

# Task Force - National STEM Platforms

Lisbon, 25 October 2013



# The Dutch Approach

## Platform Beta Techniek & Jet-Net

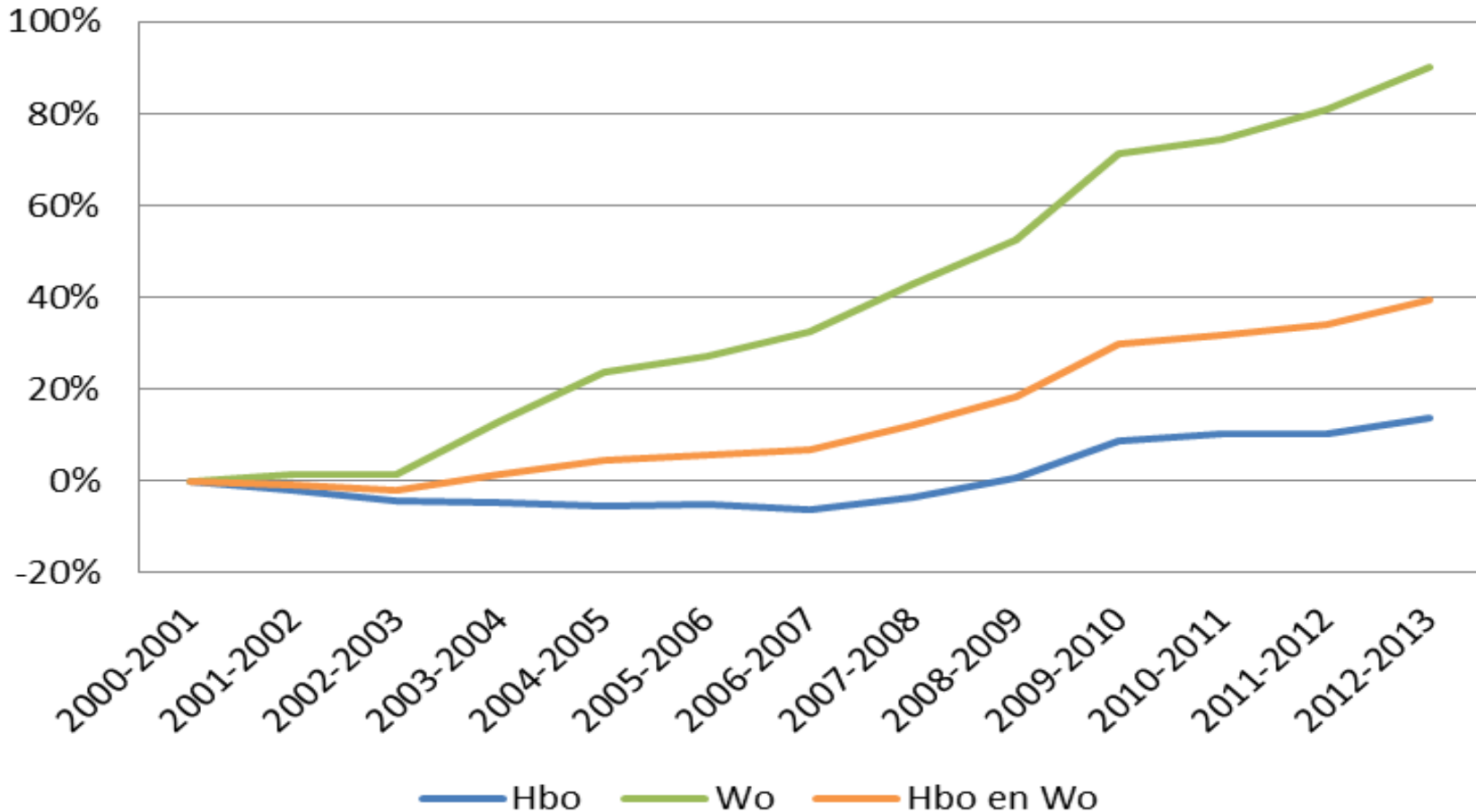
Sebastiaan Smit  
Project Manager Jet-Net



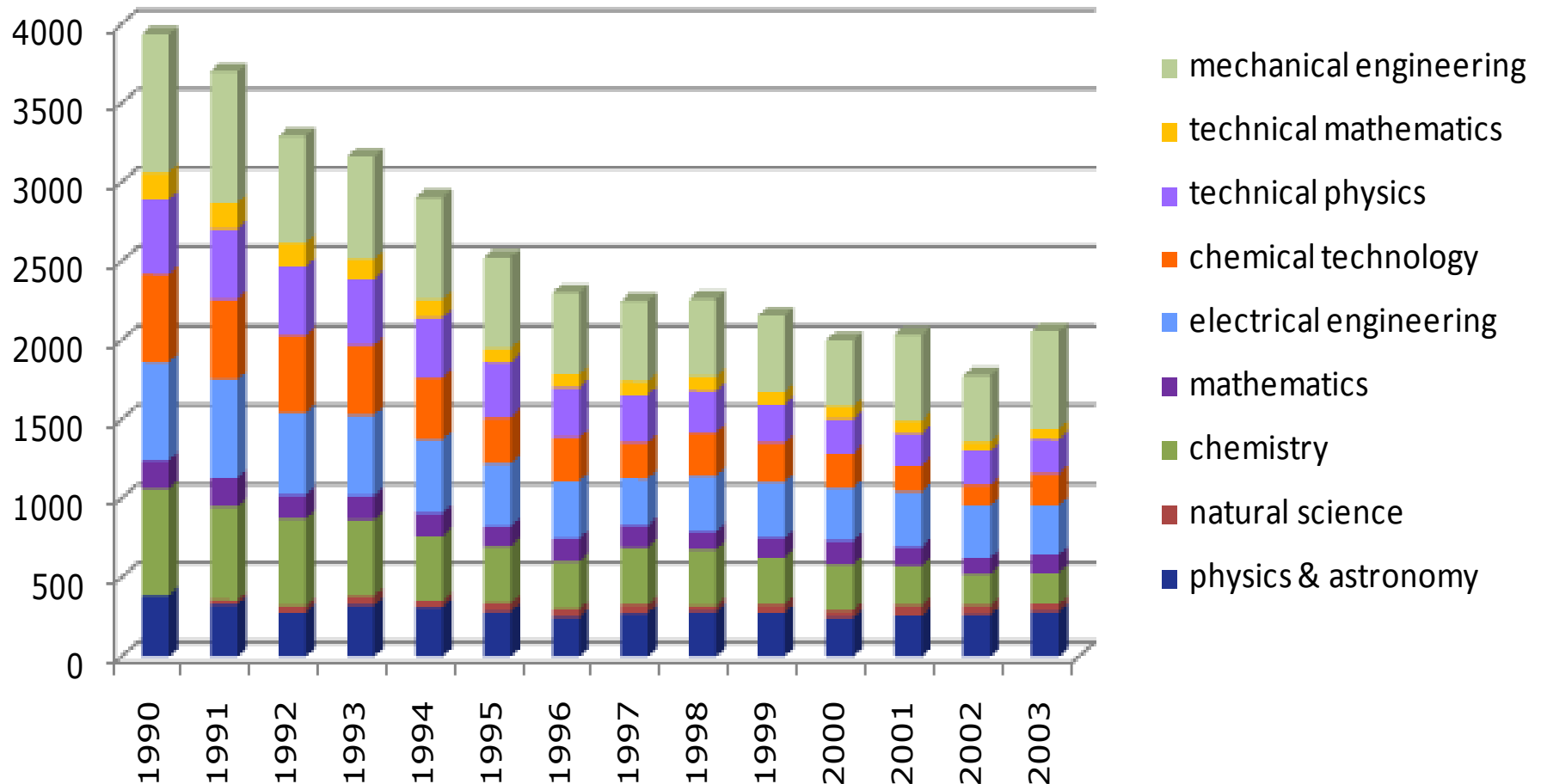
# Where are we now?

## Results Inflow Higher STEM Education

Instroom betatechnische studenten tov 2000



# WHY?



# Short historical overview

In the past some diffused policies:

- 1987-1993: Media campaigns
- 1998 STEM agreement with 6 universities

1998 - 2004: Start of chain approach: “Axis”

2000: Lisbon ambitions

2002: Lobby companies (Shell, Philips): Jet-Net

2004 - 2016: National STEM Platform ‘Beta Techniek’

- 2011 - 2016: Masterplan Science & Technology ‘4 out of 10 STEM workers’
- May 2013: Technology Pact - goals to be realised in 2020

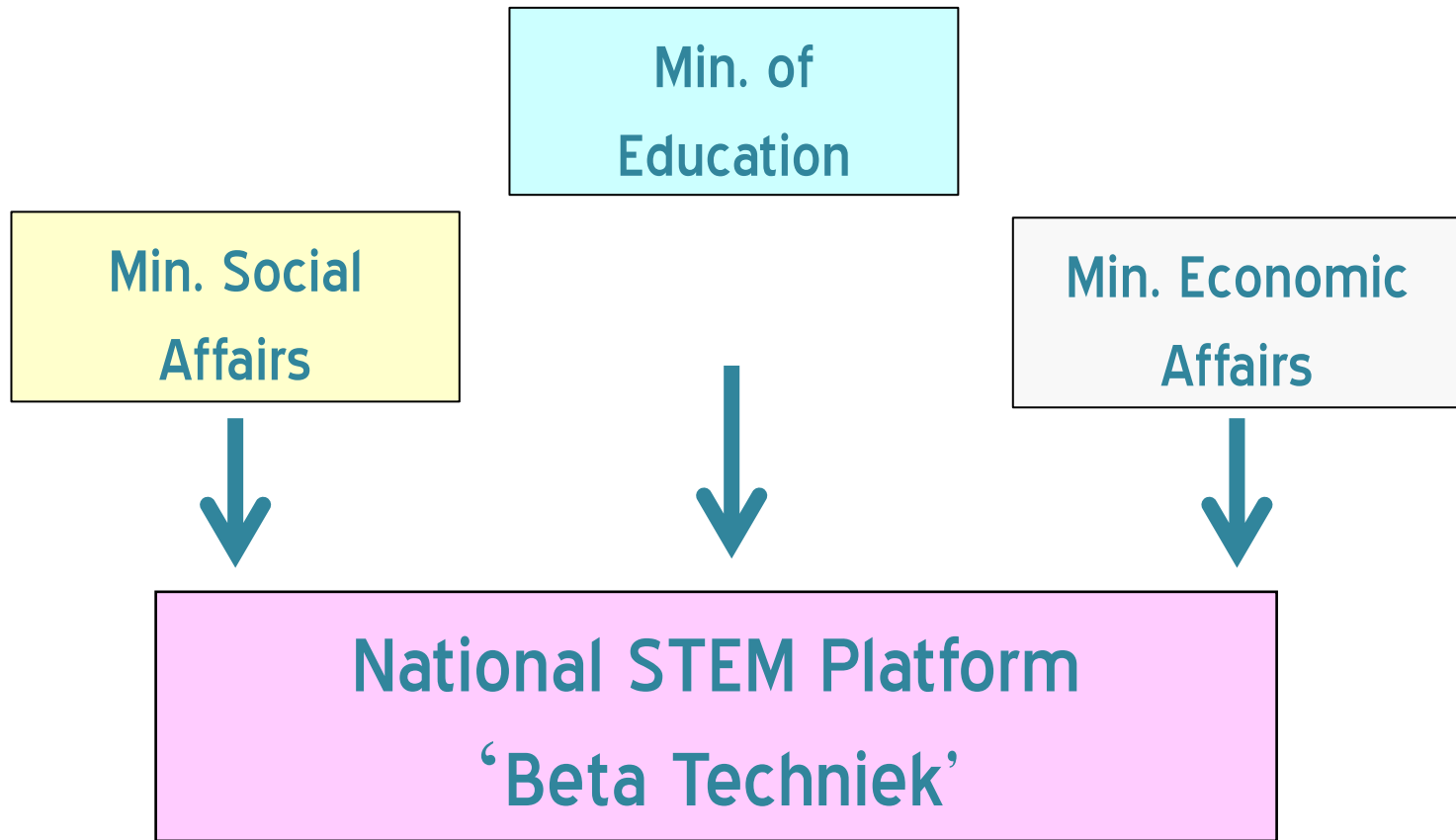


*Source: Dutch Deltaplan*

# Deltaplan

- Action plan to address shortfall in STEM experts
- Drafted by Ministries of Education, Economic Affairs and Social Affairs
- Four key strategies: interesting programs, appealing jobs, interesting options and attractive business climate
- 2010 objective: 15% more STEM graduates
- Implementing agency: National STEM Platform ‘Beta Techniek’
- Budget: €60 million per year (2004-2010)





Source: Dutch Deltaplan 2004

# Strategy National STEM Platform

- From primary school to the job market: chain approach
- Implemented by educational institutions
- Result-oriented → Performance & innovation contracts
- Monitoring & auditing → intervention strategy



# Projects Platform Bèta Techniek

Primary Education

Secondary Education

Vocational Education

Higher Education

SCHOOL  
AAN ZET

Toptechniek in Bedrijf



bèta excellent  
ambitie & onderscheid 2011 - 2016



VO-HO netwerken



Jet-Net  
Jongeren en Technologie Netwerk Nederland



Sectorplan Natuur- en  
Scheikunde

inGenious



Sprint-UP

3TU Sectorplan  
Technologie

Topsectors and Masterplan Science & Technology

# Masterplan Science & Technology

Human Capital agenda for STEM 2011 - 2016

Total inflow on Labour Market:

1.3 million

500.000 Jobs  
in STEM

330.000 STEM  
workers

Shortage  
170.000



*We need Market share of 40%*

*Current Market share 25%*

# Jet-Net - Youth and Technology Network

November 2002



PHILIPS



AkzoNobel  
Tomorrow's Answers Today



Source: Jet-Net 2002

# Cooperation within Jet-Net

- Educational institutions
- Government
- Industry

**LONG TERM VISION**  
LONG TERM VISION



# Goal and Procedure Jet-Net

## Goal:

Promote the flow of students to higher STEM Education

‘4 out of 10 STEM workers’

## Dual approach:

1. Adding context to the teaching of the STEM-subjects →  
lower barriers
2. Showcasing career prospects in industry and technology →  
increase attraction

# Goals and Procedure

- 1 on 1 collaboration between school and company
- Employees are ambassadors of their discipline
- Target groups: pupils (age 12 - 18), teachers and parents
- Curriculum of school
- Joint program and quality development
- Activities in junior and senior high school years
- 80 - 20 rule 'Learning by doing'
- National annual activities for teachers and students

# Conditions for success

- **Commitment** of the school and company: human power, resources, time and initiative
- **Direct link** school and company
- Embedding activities in the **curriculum**
- Convert **enthusiasm** to professional approach
- Let students experience by **doing-it-themselves**

# Results Jet-Net over 10 years

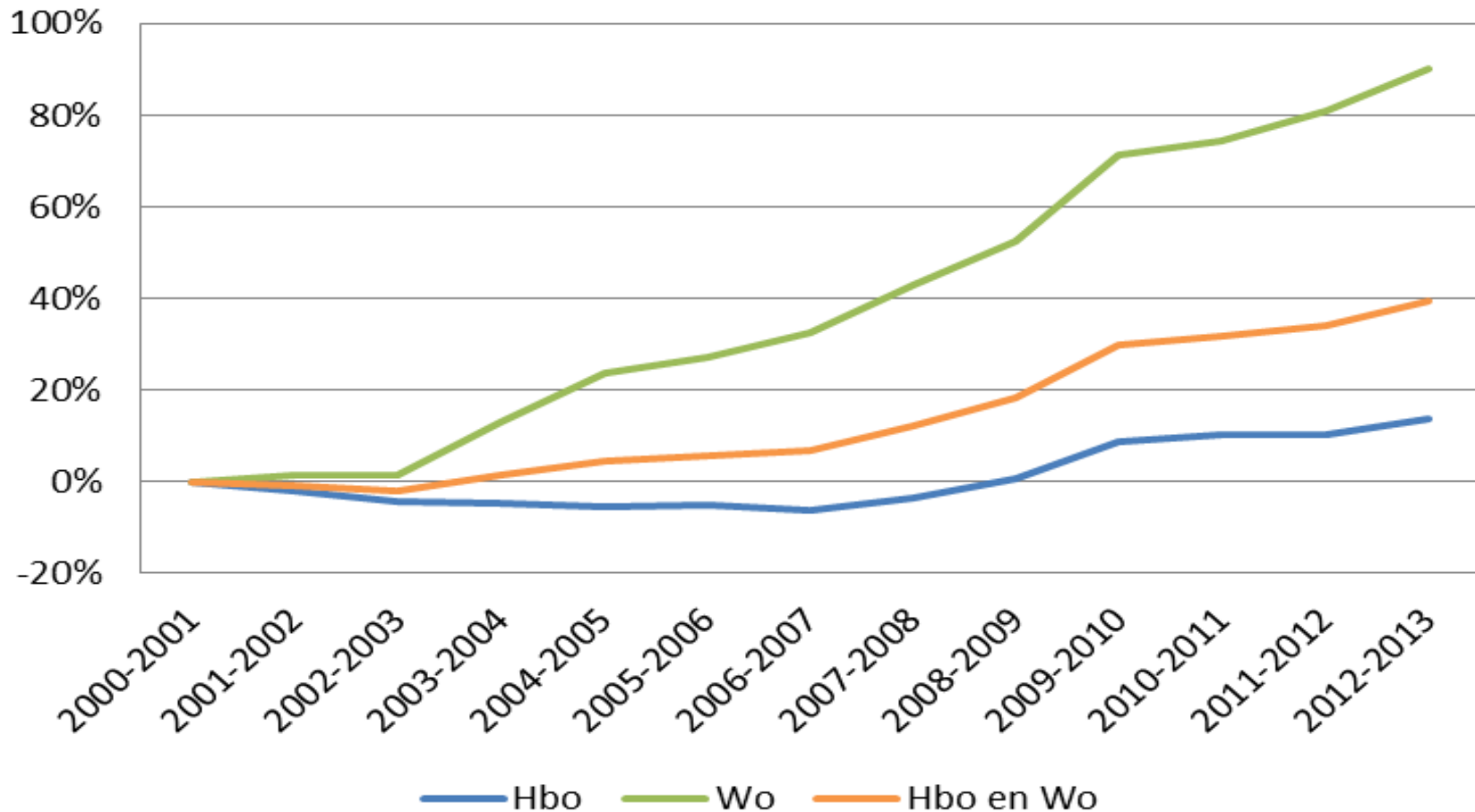
- **87** Jet-Net companies and **31** Partners
- **→600** activities every year
- **175** active Jet-Net schools
- **→60.000** students per year
- **3.500** students Career Days in 2012
- **80** schools on the waiting list





# Results Inflow Higher STEM Education

Instroom betatechnische studenten tov 2000



# Benefits for the Jet-Net Company

- Highly motivated staff
- Network
- Get in contact with a new generation
- Corporate Social Responsibility
- Wider Labour Market

# Support

*Barroso: “Jet-Net is a Powerful example in Europe”*



*Kleisterlee: “Inspiring young people for science and technology is our commitment towards Jet-Net and a knowledge based economy”*



**Thank you!**  
**Questions?**

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# Technology Pact

- Pact signed by 60 organisations
- A shortage of 30.000 STEM graduates every year
- Three action lines:
  1. Choosing for technology
  2. Learning in Technology
  3. Working in Technology
- Regional implementation
- 23 measures in the Pact, a few examples:
  1. By 2020, all 7,000 primary schools in the Netherlands will have science and technology on their curricula.
  2. The government will make available a one-off sum of €100 million to get more science teachers into secondary schools and to allow teacher training programmes to devote more attention to technology.
  3. Businesses in the designated top sectors will make 1,000 scholarships available annually