Dutch Enterprise and Innovation Policy: Topsector approach

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Focus on Global challenges, Dutch solutions

Global challenges
Dutch solutions

inclusive, innovative and reflective societies

secure, clean and efficient energy

smart, green and integrated transport
Modern industrial policy: Dutch enterprise policy

• Permanent effort to maintain an internationally competitive business environment
  ✓ In 2011 launch of a new enterprise (industrial) policy with 2 pillars

  • Pillar 1: Excellent framework conditions for all enterprises
    ✓ Focus:
      a) strengthening innovation framework,
      b) red-tape reduction,
      c) improving access to finance
      d) ensuring better match between education and labour market

    • Examples: tax incentives for innovation & entrepreneurship, reducing administrative burden, financing (innovative) entrepreneurship

  • Pillar 2: Top sector approach (sector specific)
    ✓ Comprehensive sector agenda’s through Public Private Partnerships: knowledge, industry and government
Three main goals of Enterprise Policy

1. The Netherlands in the **top five** knowledge economies in the world (by 2020);

2. Raising Dutch R&D expenditure to **2.5%** of GDP (by 2020);

3. Support PPS with more than **500 million** euros in public and private funding.
Top sector approach: characteristics

• Top sector approach brings together entrepreneurship and innovation in a single **integrated** approach.

• To use their resources effectively, businesses, knowledge institutions and government (**triple helix**) work closely together and coordinate their efforts: **public private partnerships**

• **Demand-driven**: comprehensive sector agenda’s through public private partnerships (knowledge – industry – government)

• **9 top sectors:**
  ✓ Knowledge-intensive (R&D)
  ✓ Export oriented
  ✓ Potential to make important contribution solving societal challenges worldwide

Ministry of Economic Affairs
The nine topsectors

1. High Tech Systems and Materials (HTSM) *Aerospace
2. Horticulture & Propagation Materials
3. Agri&Food
4. Life Sciences & Health
5. Logistics
6. Chemical Industry
7. Water
8. Energy
9. Creative Industry
Top sector: comprehensive agenda’s & integral approach

Each top sector has action plan with clear ambitions:

*Innovation*
- Agenda’s for user inspired public/private research

*Human capital*
- Human Capital Agenda’s
- Focus on supply of sufficient S&T-graduates (‘Techniekpact’)

*Regulation*
- Remove sector specific regulatory barriers
- Introduce incentives (sustainable energy)

*International*
- Trade missions
- Economic diplomacy

*Regional cooperation*
- Ecosystem
- Campuses
Main facts & figures Dutch enterprise policy

### Global Competitiveness Index 2013-14

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Score</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Switzerland</td>
<td>5.67</td>
</tr>
<tr>
<td>2</td>
<td>Singapore</td>
<td>5.61</td>
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<tr>
<td>3</td>
<td>Finland</td>
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<td>4</td>
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<td>6</td>
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<td>7</td>
<td>Hong Kong</td>
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<td>8</td>
<td>Netherlands</td>
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### R&D effort

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td>Private</td>
<td>1.08%</td>
<td>1.10%</td>
<td>1.10%</td>
</tr>
<tr>
<td>Total</td>
<td>1.90%</td>
<td>1.95%</td>
<td>1.98%</td>
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**Doel: 500 miljoen euro aan Publiek-Private Samenwerking (waarvan 40% private inbreng)**

<table>
<thead>
<tr>
<th>Overheid</th>
<th>Fontein bedrijven</th>
<th>Fontein kennisinstellingen</th>
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<tbody>
<tr>
<td>€571 miljoen</td>
<td>35% private bijdrage</td>
<td><em>Het betreft hier een schatting van de totale omvang op basis van de private bijdrage van loopende PPS-projecten</em></td>
</tr>
</tbody>
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**Some results:** Top sector approach after 4 years

**Innovation**
- Increased private expenditure on R&D: from 1.08% GDP in 2011 to 1.10% GDP in 2013
- Growth in public private partnerships
- More than 2000 parties involved, €571 mln private commitment

**Human Capital**
- 519 private scholarships
- More inflow in higher education in science and engineering studies (+ 12% in universities)

**International**
- Economic missions: 29 missions to 27 countries between July 2013 and July 2014 (e.g. China: Agri&Food, United States: Water, India: Life Sciences & Health)
- “Netherlands – Pays ‘d Honneur” JEC 2014 and sustained participation in Paris Airshow
- Increase foreign investments in the Netherlands (+ 60 % in 2013)
Aeronautics and Maintenance Roadmap

- Roadmap is part of HTSM

- Focus on competitive strengths:
  - Aerostructures
  - Engine Subsystems and Components
  - MRO
  - Aircraft Systems
  - Future Concepts

- Close collaboration between Dutch Industry, Knowledge Institutes, Academia and Government (including Embassies)
- International Focus through “Economic Diplomacy”, Partners for International Business
- Goals: strengthen competitiveness, promote trade, Science & Technology cooperation (Innovation Attachés in 20 Countries – France) and Foreign Investment, exchange of Knowledge Workers
Aeronautics Triple Helix

Knowledge

Engineers (7)

Industry (50)

Education & Research

60,000 knowledge workers

100 organisations

€ 10 billion turnover

Transport (10)

Maintenance (30)

Government (central/regional)
NL Ambitions materials: Materials Roadmap

Ambitions NL
- Country for green and sustainable chemistry in 2050
- Top 3 producer of smart materials and solutions in 2050
- Need for strong knowledge and innovation base

How
- Coordinate between Roadmaps of different Top sectors – High Tech, Chemistry and Water (Maritime)
- Update Materials Roadmap: broader focus than current one.
- Composites area for joined activities:
  - by market segment (Auto, Aeronautics, Marine & Offshore)
  - Dutch infra structure improvement, High Volume production & SMART industries 4.0
- Build an open innovation production lab to scale up production and align Academic research programs.
  - M2i institute: Science, Market Platforms
  - M2i companies: Human Capital, Valorization
Smart Industry

Important
- ICT is most important ‘driver’ for productivity growth
- Strengthen NL industry + connected services
- Improve business climate and increase production in the NL

Should lead to
- Increased efficiency
- Increased effectiveness
- Renewed business models

Action plan
- Capitalize on existing knowledge
- Accelerate via Field labs (i.e. Composite field lab NLR/Fokke
- Strengthen the fundament
International cooperation: Clean Sky 2 and SESAR

Clean Sky 2
- €4bn budget, focus on environment, competitiveness and mobility (demonstrations + longer term research)
- NL governmental role:
  - Improve participation of stakeholders in Clean Sky as Core Partner and Partner
  - NL looking into synergies with regional strategies (RIS3)
  - NL active in States Repr. Group and subgroups

SESAR
- €1.5bn, focus on Single Sky Air traffic management Research
- NL governmental role:
  - SESAR is essential to keep up to international developments
  - NL stakeholders should optimally use SESAR results (deployment)
International cooperation: TAPAS

TAPAS

- €23 mln budget, Focus on Thermoplastic technology development:
  - New materials
  - New processes
  - New design concepts

- Design, develop, build & test demonstrators:
  - Fuselage shell (Airbus lead)
  - Torsion box (Fokker lead)

- International cooperation project of 8 NL companies (Fokker, Ten Cate, Airborne, Codet, DTC, KE Works, KVE, Technobis), 3 knowledge institutes (TU Delft, University of Twente and NLR) and Airbus

- NL governmental role: funding support
Concluding remarks

- **NL enterprise and innovation policy:**
  - Excellent framework conditions
  - Top sector approach (High Tech Systems Materials/Aeronautics)
    - Increased private expenditure on R&D, increased public private partnerships
    - Better connection human capital, Increased international partnering, Foreign investments
  - Materials roadmap and Smart industry: enabling factors for integrated cooperation and new approaches/processes

- **International cooperation**
  - Huge opportunity for innovation
  - Better alignment of R&D to needs
  - Good involvement of all stakeholders is key

- **Let’s join forces!**