euro and spans three years.

Source: <http://www.clusterforum.org/>

#### 1.2.3.6 Dalarna

Dalarna has no major programme for cluster development, although it is an important ingredient in the RTP and RUP of the region. The region has identified a number of clusters, established cluster organisations and work in close cooperation with them. Region Dalarna states that their work with cluster and cluster development is a way to increase the level of overall engagement in the development in the region. The public authority of Dalarna also states that, in their implementation report of the RTP, the stringency shown by the national authorities Nutek and VINNOVA with regards to cluster and innovation system promotion, has contributed to the determination of Dalarna to take part of this progress as well.

Source: <http://www.regiondalarna.se/dokument/rtpprogramkreativa.pdf>

#### 1.2.3.7 SE02 – Östergötland, Södermanland, Örebro, Uppsala and Västmanland

The NUTS 2 region Östra Mellansverige, SE02, will be renamed 1<sup>st</sup> January 2008, to SE12. It consists of five counties. One project concerning clusters is common to the entire region. It is called TOWER, and is an Interreg IIIC programme aiming to increase the interregional cooperation in all issues concerning economic growth.

TOWER is running between 2005 and 2007, it is financed by 50% by EU structural funds and it involves five regions in Europe, but Östra Mellansverige is lead region. It focuses mainly on entrepreneurship and SMEs.

**Östergötland** and its regional authority Östsam, responsible for development issues, is not involved in any major cluster development projects. It does, however, indirectly support cluster development, mainly through cooperation with science parks in

the region and the establishment of an environment centre focusing on the Triple Helix. It is also, obviously, a member of several cluster organisations in the region (see separate list) like “Hälsans Nya Verktyg”. Thus, it supports the clusters in the region by being a member of them. But no broader strategy on cluster development is to be found.

**Södermanland** has increased its cluster development since the region started to work with the RTP. In this work, the cluster organisations in the region mentioned in 2.2.4 has been created, and the region is a partner in them. Three of them are mature, two are emerging and a bunch of them are embryonic or in the start phase, according to the region. Apart from TOWER, Södermanland is not involved in any major programme for cluster development, but it follows the development in the clusters in the region closely.

**Örebro** and **Västmanland** does not seem to have any major cluster strategies either, except some focus on clusters in their regional growth plans and RUP, regional development plans (2007-2013). As other regions, they work in close cooperation with the clusters in the region. Örebro region administratives state that strong clusters are very important tool in the marketing of the region.

**Uppsala** regional authority (Regionförbundet Uppsala län) works closely with the clusters in the region, and other actors who works with cluster development, such as ALMI and CONNECT. In the county there is also an institution for the specific target of cluster development and Triple Helix cooperation. It is called STUNS, (Stiftelsen för Samverkan mellan Universiteten, Näringsliv och Samhälle) and is situated in Uppsala Science Park. It was founded already 1985, which is somewhat extraordinarily, considering that these concepts gained in popularity not until the nineties. STUNS works with a handful projects that should be clear in purpose and easy to measure the effects of, in order to enable identification of successful support actions. The aim is to increase the region's economic power and create a more dynamic business life.

The county and municipality administrative authority, together with the regional universities and chamber of commerce, founded STUNS. Apart from seeking to develop the business environment in the region, STUNS also works with trying to get as many EU and national funds as possible to the region. But mainly, STUNS focuses on creating networks and trust between actors in the region. It finances innovation initiatives and supports new companies in growth sectors, using R&D institutions and the public administration to improve the business and innovation climate. STUNS work model is to always concentrate their efforts in projects, with clear aims and targets. The projects are lead by a coordinating group, established for each project, with suitable representatives from each part of the Triple Helix.

Source: [www.stuns.se](http://www.stuns.se)

#### 1.2.3.8 Norrland

Norrland consists of five counties (Gävleborg, Jämtland, Västernorrland, Västerbotten and Norrbotten, although the term Norrland has nothing to do with counties) covering about 60 % of the area of Sweden but only around 12 % of the population.

Västerbotten is one of the regions in Sweden with less developed cluster policies. Although a couple of strong clusters undoubtedly exist in the region, namely forest technology and mining, the public administration has no explicit plans of how to

improve the conditions for them. Clusters and innovation systems are of course mentioned in the RTP and the regional development plan, but only in vague terms.

Västerbotten is therefore an example of a region with very strong and mature cluster(s), but no developed cluster policy. There is cooperation within the Triple Helix, for example has the university in Umeå a strong focus on the needs of the clusters in the region. But there is no real strategy behind promoting this kind of cooperation.

One initiative in Västerbotten deserves a positive judgement, though. It is called the Biofuel Region and is geographically situated in both Västerbotten and Västernorrland. It is an emerging cluster with institutionalised cooperation between companies, public administration and the R&D in the region. It has an ambitious organisation and has the potential to gain importance over time.

Source: <http://www.competitiveness.org/cid/ciview/92/>, <http://www.biofuelregion.se/>

Västerbotten and Norrbotten, which together form a NUTS 2 region (SE33 from 2008 onwards), maintain extensive cooperation with regards to regional development issues. They have come up with a common regional development plan (RUP) for 2007-2013, where clusters are given some importance. The cooperation within the Triple Helix is emphasized as important. They also state that clusters are the engines of innovation. Perhaps this is a sign of a greater focus on cluster policies in the two counties in the years to come.

Västernorrland's clusters are not very well developed, and the strategy of the region is to find the sectors where the bases for clusters exist. The work in this region therefore differs somewhat to that in other regions with more developed clusters.

There are no major programmes in Jämtland or Gävleborg.

#### 1.2.3.9 Småland and the islands

Under this heading we are concerned with a NUTS 2 region, consisting of four counties. The counties are Jönköping, Västergötland, Kalmar and the island county Gotland. This region, especially the mainland, is famous for IKEA and the so-called Gnosjö-spirit, indicating innovativeness and entrepreneurial potential.

##### **Program : ReFine**

Financing: Public administrations on regional level, Nutek, VINNOVA and Visanu, EU project ISMIS (<http://www.ismis.info/>). ReFine was created 2002/2003 but is at the moment inactive, waiting for new resources.

Actors:

- Initiators: Key representatives from business world, public administration and R&D institutions.
- The organisation was formed for this purpose.
- It has no other tasks apart from this.
- Organisation: Coordinating process board. Project work groups.

Scope and target:

- Geographical scope: Jönköping County.
- Policy focus: Science and Technology policy.
- All kinds of innovation systems and clusters are focused on.

Programme contents:

- Innovation systems, providing clusters with R&D network, resources and institutions that they otherwise would have no access to.
- A certain focus on SMEs.
- Goals: Making clusters in the region more able to compete. Reach a critical mass in R&D. Improve the Triple Helix.
- Offer package: Creating networks. Funding coordination.
- ReFine has some international content.

Process:

- Bottom up approach.

ReFine is currently not active, due to the lack of funds.

Source: [www.refine.nu](http://www.refine.nu)

#### 1.2.4 Successful cluster programmes

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Four levels of innovation system and cluster programmes are discussed below:

**Vinnväxt** is internationally known as a succesful program on the national level. The European Comission uses Vinnväxt as a good example of how to promote innovation systems and clusters, which has made Sweden somewhat of a precursor when it comes to such policies. According to the European Commission, this success is due to the many seminars that were conducted in the starting phase of Vinnväxt, which enabled the programme to learn from the trials and errors of other countries.

Two feautres of Vinnväxt are generally seen as explaining the expected success of the program, the ambitious planning phase, including among other things five pilot cases and the above mentioned international seminars, and the long term set up of the programme. Vinnväxt is committed to support their innovation systems/clusters for ten years, with the aim to make them self-sustainable after this period.

Source: <http://cordis.europa.eu/aoi/article.cfm?article=200&lang=EN>

**ReFine**, according Visanu, is (was) one of the best cluster promoting institutions in Sweden. It is lifted up as a good example because of ReFine's ability to make appropriate analysis of the strengths and weaknesses, opportunities and threats to the innovation system and clusters in the region. According to Visanu, the survival of a cluster and its innovation system is dependent upon its ability to correctly understand its conditions and surroundings. ReFine provide the actors with superior knowledge in this matter. ReFine works through study trips, seminars, workshops and so on.

Source : [http://www.ltc.se/refine/pdf/Med\\_tillvaxt.pdf](http://www.ltc.se/refine/pdf/Med_tillvaxt.pdf)

**Øresund Science Region** is a transnational programme covering the Skåne region in Sweden and the Zealand Region in Denmark. ØSR works with a focus on the Triple Helix model and is widely recognized as having been able to create a common research region across the national boundaries. The Life Science cluster in the region is one of the most important in the world.

Source: [www.oresundscienceregion.org](http://www.oresundscienceregion.org)

**Värmland** is viewed as being one of the most successful regions when it comes to cluster development in Sweden. The Turkish government is one of a number of public authorities who have sought knowledge of Värmland's success. The region was, furthermore, host to an international cluster conference in November 2007. One of the clusters in the region, the Paper Province, is considered as the most prominent industrial cluster in Europe. The reasons for Värmland's success seems to be the extensive networking and specialisation in the region. Although the trust between different actors in the region is very high, cooperation between academic research and the corporate world can be greater, one evaluation states.

Source: [http://www.nwt.se/ArticlePages/200711/14/20071114081145\\_090/20071114081145\\_090.dbp.asp](http://www.nwt.se/ArticlePages/200711/14/20071114081145_090/20071114081145_090.dbp.asp)

## 1.3 Cluster policies

Above the level of agencies and programmes is the policy level. On the policy level, plans and strategies are developed in the form of policy documents, directives and legislation, rather than concrete programmes and organisations.

There may be one overarching policy for clusters, a “cluster policy”, outlining specifically how cluster development should be pursued. In addition, clusters may form a framework in a long range of policy fields. Primarily, this is often the case in three key areas: innovation and technology policies, regional economic development policy, and entrepreneurship/SME policy. However, it can also occur in many other policy areas.

### 1.3.1 Overarching cluster policy

Innovation system and cluster policy is important, both at the national and regional level. It has been on the agenda for some 10 to 15 years now on the national level. On the regional level, innovation and cluster policy has gained in importance due to the emphasis that the government has put on the outlining of the Regional Growth Plans (RTP). This means that all regions have had to present the way in which they work to promote clusters. On the regional level the policy differs, as we have seen, substantially. Some regions focus on clusters to a very high degree, while others do not have a pronounced focus on such political level support actions.

One important paper is the final document from the Visanu project. It is both an evaluation of the programme and a guideline for future policies regarding clusters as innovation strategy. It states that the effects of a cluster approach are biggest for SMEs and that the region has a lot to win by concentrating on the strongest industrial sectors. The cluster approach contributes with chances of renewal to an industrial sector, instead of stagnation in the innovation progress.

Source : [http://www.nutek.se/content/1/c4/27/79/Slutrapport\\_Kent\\_verstva.pdf](http://www.nutek.se/content/1/c4/27/79/Slutrapport_Kent_verstva.pdf)

There are several papers and documents in the VINNOVA database concerning these issues.

Cluster policies are widely believed to promote a sustainable growth and a sustainable development, i.e., a growth today that does not degrade the possibilities to have growth in the future. Thanks to the inherent innovation possibilities in clusters and the increased know-how spill over, clusters are seen to have this effect. Thanks to the

increased partnership with the public that cluster bring, less social tension is to be expected.

Source: <http://www.lo.se/home/lo/home.nsf/unidView/09FDD4DB31E7CE79C1256EF30044C0C1>

Nutek focuses on the critical mass of regions. Without enough mass in the business world, the region will fall behind in terms economic development. And clusters are both a symptom of and a tool for developing the corporate mass.

Cluster policy has been used at least since the mid nineties. Some projects, like the STUNS in Uppsala, show that the concept has been visible before that. During the first years of the new millennium, cluster policy has very much been a popular model.

The work of Michael Porter has been very central in the main ministries responsible for the regional development policy in Sweden since the beginning of the 1990's. CIND, a research institute under the university in Uppsala, with clusters as their main focus, and CSC under Stockholm School of Economics with Örjan Sölvell in the lead, have also played major roles in cluster policy progress in Sweden.

### 1.3.2 Clusters as framework in key policy areas

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#### **Innovation and technology policy**

Main policy orientation: Improving the conditions for innovation systems, mainly within existing or potential clusters. Increasing number of incubators and science parks in Sweden. VINNOVA has very recently published a report concerning the need of a need-driven R&D funding:

<http://www.vinnova.se/In-English/Publications/Products-hidden/Needs-driven-RD-programmes-in-sectorial-innovation-systems/>

Main programmes: Vinnväxt, see above.

Agencies: VINNOVA, implementing agency of the Ministry of Enterprise, Energy and Communications.

Role of clusters: Clusters are seen as the home for innovation systems, and has thus an important role. The cooperation within the Triple Helix is seen as necessary to create functional innovation systems.

#### **Regional economic development policy**

Main policy orientation; clusters: Focus on clusters and innovation systems in the RTP, Regional Growth Plan, and in the RUP, Regional Development Plan. This means that a great part of the regional support to the business goes to clusters or cluster development. All regions have not followed this strictly however, but most of them try to do this. Clusters cannot be created from nothing, so all regions search for potential clusters that can market and benefit the entire region in the future.

Main programmes: EU Interreg. programmes are common, national programs such as Nutek Regional Cluster Program. Pure regional programs are less common, perhaps as an effect of the small administrative regions in Sweden.

Agencies: The government has required associations in each region, between the county administrative, the government's regional authority, and the municipalities. These associations, often called Region X (where X is the name of the county) are responsible for cluster development.

#### **Entrepreneurship and SME policy**



Main policy orientation: To improve the conditions for entrepreneurs, by setting up establishment funds for example. SMEs and entrepreneurs are increasingly gaining in importance in Swedish economic policy. The target is to make Sweden the most business friendly country in Europe. The government seeks to facilitate for new companies, decrease the bureaucracy.

Main programmes: National programme for entrepreneurship, programme for increased female entrepreneurship, and programme for increased cooperation between universities and colleges and SMEs.

Agencies: NUTEK, ALMI.

Role of clusters: Clusters increase the possibilities for a good business climate, and increase the level of innovation. This is important to foster entrepreneurs and SMEs. Many of the programs for cluster development have a clear SME focus.

Source: <http://www.nutek.se/content/1/c4/05/21/75558717.pdf>, <http://www.vinnova.se/upload/EPiStorePDF/vp-07-01.pdf>

### 1.3.3 Clusters as framework in various policy areas

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#### **FDI attraction policy**

ISA, Invest in Sweden Agency, was one of the founding partners in the Visanu programme, one of the most important programmes in Swedish cluster policy. That shows that clusters play an important role to attract FDI. ISA has developed a useful cluster navigation tool to facilitate for foreign capital to match a suitable Swedish cluster, although so far only in a limited number of sectors.

ISA is marketing Sweden mainly in certain sectors, where the country has comparative advantage, thanks to the strong national clusters in these sectors. Therefore, it was actually ISA who first started to emphasize on clusters as a working tool for regional development, in the late 1990s.

Source: [www.isa.se](http://www.isa.se)

#### **Science and education policy**

According to VINNOVA, it is impossible for Sweden to be successful in every science and education field. Being a small nation, Sweden ought to focus on its specialities. In this aspect, the bigger, potentially national clusters play a major role. VINNOVA also promotes commercialisation of science results, and here clusters can contribute.

Source: [www.vinnova.se](http://www.vinnova.se)

### 1.4 Cluster or competitiveness councils

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In some countries, councils have been set up to promote a dialogue about clusters and competitiveness. Often, these councils have representatives from the government sector as well as from the academic world and the business community.

Globaliseringsrådet, council of globalisation, is one competitiveness council. It was founded by the new government in the autumn of 2006 modelled upon the Finnish and Danish examples and consists of representatives from the government, public administration, academia, the business world, trade unions and the media. It is supposed to prepare the Swedish society of the dramatic changes that the globalisation brings, and to give advice to the government of how to make Sweden a powerful actor in the globalisation progress.

The most important tangible task of the council is to present a globalisation strategy. In this, the council shall present how Sweden can gain welfare, instead of lose, in the globalisation process. Another important responsibility of the council is to provide an arena for debate and discussion about the effects of globalisation. Important things to analyse are how Sweden can improve its innovation systems and renew its business world. Evidently, cluster policy is an issue impossible to avoid in this discussion.

The council operates in three different ways; one is to order basis reports (25-30) from several different subjects in order to be able to make policy advices. The council also conducts several meetings to debate about its work. The third way is public meetings, in different parts of Sweden, to wake a public debate about globalisation issues. The final strategy is to be presented before the end of 2010.

So far, it has had limited effects on policy, because it is such a recent initiative.

ITPS, Swedish Institute for Growth Policy Studies, is an institute established to help Swedish authorities understand growth and to evaluate the government policies. It is not a council with representatives from different sectors of society, but still a major player in influencing policy and debate about growth and growth related issues. It operates through statistics, reports, seminars and offices abroad, in China for example, and has a unique competence in growth related matters.

It has made several publications about cluster policies and regional growth policies. ITPS has had a positive impact on putting clusters high on the Swedish agenda.

## 1.5 Other policy issues

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Sometimes it is useful to know about any other issues that have an impact on clusters in a country. Such issues could be, for example, any macro economic policies that may be relevant for clusters (tax regimes, etc), or if any general evaluation has been made about the country's competitiveness and barriers to competitiveness.

As already mentioned, the upsizing of administrative regions could provide the regions with more political and financial power to develop their clusters.

*Shifts in the orientation of cluster policy:* One very important shift was the RTPs, which dramatically increased the buzz surrounding clusters on the regional level. Until then, it had mainly been a subject on national level, of course with some important exceptions.

*Major obstacles in the process of building cluster policy:* According to Olof Sandberg at the Ministry of Enterprise, Energy and Communications (private communication) the main obstacles to cluster policy in Sweden is certain short-sightedness in the policies. Apart from for example the Netherlands and Ireland, who work with ten-year plans, Sweden has four years plans on innovation-related policies. Thanks to Vinnväxt, which supports innovation system/cluster initiatives for ten years, this is somewhat neutralized.

The recent government shift in Sweden has not meant any drastic changes in cluster policy. The political parties agree relatively well on these issues. The main difference is the consistence of the government, four different parties, each responsible for different ministries, and the fact that the government has a stable majority. The ministry responsible for cluster policies is shaped by a specific political party (Centerpartiet)



instead of participation of the whole government. This is a potential breeding ground for conflicts with other ministries as, for example the ministry of education and research, governed by another party (Folkpartiet), is also concerned with clusters. However, this has not been a problem so far.

Conflicts with other policies are the somewhat sensitive issue of concentrating on specialisation. For example, should all financial support for biotech research go to regions and clusters already excelling at it, or ought the government and the authorities to aim for broad knowledge everywhere. This is a general issue that divides the political blocks and parties. The clusters demand resources for specialisation, but voices are raised against this form of *elitism*. It is also a question of how narrow competence the universities and other science and education institutions should develop. The current government is somewhat more ready to aim for massive specialisation than the former was.

*Cluster policy in public/academic debate:* It is a central theme on authority level, but not so much evident in the public debate. In the academic debate, there is no doubt about the positive effects of clusters.

*Assessment of competitiveness or barriers to competitiveness:* Citation: A survey of Sweden as an investment country has been presented by the Invest in Sweden Agency (ISA). According to the ranking in the study, all the Nordic countries are among the leading ten on the list, but Sweden dominates the Baltic Sea region. The USA tops the list. In the IMD "World Competiveness Yearbook 2007" Sweden has climbed from 14th to 9th place on the list of the world's most competitive economies. The report makes it clear that confidence in Sweden's economic policy has increased since the change in government.

Source: <http://www.demokratitorget.gov.se/sb/d/9084/a/82022>

Sweden is placed fourth in the Global Competitiveness Report 2007-2008, presented by the World Economic Forum, where Michael Porter is one of the co-authors. Sweden is ranked number one in technological readiness and second in higher education and training. The country has the sixth best innovation climate in the world.

Source: <http://www.gcr.weforum.org/>

## 1.6 Policy trends

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