

## Stronger after the storm

### Investment in people and knowledge to emerge from the crisis stronger.

In response to the current economic crisis, the Lower House has asked government to submit a cohesive package of proposals for the Dutch economy, in consultation with organizations such as the Innovation platform.

The Innovation platform has a vision of the future economy of the Netherlands as an internationally competitive knowledge economy. This is an economy in which knowledge and creativity are important production factors and people are challenged to develop themselves as much as possible and use their talents. People invest in themselves with lifelong learning. Excellent science will flourish and contribute to progress. In addition, scientific knowledge is used for innovations, competitive business activity and solutions for social challenges related to sustainability, energy food and health. One important foundation is the modern infrastructure (roads, electricity, telecommunications, [air]ports and broadband communication). These link the different parts of the economy and connect the Netherlands with world markets. There is a dynamic climate of enterprise in which people have the courage to take risks in order to make progress. This is the basis for achieving sustainable economic growth and prosperity in the future, together with each other.

Together with other parties we have developed a strategy in order to achieve this vision, translated into concrete goals and actions, as drawn up, for example, in the "Knowledge Investment Agenda" (KIA), the Key areas approach and "The Netherlands in the World". The recent 2009 KIA photograph shows that despite the many good initiatives, the Netherlands is in danger of losing its position in the group of leading countries in the knowledge economy. As a result of the crisis, the development of the Netherlands as a high quality knowledge economy is at risk of coming under even more pressure. The Innovation platform considers that the Netherlands should not allow all the efforts which have been made to achieve the current level to be lost. In fact, this is actually the time that more investments should be made in the foundations of our knowledge economy. The crisis should be used in order to improve the structure of the Dutch economy and bring about a connection with the leading group of countries. Therefore the Innovation platform also argues for a more explicit, innovative and sustainable industrial policy on the part of government and for attracting more international business activity.

### Heavy weather: the Netherlands is vulnerable

The Netherlands is badly affected by the consequences of the financial crisis and the economic crisis that is still developing. As an exporting and trading country the Netherlands is extra sensitive to the international economic climate. With a relatively large financial sector, the Netherlands was badly affected by the consequences of the international credit crunch. The downward trend in the economy is still accelerating. It is not clear at which level this will

balance out.<sup>1</sup> Certainly the dramatic decline in investments of companies – with in total 22% (13 billion) up to 2010<sup>2</sup> – is striking in the CPB estimates, This is much more than the decline during the crisis in 1981, when business investments declined in total by more than 11%. This indicates the great risks which apply for companies.

There is a considerable risk of the erosion of our knowledge base which is already inadequate. With 1% of the GNP, private investments in R&D are significantly lower than in the countries which belong to the leading group. Furthermore, almost 40% of the private R&D is carried out in companies with a vulnerable financial base as a result of the credit crunch, amongst other things, because of the relatively high funding with external capital and the related high interest rates.

This means extra pressure on the cash flow and therefore also on the expenditure for research and development. Businesses are slowing down the R&D projects which focus on the long term or are halting them, with all the attendant consequences for the position of information workers.

In this respect, what's gone is gone as regards private R&D. Many R&D facilities have been established in the Netherlands as a result of historical choices, and for businesses the crisis can also be a reason to make structural adaptations to their global policy on establishing R&D facilities. This is both a threat and an opportunity for the Netherlands, depending on the extent to which we are able to create a favourable climate for research and development in comparison with other countries.

In comparison with other countries, public investments in knowledge had already fallen behind in the Netherlands before the crisis. This further undermines the starting position of our country. In the competitive ranking lists, and with regard to the knowledge investment quota (public and private investments in education, knowledge and innovation as a percentage of the GNP), the Netherlands now falls behind the Scandinavian countries and Switzerland, among others. These countries understand that their future prosperity is related to their knowledge intensity and are investing in this precisely during this period of crisis. Their extra investments in knowledge during a period of crisis are increasing by several percentage points of the GNP. The Netherlands should measure up to these countries in order to remain competitive. The knowledge investment quota is at 7.6%, while the ambition is at 9%. As a result of investments in the crisis, our competitors have now surpassed 9%. The US is also investing \$21.5 billion extra in science. It is necessary to accelerate our investments in knowledge during this period of crisis in order to support our competitive position now and after the crisis.

## Trends

**The crisis is taking place against a background of a number of structural trends. The Netherlands is part of a globalizing economy. The international interdependence of our economy is moving faster than the development of our economy itself. Businesses will increasingly have to distribute their activities across countries and will have to reconsider their geographical positions in this respect. High quality**

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<sup>1</sup> Weathering the storm, McKinsey & Company, 21 January 2009.

<sup>2</sup> CPB, 17 February 2009.

**knowledge infrastructure, top research and a good general climate for establishing businesses are the most important determinants to maintain or lose R&D. The Dutch economy will survive or fall, depending on its international attraction. We must work on this now.**

The decline in investments, the reduction in R&D expenditure and public investments which do not keep pace with our peers mean that the Dutch innovation system and therefore the potential for growth of the Dutch economy are under pressure. The challenge now is to actually make the best possible use of "creative destruction" which applies during a crisis, and to seize the opportunities offered by global trends at the same time as the crisis. The measures advocated by the IP support this.

## **Sustainable policy on industry**

From the perspective of innovation and competitive strength, the Innovation platform considers that the cabinet will have to implement a competitive and sustainable policy with regard to industry in relation to businesses and knowledge institutes, so that we emerge from this crisis faster and stronger. This should be a policy which focuses on sectors which will be profitable in the future. The policy should not be aimed at specific companies, but on key areas and markets which will undoubtedly have a top position in the future. Investments in knowledge require attention for the long term.

### **Approach to key areas**

**The Netherlands has strong key areas which are revealed in concrete hubs and regions. With its small area, the Netherlands has a strong food cluster and is a top player in this at the world level. The high tech and chemical industries operate on an international frontier in the Netherlands, so that R&D and activities in the Dutch clusters can serve as a basis for attracting foreign R&D. This is strengthened by open innovation.**

**Its location on the delta has given the Netherlands its top position in the water, but also its trading skills. With these skills, Dutch businesses can easily make links with businesses across the world and establish a strong position in the chain and help other businesses to create maximum value.**

Markets and technologies will become more sustainable. With its approach to key areas, there are many opportunities for the Netherlands in this field, with its excellent business and scientific qualities.

The climate of enterprise and for establishing businesses should also be strengthened. This can be achieved, for example, by reducing taxes and the pressure of regulations, and strengthening main ports and regional hot spots. This will help Dutch companies to start up and grow, but will also make us more attractive for foreign companies. In order to profit from this as much as possible, the Netherlands could approach businesses in a more targeted and proactive way to

establish themselves in the Netherlands. Specifically and actively attracting foreign investment will act as a strong stimulus for our knowledge economy.

The cabinet's measures must focus on a (healthy) creative destruction and reconstruction. Difficult choices which were taken in the crisis actually form the cornerstones of future successful companies. A healthy dynamic approach means that the disappearance or decline of some companies will be compensated by the emergence of new businesses and employment. At the end of the crisis there will be a valuable wave of new innovative businesses and enterprise. However, the challenge is to prevent the destructive reduction of research and development. Research laboratories and their people form the vital infrastructure for the Dutch economy, and if these are destroyed it will be more difficult to glue the pieces back together. Experiences in key areas have shown that there are high quality investment options here for businesses, knowledge institutes and government. Where there is a link with social challenges, there is a particularly important role for government.

It seems counterintuitive to talk about investments when the budgetary rules actually require savings to be made: we do not want to burden the future generations with debts from the present. However, investing in knowledge at the same time also means investing in the generations to come. It was necessary to keep the banks going, but this was not enough. Knowledge investments are indisputably profitable and lasting. With the measures of the Innovation platform, the Netherlands will keep knowledge investments going, ensure that there are connections with the group of leading countries once again which invest strongly in knowledge, and prepare the Netherlands for the future. The future generations may actually profit most from a long-term knowledge-intensive society and sustainable economic growth.

## Measures: the priorities of the Innovation platform

For quite some time the Innovation platform has argued to strengthen the position of the Netherlands as a knowledge society. This crisis, and the strategies of our peers, confirm the urgency of this approach. Investments in knowledge and key areas – as was also indicated in the Knowledge Investment Agenda – mean that our country will emerge from the crisis stronger than other countries. More dynamic new and foreign businesses are essential to generate business – and therefore employment – as much as possible. In addition, we have to take short-term risks which must be limited. An essential R&D capacity must be maintained for the Netherlands. There is a joint role in this respect for businesses, knowledge institutes and governments

*In the appendix we describe the concrete actions which arise from the vision and actions of the IP. In the light of the current situation we argue in particular for:*

- *maintaining the human capital of information workers;*
- *promoting government investments and using them in a more innovative way; an important proportion of the total investments of 20 billion<sup>3</sup> can be used in an innovative way;*

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<sup>3</sup> According to the CPB, the total investments by governments amount to 20 billion (MEV 2009).

- *actively attracting significant, knowledge-intensive foreign companies.*

If the crisis continues and cash flow problems continue to form a bottleneck for existing and new knowledge-intensive companies, big problems will arise in the short term. Resolving these will require about 1 billion euros of temporary investments. This concerns both moving existing expenditure and extra investments. A targeted investment policy by the government will lead to private initiatives as a result of the flywheel effect. For the measures which are needed to emerge from the crisis as a stronger country, we refer for the sake of convenience to the Knowledge Investment Agenda and The Netherlands in the World. A large part of the investments required by 2016 still have to be made; in a period of crisis it is particularly important not to delay, and if possible, even to accelerate these. At the moment there are concrete investment options for 1 billion euros and experience has shown that in the field of innovation businesses will in that case invest at least the same amount. The sooner investments are made by the government, and others follow, the sooner there will be returns. This means that many people will be able to stay in work, whether or not this is in the same place.

## Appendix

### Stronger after the storm: measures (Innovation platform)

1. In the short term, cash flow is a problem. This leads to big risks and this means that banks will start to play their role again. In addition
  - businesses have to be helped to keep their R&D expenditure up to standard by expanding and adapting the WBSO
  - businesses can continue to invest in new products and services, assisted by increasing the funds for innovation
  - researchers who are threatened with dismissal are used in other places in the region or in the key area, preferably for existing programmes so that they can return to their own business or their own cluster after the crisis, fit for purpose. Matchmaking between supply and demand and retraining may be necessary to some extent. There are all sorts of proposals to use researchers for social issues.<sup>4</sup> In the end it is necessary to opt for proposals which correspond to existing key areas and regional concentrations, businesses and knowledge institutes must be the applicants and researchers must remain available for those areas.
  
2. In order to increase the dynamic effect, the IP argues for concrete changes and structural reforms.<sup>5</sup> The Netherlands must now:
  - take measures and action to attract 50 significant foreign companies. The IP has formed a strong coalition of sectors regions and intermediaries. With a targeted and coordinated effort of the state, other governments and businesses, the number of important foreign branches to come here can be increased to 50 in three years. It has been calculated that an additional government investment of 10 million euros per year, in combination with a number of improvements in the climate for establishing businesses here can lead to an increase of the GNP of 0.5 to 1%.
  - advise more (10,000) businesses on how to increase their productivity. In a period of crisis, growth of productivity declines. The IP is working on a coalition of sectors and intermediaries to assist more businesses to increase their productivity.
  - supervise more (new) businesses and provide credit facilities to start and innovate;
  - invest in lifelong learning (corresponding to the priorities of the KIA) in order to constantly adapt the knowledge and skills of employees and job seekers to the changing economic circumstances and possibly other jobs.
  - carry out more valorization of knowledge for the market.<sup>6</sup>

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<sup>4</sup> See, inter alia: Kenniswerkers aan het werk voor innovatie. BREIN – Bestrijdt de recessie met innovatie (20 February 2009)

<sup>5</sup> *The Netherlands in the World: connecting global ambitions* (2008) Kennisinvesteringagenda (Knowledge Investment Agenda (2006), KIA Working group, *The Netherlands in the fast lane, the 2nd annual photograph of the Knowledge Investment Agenda (KIA) 2005-2016*, 27 February 2008.

<sup>6</sup> See the Valorisation Agenda (IP, Ministry of Economic Affairs, Ministry of OCW, Ministry of LNV, Ministry of WVS, VNO-NCW, MKB-NL, NFU, VSNU, HBO Council, NOW, KNAW, Association of GTIs, DLO and STW), 3 December 2008.

- provide better government services, more efficiency and flexibility, amongst other things, in tenders and by reducing the regulations and administrative pressures.
  - remove the obstacles to getting large projects/investments off the ground quickly and in an innovative way. For example, the IP promotes large hydrological works with an innovative effect such as the Sandmotor, the innovative Afsluitdijk and an energy island. The metaphor and trademark of tulips at sea have achieved a great deal in this respect, both nationally and internationally.
3. In order to emerge from the crisis stronger in the long term the Netherlands must now:
- invest more in scientific knowledge. The KIA indicates that it has fallen behind in comparison with more knowledge-intensive countries. Science means investing in the future. There are big social challenges related to health, sustainable energy, the increasing scarcity of water, food and raw materials, which must be tackled. Together with the excellent scientists in the Netherlands, we can get closer to the solution for these challenges. In order to do this in a targeted way and maintain our scientific excellence, the financial cash flows of the government which now go to the innovation programmes, FES funds and NOW, must be better coordinated
  - investments in large-scale research infrastructure, necessary to attract international businesses and scientists. Since October 2008 there have been 25 proposals; facilities which allow for groundbreaking research and because of their scale (at least € 40 million over ten years for one facility) cannot be financed by an individual university or institute.<sup>7</sup>
  - support and further strengthen key areas. In 2004 the Innovation platform introduced the approach to Key areas and the Ministry of Economic Affairs took this over. Key areas are the strong sectors where investments are profitable.<sup>8</sup> In addition to the current programmes which have to be carried out, there are innovation projects and programmes for approximately 300 million euros which should be set up. Investing now in key areas strengthens their growth in the future.<sup>9</sup>
  - organize more innovation campuses focusing on key areas. In the short term this leads to investments in buildings and infrastructure and strengthens the use of knowledge and business. At the moment there are three campuses, in Eindhoven, Wageningen, and Geleen, and there are initiatives for campuses, in Delft, Rotterdam and Helmond, amongst other places. They should be organized at an accelerated rate in at least three places which will require investments in buildings, services and infrastructure, in particular by provinces, municipalities and knowledge institutes.
  - choose positions at an accelerated rate in *lead markets*, amongst other things in sustainable energy and mobility.<sup>10</sup> Governments invest about 20 billion euros per year

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<sup>7</sup> Van Velsen Commission, *Dutch Roadmap for Large-scale research facilities*, October 2008.

<sup>8</sup> Progress Commission for key areas. Progress of key areas and interim evaluation of approach to key areas, 21 January 2009.

<sup>9</sup> The IP will certainly explore the economic opportunities for the Netherlands in the field of sustainable energy, if all the countries become more sustainable in their energy consumption and production. What can the Netherlands achieve more quickly than other countries? This is in response to the cabinet's Energy innovation agenda, which focuses on the question of what innovations are needed to achieve the cabinet's aims in the field of climate and energy by 2020.

<sup>10</sup> The conclusions which are drawn in that case should also be sold abroad more actively than they are now.

and have about 33 billion euros of tenders. A number of partial markets can be used very well as a lead market, where the government concerned imposes innovative demands and privileges innovative businesses which can then strengthen their (international) position. The government can promote innovation as a *launching customer*. Lead markets and *launching customership* mean that the government should organize its own expenditure in a more innovative way, should tender contracts in a more innovative way and must achieve greater coordination between its innovation aims and the many billions in all its expenditure and investments.<sup>11</sup>

- In this way the IP argues for the creation of a test park and hub-at-sea in order to stimulate the wind energy sector and speed up the arrival of innovative concepts which will reduce the cost price of wind at sea more quickly. In the next 20 years the government will have to spend billions in order to subsidize the unprofitable top for wind at sea, in view of the ambition to achieve 6000 MW at sea by 2020. Of these 6000 MW, about 4000 MW will have to be achieved far from the coast (*far shore*). If the Netherlands creates a test park now, the costs of wind at sea will fall at an earlier stage and the Netherlands can use its water, wind and offshore knowledge to take up a leading position in far shore wind, which is still unexplored territory for all the North Sea countries. It has been calculated that an innovation programme and demonstration park far out at sea, with a size of 100–300 MW would require approximately 200-500 million of additional investments, but could eventually lead to € 1.7 billion of savings in the subsidy for the unprofitable top in the periods 2015-2030.<sup>12</sup>

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<sup>11</sup> The SBIR is an existing instrument which could be used on a large scale. With SBIR the government can contract out the feasibility studies and the necessary research – including demonstration or pilot studies – quickly and easily in order to achieve innovation. Good examples include the use of satellites for guarding the dykes and using greener traffic signs on motorways by replacing diesel power by hydrogen fuel cells. In this way there is a greater cohesion between the government's social and innovation targets and the many billions in all its expenditure and investments.

<sup>12</sup> The R&D programme and the completion of the park will immediately create approximately 500-1,200 fte of employment in the short term. In addition, the programme will have an indirect economic spin-off for the Dutch offshore (wind) industry, which can in this way achieve a larger market share in the European market with which it could achieve approximately 15,000 extra fte by 2020.