

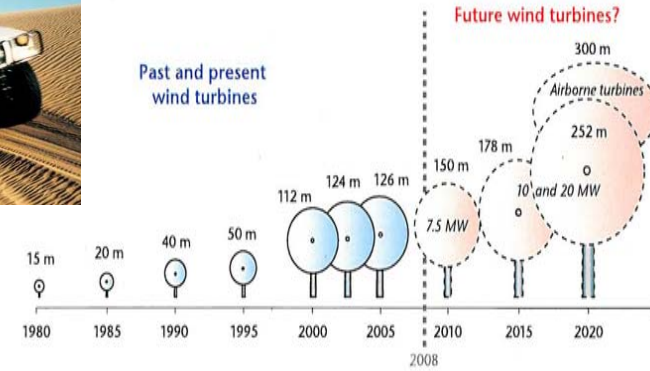


**WBGU**

GERMAN ADVISORY COUNCIL ON GLOBAL CHANGE



Growth in size of wind turbines since 1980

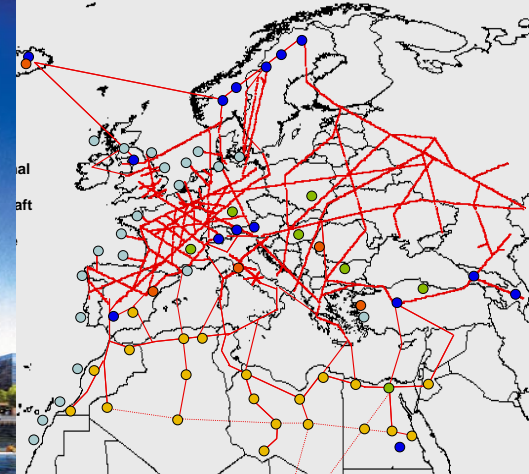


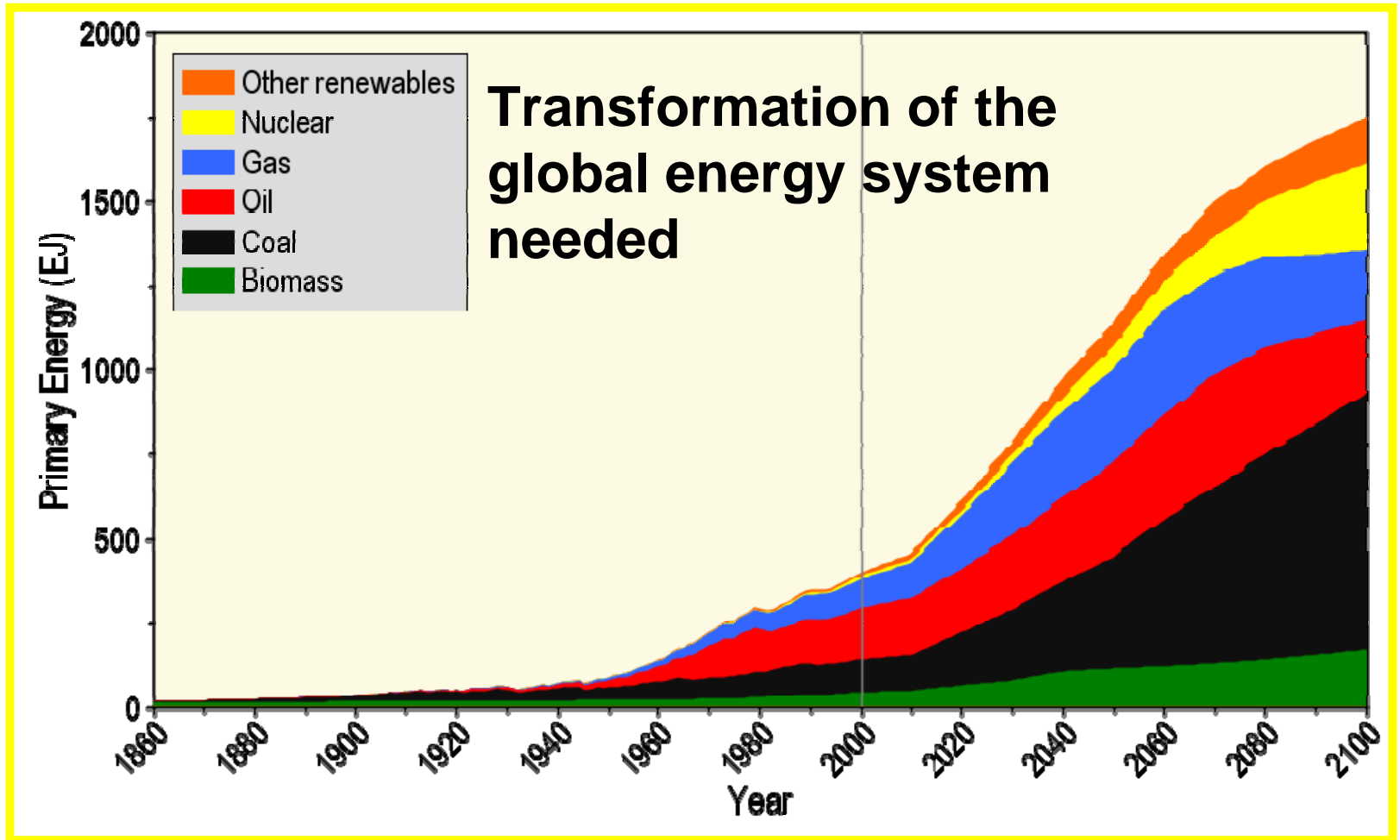
Source: Adapted from EWEA (2009).

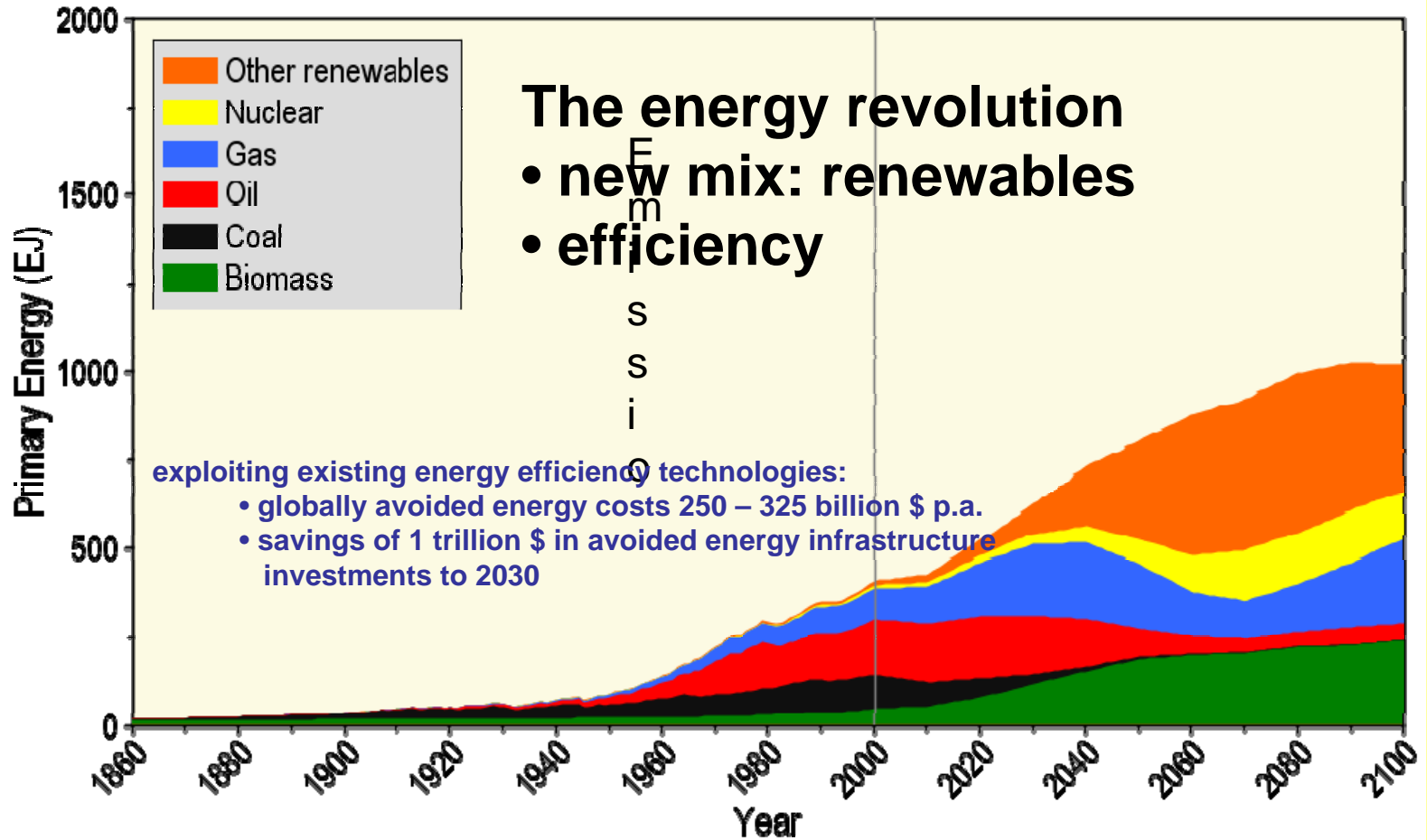
# Low carbon transformations Conceptual ideas

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CCICED AGM 2010  
Beijing







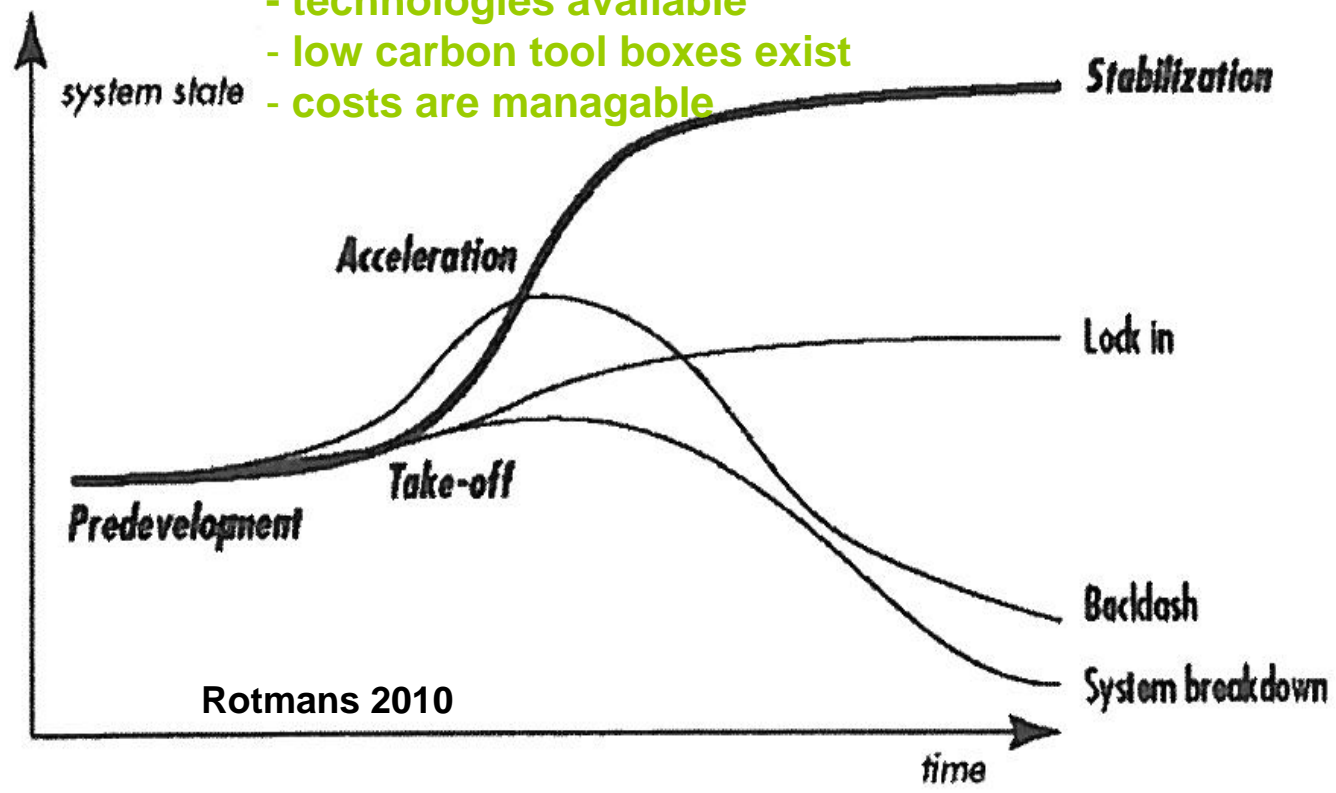


## Transformation path from a high to a low carbon economy

### Strategic decisions for radical change

#### Good news:

- technologies available
- low carbon tool boxes exist
- costs are manageable

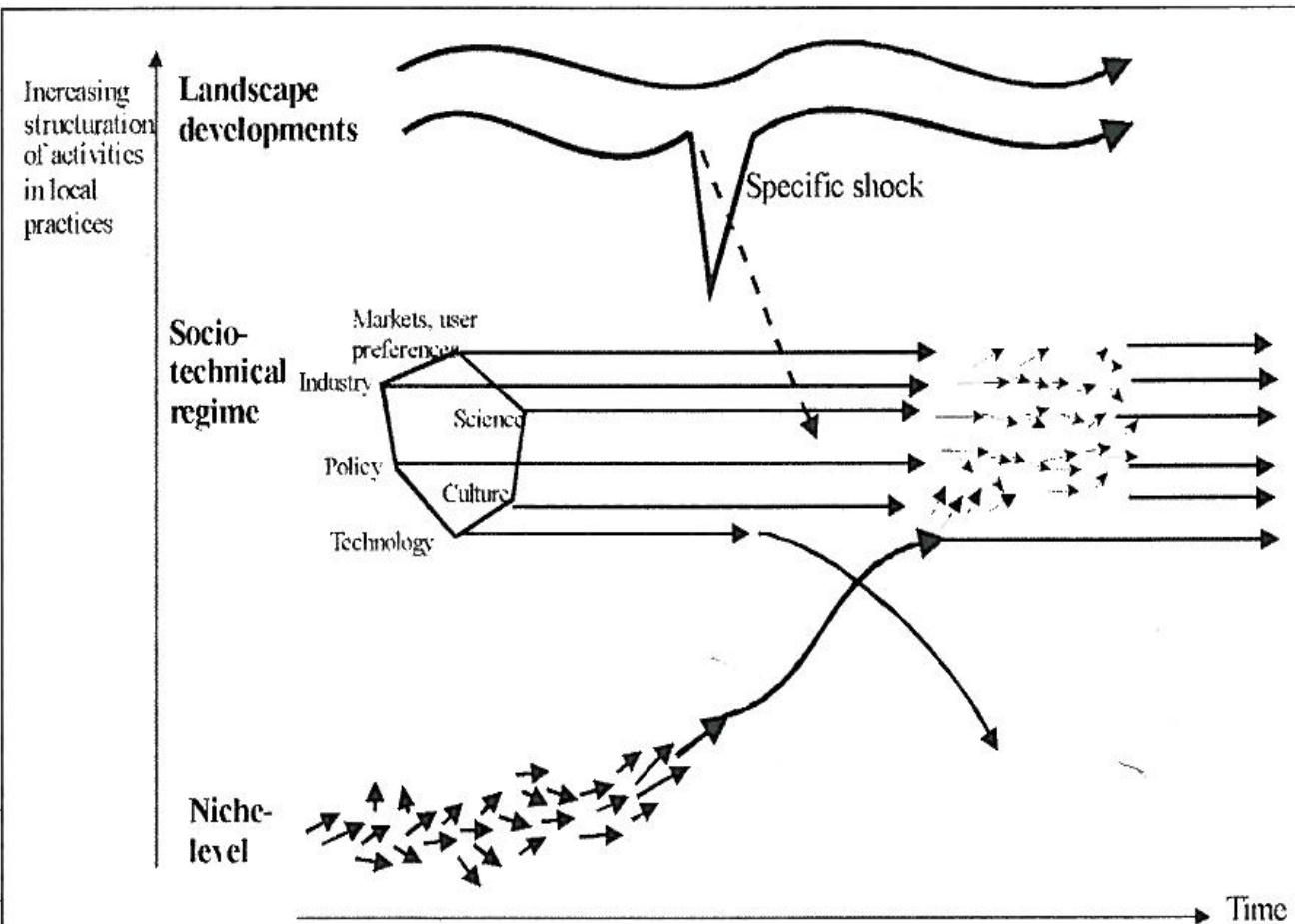


#### Major challenges:

- path dependency/ politics (carbon subsidies)
- time pressure/ speed
- urbanization revolution
- cheap coal
- frozen climate negotiations



## A multilevel perspective on transformation



**Major trends are facilitating the transformation:**

- communication technologies
- global learning processes
- peak oil

**Transform the high carbon regime into a low carbon one:**

- price for carbon
- efficiency standards
- road maps for sectors (mobility, cities, industry, forests)
- innovation, R&D, human capital

**Low carbon pilots and pioneers:**

- cities
- investors, civil society, architects
- R&D, business schools, CCICED