

THE PROCESS AND EXPERIENCES WITH CREATING USER-DRIVEN INNOVATION PROGRAMMES IN THE NETHERLANDS AIMED AT ACHIEVING GLOBAL EXCELLENCE

**Merlijn van Rijswijk, Marcel Kleijn, Michiel Janson
and Ernst Menten**

Ministry of Economic Affairs, Strategic Innovation Programmes Department, The Netherlands¹
correspondence to: m.j.kleijn@minez.nl

Abstract

The Netherlands has drafted in 2005 a new innovation policy, consisting of a basic package for all entrepreneurs and a programme-based package aimed at supporting the Dutch industry in achieving global excellence, in a limited number of (business) areas. The programme-based package is characterized by an integral approach, resulting in user-driven public-private innovation programmes, thereby creating focus and critical mass. A unique aspect of the new approach is that industrial foresight processes are integrated with actual policy implementation. The total annual budget for the innovation programmes is to be at least EUR 200 million.

The process in the programme-based package for innovation starts bottom-up with industry and knowledge institutes indicating their willingness to work together on drafting a shared vision and strategic agenda in a certain focussed application area. A vision and strategic agenda is to include crucial factors for success of the envisaged programme broader than R&D, like vocational training, promoting start-ups, knowledge transfer and embedding in international initiatives. An external strategic advisory committee advises the Minister of Economic Affairs in selecting those vision/strategic agenda's that are most promising. Selection criteria used include: stakeholder commitment, impact on sustainable economic growth, innovativeness, internationally distinguishing (business and research) excellence and legitimacy of government intervention. After selection, programmes are built, in interaction with government. These programmes are then again advised upon by the strategic advisory committee. The approach taken in the programme-based package is in line with the policy of the European Commission, such as Technology Platforms and Joint Technology Initiatives.

The first innovation programme resulting from this approach is in the field of nano-electronics and embedded systems: Point-One. Partners include Philips, ASML and over 30 SME's. A second programme in the field of Food & Nutrition is to be launched in September 2006. In our paper, we include the lessons learned during the process that led to these first round of programmes. Also, some unresolved issues in the new approach are discussed.

Keywords: innovation, programme, foresight, vision, strategic agenda

¹ This paper has been written under personal title and does not necessarily reflect the opinion of the Ministry of Economic Affairs.

1 Context of the user-driven innovation programmes

1.1 Innovation policy in the Netherlands

In order to secure prosperity and welfare in the Netherlands both now and in the future, the Dutch government aims to attain sustainable economic growth. The former cabinet Balkenende-II had ambitious plans to achieve this growth and drafted a revised innovation policy. Entrepreneurs play a key role in these plans. They are, after all, the driving force for economic growth. It is believed that in a global competition, it is important to specialise and deliver top performances. Entrepreneurs should be given the best possible chances to deliver these top performances. Only then can the Netherlands remain one of the European leaders in the field of innovation and thus can sustainable economic growth be achieved.

The revision of the innovation policy was inspired by experiences with innovation policy abroad (e.g. Finland), suggestions from the Innovation Platform, Parliament and industry and by a thorough self-assessment of the existing policy instruments. The assessment indicated that the existing policy mix insufficiently contributed to a good entrepreneurial climate. The Ministry of Economic Affairs (henceforth referred to as the ministry) in turn developed a package of radically renewed instruments that optimally satisfies the requirements of entrepreneurs, knowledge institutions and other parties that play a pivotal role in achieving sustainable economic growth (Ministry of Economic Affairs, 2005). The new set of instruments is from a government point of view characterised by: flexibility and customisation, resulting in more possibilities to enable companies to excel; fewer instruments with more coherence; less, more accessible helpdesks; fewer acquisition costs and administrative burden. The ministry incites industry to deliver top performances. From a company's perspective the new innovation policy implies that companies are encouraged to discuss their ambitions and bottlenecks in the innovation process, together with (inter)national partners and (sometimes) competitors and to find common areas where they want to co-innovate and co-invest.

With the renewal of the financial instruments, the ministry is breaking new ground with regard to the way in which policy is developed and implemented. This means making a clean break from the past. A better balance now exists between the use of generic and specific instruments, with more emphasis on specific instruments.

1.2 The new set of instruments: basic and programme-based package

The new set of instruments from the ministry consists of two mainstays: an accessible and transparent basic package, with a related programme-based package that offers possibilities with regard to combining specific forces in a limited number of fields in which the Netherlands can excel. For this paper, the programme-based package is most relevant. In order to paint a complete picture, we will first shortly elaborate on the basis package.

The basic package: simple, quick and accessible

This package is aimed primarily at small and medium-sized enterprises that want to innovate and entrepreneurs who want to export and/or engage in overseas investment. Entrepreneurs must be able to access information and capital without too much difficulty. This is, therefore, the most important objective of the basic package for entrepreneurs, which consists of three parts:

- A generic system for reduction of the costs of R&D personnel by fiscal incentives
- A package for information and advice
- A capital package, aimed to facilitate access for companies to the capital market

Programme-based package: inciting entrepreneurs to deliver top performances

The ministry encourages the Dutch industry to deliver top performances in fields which have a powerful influence on the entire Dutch economy. This is only possible if all parties (businesses, knowledge institutions and government) combine forces on all issues relevant to successfully introduce new products and services in the market. Therefore, greater focus is required and more actors need to be involved. This process is led by industry in a participative foresight process (see e.g. Pirttimäki, 2006), including all relevant stakeholders. The rationale for this programme-based package is systems failure, and thus we could classify this as a third generation foresight (Georghiou, 2001).

The approach taken in the programme-based package is in line with the policy of the European Commission, with Technology Platforms (ETP's) and Joint Technology Initiatives (JTI's). Visions and strategic (research) agenda's are developed by industry in ETP's and can be implemented through a JTI (European Commission, 2004). The work that is done in a European context can provide an excellent starting point for the foresight processes in the Netherlands, and vice versa.

In contrast with the model of the European Commission, and many other countries, in the case of the Netherlands the industrial foresight processes are integrated with actual policy implementation. To our knowledge, this is quite unique. According to Luukkonen (2002), there are many advantages of integrating foresight in the decision process, but also some potential weaknesses. These weaknesses include the tendency to reinforce current thinking and current structures, technology-driven foresight and the tendency to avoid interest conflicts. As explained in the remainder of this paper, some of these potential weaknesses are relevant for the Dutch case.

The programme-based package is currently in the end of its development and pilot phase. From 2007 on, the ministry's innovation agency SenterNovem will implement the programme-based package for innovation full-swing. The total annual budget involved of the programmes is to be at least EUR 200 million. For the long term, around 10 – 15 innovation programmes are envisaged, with an average annual budget of EUR 10 – 20 million and a length of 3 – 5 years.

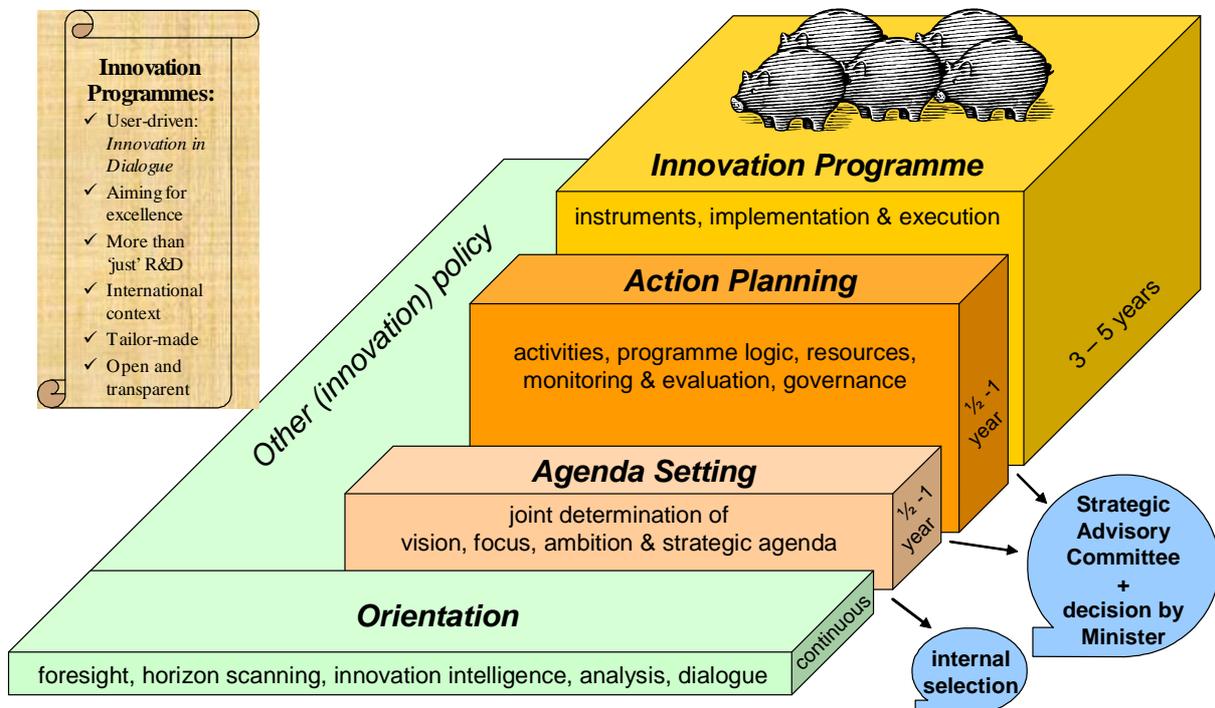
This paper is outlined as follows. The next section discusses the approach that is taken to develop innovation programmes. Section 3 presents the experiences and lessons learned until now, from both an industry perspective and a government perspective. In section 4, we discuss some unresolved issues in the approach. Finally, section 5 presents the main conclusions.

2 The approach

It is primarily a bottom-up approach. Companies, knowledge institutes and other stakeholders present their vision, ambition and strategic (innovation) agenda to the ministry and together they will develop an innovation programme to realise the ambition. Not all initiatives will be supported by the ministry. Only high quality proposals will be selected for support. The figure below illustrates the selection and development process.

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The process consists of different phases. A short explanation is given for each phase. The implementation and execution of the innovation programme is outside the scope of this paper.

2.1 Orientation

This phase consists of a mixture of dialogue and analysis. On the one hand, companies and knowledge institutes organise themselves and jointly identify promising areas, which they can present to the government. On the other hand, government may incite the industry to come up with new initiatives. Both the industry and the government are continuously scanning global trends in markets and society, new technologies and innovative initiatives both in the Netherlands and abroad. The government is building up so-called innovation intelligence, in order to be capable of identifying the most promising initiatives to further support towards the

development of an innovation programme. This is done based on the following criteria: status and trend of the economic value of the promising area under consideration, international position regarding market share and knowledge base and future perspectives and trends (market, society, technology). The ministry determines whether or not the initiative will be actively supported in the further development (i.e. a dedicated team is appointed to facilitate industry in the next phase). Unique in this approach is that on the one hand, a decision to support the agenda setting phase does not automatically imply a commitment for financial support, which gives the opportunity to incite and support many foresight initiatives, which have a value in itself. On the other hand, when an initiative turns out to be an excellent plan, the ministry can follow up the implementation of this plan. This is different from most foresight activities in other countries, where foresight is not done within the context of policy implementation. It is also an important change with the Dynamo approach (see Butter and Mook, 2004), which the ministry developed in 2003 – 2004 to select new promising (technology) areas, where the link between the foresight exercise and the policy implementation was too weak. The results of an exercise such as Dynamo 2004 (Butter and Mook, 2004) may be input for the orientation phase.

2.2 Agenda setting

As mentioned before, the initiative lies with industry; in the agenda setting phase they need to (further) organise themselves, establish a joint vision of future opportunities and threats (through e.g. scenario workshops and SWOT analyses) and develop a joint focus and ambition. The ambition then should be translated into a strategic agenda, consisting of the major steps to be taken in the next 5 to 10 years. This agenda setting phase can be viewed as a corporate foresight activity (see e.g. Becker, 2002). The main difference with traditional corporate foresight is that it is done by a network of organisations instead of within a single enterprise. Following the classification of Cuhls and Johnston (2006), we could classify this as 'foresight for strategic planning'. The setup of the agenda setting phase was greatly inspired by the ambition-driven strategy approach, originally designed by Arthur D. Little (see Bock et al., 1998) and used in the Netherlands during the foresight programme of the NRLO (nowadays Innovation Network) in 1995-1999, which was described by De Wilt (2004).

The agenda setting phase is difficult and time consuming. Moreover, it requires a great deal of trust between stakeholders. To establish mutual trust, facilitation by an independent party (usually a consultant, sometimes government) helps (see also Nyiri, 2003). This process almost never starts from scratch: leading companies often have prepared their own vision and agenda, and in some cases a joint vision has been established on an international level, e.g. in a European Technology Platform or an ERA-Net. This implies that agenda setting is often done in a very dynamic international context.

The role of the ministry in this phase is limited, but important. The ministry may assist in planning the process, line up other relevant ministries, provide useful information and insights, identify new relevant stakeholders which can be involved in the process and clearly communicate the process and criteria that are used (expectation management). The ministry also needs to guard the quality of the process, in order to be able to decide whether the vision and strategic agenda is good enough to be presented to the strategic advisory committee. Finally, the ministry facilitates the presentation of the vision and strategic agenda to the strategic advisory committee, who will advise the Minister whether or not to support the initiative, based on the following criteria: potential effect on sustainable economic growth, level of innovativeness, international excellence of the stakeholders, legitimacy of government intervention, commitment

of all relevant stakeholders and the quality of the vision and strategic agenda. If the committee advises positively, then the Minister may decide to support the development of an innovation programme and give commitment to financial support for implementing the innovation programme.

2.3 Action planning

Before the ministry will financially support the innovation programme, it needs to be developed first. The development is again done by industry, but with stronger support from the ministry. Programme development consists of planning the right actions, for all stakeholders (i.e. industry, knowledge institutes and government), to reach the objectives that were set out in the strategic agenda. Also, other issues such as governance structure, programme logic (or intervention logic, see e.g. Technopolis, 2005), the monitoring & evaluation plan and the required resources need to be tackled. When the programme is developed, the programme proposal will be presented to the strategic advisory committee. This committee will advise the Minister whether or not to financially support the implementation of the innovation programme, based on the following criteria: connection of the programme to the vision and strategic agenda that were developed before, the legitimacy for government intervention for each of the activities, the programme logic, the monitoring and evaluation plan and the required resources. When the committee advises positively, the Minister may decide to allocate public funds to the innovation programme and the programme can be further implemented and executed.

3 Experiences and lessons learned

3.1 Experiences

A quick start...

August 2005, the programme-based approach towards innovation started with the objective to generate three pilot programmes within the fields of Flowers & Food, High Tech Systems & Materials and Water. There was a strong desire to show results of the new approach as quickly as possible. Therefore the decision was taken to start to generate innovation programmes within the key (business) areas selected by the Innovation Platform (see textbox). This approach had

several advantages: it was ensured that industry had clear ambitions in these fields, already quite some dialogue had taken place between industries and knowledge institutes in these fields

Innovation Platform selects key areas for the Netherlands

In the Netherlands an Innovation Platform was established in 2004, chaired by the Prime Minister, in order to give more attention towards innovation. The platform consists of senior industry executives (both from multinationals and SME's), professors and the Prime Minister, Minister of Economic Affairs and Minister of Education, Culture & Science. Assisted by a small team of professionals the Innovation Platform decided to launch a 'call for ideas' for private and public/private initiatives in the field of innovation. It was clearly stated that the Innovation Platform did not have funds to implement the ideas. In total 113 proposals were received, that were grouped and ranked based on the following criteria: ambitions of parties involved, social and economic impact, global competitiveness of business and internationally distinguishing knowledge and technology available in the Netherlands.

This bottom-up process resulted in four key (business) areas for the Netherlands: Flowers & Food, High Tech Systems and Materials, Water and Creative Industries. Creative Industries have not been chosen for generating pilot innovation programmes, as it was a much more fragmented business area than the other ones. In a later stage also the Chemical Industries were nominated as a fifth key (business) area for the Netherlands. ICT and Life Sciences were nominated as 'Innovation Axis', both being an enabler for innovation in a large number of business areas. For more information, see http://www.innovatieplatform.nl/en/Projects/projects_2005/index.html.

in order to define common business ambitions, there was a strong knowledge position in these fields and there was political and industrial commitment for this selection of areas (as it was the result of a bottom-up process backed by the Innovation Platform).

... but a long process

The process of generating innovation programmes proved to be more time-consuming than anticipated. In all three areas, the industry and ministry started right away with the action planning phase, in order to gain time. However, this time gain was rather limited, as it turned out that many discussions on the scope and goals of the programmes were still needed. Another obstacle encountered was that the key business areas themselves were very broad. Too broad to be a common denominator for industries in setting up a joint vision and strategic agenda. For example, the key (business) area Water included water purification, the maritime cluster and coastal defence. Therefore, quite some time was needed to discuss the objectives (i.e. vision) and boundaries (i.e. focus) of an innovation programme.

Current status of programmes

Almost one year after starting the implementation of the programme-based package, in June 2006, the first pilot innovation programme Point-One (Pole Of Innovative Technology On Nano-electronics and Embedded systems) was launched (see textbox). July 2006 the second pilot programme Food & Nutrition Delta was finalised. This programme will be launched in September 2006. Two more proposals for innovation programmes, in the areas of Water technology and the Maritime industry, were presented to the strategic advisory committee in September 2006. Three initiatives, in the fields of Life Sciences & Health, the Chemical Industries and Automotive, are in the agenda setting phase. Three other initiatives (Materials, Logistics & Supply Chains and the Service Industries) are in the orientation phase.

First Innovation Programme: Point-One

Late 2004, leading Dutch companies in the Eureka-cluster MEDEA (Philips, ASML) experienced some difficulties in the alignment of funding procedures between different member states. In this context, they invited the Minister of Economic Affairs to join them on a field visit to one of the new French Pôles de Compétitivité in the field of nano-electronics (PdC) in Crolles. During this visit in January 2005, the Minister was impressed by the results of this integral approach in a PdC and encouraged the companies to prepare a proposal for a Dutch equivalent of a PdC. Some weeks later, this proposal was ready. Since the Minister had personally invited the companies to prepare a proposal, there was strong commitment from all levels in the companies. Everyone cooperated instantly and a proposal was drafted. During this period, the ministry was revising its innovation policy, which made it difficult to react. However, in June 2005 it was clear that the new approach would involve innovation programmes, which would be suitable for the PdC proposal. From this moment on, the PdC proposal was taken as one of the pilot programmes in the new innovation policy. A major drawback at this moment was the fact that the process which is described in section 2 had not yet been established. The PdC consortium and the dedicated team from Strategic Innovation Programmes Department both had to learn-by-doing. The further development consisted of setting up an integral set of activities and instruments, opening up the process to other stakeholders (in particular SME's), setting up a monitoring and evaluation plan and deciding upon the governance structure. After months of hard work and many discussions, in April 2006 the programme could be presented to the external advisory committee, who advised positively. In June 2006 the name Point-One (Pole of Innovative Technology on Nano-electronics & Embedded Systems) was made up and the programme was launched. More information can be found at <http://www.point-one.nl/en/Home>.

During the process of developing the innovation programmes, many lessons were learned, both by the industry and by the ministry. Below the most important lessons are discussed, first from the industry perspective and then from the government perspective.

3.2 Lessons learned for industry

Lesson one: a cultural change is needed

In order to achieve global excellence, a cultural change is required. The Dutch industry needs to aim for international excellence. For this, it no longer suffices to develop a vision and strategy in the relative isolation of one company: vision and ambitions need to be shared with partners. Not only national, but also international partners. For example, two of the leading companies in the Point-One programme had never before discussed matters on such a strategic level as they did in developing the Point-One programme. These companies have experienced this process as very useful. Companies in general find it relatively easy to formulate their own vision and (ambition-based) strategy. But setting focus and making concrete choices within a network is far more difficult. First, there is hesitation within companies to share their visions of the future and their true intentions with other companies. Second, it is difficult to make choices which are agreed upon by all stakeholders. As put forward by Luukkonen (2002), there is risk of reaching a consensus instead of a shared ambition. However, making clear choices which are written down and communicated, helps the process a great deal. Every potential stakeholder will know whether or not he/she wants to be involved and the action planning in a later phase will be easier since the objectives are clear. Also, in order to reach the policy objectives of achieving global excellence, clear-cut choices must be made.

Lesson two: public-private partnerships involve more than R&D-projects

Another lesson learned for the industry, was the insight that a strategic agenda involves more than 'just' R&D. Traditionally, companies are only used to co-operate with other companies and institutes in pre-competitive research projects. Also, the role of government was mainly limited to subsidies for R&D-projects. The Dutch experience with the new programme-based package show that industry in first instance mainly focuses on R&D and technology. The new approach however, forces the companies to think wider than R&D and technology, and also consider other aspects that affect their ambition (such as regulation and human capital). In the Point-One programme, the consideration of aspects such as human capital and involving SME's was suggested by the ministry, and later considered to be very important by the leading companies. This implies that companies must involve different departments (strategy, marketing, human resources, R&D) in the process and also involve decision-makers. Whereas in the old system the ministry mainly communicated with R&D directors, in the new system the commitment and involvement on the level of CEO's is necessary. On the side of the ministry, the role of the Director-General of enterprise and innovation and the Minister is becoming more important.

Lesson three: it takes time

Finally, a lesson learned for industry, which in fact is also a lesson for the ministry, is that the process takes time. The company representatives active in the development process need to explain to their CEO's that this process is different from the old, more individual way of working,

and thus requires patience. The results however, are better. Joint corporate foresight lays a strong foundation for coordinated future actions. The development of the pilot programmes has taught the industry and the ministry that it is of vital importance to spend enough time for agenda setting. This part of the process cannot be over rushed. All stakeholders must acquire the same understanding of today's situation, so that the best choices for the future can be made. Furthermore, communication to a wider public is important, e.g. to involve more companies (especially SME's). In the action planning phase it is important to spend enough time on the programme logic. The experience so far shows that it is difficult for industry to build a programme, where activities, results and objectives are constituting a logical framework. The tendency is to 'jump' from objectives to activities, without explicitly developing the associated logic. Nevertheless, this is important, first in order to develop a good monitoring & evaluation plan and second, in order for the ministry and later the strategic advisory committee to evaluate the necessity of government intervention. All these activities take time, which at first sight may seem unnecessary to the stakeholders, but they will improve the quality of the innovation programme a great deal.

3.3 Lessons learned for the ministry

Lesson one: implementation power is necessary

As in most foresight projects (see Kuhlmann, 2002), also in the new approach of the ministry, the process of building a joint vision and strategic agenda in itself contains a lot of value. New networks are built, existing networks are strengthened and/or renewed, information and knowledge flows between industry and knowledge institutes etc. However, industry will only be persuaded to enter this process, when at the end of the day there is a potential reward, in this case: government support by means of an innovation programme. The aim of the ministry is to allocate enough public funds for the innovation programmes, to encourage many industries to engage in a foresight process and to be able to support the implementation of the excellent proposals that result from these industrial foresight projects.

Lesson two: involve SME's through dedicated workshops

It is very important to involve SME's in the innovation programmes; both when developing the programme and during the implementation and execution of the programme. SME's bring in new and fresh ideas, and their cooperation with large companies and knowledge institutes can lead to interesting innovations. However, connecting SME's to the innovation programmes, especially the development, is difficult, because they do not have the resources to attend the many meetings that it takes to develop the innovation programme. In developing the pilot programmes, the ministry has organised some workshops to involve SME's. This was done in the agenda setting phase. Based on information within the innovation agency SenterNovem and within industry associations, the relevant SME's were identified and invited. This approach has proved to be successful. The SME's were informed about the process and delivered input that improved the choices made. Another possible way to involve SME's, which has not yet been tested, is to use the Internet for communication about the process and contents and to receive input from SME's. Involvement of SME's in the implementation and execution of the programmes is established by the explicit requirement that the innovation programme is open for SME's.

Lesson three: critical reflection is necessary

The process is designed in such a way that it is possible that the ministry decides not to support the implementation of a vision and strategic agenda that has been prepared by industry. This decision will not be an easy one, especially when the ministry has facilitated the development of the vision and strategic agenda. The industry, which has organised themselves and has been in dialogue with the ministry for a long time, will use all their influence to get their vision and strategic agenda accepted. Therefore, the ministry needs to have checks and balances. Industry needs to know that only excellent proposals will be selected for further development. For this it is necessary that all stakeholders know how the proposals will be evaluated (expectation management). Within the ministry, a so-called innovation intelligence unit has been set up which collects knowledge and foresight to be used when evaluating the quality of the industry proposals. This information should be available to all stakeholders. At the same time, in the organisational structure of the innovation agency, the checks and balances need to be embedded. Critical reflection must be incorporated both in the organisation and in the process.

4 Unresolved issues

As the previous section illustrates, both industry and the ministry have learned a lot over the last year. However, there are still some unresolved issues which have not yet been tackled. In this section we discuss the following issues:

- ensuring sufficient renewal of networks
- dividing roles between industry and government
- measuring the impact

4.1 Ensuring sufficient renewal of networks

An important issue in the new bottom-up approach is the role of established networks, usually involving large companies. Since the large companies know their way to the ministry, are well organised in national and international networks and have enough resources to formulate their vision and strategic agenda, there is a danger that large companies and their established networks will dominate the innovation policy. As stated by Luukkonen (2006), there is a danger that not enough renewal is taking place.

The first question is whether this is a problem. The answer is yes. With modern theory on innovation in mind, we think that break-through innovations usually do not occur within established networks but are fostered by open ecosystems (open innovation, see Chesbrough, 2003). New players, new ideas: they are the drivers of major innovations.

The government has two options to achieve sufficient renewal. First, in the case of an initiative taken by an existing network, the government can stimulate the involvement of new stakeholders in the process: network renewal. This can be done during the agenda setting phase. Government can suggest to bring in futurists, foreign companies and knowledge institutes, companies from other sectors, SME's and/or start-ups. The government should however be careful not to directly influence the content. Since two wrongs do not make a right, a balance needs to be found here. A second option that the government has, is to pro-actively stimulate the creation of new networks. This is the strategy that has been taken for the Creative

Industries, appointed by the Innovation Platform as a key area. In the Creative Industries, there are currently no strong networks, capable of developing a joint vision & strategic agenda. Therefore, the government is now giving a subsidy for organisations that want to foster network creation in the Creative Industries. Also, the ministry can stimulate international cooperation, if that is not perceived as an important issue by the involved companies and knowledge institutes.

4.2 Dividing roles between industry and government

A balance needs to be found between on the one hand the user-driven approach, where industry is in the lead and determines the objectives and activities, and on the other hand the fact that public funds are used to support the implementation. When and how should the government interfere with the process and the choices made? Nyiri (2003) states that the government should realise the need for launching a foresight exercise, make decisions on its timeframe and its objectives, and then create the necessary conditions and framework. The experience in the Netherlands so far shows that industry is in the lead during the agenda setting phase, where the role of government is limited to involving new partners (in particular SME's), deliver information and facilitate the process if needed. Also during the action planning phase, the industry was mainly responsible in developing the pilot innovation programmes. However, we feel that the role of the government should be more prominent here. Once decided that government will support the implementation of a vision and strategic agenda, it needs to be determined which government interventions will be put in place. The government has a final say in this, since it needs to justify the choices to the Dutch parliament. Also, the ministry will have more knowledge on the effectiveness of policy instruments (policy intelligence) than industry. A joint responsibility for the action planning phase is perhaps optimal. Future experiments should reveal whether this is indeed the case. Finally, the division of roles in the programme implementation and execution should be laid down in the governance structure for the structure. The programme needs to be owned by industry, but the government should be able to decide on the allocation of public funds for e.g. R&D-projects.

4.3 Measuring the impact

The last issue that we address here is the question of how to measure the impact of the new innovation policy. At this moment, the monitoring and evaluation mainly focuses on the innovation programme itself, where the impact of the subsidy given to industry receives the most attention. However, in the new approach, the agenda setting and action planning phases will carry their own impact, both on the innovation system and on the companies involved. It is therefore important to monitor the whole development process, where intangibles such as organisational capabilities (networks, new knowledge, management capacity, etc.) are taken into account. The results of the TAFTIE Task Force on Additionality will be used here (TAFTIE, 2004 and Närfelt and Wildberger, 2006). Relevant questions for determining the additionality of the policy intervention with respect to the foresight activities are e.g. "would foresight have happened without the policy intervention?" and "have persistent changes been achieved?" (Georghiou and Keenan, 2004).

5 Conclusions

In the previous sections, the approach for developing innovation programmes in the Netherlands was described and the experiences and lessons learned were presented. Moreover, some unresolved issues were discussed. The main conclusions from this paper are the following:

1. The Netherlands have created an approach for developing innovation programmes, where industrial foresight processes are integrated with actual policy implementation. This approach is to our knowledge unique in that sense.
2. The experiences so far are positive: companies acknowledge the value of the agenda setting phase, where a joint vision and strategic agenda is developed. Many lessons have been learned during the first year. Industry has learned that a cultural change is needed within industry, that the new public-private partnerships involve more than R&D-projects and that the agenda setting and action planning phases take time. The ministry has learned that implementation power is important, SME's should be involved in the process and critical reflection is necessary.
3. Although the experiences until now are positive, there are still some unresolved issues that need to be tackled in the near future. In this paper we discussed the following three: ensuring sufficient renewal of networks, dividing roles between industry and government and measuring the impact. We aim to transform these issues into lessons learned before the next International Seminar of Future-Oriented Technology Analysis in Seville in 2008.

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