

Energy Transition: the Dutch approach



Hugo Brouwer, Paris 28 April 2010

Context: Clean & Efficient

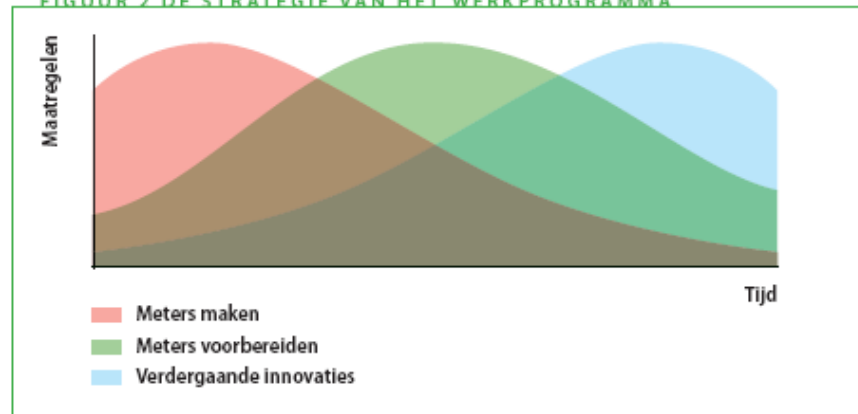
Targets (2020)

- 30% CO2-reduction
- 20% renewable energy
- 2% annual energy efficiency increase

Three 'policy waves'

- Taking large steps
- Preparing meters
- Long term innovation

FIGUUR 2 DE STRATEGIE VAN HET WERKPROGRAMMA



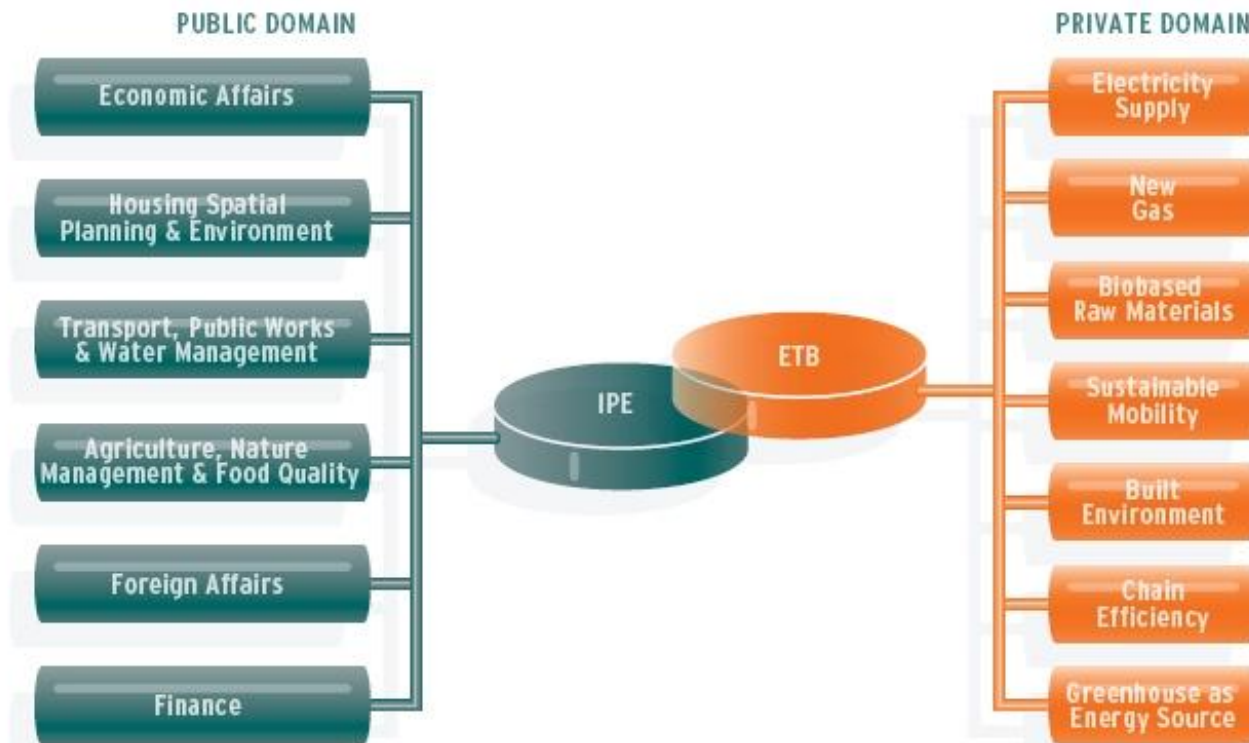
Energy Transition: profile

- **Longterm visions, transition-paths**
- **Climate-policy + Industry-policy**
- **Stakeholder-platforms (public-private)**
- **Focus on Frontrunners**
- **Innovation: not only technology and financing**
- **Interdepartmental collaboration**

Energy Transition: organisation

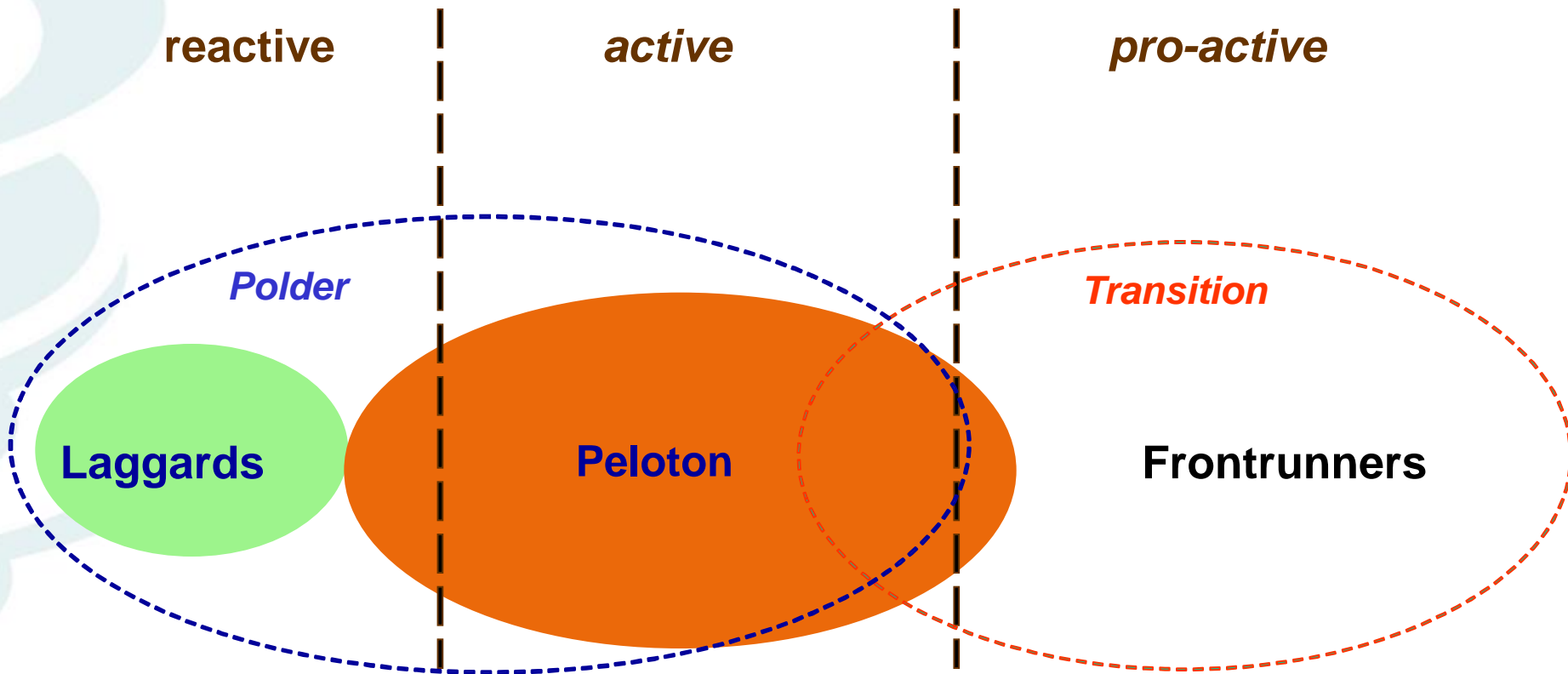
Energy transition: structure

Public-Private method



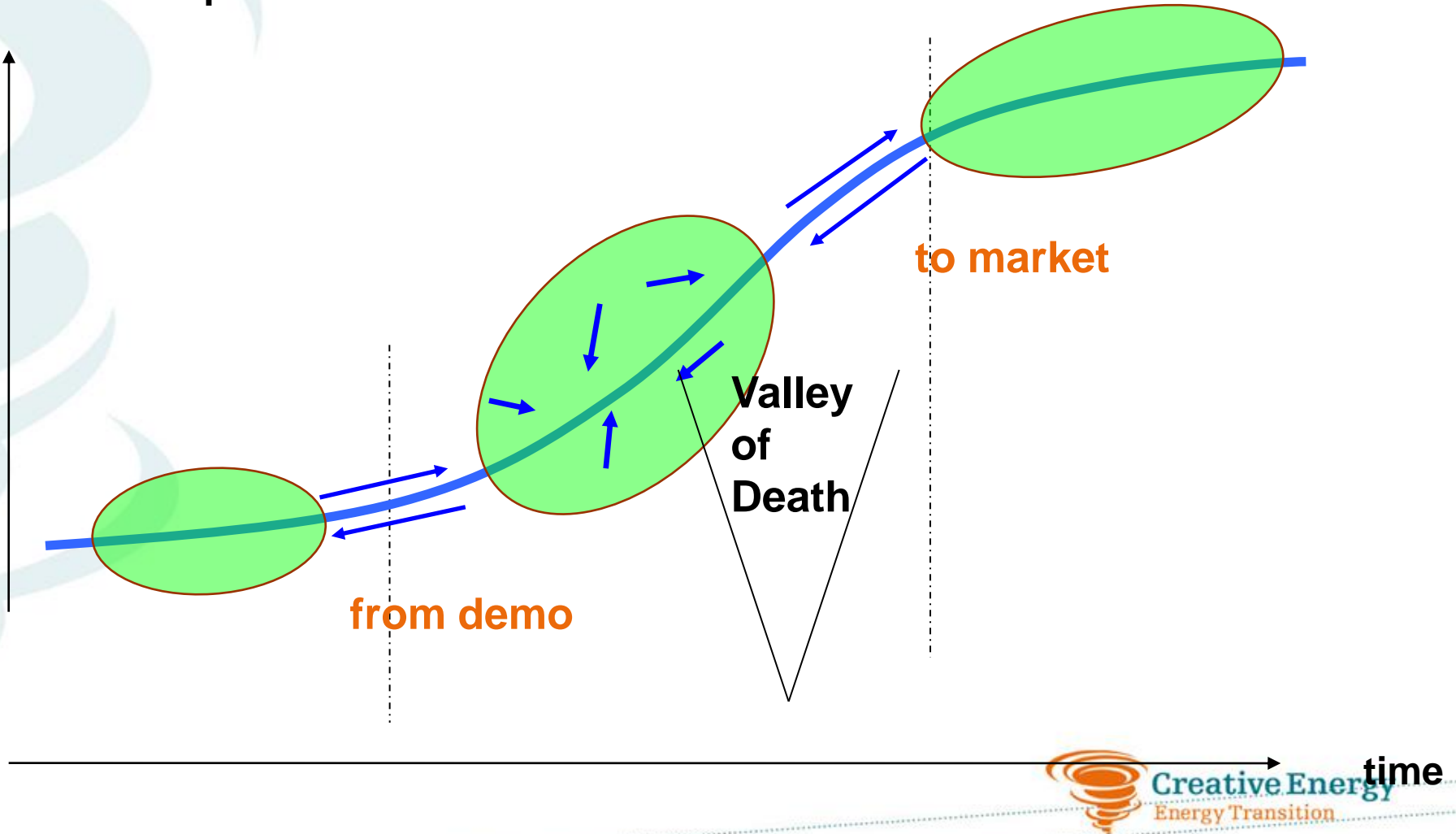
Energy Transition: frontrunners

**Frontrunners deserve attention:
They have to deliver 90% of the future solutions**

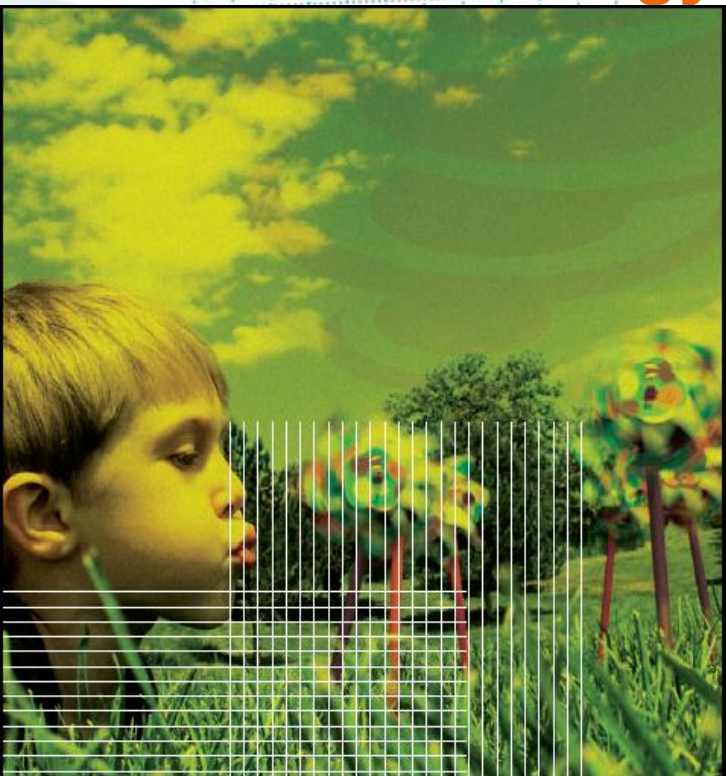


Energy Transition: accelerate innovation

Market acceptance



Energy Transition: innovation agenda



2. The challenge for the Innovation Agenda

Approx. 30 programmes

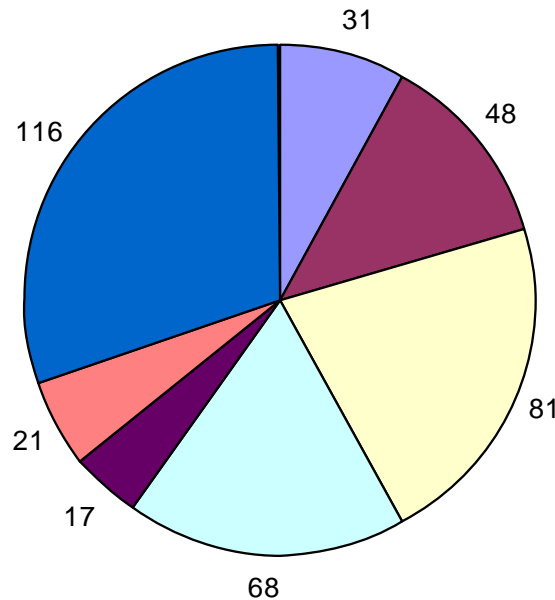
€ 438 M Euro
2008-2012

1. Green raw materials
2. New gas
3. Renewable energy
4. Sustainable mobility
5. Chain-efficiency
6. Built environment
7. Greenhouse as powerplant



Projects: total (preliminary results)

Number of projects per Innovation-theme
2004 - 2008



- Groene Grondstoffen
- Gebouwde Omgeving (incl. warmte)
- Duurzame Mobiliteit
- Kas Als Energiebron
- Nieuw Gas incl. CCS
- Ketenefficiency (incl. industr. warmte)
- Duurzame Elektriciteitsvoorziening

Projects **384 total**
Investments **€ 2 bln**
Funding **€ 0,3 bln**

Transition-paths



- Natural gas – biogas - hydrogen
- Biofuels
- Electric transportation
- Intelligent mobility



Sustainable mobility: policy

- Policy target 2020:
 - Public transport busses > 20% more efficient
 - Personal cars: emission standards down to 80 mg/km
 - New cars: efficiency 1:30
 - Infrastructure filling stations natural/biogas, electricity
- Instruments:
 - Green Lease
 - Green fiscal incentives
 - Biogas filling station infrastructure
 - DutchHy: H2-coalition Amsterdam – Rotterdam
 - Electric car Action plan

Built environment: policy

Policy target 2020:

- **New buildings: energy neutral**
- **Existing buildings: 30% more efficient, 2.4 mln dwellings**

Strategy:

- **Innovation programme + experimental areas**
- **Action plan executed by coalition of stakeholders**

Regional partnerships

Rotterdam Climate Initiative (i.a.)

Goal: 50% CO2 reduction in 2025



- CCS
- CO2 in horticulture
- LED streetlights
- E-efficient public transport
- Industrial e-efficiency

Lessons learned/ Recommendations

- **Key role for Frontrunners!**
- **Public/private and regional partnerships: powerful**
- **Connecting (innovative) people: vital activity!**
- **Focus on societal innovation**
not only technology
- **Combine focus climate change policy and business opportunities**
- **Be pragmatic**
 - *take benefit of opportunities*
 - *start small, enlarge gradually*
- **Communication important**
 - *concrete results: demonstrate and convince*

Energy Transition: a chance!

