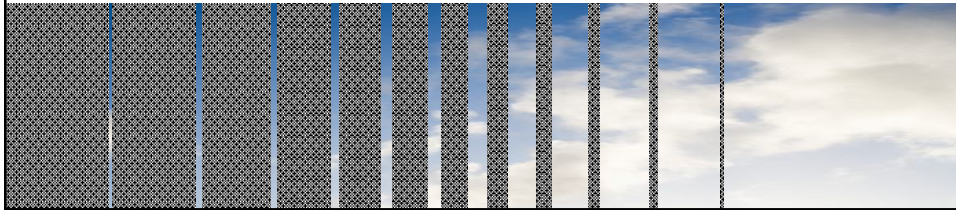


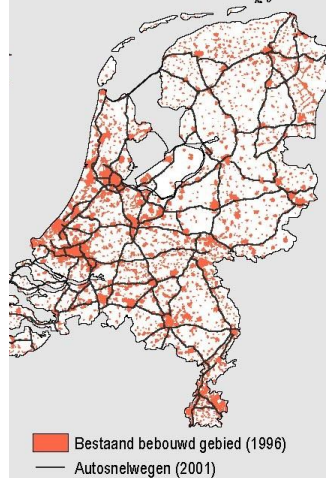
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Why are transport projections often wrong?

Hans Nijland



Gerealiseerde hoofdwegennet 2001



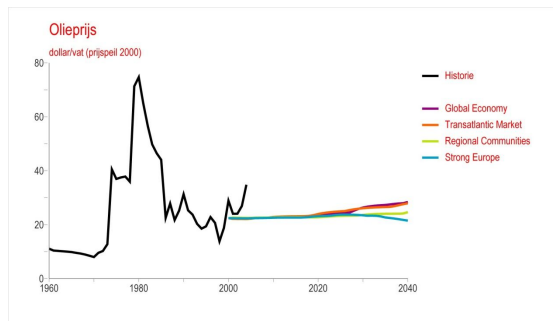
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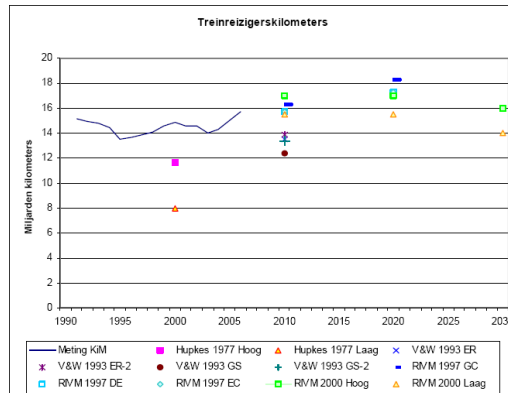
1977: WRR general exploration of the future (2000)
2004: review

- Lessons:**
- we don't know the unknown (congestion)
 - recent history dominates our views (oil price)

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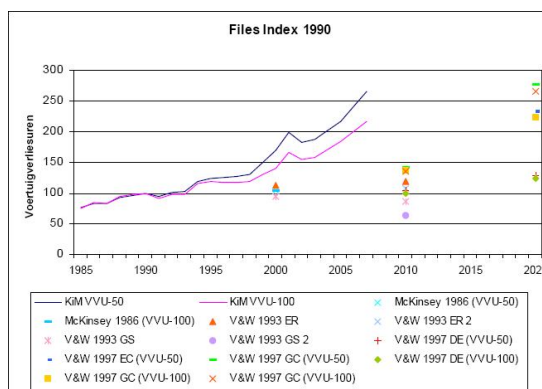


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Source: Annema & de Jong, 2009

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Lessons:

Source: Annema & de Jong, 2009

Uncertainty highest when a lot of policy (and new technology) is involved

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Flyvbjerg: costs overruns lower-than-predicted revenues



Demand forecast

Type of project	Number of cases (<i>N</i>)	Average inaccuracy (%)	Standard deviation
Rail	25	-51.4	28.1
Road	183	9.5	44.3

- 84 % of rail forecasts wrong > 20 %
in all 20 countries of the study in 5 continents,
9 out of 10 overestimation
- Inaccuracy is constant during 30 years → estimates have not improved

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Why?



-technical explanations (inadequate data, inadequate models etc.)
(Ascher 1978, Morris and Hough 1987, Wachs 1990, Flyvbjerg 2002)

-psychological explanations (optimism bias)
(Lovallo and Kahnemann 1993, 2003)

-political-economic explanations ('strategic misrepresentation', lying to win competition for scarce funds)

Source: Annema et al., 2008

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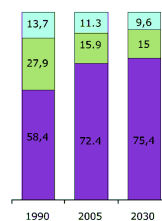
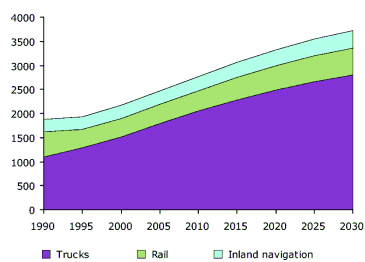
Source: Hilbers et al., 2010

**Underestimated costs + overestimated benefits = project approval
(Wachs 1990, Flybjerg 2002, 2005)**



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% of total transport



<http://www.eea.europa.eu/data-and-maps/figures/model-split-of-freight-transport-in-eu-27-1990-2030>

2001 white paper (Time to Decide)

2011 white paper (roadmap to a Single European Transport Area)

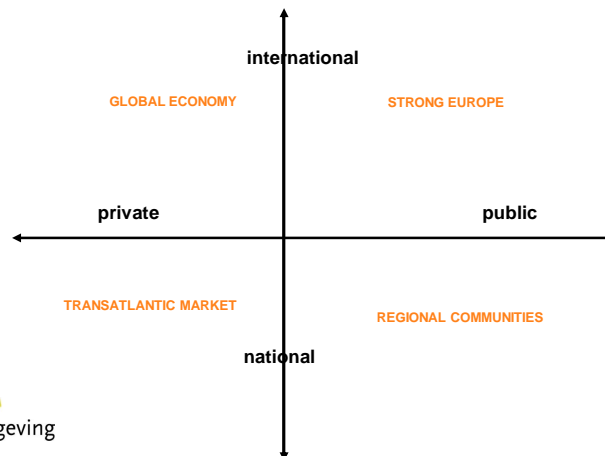
2030: 30 % of road transport >300 km by rail and inland navigation

2050: 50 %

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How to deal with an uncertain future (1)

- recognize uncertainty: scenarios



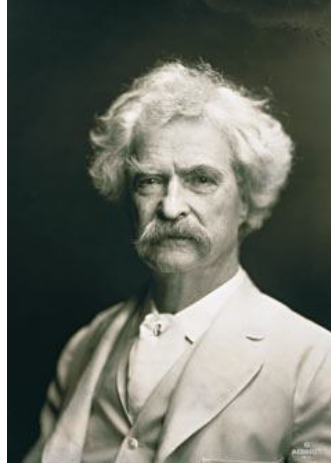
How to deal with an uncertain future (2)

reference class forecasting



Kahneman

It's difficult to make predictions, especially about the future



Mark Twain (1835-1910)

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