



Dutch Subsidy Arrangement

“KNOWLEDGE WORKERS”

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Where innovation starts

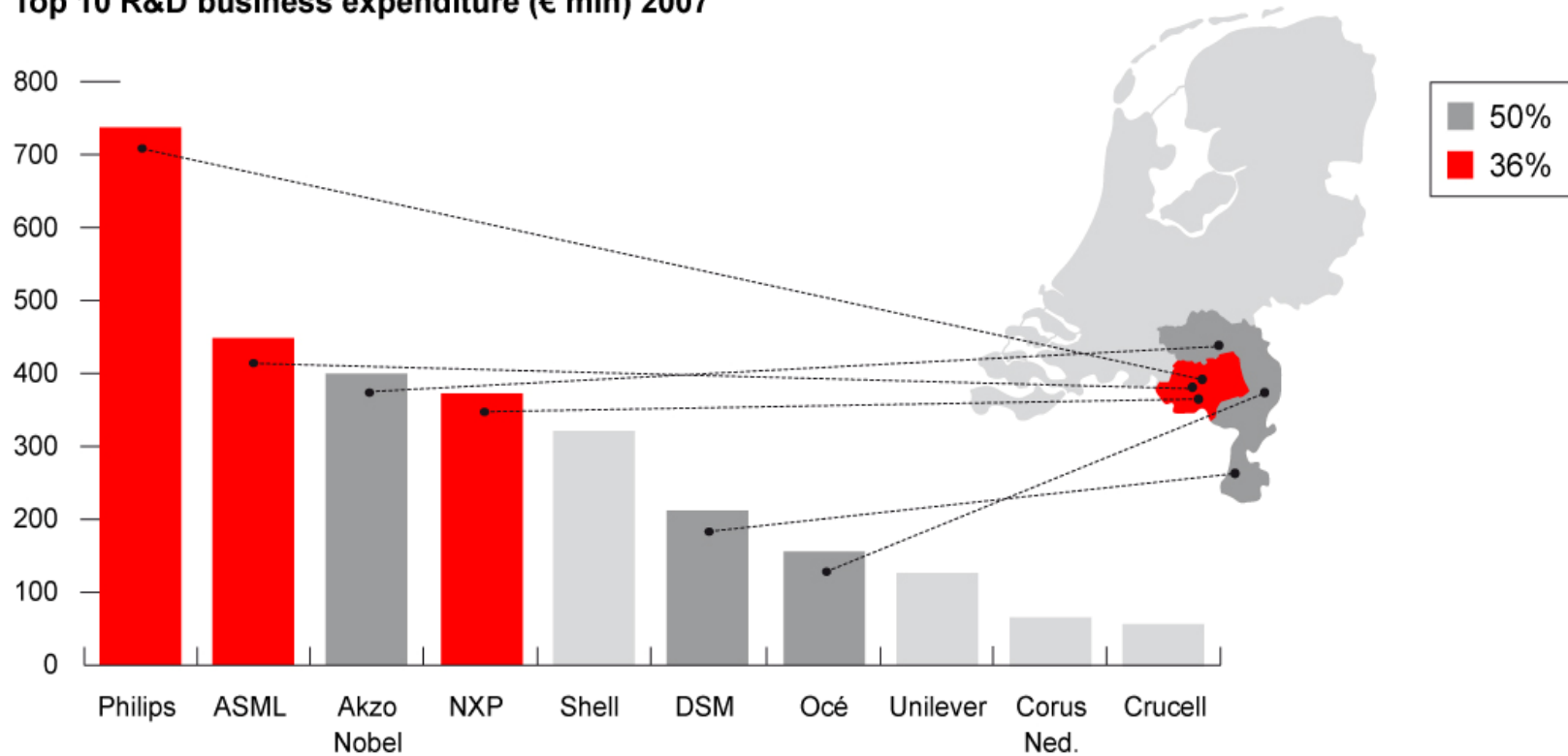


Europe's most innovative regions

2

Brainport: a top technology region

Top 10 R&D business expenditure (€ mln) 2007



Source: Technisch Weekblad, Brainport Foundation

Motivation

Economic crisis inspired:

- **Retain the knowledge workers** of Dutch based companies for the technological field.
- **Prevent a lost generation** of recently graduated Masters and PhD's.
- **Secure strategic Dutch R&D position**

Definitions

- ***Knowledge worker***
 - R&D employee of a **company**
- ***Knowledge Institute (KI)***
 - Located in the Netherlands
 - University, HBO, TNO, ECN, Deltares, WUR, NLR etc.
- ***Young Researcher***
 - Acquired his PhD or PDEng title in 2008 or 2009.

Subsidy Arrangement “Knowledge Workers” (1)

- **Full time transfer of knowledge workers from their current job in industry to long term research projects with knowledge institutes (KI) like Universities.**
- **Knowledge worker stays on pay-roll of company.**
- **Government pays 75% of the labour costs of the industrial knowledge workers to the company.**
- **Government pays 14% to the KI for guidance, support, accomodation etc. The KI gets extra funding for hiring young researchers.**

Subsidy Arrangement “Knowledge Workers” (2)

- **The projects are subsidized until 1-1-2011 (16 months).**
- **At the end of the project the knowledge workers return to their companies.**
- **Research subjects must be relevant for Dutch Society and Economy.**
- **The subsidy budget is €180 million aiming at 2.000 knowledge workers**

Procedure

1) Company and knowledge institute together make a project plan:

- **Activities, management and milestones:**
- **Relevance for Dutch societal and economic priorities**
- **IPR**
- **Requirement: fundamental and industrial research: > 3 years to market**
- **Names of knowledge workers**
- **Physical location**
- **Minimal administration**
- **Interaction between knowledge workers and knowledge institute**

2) Tender procedure

3) **Pressure cooker:**

- **3 weeks to submit proposals**
- **Results were communicated within 6 weeks**

TU/e involvement and mission

- Keep knowledge workers at work: **general responsibility**
- Give knowledge workers extra knowledge and expertise: **education**
- Strengthen cooperation with companies: **valorisation**
- Accelerate valorisation of research: **valorisation**
- Increase scientific output: **research**

Tender results (1)

- **Number of projects approved: 175**
 - Projects that were too far away for the company to invest in
 - Projects that would have been killed because of the crisis
 - Projects that would have continued but in a smaller way
- **Number of different companies: 115**
- **Total number of knowledge workers engaged: 1876 of which five major high tech companies (Philips, ASML, Oce, NXP, DSM) accounted for 54%.**
- **Start of projects: july/ september**

Tender results (2)

- **Eindhoven University of Technology engaged 877 knowledge workers (47%)!**
- **Companies in High Tech Region of the Netherlands (called Brainport) received 58% of funding.**
- **Theme's: high tech systems (42%), health (14%), energy (10%), chemistry (9%), automotive (8%)**
- **Companies preferred Technical Universities and TNO to other knowledge institutes.**

Tender results (3)

- **Projects submitted were already in the mind of the companies before Subsidy Arrangement came into the picture.**
- **Short time for making proposals resulted in excellent quality.**
- **SME companies that did not work with Universites before, finally connected.**
- **University departments connected to new departments of large companies**

Conclusions and results after 5 months (1)

- **Enormous intensification of interaction between scientific staff and company employees** (e.g. professor at work 1 day/2 weeks at company identifying new areas of research).
- **New relations (MKB and large companies) are there to stay** (identification of follow-up projects)
- **Senior company personnel and full time appointment greatly enhances the impact.**
- **Software professionals learn an additional fundamental approach** (symptom versus root-cause). University learned about the business constraints.

Conclusions and results after 5 months (2)

- Role of university is most crucial in projects where radical breakthroughs are needed: **university generates new possibilities.**
- **Multicompany projects really opened the dialogue between the respective companies.**
- **Push of development issues to research activities**
- University professors typically spend 1h/wk per knowledge worker and 2h/wk per young researcher
- Financial and project administration is minimal
- Hiring of additional scientists (post-doc contracts) was necessary.

Recommendations for future subsidy arrangements

- Stimulate projects where scientists and company have **intense interaction** on **senior level**: win-win situation.
- **Pressure cooker** approach gives equal results to long term procedures and thus is **more efficient**

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