

Country Report: Netherlands

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.

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

www.clusterobservatory.eu

www.oxfordresearch.eu

www.ensr-net.com

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| Main ministries responsible for implementing cluster policy | Finance/ Economy | Science/ Research | Trade/ Industry | Interior | Other |
|---|--|----------------------|--------------------|----------|-------|
| | x | x | | | x |
| Key agencies responsible for implementing cluster policy | Senternovem, NOW, The Netherlands Water Partnership, Syntens | | | | |
| | Is cluster policy their only task? | Yes | | No | x |

| | | | | | | |
|--|-----|---|----|--|----------------------|---|
| Are there any national cluster programmes? | Yes | x | No | | Number of programmes | 8 |
| Are there any regional cluster programmes? | Yes | x | No | | | 6 |

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

| Importance of cluster policy | | Low | Medium | High |
|--|----------------------------------|--------------------|---------------|-------|
| | National level | x | | |
| | Regional level | x | | |
| Policy papers on national level | Yes | | No | x |
| 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 | Point-One, Water Technology, FND | | | |

| 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 | x | No | |

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

Source: Oxford Research

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.

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 the Netherlands.

1.2.1 Agencies for cluster policy implementation

Ministry of Economic Affairs

The Ministry of Economic Affairs defines, implements, and regulates the enforcement of economic policy. This is done centrally by Economic Affairs - through the departments Entrepreneurship & Innovation, Energy & Telecommunications, Economic Policy and Foreign Economic Relations-, but also through eight agencies (under which Senternovem) and two independent administrative authorities.

Ministry of Education, Culture and Science

The Ministry of Education, Culture and Science is responsible for implementation of policy on education, culture and science. The Ministry consists of:

- a governmental department (with subdepartment for primary & secondary education, for higher education, professional education & science and for culture & media
- 4 civil services/ agencies
- 3 advisory boards
- 2 inspectorates

Ministry of agriculture, nature and food quality

‘Food production and rural areas of international standing. Under this banner the Ministry of Agriculture, Nature and Food Quality strives for safe, responsibly

produced food and a living countryside. Rural areas must remain economically viable while preserving landscape and heritage. Finally the Ministry seeks to strengthen the international competitive position of the agriculture sector based on socially responsible enterprise. The Ministry of Agriculture, Nature and Food Quality directs, creates the necessary frameworks, stimulates and provides funding.' The Ministry consists of 8 governmental departments (industry & Trade, International Affairs, Legal Affairs, Knowledge, Agriculture, Nature, Rural Areas, Regional Affairs, Fishery and Food Quality & Animal Health) and 6 agencies.

Senternovem

Agency of the Ministry of Economic Affairs which promotes sustainable development and innovation, both within the Netherlands and abroad. It was founded in 2004 by a fusion between the two former agencies Senter and Novem. Senternovem aims to convert government policy into tangible results that have a positive effect on the economy and on society as a whole. It creates access to a broad Dutch network of knowledge institutes, research centers, trade associations, companies and government officials. Senternovem consists of three directorates: Innovation, Energy & Climate Change, and Environment & Spatial Planning.

NWO (Netherlands Organisation for Scientific Research)

NWO:

- 'is responsible for enhancing the quality and innovative nature of scientific research as equally initiating and stimulating new developments in scientific research
- mainly fulfils its task by allocating resources
- facilitates, for the benefit of society, the dissemination of knowledge from the results of research that it has initiated and stimulated
- mainly focuses on university research in performing its task.

In fulfilling its responsibilities NWO pays due attention to the aspect of coordination and facilitates this where necessary. NWO wants to ensure that Dutch science continues to be amongst the best in the world and that the currently strong position is further strengthened. NWO would also like to see a more intensive use of the results from scientific research by society, so that the contribution of scientific research to prosperity and welfare can be further increased.'

NWO consists of 8 divisions: Earth and Life Sciences, Chemical Sciences, Physical Sciences, Humanities, Social Sciences, Medical Sciences, Physics and Technical Sciences.

NWP (The Netherlands Water Partnership)

NWP is an independent body set up by the Dutch private and public sectors in the Netherlands to act as a national coordination and information centre for water-related issues abroad. The principal aims of the NWP are to harmonise the activities and initiatives of the Dutch water sector abroad and to promote Dutch expertise in water worldwide.'

Syntens

Syntens primarily aims at enhancing the innovative ability of Dutch SME's. Its mission is to promote innovation, to strengthen the innovative ability of SME's to contribute to sustainable growth. The organisation covers the entire country through 15 offices. Next to providing advice and organising informative workshops, Syntens facilitates forming of regional clusters, aimed at sharing of knowledge or aimed at business outcomes.

Source: www.minez.nl, www.minocw.nl, www.minlnv.nl, www.sinternovem.nl, www.nwo.nl, www.nwp.nl, www.syntens.nl

In the Netherlands there are several regional agencies operational in the field of cluster development and programmes. They usually participate within specific regional boundaries, like districts or provinces. None of these agencies were specifically founded to carry out cluster development tasks, but focus on contribution and improving regional economic structures. Thus a substantial part of their activities involve cluster development and facilitating cluster programs. The following organizations are distinguished: NOM, BOM, LIOF, Oost NV, Rewin NV, RON and finally NV REDE.

N.V. NOM: The aim of the N.V. NOM is to make a contribution to the lasting improvement in the socio-economic structure and work opportunities in the provinces of Groningen, Friesland, and Drenthe (i.e. the Northern Netherlands). It consists of the following divisions: Investment development, Development project, Subsidy advice and Financing. The NOM participates, on the basis of a business plan, with share capital and/or deferred loans. NOM assists northern companies in investment matters and companies considering relocating to the Northern Netherlands. NOM initiates and coordinates in the conversion of an idea into a concrete project.

N.V. BOM: The mission of the N.V. Noord-Brabant Development Agency (BOM) is to create, improve, maintain and develop the industrial structure in Noord-Brabant. The BOM was established in 1983 and is funded and financed by the Dutch State and the Province of Noord-Brabant. Noord-Brabant is a region in the south of the Netherlands. The BOM offers four core activities:

- The BOM Foreign Investment Department assists potential foreign investors in every field required, free of charge.
- The BOM Venture Capital Department finances innovative and financially healthy companies by providing equity capital and subordinated loans of up to 1,8 million Euros.
- The BOM New Business Development department supports R&D programs and initiates and stimulates innovative industrial projects. Moreover, the BOM offers access to its network with the local, national and European business communities as well as with universities, research centers and financial institutions.
- BOM Business parks focus on the development of the regions industrial estates.

N.V. Industriebank LIOF: LIOF is the Limburg development company. Since 1975 LIOF contributes to the prosperity of the province with an ongoing program to

strengthen the province's economic base. LIOF targets industry and the dynamic service sector. Its four core activities are Investment Promotion & Business Development, Participation, Development/Innovation and Business Parks, as these relate to the location/relocation of (foreign) companies, venture capital participation in Limburg companies with prospects, the development/implementation of programs and projects to sharpen the competitive edge of Limburg business and the coordination of the development of new business parks.

Oost N.V.: Development Agency East Netherlands (Oost NV) is a regional business development and investment agency, originating from a fusion in 2003 between two smaller regional development agencies (GOM and OOM). Its mission is to help foreign companies setting up European activities in the eastern region of the Netherlands (the provinces Gelderland and Overijssel). Services cover four areas: Regional Development & Innovations, Business Environment, Foreign Investments and Venture Capital. In order to accomplish its mission, Oost NV maintains a wide network of regional, national and international business relations, knowledge institutes, intermediaries and governmental institutions. Basic services include assisting in site selection and finding joint-venture partners, setting up distribution centers, strategic alliances and technology transfers, consulting on government regulations, taxes, financing and subsidies and providing access to venture capital.

N.V. REWIN: N.V. REWIN West-Brabant is a regional development company that conducts activities in order to improve and stimulate the regional economic development in the western part of Noord-Brabant. REWIN provides information concerning business locations and assists during the process of relocating. Services are offered to assist with growth strategies and financing. And finally REWIN initiates regional development plans.

RON N.V.: The Regional Development Company Noordzeekanaalgebied N.V. (RON N.V.) was founded in 1999, in order to deploy activities that benefit the economy in the North Sea Canal area. The main objectives are derived and conditioned by the Masterplan Noordzeekanaalgebied, and comprise of regenerating obsolete business locations, planning and exploitation of new business locations and finally the marketing and acquisition of new and relocated firms. RON N.V. functions as a mediator by coordinating public and private co-operation. For that matter they are involved in cluster development. The following stakeholders participate in this organization: Province of Noord-Holland, the municipalities of Amsterdam, Beverwijk, Velsen and Zaan-stad, ABN AMRO bank, Corus, ORAM and the Seaport of IJmuiden NV.

N.V. REDE: NV REDE is the economic development agency for the Eindhoven Region, a government related organization with the following shareholders: Cities of Eindhoven and Helmond, The Eindhoven Region Authority. Since 1983 its goal is to stimulate economic activities and strengthen the economic structure of this region. Therefore N.V. REDE's core activities include: economic promotion and acquisition, promoting the advantages of the Eindhoven Region as a location for business-activities, industry or investments, providing information about real estate and busi-

ness centers, providing business management consultancy and financing of business activities, and finally initiating and supervising economic development projects.

Source: www.nom.nl ; www.bom.nl ; www.liof.nl ; www.oostnv.nl ; www.rewin.nl ; www.nzkg.nl ; www.rede.nl

1.2.2 National cluster programmes

Point-One

- Financing:
 - Source of programme financing: Ministry of Economic Affairs
- Actor:
 - Programme initiator: Joined initiative of Dutch high-tech industries, knowledge institutes and the Ministry of Economical Affairs
 - Carried out by: Senternovem
 - The actor was not formed for this purpose
- Scope and target:
 - Geographic coverage: National (the Netherlands)
 - Policy focus: This programme finances and stimulates co-operation between knowledge institutions and private companies. Aim of the joint effort is commercial valorisation of knowledge. The programme therefore fits into the new stream of science and technology policy.
 - Not a certain stage in lifetime is targeted. However, it is not likely that declining clusters apply, whereas it is likely that embryonic or emerging clusters are extra motivated to participate in the programme.
- Programme contents:
 - Short description: The Dutch high-tech industry wants to achieve a leading position in the fields of nano-electronics and embedded systems worldwide. This ambition has been laid down in the strategic innovation programme, Point-One. In this programme, small and large businesses, educational and knowledge institutes collaborate very closely to expand the current strong position of the Netherlands in these fields and bring it up to Silicon Valley proportions.
 - Activities – prioritised areas: ‘The Point-One programme works against a determined set of priorities. First, and foremost, the Point-One cluster and program are working actively within the boundaries of the European Strategic Research Agenda's of the European Technology Platforms ENIAC (nano-electronics) and ARTEMIS (Embedded Systems).

Priorities in Societal Needs

The priorities in societal needs are covered in five areas, which are just as valid for the Netherlands as they are for the rest of the EU.

- Health, e.g., ‘The doctor in your pocket’, real-time diagnostics, bio-chips / body-sensors
- Mobility and Transport, e.g., ‘100% safety on the road’, integrated transport systems, prevention of pollution
- Security and Safety, e.g., personal emergency systems, protection against crime and terrorism, secure home environment
- Communications, e.g., seamless wired and wireless access, mobile services without compromise, protection of privacy and content

- Education and Entertainment, e.g., learning anywhere and anytime, content with best quality (e.g. HDTV), content protection

Priorities in Application Context

At the Application Context level, two segments are a priority for the Point-One program, as they have significant relevance for the Dutch economy. The selected segments are 'Industrial' and 'Private Spaces'; in both, a solid industrial and academic competence and ambition is present.

- Industrial: large, complex and safety critical systems, that embrace Automotive, Aerospace, Manufacturing, and specific growth areas such as biomedical
- Private Spaces: offering systems and solutions for homes, cars and offices, for improved enjoyment, comfort, well-being and safety

Priorities in System Design Challenges

In System Design Challenges, the full width of the area is covered in the Point-One program.

- Reference Designs and Architectures: reference designs that offer standard architectural approaches for a given range of applications to address the complexity challenge and build synergies between market sectors
- Seamless Connectivity and Middleware: middleware that enables seamless connectivity and wide-scale interoperability to support novel functionality, new services and build the ambient intelligent environment
- System Design Methods & Tools: systems design methodologies and associated tools for rapid design and development, and generic enabling technologies derived from foundational science

Priorities in Technology domains

In the technology domains level, the Netherlands industry and academia have specific innovative strengths connected to emerging high-growth markets that justify a strong emphasis. In line with these strengths, the Point-One program will focus on the 'More than Moore' line together with 'Heterogeneous Integration', 'Equipment and Materials', and 'Design Automation'. The latter being closely connected to the overlying System Design Challenges.

- More than Moore: non-digital functions and human interface
- Heterogeneous Integration: total system integration ('System-in-Package')
- Equipment and Materials: enabling technology into manufacturing Design Automation: enabling effective platform-based system design'

- Ambitions/goals: Point-One focuses on:
 - expanding collaboration between (small and large) high-tech companies, knowledge institutes and the government in strategic research projects
 - creating outstanding technology institutes for open innovation
 - stimulating excellent and attractive technical courses that meet the needs of the industries
 - supporting small and medium-sized businesses with advice, research facilities and financial means.
- Target group: 'The program is open to all relevant parties in the Netherlands; in fact a large participation from Dutch industry is considered a key success factor.'

- What the programme offers the projects: “The Point-One program will work along four focused and action-oriented strands, including instruments that are open to all relevant parties:

Strand 1: Strategic research initiatives

Strand 1 considers strategic collaborative research projects on nano-electronics and embedded systems, as a Dutch contribution to the European Research Agendas ENIAC (nano-electronics) and ARTEMIS (Embedded Systems). The Dutch contributions to the MEDEA+ program for Micro-electronics and ITEA 2 for Software Intensive Systems are an active link from the Point-One program to European R&D consortia. Thanks to ITEA 2 and MEDEA+. The Netherlands has a strong international portfolio for its national strengths to benefit on. On the national side, soon will be starting:

- The ‘MEMSland’ project on the development of a consolidated MEMS platform.
- The ‘OML’ project on the creation of a Maskless Lithography platform.
- Specific technology projects carried by TNO, for which 2 Million Euro has been reserved.
- Two open calls for proposals, for which 14 Million Euro has been reserved by the Ministry and which is organized by Senternovem

Strand 2: Open Innovation institutes

The program works actively tuned to the business plans of the Dutch Embedded Systems Institute and the Holst Centre, thereby creating an open interface within industry and between industry and academia while aligning industrial needs with academic technology feed-in.

Strand 3: Knowledge interaction between academia and industry

It is seen essential to align academic and poly-technical curricula with industry and meet industrial needs in terms of skilled people and level of training. The Point-One program will run the following activities:

- Develop a Human Capital roadmap, joining industry demand and academia supply.
- Create industry dedicated knowledge transfer projects from academia to industries.
- Organize supporting of part-time professors and experts from PdC industries to engage in teaching and research in academia
- Stimulate students to study subjects in nano-electronics and embedded systems
- Establish an industrial PhD program, dedicated toward industrial nano-electronics and embedded systems development

Strand 4: SME development

SMEs are an essential fiber in the Point-One fabric. The program actively supports existing SMEs and start-ups and will improve SME global competitive positioning in relevant technologies. The Point-One program will:

- Develop an SME radar screen and capabilities definition
- Expand SME quality improvement program (QLTC)
- Offer facility sharing
- Create a Venture Capital Fund
- Extend the existing voucher system specific to Nano-electronics and Embedded Systems

- Specifically target SMEs in an Open Call for R&D projects
- Create a framework for IP exchange that suits the needs of SMEs and large companies.

- One of the programme strands focuses on SMEs.

Source: www.point-one.nl

Innovation Programme Water Technology

- Financing:
 - Source of programme financing: Ministry of Economic Affairs
 - Time horizon: 2006-2010
- Actor:
 - Programme initiator: Water is one of the key areas identified by the Dutch Innovation Platform. A steering committee, consisting of representatives from private parties, public parties and knowledge institutes concerned with water technology, used this momentum to formulate an innovation Programme Water technology. When finished, the committee asked the Ministry of Economic Affairs to participate and support parts of the programme, which was accepted by the Ministry.
 - Carried out by: A combined effort by the steering committee, Senternovem and the Netherlands Water Partnership (NWP).
 - The steering committee was especially formed for the purpose of creating an innovation programme Water Technology in 2005, the other two actors were not.
 - Organisational set up at programme and project level: The steering committee supervises programme activities, which are supported by Senternovem and NWP. Tasks of the committee therefore entail: guarding and monitoring progress, quality and coherence of the programme, communication with governmental organisations and monitoring potential relevant developments.
- Scope and target:
 - Geographic coverage: The programmes' goal is to strengthen Dutch sector for Water technology, whether they are nationally or internationally active.
 - Policy focus: This programme finances and stimulates co-operation between knowledge institutions and private companies. Aim of the joint effort is commercial valorisation of knowledge. The programme therefore fits into the new stream of science and technology policy.
 - Not a certain stage in lifetime is targeted. However, it is not likely that declining clusters apply, whereas it is likely that embryonic or emerging clusters are extra motivated to participate in the programme.
- Programme contents:
 - Short description: Main goal of the Innovation Programme Water Technology is to establish an excellerating Dutch water technology sector, which serves economic as well as societal purposes, in the Netherlands and abroad.
 - Activities – prioritised areas:
Efforts are focussed on four clusters with high potential:

- Water supply for domestic use and water supply for industrial use
- Waste water treatment
- Censoring technology (monitoring and control of water)
- Interaction with natural systems
- Ambitions/goals:

The main goal leads to a set of ambitions:

 - The Dutch water technology sector realizes growth that at least equals growth in the global water technology sector
 - The Dutch water technology sector operates in great harmony and co-operation
 - The Dutch water technology sector distinguishes itself by combining societal and economic interests.
 - In 2010, the Dutch water technology sector contains at least four world leading clusters.
- Target group: The entire water technology sector in the Netherlands, thus containing representatives from the private sector, the public sector and knowledge institutes.
- There is not a particular focus on SMEs.
- What the programme offers the projects: The programme offers four instruments:
 - Forming a Leading Technology Institute Water Technology, to keep knowledge up to date
 - Providing the subsidy scheme 'Innovator', to facilitate consortia in industrial research or pre-competitive development
 - Supporting Dutch parties who participate in international co-operation aimed at research and development
 - Providing a fund for launching customers, to realize trial projects where innovative concepts are tested
- Cross-country/interregional activity: The programme stimulates cross-country activity by supporting Dutch parties to cooperate with foreign partners.

Source: www.senternovem.nl

Innovation Programme Food and Nutrition Delta (FND)

- Financing:
 - Source of programme financing: Ministry of Economic Affairs
 - Budget: €45,- million
 - Time horizon: 2006-2010
- Actor:
 - Programme initiator: The Innovation Platform identified 'Food and Flowers' as one of the key areas in Dutch economy. As a reaction to this, 75 multinationals, SMEs and knowledge institutes from the Dutch food industry, together with the Ministry of Economic Affairs and the Ministry of Agriculture, Nature and Food Quality, set up the Innovation Programme Food and Nutrition Delta.
 - Carried out by: Senternovem
 - The actor was not formed for this purpose.

- Scope and target:
 - Geographic coverage: National (the Netherlands)
 - Policy focus: This programme finances and stimulates co-operation between knowledge institutions and private companies. Aim of the joint effort is commercial valorisation of knowledge. The programme therefore fits into the new stream of science and technology policy.
 - Not a certain stage in lifetime is targeted. However, it is not likely that declining clusters apply, whereas it is likely that embryonic or emerging clusters are extra motivated to participate in the programme.
- Programme contents:
 - Short description: The Innovation Programme FND aims 'at making the Netherlands a leading Food Innovation region in Europe. Networks and platforms will be created in an integrated manner to develop new technologies in order to enhance the new business development along the food industry, with special attention to Small and Medium Enterprises. This will lead to the development of innovative, new or enhanced food products that fulfil consumer needs and expectations. Those products, combined with recommended changes in lifestyle and eating patterns, will have a positive impact on public health and the quality of life. Moreover, the competitive edge and market position of the food industry will be enhanced'
 - Activities – prioritised areas: There are two phases in the Innovation Programme FND. First phase is the establishment of a Leading Technology Institute WCFS+ (Wageningen Centre for Food Sciences). The second phase has two action lines. The first is market implementation of the newly developed knowledge by WCFS+. Other action line is to enhance the innovative ability of SMEs in the food industry.

The Innovation Programme FND concentrates on a limited amount of themes. These are:

- Food & Health
- Sensory & Structure
- Bio-ingredients & Functionality
- Consumer Behaviour
- Safety & Preservation
- Adjacent technology for food and nutrition

- Ambitions/goals: The ambition to create a leading innovative food region in the Netherlands is translated in several sub-goals:
 - supporting an innovative and competitive food industry, and to generate more turnover and revenues in the food industry, by strengthening its market position through developing product-market combinations with high added value.
 - raising consumer wellbeing by introducing healthy products
 - strengthening entrepreneurial power and knowledge position of SMEs
 - creating the most competitive food and nutrition knowledge infrastructure in Europe
 - dynamising knowledge creation and knowledge transfer between companies and knowledge institutes
- Target group: All multinationals, SMEs and knowledge institutes active in the food industry.

- Focus on SMEs: A great part of the programme is aimed at stimulating innovation by SMEs.
- What the programme offers the projects:
For phase one, the research programme performed by WCFS+, a subsidy of €33 million is provided.
For the second phase, three instruments are designed:
 - FND Innovation project: a subsidy with a maximum of €1,- million for industrial and/ or pre-competitive research in one of the fore mentioned FND-themes. Applying consortia must exist of at least one company and one knowledge institute.
 - FND-SME Innovation project: a subsidy with a maximum of €500.000,- for industrial and/ or pre-competitive research in one of the fore mentioned FND-themes. Applying consortia must exist of at least two SMEs.
 - Feasibility project: a subsidy with a maximum of €50.000,- for a SME to investigate the technical and economical feasibility of an innovative trajectory.

Source: www.foodnutritiondelta.nl

Innovation-Oriented Research Programmes (IOP)

- Financing:
 - Source of programme financing: Ministry of Economic Affairs (50%) and universities/ institutes (50%), whereby universities contribute in kind (for example in the form of physical infrastructure or project supervision).
 - Budget: On average €32,- million for one IOP
 - Time horizon: Every IOP has a time-span of 4 year, after which application for another for year is possible.
- Actor:
 - Programme initiator: Ministry of Economic Affairs
 - Carried out by: Senternovem
 - The actor was not specifically formed to carry out IOP.
 - The actor has other tasks apart from this programme. Senternovem is responsible for the implementation of the Ministry of Economic Affairs' policy
 - Organisational set up at programme and project level: On the programme level: 'Applications for an IOP subsidy can be made by an IOP co-operation. This consists of at least one Dutch non-profit research institute and two Dutch companies/ businesses/ enterprises. The co-operation is not allowed to have a legal character. Applications can be made during a tender period only'. Applications are evaluated by the IOP programme commission of Senternovem. On the project level: 'Every IOP has a coaching committee, consisting of company representatives and researchers who meet twice a year. During the meeting researchers report on their results, while company representatives make suggestions that allow the research to connect more suitably with the requirements of industry'.
- Scope and target:
 - Geographic coverage: The Netherlands

- Policy focus: This programme finances and stimulates co-operation between knowledge institutions and private companies. Aim of the joint effort is commercial valorisation of knowledge. The programme therefore fits into the new stream of science and technology policy.
- Not a certain stage in lifetime is targeted. However, it is not likely that declining clusters will apply for an IOP, whereas it is likely that embryonic or emerging clusters are motivated by IOP to co-operate.
- Programme contents:
 - What – short description: ‘An IOP research project is an innovative, systematic and connected entity of activities in the field of fundamental research, or a combination of fundamental and industrial research and/or pre-competitive development. Three kinds of research are possible:
 - Fundamental research: the extension of general scientific and technical knowledge, with no industrial or commercial aims;
 - Industrial research: research aimed at gaining new knowledge with the purpose to use this knowledge for the development of new products, processes or services *or* to considerably improve existing products, processes or services;
 - Pre-competitive development: to transform the outcome of industrial research into plans and designs for new, changed or improved products, processes or services.’
 - Activities – prioritised areas: ‘IOPs stimulate fundamental-strategic research within specific themes at universities, (non-profit) research institutes and companies in a direction that corresponds to the long-term industrial needs of industry in the Netherlands.’ Examples of IOP-topics are electromagnetic power technology, genomics, image processing, photonic devices and self-healing materials.
 - Ambitions/goals: ‘The aim of an IOP programme is to intensify the interaction between companies in the Netherlands and the knowledge infrastructure within a specific discipline, by providing an extra impulse to research within a theme and by actively involving industry in the execution of this research. Combining the forces of companies and knowledge infrastructure leads to the formation of new networks and the reinforcement of existing ones.’ By doing so, ‘the IOP contributes to strengthening the economy and knowledge infrastructure of the Netherlands.’
 - Target group: The diverse range of sectors and fields, universities, other non-profit research institutes and the business community
 - What the programme offers the projects: Financial support and project administration by Senternovem
 - Cross-country/interregional activity: Foreign research institutes and companies/ businesses/ enterprises are also allowed to take part in an IOP project.
- Process:
 - Based on applications or appointments: Applications
 - Main elements in applications:
 - ability of applicants to live up to financial terms
 - technical and economical feasibility of the project
 - sufficient research skills of the applying party
 - expected benefits for Dutch economy

- quality and innovative standards
- Evaluation:
 - Results so far/conclusions from evaluations:
 - ‘TOPs have played a good part in the structural strengthening of strategic research in specific areas. In this way structural attention for industrial themes has been realized, the initial money flows have been moved, and contract research has grown.
 - ‘The IOP has very clearly contributed to shaping thorough and structural networks between industrial R&D, research establishments and firms. This has led to new collaborative projects, programmes and contract research. Examples are the research schools, LTIs (Technological Top Institutes) and platforms.’
 - A more interactive approach is needed to increase the use made of knowledge, particularly by firms (often SMEs) and knowledge institutions not directly involved.’

Source: www.senternovem.nl

Innovation Performance Contracts (IPC)

- Financing:
 - Source of programme financing: Ministry of Economical Affairs
 - Budget:
 - Pre-IPC phase: €3,- million
 - IPC phase: €14,- million
 - Time horizon:
 - Pre-IPC phase: 1,5 year
 - IPC phase: 3 years
- Actor:
 - Programme initiator: Ministry of Economic Affairs
 - Carried out by: Senternovem
 - The actor was not specifically formed to carry out ICP.
 - The actor has other tasks apart from this programme. Senternovem is responsible for the implementation of the Ministry of Economic Affairs’ policy
 - Organisational set up at programme and project level: An application for an IPC can be made by a group of in between 15 and 35 SMEs, who are committed to cooperate with one another in order to create new products or processes. This group needs to be represented by a partner with legal status, who is engaged in stimulating economical activity in a structural and non-commercial way, for example a line organisation. This partner functions as a project administrator, spokesman and project leader.
- Scope and target:
 - Geographic coverage: National (the Netherlands)
 - Policy focus: Main aim of the programme is to unite SMEs in their quest for knowledge. Therefore the programme fits the new approach in industrial and enterprise policy, where common needs for firm groups are targeted.

- IPC motivates organisations to form innovative clusters, so specifically embryonic and emerging clusters are targeted.
- Programme contents:
 - What – short description: The programme has two phases: the pre-IPC phase and the IPC phase. In the first, the representative organisation investigates the grounds for co-operation between the participating SMEs. What are potential innovation areas, what knowledge base is already available in the network of SMEs and what knowledge is needed? Resulting from this phase is an overarching project plan describing the innovative route and activities of the representative organisation facilitating this trajectory. Furthermore, every participating SME describes their specific contribution to the chosen innovative route. In the second phase these plans are executed.
 - Activities – prioritised areas: There are no prioritised areas.
 - Ambitions/goals: Goal of IPC is to stimulate innovation of SMEs, in a longitudinal and demand-oriented fashion. Crucial elements are cooperation and knowledge transfer.
 - Target group: Interlinked groups of SMEs (by region, theme or otherwise).
 - There is a particular focus on SMEs.
 - What the programme offers the projects: Financial support
- Process:
 - Based on applications or appointments: Applications
 - Top down or bottom-up approach in selection of clusters to support: Bottom-up
 - Main elements in applications: The intention of an IPC co-operation between a non-commercial legal character, engaged in stimulating economic activity and 15-35 SMEs.

Source: www.senternovem.nl

BSIK: Investing in Knowledge Infrastructure

- Financing:
 - Source of programme financing: 50% from government subsidy resources (Ministry of Economic Affairs and Ministry of Education, Culture and Science), 50% from players in public research and industry
 - Budget: €800,- million governmental subsidy resources
 - Time horizon: 2004-2010
- Actor:
 - Programme initiator: Task force ICES/ KIS (interdepartmental commission)
 - Carried out by: Senternovem, in close co-operation with the Netherlands Organisation for Scientific Research (NWO)
 - Both actors were not specifically formed to carry out BSIK.
 - The actor has other tasks apart from this programme: Senternovem is responsible for the implementation of the Ministry of Economic Affairs' policy

- Organisational set up at programme and project level: The preparation of the programme consisted of three phases, covering 2000 through 2003. First phase was an evaluation of crucial knowledge fields. With assistance of the Dutch research infrastructure 8 focal knowledge themes were selected. Second phase was a 'call for expressions of interest', which provided insight in the relevance and necessity of investment in the specific knowledge fields. In total 130 project ideas for investment were submitted by consortia of public research institutes and industry parties. The Netherlands Bureau for Economic Policy Analysis advised on the strength of each of the eight knowledge fields, after which five were selected. In phase three, the 'call for proposals', consortia could apply for funding of projects with a focus on one of themes central themes. 67 Proposals were filed. A 'commission of wise men', assisted by Senternovem, the Royal Netherlands Academy of Arts and Sciences (KNAW) and the governmental planning bureaus, advised the government on granting of subsidy. Eventually, 33 projects were given the green light and started of on the first of January 2004.
- Scope and target:
 - Geographic coverage: National (the Netherlands)
 - Policy focus: This programme finances and stimulates co-operation between knowledge institutions and private companies. Aim of the joint effort is commercial valorisation of knowledge. The programme therefore fits into the new stream of science and technology policy.
 - Not a certain stage in lifetime is targeted. However, it is not likely that declining clusters have applied, whereas it is likely that embryonic or emerging clusters were extra motivated to initiate co-operation.
- Programme contents:
 - Short description: Each programme has a runtime of four to six years. Mission is to carry out fundamental research which will lead to new products or processes for market or societal purposes.
 - Activities – prioritised areas:
All 37 projects are somehow related to one of the following themes:
 - Information and communication technology
 - Spatial planning
 - Sustainable system innovations
 - Micro system technology and nanotechnology
 - Health, food, biotechnology and genomics
 - Ambitions/goals: The Netherlands strive towards a high standard knowledge economy. In order to do so, a challenge lies in matching fundamental research with societal issues. The BSIK-programme tries to meet this challenge by creating parameters to grasp opportunities for innovation
 - Target group: Consortia of public research institutes and industrial players
 - There is not a particular focus on SMEs.
 - What the programme offers the projects:
Senternovem provides the following services in relation to the projects:
 - Financial project management
 - Monitoring of all projects
 - Communicational activities
 - Cross-country/interregional activity?: No

- Process:
 - Based on applications or appointments: Applications
 - Main elements in applications if that is used:
 - Scientific quality
 - Structural strengthening of the knowledge economy
 - Likelihood of innovate spin-offs
- Evaluation:
 - Results so far/conclusions from evaluations: In 2005, the 'commission of wise men' informed the task force ICES/ KIS-3 on the status of the 37 projects. In this advice 31 projects were positively evaluated. For five projects points of concern were mentioned. On one project, the commission advised the government to stop providing subsidy.
 - Planned future: For 2008 a midterm evaluation is planned.

Source: www.senternovem.nl

Leading Technology Institute (LTI)

- Financing:
 - Source of programme financing:
Subsidy (provided by Ministry of Economic Affairs) comprises of:
 - 75% of total costs when fundamental research is carried out;
 - 50% of total costs when industrial research is performed;
 - 25% of total costs when preconcurrenial research is performed. Remaining costs are on account of public research institutes and industrial parties, depending on the composition of the consortium
 - Budget: Variable
 - Time horizon: Every LTI has a time-span of 4 year, after which application for another four year is possible
- Actor:
 - Programme initiator: Ministry of Economic Affairs
 - Carried out by: Senternovem
 - The actor was not specifically formed to carry out LTI.
 - The actor has other tasks apart from this programme. Senternovem is responsible for the implementation of the Ministry of Economic Affairs' policy
 - Organisational set up at programme and project level:
A LTI can apply for subsidy when a strategic research programme is carried out by a consortium, which consists of at least three Dutch public research institutes and at least three Dutch industrial parties or entrepreneurs. Application is by means of a business plan with budget specifications and is evaluated by the Minister of Economical Affairs. Part of this application is an intention declaration by all partners in which they stress and describe their contribution in the consortium. The LTI itself is a recognisable virtual institute which is centrally coordinated.
- Scope and target:
 - Geographic coverage: National (the Netherlands)
 - Policy focus: This programme finances and stimulates co-operation between knowledge institutions and private companies. Aim of the joint effort is

commercial valorisation of knowledge. The programme therefore fits into the new stream of science and technology policy.

- Not a certain stage in lifetime is targeted. However, it is not likely that declining clusters apply, whereas it is likely that embryonic or emerging clusters are extra motivated to initiate co-operation.
- Programme contents:
 - What – short description: A LTI is focussed on a coherent research area in fundamental-strategic research, which has high economic relevance as well as high scientific quality. Resulting from this, a LTI attracts world leading researchers and top class equipment.
 - Activities – prioritised areas: No prioritised areas are appointed.
 - Ambitions/goals: LTIs have as goal to develop knowledge on a specific theme with international relevance which provide industry players with strategic answers
 - Target group: Industry players and public research institutions
 - There is not a particular focus on SMEs.
 - What the programme offers the projects: Mainly financial support
 - Cross-country/interregional activity: Aim is to attract world leading expertise and equipment, when foreign researchers or facilities can contribute they are invited
- Process:
 - Based on applications or appointments: Applications
 - Main elements in applications:
 - ability of applicants to live up to financial terms
 - technical and economical feasibility of the project
 - sufficient research skills of the applying party
 - expected benefits for Dutch economy
 - quality and innovative standards

Source: www.senternovem.nl

Smart Mix

- Financing:
 - Source of programme financing: Ministry of Economic Affairs and Ministry of Education, Culture and Science
 - Budget: €100.000.000,-
- Actor:
 - Programme initiator: Innovation Platform
 - Carried out by: Senternovem and the Netherlands Organisation for Scientific Research (NWO)
 - Both actors were not formed for this purpose
- Scope and target:
 - Geographic coverage: National
 - Policy focus: This programme finances and stimulates co-operation between knowledge institutions and private companies. Aim of the joint effort is

commercial valorisation of knowledge. The programme therefore fits into the new stream of science and technology policy.

- Not a certain stage in lifetime is targeted. However, it is not likely that declining clusters apply, whereas it is likely that embryonic or emerging clusters are extra motivated to initiate co-operation.
- Programme contents:
 - What – short description: Smart Mix stimulates economic, societal and cultural innovation in those areas where the Netherlands can excel
 - Activities – prioritised areas: There are no prioritised areas, as long as there's a industrial or societal need
 - Ambitions/goals: Smart Mix has two related goals: creating societal and economic value, and creating focus and mass in scientific excellence. This is pursued by matching industrial parties or societal organisations with public knowledge institutions who bundle their knowledge
 - Target group: Industrial parties or societal organisations ('users of knowledge') and knowledge institutions ('creators of knowledge')
 - There is not a particular focus on SMEs.
 - What the programme offers the projects: Financial support
 - Cross-country/interregional activity: In the first place knowledge creation in the Netherlands is targeted.
- Process:
 - Based on applications or appointments: Applications
 - Top down or bottom-up approach in selection of clusters to support: Bottom-up
 - Main elements in applications: Application is organized in two stages: a pre-application and a worked-out programme proposal. The pre-application is evaluated by the Smart Mix secretariat and the Smart Mix Advisory Commission (consisting of a maximum of 10 members with scientific, industrial or societal background). The consortia with the best pre-applications are invited to work out their application in a programme proposal. This programme is evaluated by the Smart Mix secretariat and Advisory Commission. The Minister of Economic Affairs and the executive committee of the NOW are informed with the results, after which the director of Senternovem is charged with the task of assigning subsidy

Source: www.senternovem.nl

1.2.3 Regional cluster programme

Peaks in the Delta Eastern Netherlands

- Financing:
 - Source of programme financing: Ministry of Economic Affairs
 - Budget: €23,- million
 - Time horizon: 2006-2010
- Actor:

- Programme initiator:
The national government has set a regional strategic economic agenda ('Peaks in the Delta'), taking into account six regions ('deltas') in the Netherlands which represent positive prospects for economic development. These regions contain the highest concentrations of employment in the country, are represented by one or more universities and have linkages with several main ports in the Netherlands. Each region has its sectors/ areas in which a competitive advantage can be gained ('peaks'). To stimulate development in these areas, in each region an innovation programme is started by assigning a Programme Committee with the task to work out the initial regional agenda. This committee, consisting of representatives from the public and private sector and knowledge institutes in the region, worked out the programme.
- Scope and target:
 - Geographic coverage: Eastern Netherlands: the provinces of Gelderland and Overijssel, containing the economic core areas of Twente, Arnhem-Nijmegen and Wageningen-Ede-Rhenen-Veenendaal
 - Policy focus: Main aim of the programme to stimulate economic key areas within the region in order to enhance the regional economy as a whole. Therefore it matches perfectly with the new regional policy-approach, which is aimed at building competitive regions.
- Programme contents:
 - Activities – prioritised areas:
General goal of the programme is to realize significant growth in corporate investments and added value in three key areas in Eastern Netherlands: Food & Nutrition, Health and Technology. Three sub goals are formulated. For each of the sub goals several programme lines are developed. Sub goals and according programme lines are the following:
 1. More corporate investment and added value in Food & Nutrition sectors (food technology, agribusiness, biotechnology and nutrition)
 - More accurate implementation of public knowledge on Food & Nutrition (knowledge valorisation)
 - Attract and stimulate new business activity in Food & Nutrition
 - Guaranteeing sufficient and qualitative knowledge workers in Food & Nutrition
 2. More corporate investments and added value in Health-sectors (neuroscience, biomedical materials and molecular imaging)
 - More accurate implementation of public knowledge of Health (knowledge valorisation)
 - Attract and stimulate new business activity in Health
 - Guaranteeing sufficient and qualitative knowledge workers in Health
 3. More corporate investments and added value in Technology-sectors (nano- and micro technology, ICT & Telematics, technical materials and mechatronics)
 - More accurate implementation of public knowledge of Technology (knowledge valorisation)
 - Attract and stimulate new business activity in Technology
 - Guaranteeing sufficient and qualitative knowledge workers in Technology

Projects that attribute to one of the sub goals and programme lines can apply for subsidy. There are four important criteria for projects:

- effective contribution of the project to programme lines

- economic efficiency of the project (balance between programme costs and revenues)
- the scope of the project: projects aimed at multiple areas (for example Health and Technology) are preferred
- the amount of private investment in the project

The Undersecretary of the Ministry of Economic Affairs is responsible for assigning subsidy to the projects, in what the Programme Committee has an advising role.

Source: Pieken in Oost-Nederland: Werk maken van kennis, Programmacommissie Oost-Nederland, 2006

Peaks in the Randstad North Wing

- Financing:
 - Source of programme financing: Ministry of Economic Affairs
 - Time horizon: 2006-2010
- Actor:
 - Programme initiator: The national government has set a regional strategic economic agenda ('Peaks in the Delta'), taking into account six regions ('deltas') in the Netherlands which represent positive prospects for economic development. These regions contain the highest concentrations of employment in the country, are represented by one or more universities and have linkages with several main ports in the Netherlands. Each region has its sectors/ areas in which a competitive advantage can be gained ('peaks'). To stimulate development in these areas, in each region an innovation programme is started by assigning a Programme Committee with the task to work out the initial regional agenda. This committee, consisting of representatives from the public and private sector and knowledge institutes in the region, worked out the programme.
- Scope and target:
 - Geographic coverage: The Randstad North Wing and Utrecht region: the provinces of North-Holland, Utrecht and Flevoland, containing the North Wing (Kennemerland-Amsterdam-Almere) and the Utrecht-Amersfoort-'t Gooi economic core areas.
 - Policy focus: Main aim of the programme is to stimulate economic key areas within the region in order to enhance the regional economy as a whole. Therefore it matches perfectly with the new regional policy-approach, which is aimed at building competitive regions.
- Programme contents:
 - Activities – prioritised areas:

Main goal of the programme is to develop an economic top region in the Randstad North Wing by creating circumstances where economic activity of world class is attracted and can flourish.

Economic focal point in the Randstad North wing is international knowledge-intensive business services. From this strategic interest several sub goals are formulated, that need to be enhanced through programme lines. Sub goals and according programme lines are now shortly elaborated.

1. Optimal utilisation of the potency of the creative industry in the region (arts, ICT, new media, entertainment and creative business services)
 - Creating optimal circumstances for creative industry to flourish
2. Stimulating growth in the regional Life Sciences & Medical cluster (activities based on modern molecular and cellular biology)
 - Accelerating growth of the Life Sciences & Medical cluster
3. Strengthening innovative ability in Logistics and Trade
 - Stimulating development of clusters with high potential and high added value
 - Strengthening development in logistics
4. Utilising and strengthening the international position in tourism and congresses.
 - Accommodating city tourism
 - Strengthening international competitive power
5. Improving interaction between knowledge-infrastructure and industry
 - Strengthening the knowledge network, relations between knowledge institutes and industry and bridging the gap between education and labour market.

Projects that attribute to one of the sub goals and programme lines can apply for subsidy. There are four important criteria for projects:

- contribution of the project to regional co-operation
- amount of private investment in the project
- innovative character
- contribution of the project in international profiling

The Undersecretary of the Ministry of Economic Affairs is responsible for assigning subsidy to projects, in what the Programme Committee has a advising role.

Source: Pieken in de Noordvleugel: Verdere uitbouw van de internationale dienstverlening, Programmacommissie Noordvleugel, 2006

Peaks in the Randstad South wing

- Financing:
 - Source of programme financing: Ministry of Economic Affairs
 - Budget: €30,- million
 - Time horizon: 2006-2010
- Actor:
 - Programme initiator: The national government has set a regional strategic economic agenda ('Peaks in the Delta'), taking into account six regions ('deltas') in the Netherlands which represent positive prospects for economic development. These regions contain the highest concentrations of employment in the country, are represented by one or more universities and have linkages with several main ports in the Netherlands. Each region has its sectors/ areas in which a competitive advantage can be gained ('peaks'). To stimulate development in these areas, in each region an innovation programme is started by assigning a Programme Committee with the task to work out the initial regional agenda. This committee, consisting of repre-

representatives from the public and private sector and knowledge institutes in the region, worked out the programme.

- Scope and target:
 - Geographic coverage: The province of South Holland, containing the South Wing economic core area (Haaglanden-Rijnmond-Dordrecht)
 - Policy focus: Main aim of the programme to stimulate economic key areas within the region in order to enhance the regional economy as a whole. Therefore it matches perfectly with the new regional policy-approach, which is aimed at building competitive regions.

- Programme contents:

- Activities – prioritised areas:

Main goal of the programme is to stimulate industry areas in the Randstad South wing which bear a high economic potential. The Programme Committee identified the following clusters: Haven- en Industry Complex (in English: 'Harbour- and Industry Complex, situated around Rotterdam), glasshouse horticulture, International Law, Justice & Safety and Life & Health Sciences. Corresponding to this are the formulated sub goals and programme lines:

1. Enhancing economic performance of the HIC
 - Strengthening competitive position of Port Rotterdam as Food Port
 - Optimising utilisation of knowledge-infrastructure for process efficiency in the petrochemical industry
2. Strengthening innovative force of suppliers in glasshouse horticulture
 - Broader utilisation of glasshouse knowledge
3. Strengthening cluster International Law, Justice and Safety
4. Strengthening economic activity in Life & Health Sciences
 - Enhancing organising ability within the cluster

Projects that attribute to one of the sub goals and programme lines can apply for subsidy. There are four important criteria for projects:

- Contribution of the project to one of the programme lines
- Contribution of the project to intensifying co-operation between knowledge institutions and industry
- Contribution of the project to stimulation of economic activity in one of the fore mentioned clusters

The Undersecretary of the Ministry of Economic Affairs is responsible for assigning subsidy to projects, in what the Programme Committee has a advising role.

Source: Pieken in Zuidvleugel: Naar een nieuw economisch elan, Programmacommissie Zuidvleugel, 2006

Peaks in South-eastern Netherlands

- Financing:
 - Source of programme financing: Ministry of Economic Affairs, Province of Noord-Brabant, Province of Limburg and the Region Eindhoven Assembly
 - Budget: €100,- million
 - Time horizon: 2006-2010

- Actor:
 - Programme initiator: The national government has set a regional strategic economic agenda ('Peaks in the Delta'), taking into account six regions ('deltas') in the Netherlands which represent positive prospects for economic development. These regions contain the highest concentrations of employment in the country, are represented by one or more universities and have linkages with several main ports in the Netherlands. Each region has its sectors/ areas in which a competitive advantage can be gained ('peaks'). To stimulate development in these areas, in each region an innovation programme is started by assigning a Programme Committee with the task to work out the initial regional agenda. This committee, consisting of representatives from the public and private sector and knowledge institutes in the region, worked out the programme.
- Scope and target:
 - Geographic coverage: the eastern part of North Brabant and Limburg, containing the economic core areas of Southeast Brabant and the A2 ('s Hertogenbosch-Eindhoven-Helmond), corridor Tilburg, Venlo and Maastricht-Heerlen
 - Policy focus: Main aim of the programme to stimulate economic key areas within the region in order to enhance the regional economy as a whole. Therefore it matches perfectly with the new regional policy-approach, which is aimed at building competitive regions.
- Programme contents:
 - Activities – prioritised areas:

Main goal of the programme is to maintain and enhance the status of the region as an international economic top region. This goal is translated in several targets:

 - Developing 10 top knowledge institutions that provide a knowledge platform for industry in the region
 - Creating 100 top companies with international status who function as accelerators of innovation and growth
 - Creating a group of 1000 SMEs who function as a foundation for the knowledge economy and stand for the ambition to innovate and grow
 - Creating room for 10.000 new knowledge workers

To realize these targets several programme lines are formulated

- Intensifying co-operation between value chains and enabling technologies in joint R&D and new business development
- Stimulating innovative entrepreneurship and application of knowledge by SMEs
- Stimulating physical and virtual knots for knowledge-intensive industry
- Stimulating and guaranteeing supply of knowledge workers

Projects that attribute to one of the programme lines can apply for subsidy. There are four important criteria for projects:

- Contribution of the project to one of the programme lines
- Economic efficiency of the project
- Contribution of the project in profiling the region as an international top region
- Prospect of beneficial results after termination of the project

The Undersecretary of the Ministry of Economic Affairs is responsible for assigning subsidy to projects, in what the Programme Committee has a advising role.

Source: Pieken in Zuidoost-Nederland: uitzicht op de top, Programmacommissie Zuidoost Nederland, 2006

Peaks in South-western Netherlands

- Financing:
 - Source of programme financing: Ministry of Economic Affairs
 - Time horizon: 2006-2010
- Actor:
 - Programme initiator: The national government has set a regional strategic economic agenda ('Peaks in the Delta'), taking into account six regions ('deltas') in the Netherlands which represent positive prospects for economic development. These regions contain the highest concentrations of employment in the country, are represented by one or more universities and have linkages with several main ports in the Netherlands. Each region has its sectors/ areas in which a competitive advantage can be gained ('peaks'). To stimulate development in these areas, in each region an innovation programme is started by assigning a Programme Committee with the task to work out the initial regional agenda. This committee, consisting of representatives from the public and private sector and knowledge institutes in the region, worked out the programme.
- Scope and target:
 - Geographic coverage: The province of Zeeland plus the western part of the province North-Brabant (Greater Breda) containing the economic core areas of Sloehaven-Kanaalzone and the A16-A4 West Brabant areas (Moerdijk-Breda-Bergen-op-Zoom)
 - Policy focus: Main aim of the programme to stimulate economic key areas within the region in order to enhance the regional economy as a whole. Therefore it matches perfectly with the new regional policy-approach, which is aimed at building competitive regions.
- Programme contents:
 - Activities – prioritised areas:

Main goal of the programme is to enhance the economical structure of the region, being characterized by the proximity of two main ports Antwerpen and Rotterdam. Three key areas are targeted: process industry, logistics and tourism. In line with these areas three sub goals with corresponding programme lines are introduced:

 1. Sub goal process industry: economic growth of companies in maintenance and bio-energy in the period 2006-2010 is larger than economic growth in general
 - develop an international hotspot for high grade technological maintenance
 - develop centre for development, application and production of bio-energy
 2. Sub goal logistics: create a logistic hotspot for logistic business services in between two main parts (Antwerpen and Rotterdam)
 - attracting new business activity
 - innovation within existing logistic chains

- innovation between existing logistic chains
- 3. Sub goal tourism: attracting more foreign tourists
 - attracting qualitative and innovating companies and new markets
 - strengthening and unlocking knowledge infrastructure

Projects that attribute to one of the programme lines can apply for subsidy. There are four important criteria for projects:

- financial participation of entrepreneurs
- co-operation between one or more knowledge institutes, entrepreneurs or public parties
- spreading acquired knowledge and experiences to entrepreneurs, knowledge institutes of public parties
- interregional co-operation between knowledge institutes, entrepreneurs or public parties in South-western Netherlands and Flanders

The Undersecretary of the Ministry of Economic Affairs is responsible for assigning subsidy to projects, in what the Programme Committee has an advising role.

Source: Pieken in Zuidwest-Nederland: Profiteren van de strategische ligging, Programmacommissie Zuidwest-Nederland

The Northern Compass

- Financing:
 - Time horizon: 2006-2010
- Actor:
 - Programme initiator: Compass of the North is a result of a regional initiative in what the provinces of Groningen, Drenthe and Friesland combine their forces to enhance the economy in the Northern region of the Netherlands (Northern Netherlands Assembly).
- Scope and target:
 - Geographic coverage: The provinces of Groningen, Drenthe and Friesland, containing the economic core area of Groningen
 - Policy focus: Main aim of the programme to stimulate economic key areas within the region in order to enhance the regional economy as a whole. Therefore it matches perfectly with the new regional policy-approach, which is aimed at building competitive regions.
- Programme contents:
 - Activities – prioritised areas:

In the northern region of the Netherlands three economic key areas of potential world class are situated:

 - Multi-Censoring Systems: development and application of Multifunctional Wide Area Censoring Networks. Organized by the regional innovation programme Sensor Universe
 - Water: innovative initiatives in water technology, water management and water policy
 - Energy: innovative projects in gas energy and sustainable energy

Apart from these key areas there are several sectors that also have potential for growth. These sectors are referred to as ‘spearhead sectors’, and consist of agribusiness, chemistry, commercial care, life sciences, IT, shipbuilding and tourism. Projects that contribute to development of the key areas or spearhead sectors can apply for subsidy and organisational support by the Northern Netherlands Assembly.

Source: De koers verlegd, Northern Netherlands Assembly, 2005

1.2.4 Successful cluster programmes

The innovation programmes Point-One, Water Technology and FND are the result of an intensive co-operation between government, industry and knowledge institutes. Because they share a mutual interest in raising the level of the economic area, all parties are fully engaged in stimulating projects and co-operation.

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

Five central policy themes

In the Dutch spectrum of subsidy and stimulation programmes for encoring public and private R&D the Dutch ‘cluster policy’ is not that important. Looking at the main aspects of the Dutch Science, technology and innovation policy the following 5 policy themes can be distinguished:

- Theme 1: investments in R&D and innovation
- Theme 2: investments in Human Resources
- Theme 3: Public-private interaction and knowledge use
- Theme 4: Scientific and technological performance
- Theme 5: Innovation performance

These five themes form the foundation for Dutch policy formulation in several areas, and therefore form the foundation for the discussion of cluster policy in the Netherlands.

Source: Science, Technology and Innovation in the Netherlands: Policies, facts and figures 2006, Ministry of Economic Affairs, 2006

Policy aim

General policy aim is to strengthen the international competitiveness of the Dutch economy, enhance productivity, employment and growth of national income. More specific: improving information provision on new technologies, stimulating interaction between actors in the innovation system, improving the match between the supply of the knowledge infrastructure and market demand (improving university-industry interaction).

Two ‘cluster policy’ measures

Since 2005 the Dutch Ministry of Economic Affairs started to develop two national programmes, combining the various themes. These programmes also emphasize clustering but do not follow from an overall cluster policy. Both measures ‘Innovation programmes’ and ‘Peaks in the Delta’ start from the strengths of the Dutch economy respectively the Dutch regions and attach great value to demand orientation and public-private co-operation. Initiatives should come from market parties. Both programmes mentioned have their focus on the strengths of the Dutch economy, which are often accompanied with clustering. These programmes cover at least the themes 1, 2, 4 and 5. For the Innovation Programmes also theme 2 is relevant, since human capital roadmaps are being developed for each programme.

Innovation programmes

Innovation Programmes focus on areas or sectors which are of high relevance to Dutch society. For example, programmes are formed around societal issues, such as air pollution or traffic congestion. On the other hand sectors which can contribute to the establishment of an internationally competitive knowledge economy are targeted. In this context the Innovation Platform needs to be mentioned. Chaired by Prime Minister Balkenende and facilitating the debate between key stakeholders from knowledge institutions and private parties, the Platform brought forth key areas in which the Netherlands bear the potential to become a world leading player: Flowers & Foods, High Tech Systems & Materials, Water, Creative Industries, Chemical Industries and Pensions and Insurance.

Since 2005 programmes are being set up to enhance knowledge creation in these business areas. Principal condition is that participating private parties and knowledge institutions have a shared interest to investigate and are willing to invest in a certain application field. Table 1 provides an overview of Dutch Innovation Programmes which are already started or which are in a preparational phase. Per programme the targeted sector or area is pinpointed, together with the status of the programme.

Tabel 1 Innovation Programmes

| <i>Programme Name</i> | <i>Sector/ area addressed</i> | <i>Status</i> |
|------------------------|--|---------------|
| Mobility and Water | road transport, construction, logistics, aviation, water | active |
| Roads to the future | road transport | active |
| WaterINNovation | water management | active |
| Food & Nutrition Delta | food and nutrition | active |
| Point One | nano-electronics and embedded systems | active |
| Water Technology | water technology, delta technology | active |

| <i>Programme Name</i> | <i>Sector/ area addressed</i> | <i>Status</i> |
|-------------------------|-------------------------------|-------------------|
| Creative Challenge Call | creative industry | preparation phase |
| Not yet available | automotive | preparation phase |
| Not yet available | chemical industry | preparation phase |
| Not yet available | hi-tech systems and materials | preparation phase |
| Not yet available | life sciences and health | preparation phase |
| Not yet available | maritime | preparation phase |

Source: EIM, 2007

Key implementing agencies

For the programmes separate steering committees are installed with representatives from the government, the private sector and knowledge institutions. Not only the Ministry of Economic Affairs but also the Ministry of Transport, Public Works and Water Management, the Ministry of Education, Culture and Science and the Ministry of Agriculture, Nature and Food Quality are involved in the innovation programmes.

Peaks in the Delta

In 2004, the Ministry of Economic Affairs issued the policy paper ‘Peaks in the Delta’, in which the government’s regional economic agenda is described. Aim is ‘to contribute to the Netherlands’ ambition of creating a competitive and dynamic economy’. In order to do this, six Dutch regions (‘deltas’) with a major contribution to Dutch economy were identified. Also, for each delta a unique set of economic sectoral advantages (‘peaks’) were described. For each region a steering group was installed to develop a programme to stimulate the regional peaks. During 2006 these programmes were presented and subsidy trajectories were started. For an overview of the deltas and additional peaks please see section 1.3.2. ‘Regional economic development policy’.

Source: Peaks in the Delta: Regional Economic Perspectives, Ministry of Economic Affairs, 2004

Cluster policy has been used since the early 1990s: just after Porter’s *The Competitive Advantage of Nations* (1990) an analysis of clusters in the Netherlands had been made (Jacobs et al. 1990), and cluster policy was adopted by the Dutch Ministry of Economic Affairs (1990) in their policy document “Economie met Open Grenzen” [Economy with open borders].

In the 1990s cluster policy has been strongly advocated by the Dutch ministers of Economic Affairs Andriessen and Wijers (coming from different political parties). The Dutch semi-public research institute TNO-STB has been very active in studying and promoting the cluster approach. More recently the public research institute MERIT (University of Maastricht) and the private research/consultancy organisation Techopolis have been active in policy studies and advice on clusters.

1.3.2 Clusters as framework in key policy areas

1.3.2.1 Innovation and technology policy

Policy directions

Dutch technology and innovation policy is aimed at improving the innovative and economic strength of mainly the private sector, and thereby addresses central policy themes 1, 3, 4 and 5. Explicit targets are formulated in the Innovation Letter of the Ministry of Economic Affairs, titled 'Action for Innovation: tackling the Lisbon ambition' (2003). Actions to fulfil the ambition comprise of:

- strengthening the climate for innovation: the Netherlands needs to become a 'save haven' where innovative entrepreneurs are stimulated by a favourable business climate.
- creating a dynamic environment: in a dynamic environment, characterized by high competition, companies are forced to produce more new products and/ or services. One way to enhance dynamics is to support start-ups based on technology.
- taking advantage of opportunities for innovation by opting for focus and mass in strategic areas: it is impossible for anyone to excel in all fields. Therefore, the Netherlands need to focus on those areas where competitive advantages and/ or societal benefits can be gained.

The Innovation Letter is followed by the Industry Memorandum: Heart for Industry in 2004, again published by the Ministry of Economic Affairs. In the Memorandum the Cabinet stresses the importance of industry to the Dutch economy and commits itself to aid companies by offering a favourable business climate. In doing so the government sets out on three tracks:

- get the basic preconditions for the business climate in order: such as competition, infrastructure, quality of legislation, etc.
- strengthen the modernising capability of businesses: by stimulating investments in R&D and promoting cooperation with public knowledge institutions. Preferably these activities need to be focussed on strategic innovation areas, bringing together excellent companies and knowledge partners.
- give attention to specific sectors or groups of companies: different kind of sectors or companies face different problems. When these group-specific problems frustrate economic growth, the government needs to lend a helping hand by removing these barriers. For example, starting companies face in the Netherlands often difficulties regarding capital.

Instruments

In order to attain to the policy directions mentioned above, the Ministry of Economic Affairs created several instruments, which will be shortly described below.

- Innovation-Oriented Research Programmes (IOPs): subsidy for innovative technological research projects within public-private research programmes at universities or other non-profit research organisations. Condition is that the research projects meet the long-term research needs of the related business community.
- Innovation Subsidy for Collaborative Projects (IS): stimulates technological co-operation between companies and public knowledge institutions and/ or co-operation between companies. Conditions are technological innovation, co-operation, economic perspective and sustainability.
- Technology Foundation STW: university staff can apply for a research grant in science and technology, provided that their research benefits society.
- TechnoPartner: programme to enhance the climate for technological start-ups by promoting technological entrepreneurship, providing information on starting a com-

pany, mobilising the venture capital market and facilitating the diffusion of knowledge from research centres towards commercial exploitation.

- WBSO: fiscal measure aimed at stimulating R&D in the private sector.
- Innovation Vouchers: stimulating the exchange of knowledge between public knowledge institutions and SMEs.
- Innovation Performance Contracts (IPC): stimulating innovation within SMEs by facilitating an innovative route carried out by a group of SMEs active in the same branch.
- Smart Mix: instrument to stimulate focus and mass in excellent scientific research and economic, societal and cultural valorisation. Aimed at co-operation of consortia of enterprises or civil society organisations with public knowledge institutes.
- Small Business Innovation Research (SBIR) Programme: aims to help and challenge SMEs to carry out innovative research, by providing R&D-funds by procurement contracts. By doing this, the government stimulates innovation by SMEs on issues with high societal relevance.
- Investment Incentive Scheme for the Knowledge Infrastructure (Bsik): programme in which projects of public-private consortia are subsidised, with the goal to strengthen the knowledge infrastructure in areas which are highly relevant to the Dutch society.
- Leading Technological Institutes (LTIs): virtual organisations in which companies and knowledge institutes cooperate to create public-private innovation processes. Because of the role of private parties scientific excellence is pursued in areas which are important to the private sector.

At present, the Ministry of Economic Affairs is restructuring its innovation instruments. The renewal consists of creating two main features:

- Basic package: providing public services and financial support to offer easy access to information, knowledge and capital for all entrepreneurs. Therefore information- and advice points are centralised, to offer entrepreneurs a singular 'service desk' where they can quickly find information and advise. On the other hand, the Ministry of Economic Affairs bundles their several financial instruments into one basic capital scheme, again to simplify access to financial funds for entrepreneurs. The earlier described innovation instruments Innovation Vouchers and Innovation Performance Contract are also incorporated into the basic package.
- Programme-based package: the aim of this package 'is to realise top performances within specific key areas by enhancing strong collaboration between industry, knowledge institutes and government in order to create strong clusters and networks.' The selection of key areas is a result of discussion between business and science, facilitated by the Innovation Platform (see section 1.2 and 4). Around these areas innovation programmes are being set up. In order to provide suited financial support to these programmes the innovation omnibus is introduced, which combines and replaces former instruments of the Ministry of Economic Affairs, such as IOP and IS. The omnibus provides a legal framework for initiatives of business and knowledge institutions to receive financial support and therefore 'serves as a vehicle to provide custom made (financial) support to these specific innovation programmes.'

Key implementing agencies

The key agencies for implementing innovation and technology policy are the Ministry of Economic Affairs and its agency Senternovem.

Source: Science, Technology and Innovation in the Netherlands: Policies, facts and figures 2006, Ministry of Economic Affairs, 2006

1.3.2.2 Regional economic development policy

The government has set a strategic economic agenda ('Peaks in the Delta'), taking into account six regions ('deltas') in the Netherlands which represent positive prospects for economic development. These regions contain the highest concentrations of basic deployment in the country, are represented by one or more universities and have linkages with several main ports in the Netherlands. Each region has its sectors/ areas in which a competitive advantage can be gained ('peaks'). With the agenda, the Dutch government commits itself to actively support the economic development of these regions. To set this in motion, in each region an innovation programme was started (except for the region Northern Netherlands, see below) by assigning a steering committee with the task to work out the initial regional agenda. During 2006, these agendas were presented. The regional economic development policy connects with the central policy themes 1, 2, 4, and 5. The six deltas, with their specified peaks, are the following:

Northern Netherlands (the provinces of Groningen, Drenthe and Friesland, containing the economic core area of Groningen)

The programme Peaks in the Delta Northern Netherlands has not started yet, because a regional programme is presently being enrolled by the Northern Netherlands Assembly. This is a regional initiative in which the provinces of Groningen, Drenthe and Friesland combine their forces to enhance the economy in the Northern region of the Netherlands. In their innovation programme titled 'The Northern Compass' three peaks are defined:

- Multi-Sensoring Systems: development and application of Multifunctional Wide Area Sensing Networks. Organized by the regional innovation programme Sensor Universe.
- Water: innovative initiatives in water technology, water management and water policy. Organized by the Frysian Water Alliance.
- Energy: innovative projects in gas energy and sustainable energy. Organized in the Energy Valley.

Apart from these peaks, the Northern Netherlands Assembly defined

sectors which bear considerable growth potential. These sectors are referred to as 'spearhead sectors', and consist of agribusiness, chemistry, commercial care, life sciences, IT, shipbuilding and tourism. Official statement of the national government is that the programme Peaks in the Delta Northern Netherlands will start when 'Northern Compass' is finished.

Eastern Netherlands: the provinces of Gelderland and Overijssel, containing the economic core areas of Twente, Arnhem-Nijmegen and Wageningen-Ede-Rhede-Veenendaal

Peaks in Eastern Netherlands focuses on three areas:

- Food & Nutrition: key sectors are food technology, agribusiness, biotechnology and nutrition (novel foods, functional foods and nutraceuticals). There exists a close connection with the national innovation programme 'Food and Nutrition Delta'. Geographical focal point is Wageningen, where the Food Valley is situated.

- Technology: as a bundling of knowledge Twente University offers a broad range of technology expertise. Main focal areas however are nano- and microtechnology, technical materials, mechatronics and IT & Telematics.

- Health: in this technological field neuroscience, biomedical materials and molecular imaging are peaks. Core knowledge area resides in Nijmegen, with the Radboud University and its Medical Center St. Radboud (also referred to as Health Valley).

The Randstad North Wing and Utrecht region: the provinces of North-Holland, Utrecht and Flevoland, containing the North Wing (Kennemerland-Amsterdam-Almere) and the Utrecht-Amersfoort-'t Gooi economic core areas

Peaks in the Randstad North Wing concentrates on the following sectors:

- Creative industry: within the broad diversity of disciplines, special attention goes out to arts, ICT/ new media, gaming and web designing.

- Life sciences/ medical cluster

- Innovative logistics and trade: central logistic cluster is Schiphol Airport

- Business Services

- Tourism and congresses

The Randstad South Wing: the province of South Holland, containing the South Wing economic core area (Haaglanden-Rijnmond-Dordrecht)

Peaks in the Randstad South Wing are:

- Haven en Industrie Complex (HIC): situated around main port Rotterdam a large industry complex evolves, containing high-potential clusters in transport and logistics, dredging, petrochemicals and water management.

- Horticulture: profoundly based on the high technological knowledge of suppliers.

- International Law and Justice: in The Hague several international law and justice organisations have their headquarters, such as the International Court of Law and the International Criminal Tribunal for the former Yugoslavia.

- Life & Health Sciences

The South Western Netherlands: the province of Zeeland plus the western part of the province North-Brabant (Greater Breda) containing the economic core areas of Sloehaven-Kanaalzone and the A16-A4 West Brabant areas (Moerdijk-Breda-Bergen-op-Zoom)

Peaks in South Western Netherlands comprise of:

- Process Industry

- Maintenance

- Bio-energy

- Logistics & Distribution

- Tourism

The South Eastern Netherlands: the rest of North Brabant and Limburg, containing the economic core areas of Southeast Brabant and the A2 ('s Hertogenbosch-Eindhoven-Helmond), corridor Tilburg, Venlo and Maastricht-Heerlen

Peaks in South Eastern Netherlands are:

- High Tech Systems & Materials: profound technological areas within this cluster are semiconductor & optronic devices, semiconductor & electronic production equipment, medical systems, food processing & handling systems, automotive specials and enabling technology & supply chain.
- Food & Nutrition: within this domain the region excels in functional foods, food processing & handling systems and enabling technology.
- Life Sciences & Medical Technology: especially the areas of biomarkers for molecular imaging, pharmaceuticals & diagnostics, biomedical materials and mechatronics for medical devices.

Key implementing agencies

The 'Peaks in the Delta'-programmes are organized through the Ministry of Economic Affairs; the programme 'Northern Compass' is executed by the Northern Netherlands Assembly. Furthermore, there are several regional agencies operational in the field of cluster development and programs. They usually participate within specific regional boundaries, like districts or provinces. None of these agencies were specifically founded to carry out a 'Peaks in the Delta'-programme or other cluster development tasks, but do have the task to improve regional economic structures. Thus a substantial part of their activities involves cluster development and facilitating cluster programs. The following organizations can be distinguished: NOM, BOM, LIOF, Oost NV, Rewin NV, RON and NV REDE.

Source: Peaks in the Delta, Ministry of Economic Affairs, 2004

1.3.2.3 Entrepreneurship and SME policy

Within this policy area especially central policy theme 5 is addressed. Current Dutch policy on entrepreneurship and SME stems from 2003, when the policy letter 'In Actie voor Ondernemers' (Action for entrepreneurs) was issued. The letter represents an action plan to remove existing barriers for entrepreneurship and thus providing more room for entrepreneurs to thrive. Three stages of entrepreneurship are addressed: the starting phase, the phase of growth and the last phase of company transfer and/ or termination. For each phase an action plan is formulated with accompanying action lines, which are shortly elaborated below.

Action plan starting phase

Main elements in the starting phase action plan are:

- Enhancing the cultural image of entrepreneurship: creating an 'entrepreneurial culture'. For example by promoting entrepreneurship among students
- Enhancing the position of starting entrepreneurs. For example by providing easy access to capital

- Enhancing the quality of legislation and public services for starting entrepreneurs. For example simplifying administrative procedures for subsidy schemes

Action plan phase of growth

Main elements in the phase of growth action plan are:

- Creating a better and safer climate for entrepreneurship. For example by tackling crime aimed at companies, by enhance the availability of proper schooled staff or by stimulating international entrepreneurship
- Enhancing legislation and public services for existing entrepreneurs For example by reducing the administra-tive burden for entrepreneur or simplifying Company Law

Action plan phase of company transfer and/or termination

Main elements in the phase of company transfer and/ or termination action plan are:

- Simplifying company transfer: by attending entrepreneurs on the importance of an early orientation on the company transfer phase, or by facilitating the pool of potential company buyers
- Enhancing the procedures for debt cleansing to improve the succes of renewed startups
- Reducing specific barriers for family companies

Key implementing agencies

Again, the Ministry of Economic Affairs has a main implementing role. In this place also the Dutch Innovation network for SME (Syntens) needs to be mentioned. This organisation has the objective to raise the innovative-ness of the Dutch SMEs by giving them advice often containing entrepreneurial elements, but also by setting up cluster of SMEs around innovation themes.

Source: In actie voor ondernemers!, Ministry of Economic Affairs, 2003

1.3.3 Clusters as framework in various policy areas

1.3.3.1 Business network policy

The innovation programmes emphasize public-private co-operation. The intention is to challenge market parties and business networks to come up with ideas for innovations/R&D etc. A clear business network policy is lacking but business networks are important though for the development of the programmes. Already existing business networks are better capable of activating associated companies or members. The clustering activities of Syntens can be considered business networking around shared themes or problems, mostly not to cooperate in business development projects.

1.3.3.2 FDI attraction policy

The intention of Peaks in the Delta is to stimulate the physical development of strong sectors-clusters in the Dutch regions. The attraction of foreign companies

(from other Dutch regions or from abroad) is an important element. In some regions special programmes exist for the attraction of FDI, but these are not directly or formally linked to Peaks in the Delta.

1.3.3.3 Export promotion policy

In the Netherlands separate instruments exist for stimulating exports.

These instruments are not directly linked to instruments with other objectives, although a causal match between innovation and export for instance is quite clear in certain areas. Due to the small domestic Dutch market real innovations often find a substantial part of their turnover abroad.

Export networking and support are stimulated by the Dutch export agency, often in close co-operation with trade agencies. For the water sector and road sector separate programmes with a specific export aim are installed by the Ministry of Transport and Waterworks and the Dutch export agency called Partners for Water and Partner for Roads. The business network-trade organisation Netherlands Water Partnership (NWP) is responsible for the execution of Partners for Water together with the Export Agency. Since NWP is also responsible for the water innovation programme an organisational link has been established between both programmes leading to a mutual reinforcement of innovation and export.

1.3.3.4 Sectoral industry policy

As described in 1.3.2 a special Industry Memorandum is mentioned as part of the national and technology and innovation policy. One of the elements is to assist specific sectors with solving concrete problems. So sectoral measures do not start from a separate sectoral policy but from sectoral problems and-or innovation needs. The link with clusters is an indirect one.

1.3.3.5 Science and education policy

Part of the science and education policy is to stimulate the utilisation of research results. As described earlier one of the central themes is to stimulate public/private interaction and knowledge use. Several policy initiatives have come forth from this notion. For example, the idea of the Leading Technological Institutes contains a cluster element, since public as well as private sector cooperate in these institutes (in the execution of projects as well as in the governance). Furthermore, the intention is to stimulate co-operation between research institutions and companies starting from the fore mentioned innovation programmes. Other instruments such as innovation vouchers especially aim at bringing individual companies (SMEs) and institutions together. Cluster policy brought together the Ministry of Economic Affairs and the Ministry of Education, Culture and Sciences, by relating the educational and research infrastructure to business.

1.3.3.6 Competition and market integration

There is some tension in the balance between clustering and competition and market integration. A few years ago there has been an incident about fraud in the construction sectors, with companies 'cooperating too well' in tender procedures. This might

be a reason why a clear and separate cluster policy is missing together with the historical lessons that clusters can not be organised top-down, but can only arise from bottom-up movements.

1.4 Cluster or competitiveness councils

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.

Innovatieplatform

The fore mentioned Innovatieplatform (Innovation Platform) could bear the title 'cluster council'. The platform was formed in the course off the election round of 2003, when stakeholders from business, education, knowledge institutions and societal organisations together pleaded for a boost of innovation in the Netherlands. All parties opted to install a special institute assigned with this task, presided by the prime minister. The Innovation Platform started on January 1st in 2004 with representatives from all parties involved, chaired by prime minister Balkenende. The Innovatieplatform has been designed after TEKES, the main public funding organisation for research and development in Finland.

Mission of the Innovationplatform was to create conditions, to make connections and to develop a vision to strenghten the innovative power of the Dutch economy. One major contribution of the platform was the identification of areas which hold key economic relevance. Key areas are the concentrations of sectors, technologies and networks in the Netherlands that excel in economic activity and level of knowlegde, and therefore can compete on a global level. The identification was characterized by a bottom-up process, during which independent parties could come forth with suggestions of key areas. After clustering and evaluation of the submissions, 6 key areas where selected: Flowers & Foods, High Tech Systems & Materials, Water, Creative Industries, Chemical Industries and Pensions and Insurance.

This joined effort by representatives from all relevant economic stakeholders was forwarded to the Ministry of Economic Affairs, who further enrolled the treatment of selected key areas, for example with the organisation of innovation programmes. After the new elections in 2006, the forming of a new Innovationplatform is confirmed in the new coalition agreement.

Source: www.innovatieplatform.nl

1.5 Other policy issues

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.

The orientation of cluster policy has shifted over time from manufacturing to services and semi-public sectors.

In the policy/academic debate, severe doubts are uttered about the need for backing winners in existing clusters, and about the relevance of the sub-national regional level in a small country like the Netherlands for most clusters.

There has been a general assessment of competitiveness or barriers to competitiveness by the Ministry of Economic Affairs (Concurrentietoets), the OECD (several studies: Roelandt and Den Hertog 1999; Den Hertog et al. 2001 peer review 2007), and McKinsey.

1.6 Policy trends

| Policy trends | | | |
|---|---|---|--|
| Policy Stream | Old Approach | New Approach | Cluster Programme Focus |
| Regional policy | Redistribution from leading to lagging regions | Building competitive regions by bringing local actors and assets together | Target or often include lagging regions Focus on smaller firms as opposed to larger firms, if not explicitly than <i>de facto</i> Broad approach to sector and innovation targets Emphasis on engagement of actors |
| Science and technology policy | Financing of individual, single sector projects in basic research | Financing of collaborative research involving networks with industry and links with commercialisation | Usually high technology focus Both take advantage of and reinforce the spatial impacts of R&D investment Promote collaborative R&D instruments to support commercialisation Include both large and small firms; can emphasise support for spin-off start ups |
| Industrial and enterprise policy | Subsidies to firms; national champions | Supporting common needs of firm groups and technology absorption (especially SMEs) | Programmes often adopt one of the following approaches: Target the "drivers" of national growth Support industries undergoing transition and thus shedding jobs Help small firms overcome obstacles to technology absorption and growth Create competitive advantages to attract inward investment and brand for exports |
| Source: OECD review of national cluster policies: why are they popular, again?, June 2006 | | | |