

## **Summary of advisory report number 69 *To bid and to bind, that's no question. Internationalisation of R&D as a policy challenge***

### **Summary**

What does the internationalisation of R&D mean for the Dutch economy and the innovative power of the Netherlands? In this advisory report, the AWT answers this question by looking at:

- the situation in the Netherlands with respect to corporate R&D: what Dutch companies abroad are doing and what foreign companies in the Netherlands are doing, and why;
- what this means for the Dutch economy;
- which policy is necessary to take advantage of developments and seize opportunities.

### **Findings**

The analysis emphasises the following points:

1. *No relocation of R&D* - The large Dutch companies are not working on downsizing their R&D capacity in the Netherlands in order to start up similar activities elsewhere; relocation is not occurring. They are, however, building up new R&D capacity in other countries. This is primarily due to: i) market opportunities; ii) acquisitions. What is done in the Netherlands is also changing as a result of shifts in the division of tasks (open innovation) and concentration on segments with high added value (at the beginning and the end of the production chain).
2. *Consolidation of R&D at large companies* - The large Dutch companies are consolidating their R&D efforts in the Netherlands. In general there is no growth. Nevertheless, these businesses are locating new, pioneering research lines primarily in the Netherlands. Product development is typically set up in close proximity to production facilities and markets, often abroad.
3. *Substantial investments in R&D abroad* - The large Dutch companies make considerable investments in R&D capacity abroad, which is certainly a good thing, because otherwise they would be unable to link up to emerging markets and knowledge development elsewhere in the world.
4. *Overall state of business R&D in the Netherlands is not favourable* - Companies are carrying out relatively little R&D in the Netherlands. The eight large multinationals' share in the total amount of R&D carried out in the Netherlands is falling. The Netherlands is not among the top European countries when it comes to attracting foreign investments in R&D.
5. *Business location factors in the Netherlands are reasonably good* - Internationally operating large companies invest in R&D all over the world. The location is determined by market prospects and business location factors. The most important condition for establishing a business, especially for research, is access to the best brains, in the labour market as well as in the knowledge infrastructure and within networks. Companies are generally satisfied with the quality of and cooperation with the knowledge infrastructure in the Netherlands.
6. *R&D in foreign companies in the Netherlands is more vulnerable* - R&D at Dutch branches of foreign companies is relatively vulnerable, particularly if consolidation or reorganisation occurs. R&D in the Netherlands has a different position and status from the perspective of these foreign companies than it does from the perspective of a Dutch company: the Dutch R&D branch is just one in a series of R&D outposts. There is often less of a bond with the Netherlands.
7. *Actual decisions on R&D are taken at corporate level* - Changes that bear no relationship with the value and productivity of the R&D function as such, for example in corporate governance, in ownership (acquisitions and disinvestments, private equity) or in presence of local clients or

production capacity, can have an impact on corporate strategy, R&D investments and location decisions.

8. *More policy competition* - More and more competition is developing between countries within Europe to attract corporate R&D (R&D onshoring). The Netherlands has taken the right road in this regard to position itself and actively attract companies, but there is still room for further improvement.

## Recommendations

On balance, the AWT sees no reason for immediate concerns about R&D offshoring, but certain things do need to happen if the Netherlands is to remain attractive as a location for R&D and to attract foreign company corporate R&D and keep it here. There is a public interest involved in business R&D: there are knowledge spillovers and network effects. This implies a task for the government. Business location factors must be in order, but in order to be among the best in Europe we need to do more. We advocate more active policy on the one hand, and clearer choices on the other. This leads us to make the following recommendations:

### 1. Active relationship management

The AWT recommends that the Minister of Economic Affairs develop a more direct relationship with large and medium-sized businesses in the Netherlands. This not only pertains to Dutch companies, but also to foreign companies in particular. The AWT advises the Minister to:

- Carefully map out the knowledge-intensive companies that are active in the Netherlands and identify how they are embedded locally.
- Communicate more directly with these companies.
  - Ensure that companies can turn to the government with their problems; also take the initiative in maintaining a relationship; be sure to know the issues companies have to deal with.
  - In the context of public private partnerships for innovation, provide matching services to assist companies, especially smaller or foreign companies, in finding partners, knowledge and sources of financing.
  - Ensure that local authorities refrain from applying regulations in a rigid, mechanical manner, and instead discuss the interpretation and application of regulations with companies.
  - Get company directors more closely involved in societal developments and government policy development, e.g. by way of social networks, public sector side jobs and requests for advice.
- Involve companies at an early stage in the planning of government projects. Identify future public policy objectives for which the government will be responsible and for which innovation is necessary. Discuss these objectives with companies in the Netherlands well before contracts are awarded.
- Take advantage of the possibilities that government purchasing power offers (e.g. in markets for health care and medication, energy and environment, transport and logistics, security and e-government) in order to stimulate research and innovation in the Netherlands. Encourage foreign businesses to locate R&D in the Netherlands when granting them large concessions or government contracts.
- Stand firmly behind companies in the Netherlands, including those that originate from abroad. Be proud of what we have and show that pride in the international arena as well. Support companies in their activities in international markets.

### 2. Preserving key areas and hot-spot policies

The AWT recommends that the Minister of Economic Affairs continue with and preserve the 'key area approach' (i.e., a package of targeted R&D support policies). In this regard the AWT advises the Minister to pay particular heed to the following points:

- Sustain the 'key area approach' as a main element of innovation policy for the years to come and communicate this long-term commitment to the business world and knowledge institutions. Ensure that the financing for the key area approach is structural. Ensure that the key area approach is attuned to initiatives at the European level, e.g. Technology Platforms.
- Together with the Minister of Education, Culture and Science, support and encourage the establishment of hot spots of innovative business.
  - Pursue an active policy aimed at bringing knowledge-intensive foreign companies to the Netherlands. Direct this policy foremost at knowledge-intensive businesses in key

areas. Further the approach already taken in this regard by the Netherlands Foreign Investments Agency (NFIA). In doing so, also ensure that the NFIA's activities are better attuned to those of regional and supranational organisations. Broaden the tasks assigned to the Technical and Scientific Attachés (TWA's): do not only assign them to identify and report on technological developments, but also have them focus their attention on developments in (applied) sciences. Give them more of a brokerage and linkage function between Dutch and foreign companies and knowledge institutions.

- Facilitate the establishment of hot spots by offering high-quality infrastructure, solving spatial planning problems and guaranteeing good domestic and international accessibility.
- Together with the Minister of Education, Culture and Science, ensure that there is cohesion in the steering of the research system (focus and mass) and the development of key areas.
  - Together with the Ministry of Education, Culture and Science and with support from the Netherlands Organization for Scientific Research (NWO), further develop centres of excellence in R&D in key areas, including in the form of Technological and Social Centres of Excellence (TTIs and MTIs). Focus on the niches where the combination of strengths in the business world in the Netherlands and in knowledge institutions converge. Continue to stress sufficient focus and specialisation.
  - Encourage knowledge institutions in this regard more intensively to engage in dialogue with companies with respect to their profile, plan for research chairs and their research agenda.

### **3. Further strengthening framework conditions for business location**

The AWT advises both the Minister of Economic Affairs and the Minister of Education, Culture and Science to devote urgent and specific attention to the following points:

- *Maintain the quality of the knowledge infrastructure at an excellent level.* This particularly requires more investment in fundamental and strategic research and sufficient opportunity for curiosity driven academic research. In order to achieve this aim, the best scientists must be provided with greater resources and these resources must be allocated with a greater focus on long-term prospects.
- *Improve the link between public and private research.* Good links between public and private research are established at the start of research programmes. Therefore encourage more intensive communication between knowledge institutions and companies with respect to mutual research interests and research agendas, and promote dialogue about the research profile of university chairs.
- *Encourage knowledge transfer.* It is important that research institutions and universities improve the transfer and utilisation of knowledge, particularly by promoting the mobility of researchers between knowledge institutions and the business sector. Devote more attention to knowledge dissemination through mobility ('knowledge on legs'). For example, make it more appealing for researchers to be involved in the commercial exploitation of knowledge and promote entrepreneurship.
- *Maintain the level of availability of sufficiently well qualified personnel, especially in the mathematics and science disciplines.* Many companies have been concerned for a number of years about the future availability of highly educated technical and scientific personnel. This is a problem: companies see this as a significant weakness in our conditions for business location. The AWT shares the business world's concerns in this regard. In the short term, the immigration of knowledge workers (and their families) needs to be facilitated, both for shorter and longer stays. In the long term, the policy aimed at encouraging young people to study mathematics and science disciplines needs to be intensified.
- *Provide an internationally competitive public support package for private R&D.* Continually evaluate the support facilities for corporate R&D in the light of international developments. Make sensible use of the EU's liberalised state subsidy regulations that come into effect in 2007. Promote the full implementation of a lower tax rate on royalties from licences (R&D box). Reconsider implementing a credit instrument for financing corporate R&D with provisional repayment conditions. Continue reducing administrative burdens and promote a culture of a constructive approach to regulations by government agencies.