

# Innovation strategies: What is needed to make an innovation reality?



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## Who we are ...

- VDI/VDE Innovation + Technik GmbH  
is – since more than 30 years – a service  
provider to (mainly) public bodies
  - Innovation agency, R&D programme  
management agency
  - Research and consultation services in the  
domain of innovation and technology policies
  - The Institute for Innovation and Technology  
(iit) is the 'R&D branch' of VDI/VDE-IT

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## An old example ...

- The Golf Ecomatic was introduced in 1993
- Start-stop system
- 4.4 l diesel / 100 km (53.5 mpg)
- About 3,000 units sold
- Considered as one as the most prominent ‚flops‘ in German car manufacturing history



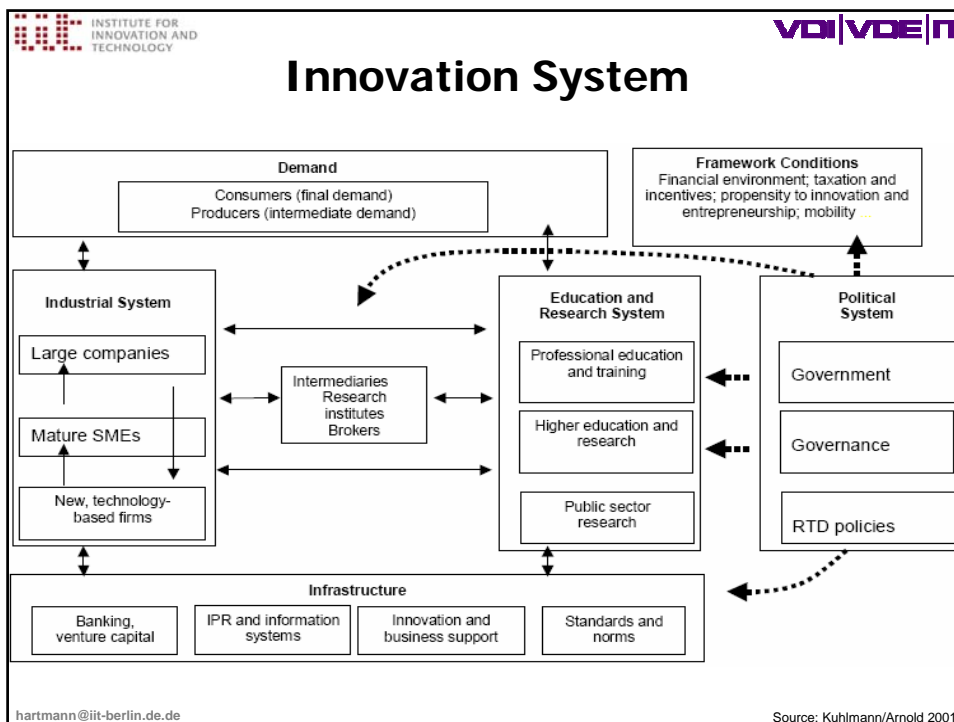
## What was missing? (1)

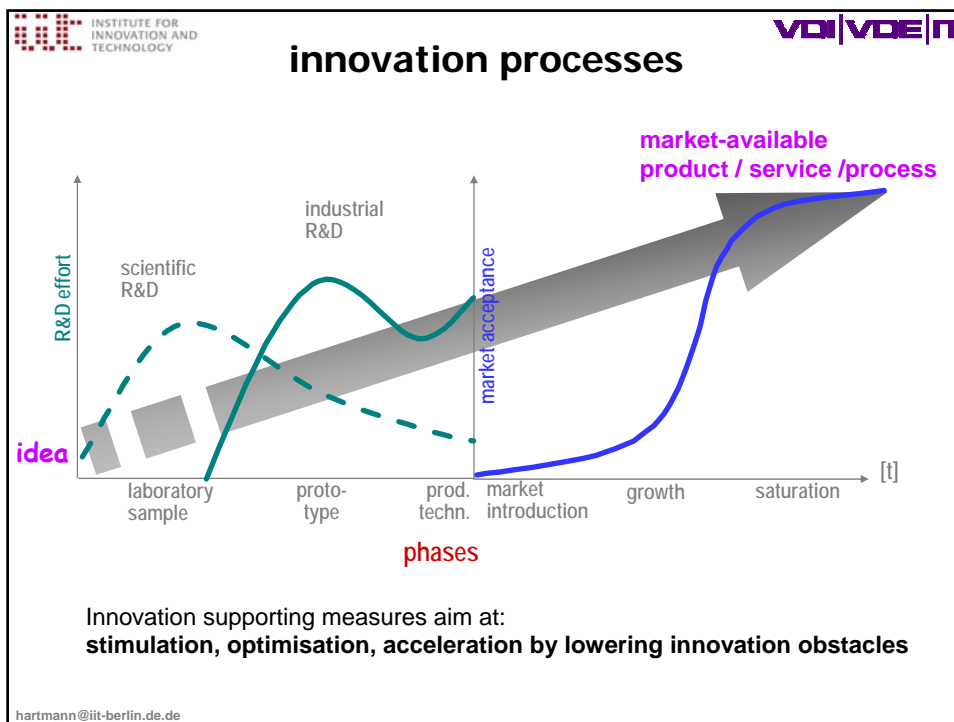
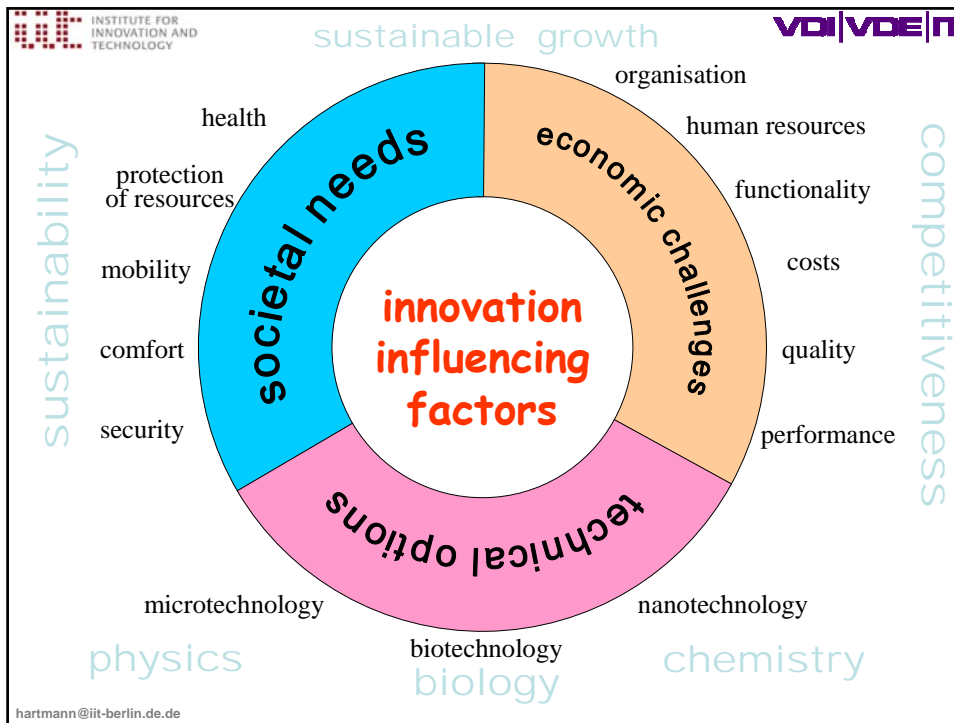
- Regulatory Framework
  - No ‚Porter / van der Linde effect‘
- Coherent product / marketing strategy of manufacturer
  - Competing Diesel-High-Pressure-Injection model (Golf TDI)
- Concern for users‘ habits and expectations
  - Unusual driving behaviour, unusual semi-automatic gear box


## What was missing? (2)

- Systemic innovation approach
  - Single product / single technology innovation
- Public awareness and acceptance
  - ‘Sportive’ car vs ‘rational’ car
- Awareness and knowledge among professionals
  - Car salespeople were not prepared to counsel prospective customers appropriately


cf. Knie, 1994  
Bieker, 2005







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## Innovation processes Trends to be Considered




from relay race to team play




- from **technology transfer** to **technology interchange**
- from **value chains** to **value nets**
- from **sectors** to **cross-sectoral innovation fields**
- from **national innovation systems** to **cluster-oriented transnational systems**
- from **globalisation** to **glocalisation**

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## Innovation processes Trends to be Considered



Example Electro Mobility:

- Automotive OEMs ..
- ... and suppliers ...
- ... and vendors ...
- ... and service suppliers (repair & maintenance)
- Energy suppliers
- City planning authorities
- Public transport
- Car rental services
- Housing services
- ....

- from ... to ...
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**Innovation processes trends to be considered**

**Example Electro Mobility:**  
Multiple products, multiple services  
'Hybrid product/service innovation'

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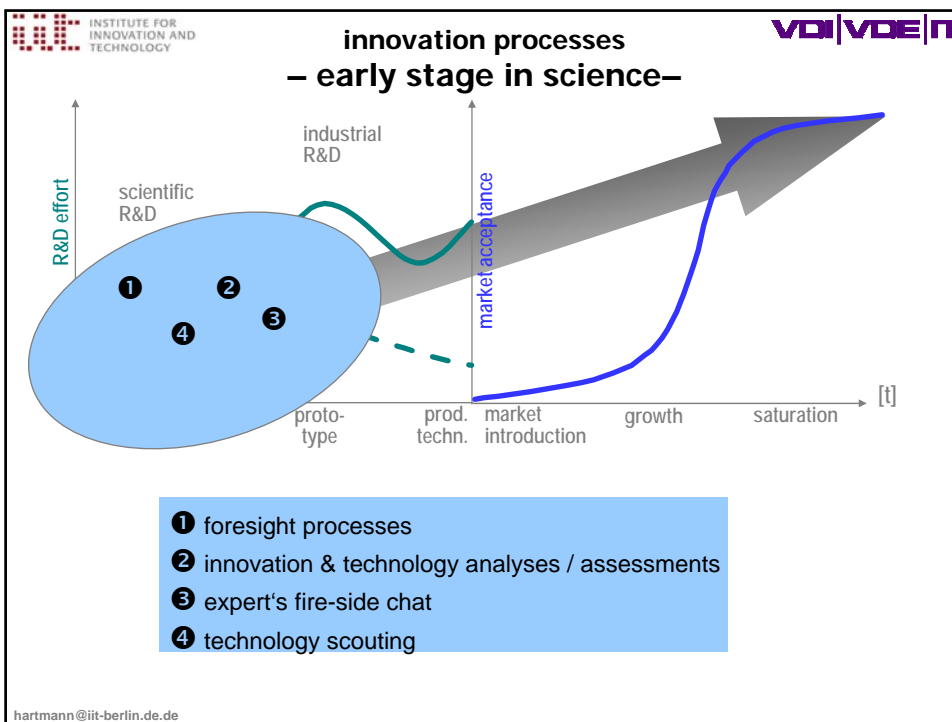
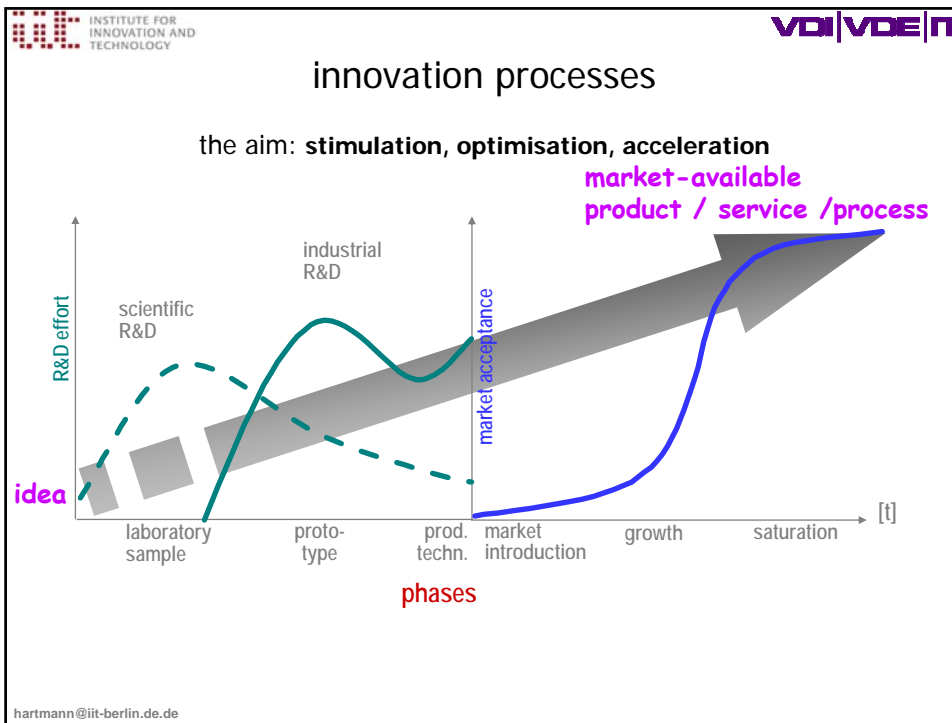
**Innovation processes trends to be considered**

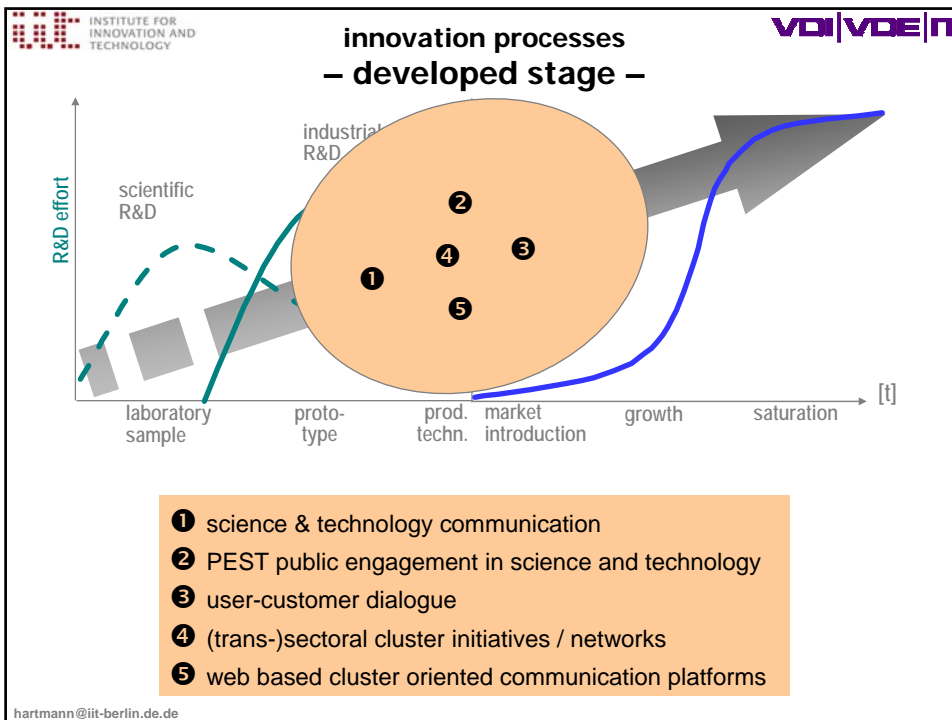
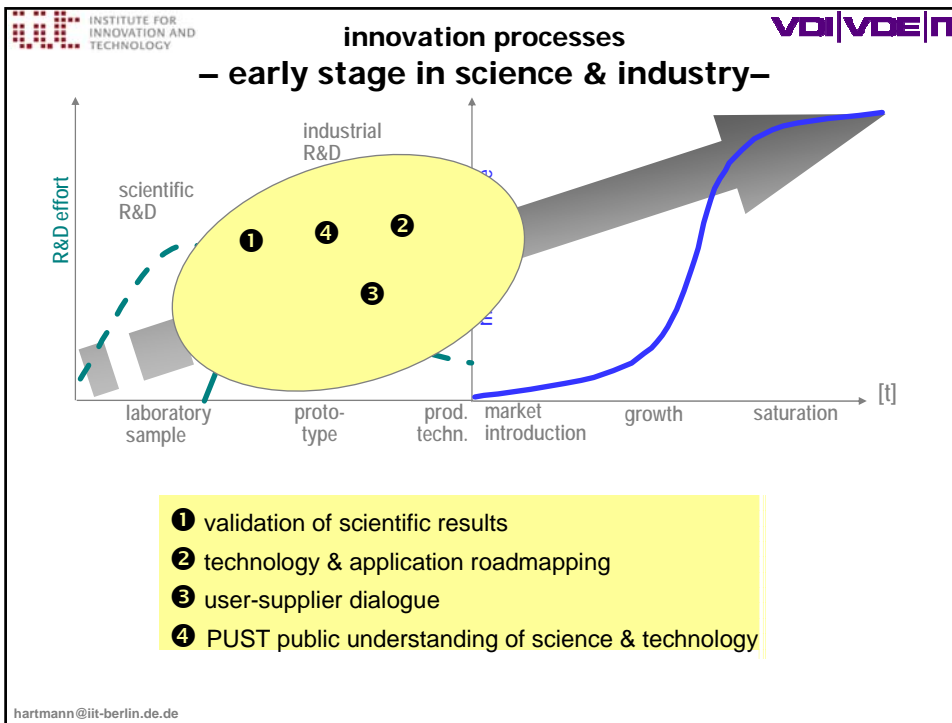
**from relay race to team play**

**Example Electro Mobility:**  
Relating global challenges to local structures, cultures and conditions

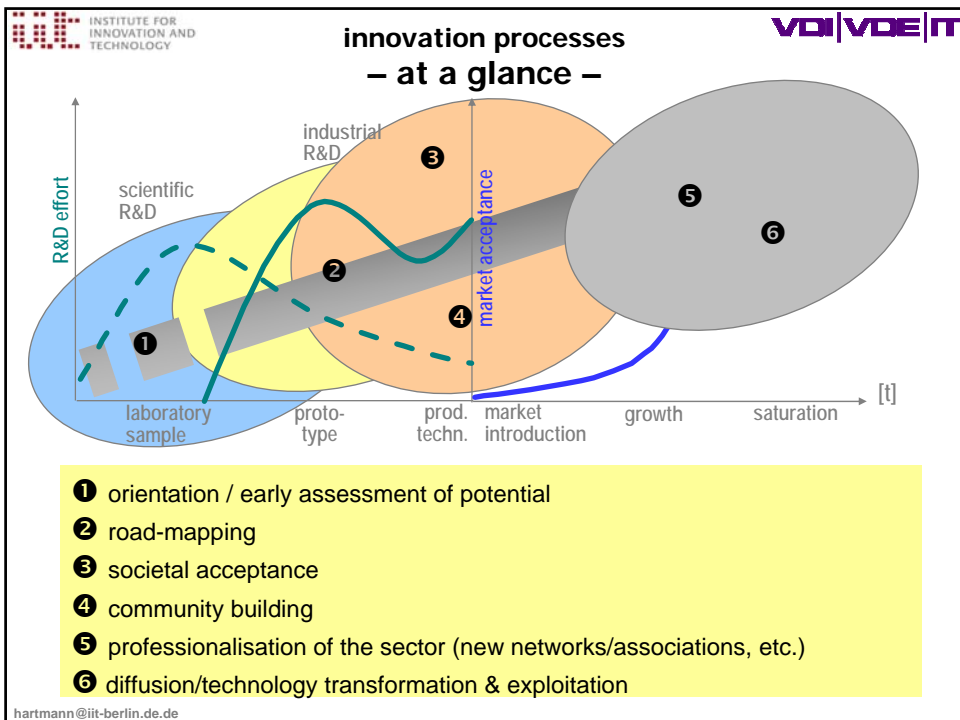
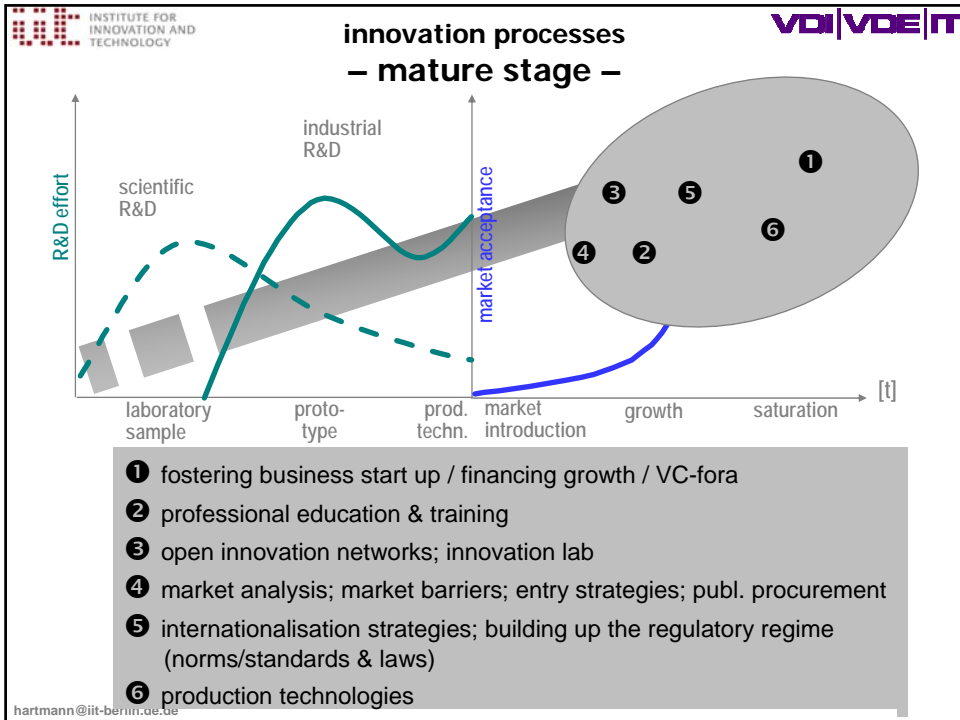
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## Electro Mobility: Current Issues in Germany (1)

- National Strategy Conference Electro Mobility
  - 25 / 26 November, 2008, Berlin
  - Kick-off for National Development Plan Electro Mobility
    - from basic research to market introduction
    - Germany as lead market for electro mobility



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## Electro Mobility: Current Issues in Germany (2)

- National Development Plan Electro Mobility: Technological Challenges
  - Energy storage / batteries
  - Vehicles, drive trains, components
  - Integration of vehicles into power grids
    - Vehicles as de-central energy storage devices
    - This might contribute to solving problems with renewable energies
    - **Systemic innovation approach!**



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### Electro Mobility: Current Issues in Germany (3)

- National Development Plan Electro Mobility: Framework conditions
  - Education and training
  - Recycling (e.g. batteries, scarce raw materials)
  - Standardisation (e.g. power plugs)
  - City planning (e.g. charging stations)



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### Electro Mobility: Current Issues in Germany (4)

- National Development Plan Electro Mobility: Markets
  - Business cases at the interface of automotive and energy industries (and some others ...)
  - Early stage user integration
  - Speeding up market penetration (e.g. public procurement)



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# Thanks for listening ...



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