To Innovate Industry and Society: the Dutch Approach

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Confindustria

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Ministry of Economic Affairs NL
Agenda

I. Strengths and challenges of NL
II. Innovation Policy
III. Nine Top Sectors
IV. European Innovation Cooperation
V. Conclusions
## I. NL: some rankings/figures

<table>
<thead>
<tr>
<th>Ranking/Score</th>
<th>Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Economic Forum Global Competitiveness 2013</td>
<td>8</td>
</tr>
<tr>
<td>Science Impact Score 2008-2011 (CWTS Web of Science 2013)</td>
<td>3</td>
</tr>
<tr>
<td>World Bank Knowledge Economy Index</td>
<td>4</td>
</tr>
<tr>
<td>World Bank Ease of Doing Business Index</td>
<td>28</td>
</tr>
<tr>
<td>Global Connectedness Index DHL/P.Ghemawat</td>
<td>1</td>
</tr>
<tr>
<td>Labour Productivity 2012 Index (The Conference Board 2012; GDP/hour worked US=100)</td>
<td>3</td>
</tr>
<tr>
<td>GDP per capita (OECD.Stat)</td>
<td>US$ 43,146 (PPP)</td>
</tr>
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I. NL Knowledge Economy

<table>
<thead>
<tr>
<th></th>
<th>NL</th>
<th>EU-27</th>
<th>OECD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private R&amp;D</strong> (% of GDP, 2011; NL: 2012)</td>
<td>1.22</td>
<td>1.22</td>
<td>1.65</td>
</tr>
<tr>
<td><strong>Public R&amp;D</strong> (% of GDP, 2011; NL: 2012)</td>
<td>0.94</td>
<td>0.72</td>
<td>0.72</td>
</tr>
<tr>
<td><strong>Scientific and technical journal articles</strong> (per million population, 2009)</td>
<td>899</td>
<td>496</td>
<td>498</td>
</tr>
<tr>
<td><strong>WIPO patent applications</strong> (per million population, 2011)</td>
<td>210</td>
<td>100</td>
<td>129</td>
</tr>
</tbody>
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Sources: OECD, Statistics Netherlands, World Bank, WIPO, Eurostat and The Conference Board
I. Netherlands’ Challenges

In relation to innovation policy:

- Relatively low private R&D
- SME innovativity
- Exploitation of knowledge (European paradox)
- Science and engineering graduates
- Foreign competitive challenges
- Global challenges
II. Dutch Innovation Policy: Ambitions

• Top 5 position of knowledge economies by 2020 (GCI/WEF)

• Increase Dutch R&D efforts 2,5% R&D by 2020

• Establish Topconsortia voor Knowledge and Innovation (TKI) in 9 Top Sectors by 2015
  • public and private parties contribute €500 mln.
  • At least 40% of consortia financed by business sector
II. The Dutch Approach

- Stimulating innovation on the basis of Public private partnerships
- International innovation cooperation
- NL High Tech Branding
- Human Capital & Skills
II. Dutch Innovation Policy: two tiers

1) Generic policies:
- excellent producer and innovation climate
- Financing, fiscal rules, smarter regulation, education, level playing field in markets

2) Topsector policies:
- Sectoral: 9 top sectors
- Demand driven: producers and researchers set the direction
- Comprehensive: Innovation, Human Capital Agenda (HCA), regulatory burden, internationalisation
- Cross-sectoral: ICT, biobased, nano; linked to EU-Horizon 2020
- Global challenges: cross-sectoral multidisciplinary approach
III. Top Sector Approach

Selection criteria:

- Knowledge intensive/innovation driven
- Strong international focus

25% of all companies in NL belong to a Top sector, together they:

- Perform ca. 95% of private R&D
- Produce 41% of total NL production
- Have a total added value of 27%
- Employ 26% of all Dutch employees
III. Nine Top Sectors

- HTSM
- Life Sciences & Health
- Chemistry
- Water
- AgroFood
- Horticulture
- Energy
- Logistics
- Creative Industry
III. Top Sector Approach: The Triple Helix or The Dutch Golden Triangle

The government helps to innovate

- General fiscal policies
- Limiting ‘red tape’
- Credit schemes
- Information systems

Entrepreneurs

Public Private Partnerships

Topconsortia for Knowledge and Innovation (TKI)

Government

Knowledge institutions

Funding of research
Stimulating public-private partnerships
IV. European Cooperation Horizon 2020

Societal Challenges
• Health, demographic change and well-being
• Food security, sustainable agriculture, bio-economy
• Secure, clean, efficient energy
• Smart, green, integrated transport
• Climate action, environment, resource efficiency, raw materials
• Inclusive, innovative, reflective societies
• Secure society
IV. EU Framework Programme VII 2007-2013

• 2100 IT-NL projects with € 2,4 Bln EU-financing
• Top FP7 Themes for IT-NL cooperation:
  - ICT: 371 projects
  - Health: 262
  - Food, Agriculture, Biotech: 210
  - Transport/Aeronautics: 159
  - Environment/Climate: 156
  - Marie Curie actions: 156
  - Research Infrastructures: 145
  - Nanoscience & Technology: 143
IV. IT – NL High Tech Cooperation (1)

Automotive
Alfa Romeo (IT), Ten Cate (NL)

Aeronautics
Fokker Aerostructures (NL), AgustaWestland (IT) and others
IV. IT-NL High Tech Cooperation (2)

- IT Vega launcher
- Connecting stage between first and second stage by Dutch Space Leiden
- Ignitors by Aerospace Propulsion Products (APP) Klundert
- Microsatellites by Isis Delft
V. Concluding remarks

• Innovation and innovation policy are crucial for economy and society
• Strong public private cooperation generates economic potential
• Societal challenges present growth opportunities
• Societal challenges require European partnerships
• Netherlands and Italy have a joined interest and are involved in many innovative projects already
• Horizon 2020 presents huge opportunities for innovation
• *Let's join forces!*