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How Will We Earn Our Daily Bread in 2040?



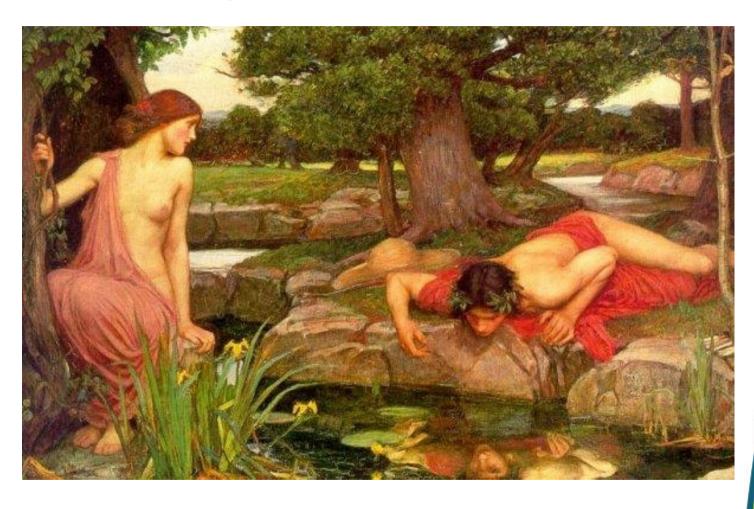
2040

This Lecture

Part I Ingredients

- Part II Cooking
- Part III Main course
- Part IV Dessert (or desert?)

Part I – the ingredients



How to approach the future

Verrassingsvrij

Onzeker

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Exogeen NL 2040

Vergrijzing Verdeeld

Four Futures

'Sommige milieustudies' (Al Gore)

Beïnvloedbaar

Innovatieplatform (wensbeelden)

How can one imagine 2040

How long is a period of 30 years?

- **1980**
 - EU consists of 9 countries
 - Cold war intensifies with Brezhnev-Reagan disputes
 - Beatrix becomes Queen of the Netherlands
 - Almere welcomes its first inhabitants
 - First personal computer
 - Economic crisis in the Netherlands

Times Are a-Changin'



Times Are a-Changin'

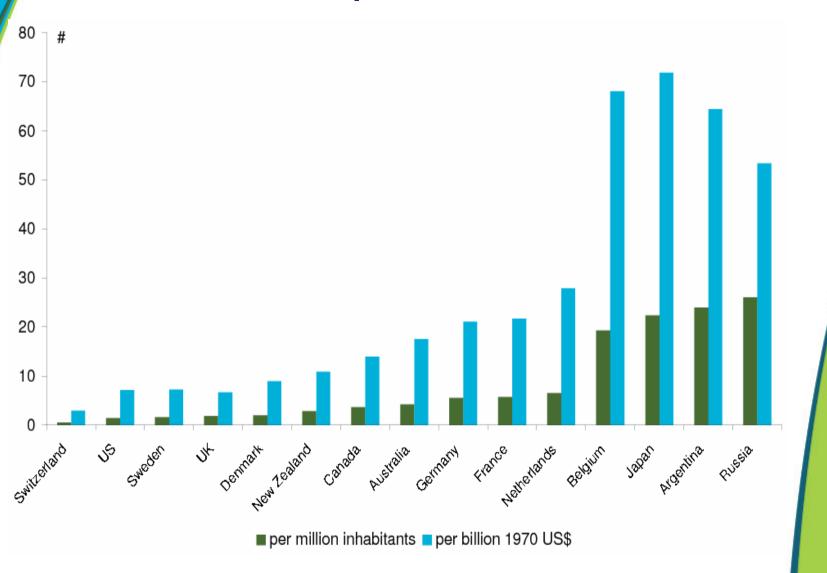
How can one imagine 2040

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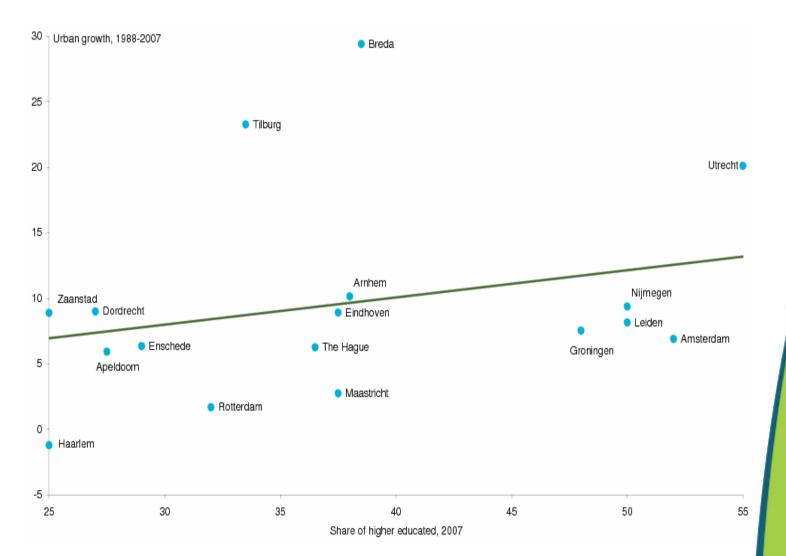
What are our assets?

- Smart people
 - Highly educated
 - Entrepreneurship
- Strong cities
 - First country in Europe to urbanise
 - Concentration on trade (VOC)
 - Liberal attitude towards new ideas and people

Assets: Smart People



Developments: The Rise of Skilled Cities



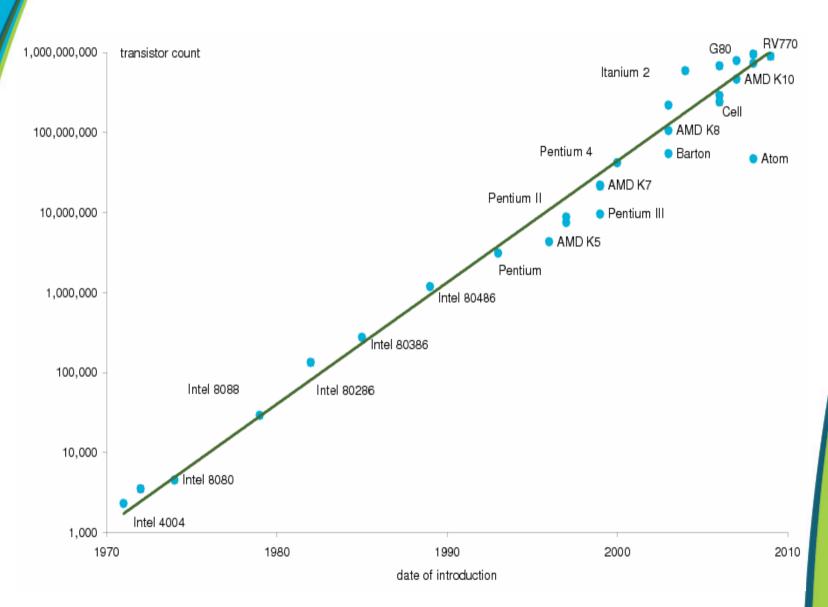


How can one imagine 2040

- How long is a period of 30 years?
- What are our assets?
 - Smart people
 - Strong cities
- What are the main trends
 - Technology, cities and human capital
 - Global developments



Developments: Computerisation

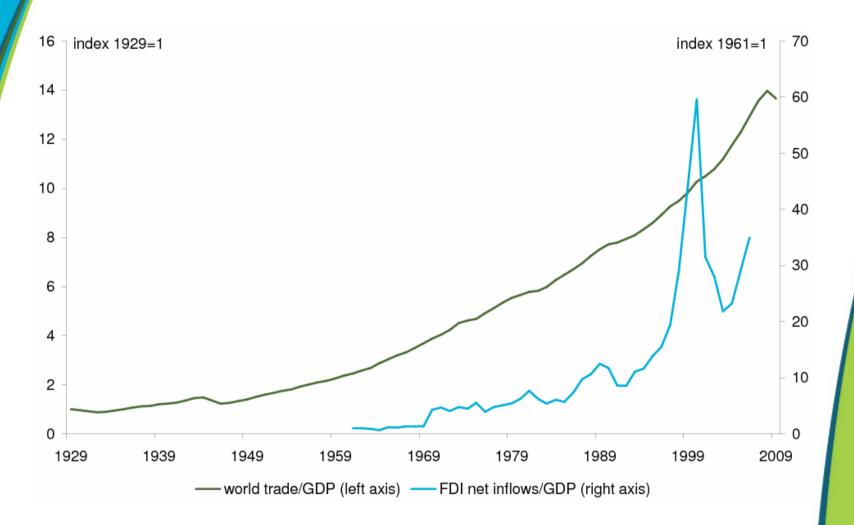


Technology, cities and human capital

- ICT has changed the way we work
- ICT has changed urban structure
- Human capital drives long-run urban success
- Technologies are developed in cities
- Cities are drives of productivity growth

Globalisation Increases Market Size





Global Developments

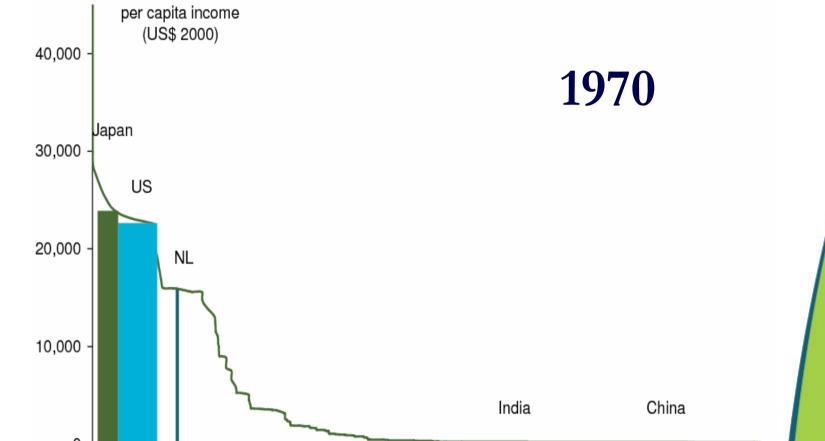
Globalisation increases market size

Demand for educated workers outpaces supply

The world becomes more equal

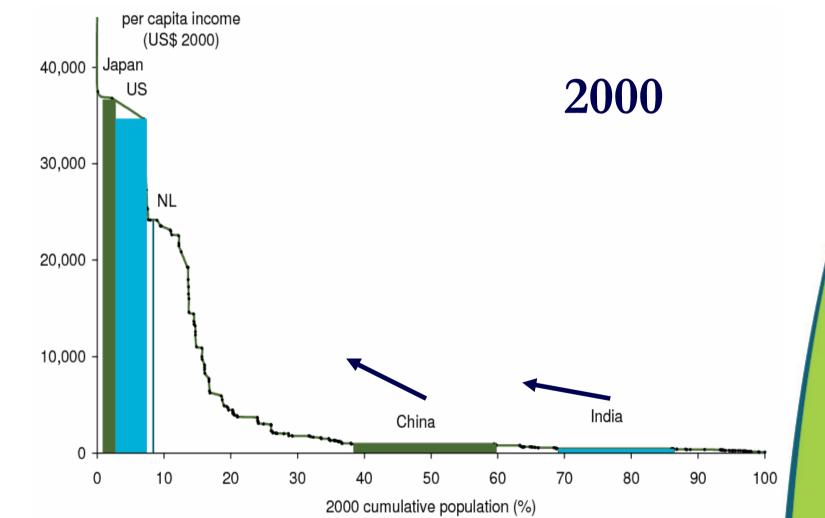
Western dominance is fading away

Western Dominance is Fading Away



1980 cumulative population (%)

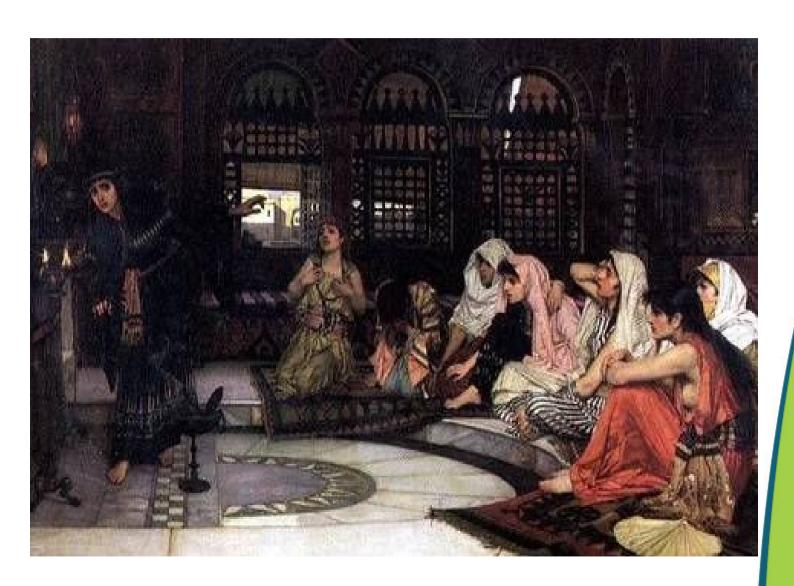
Western Dominance is Fading Away

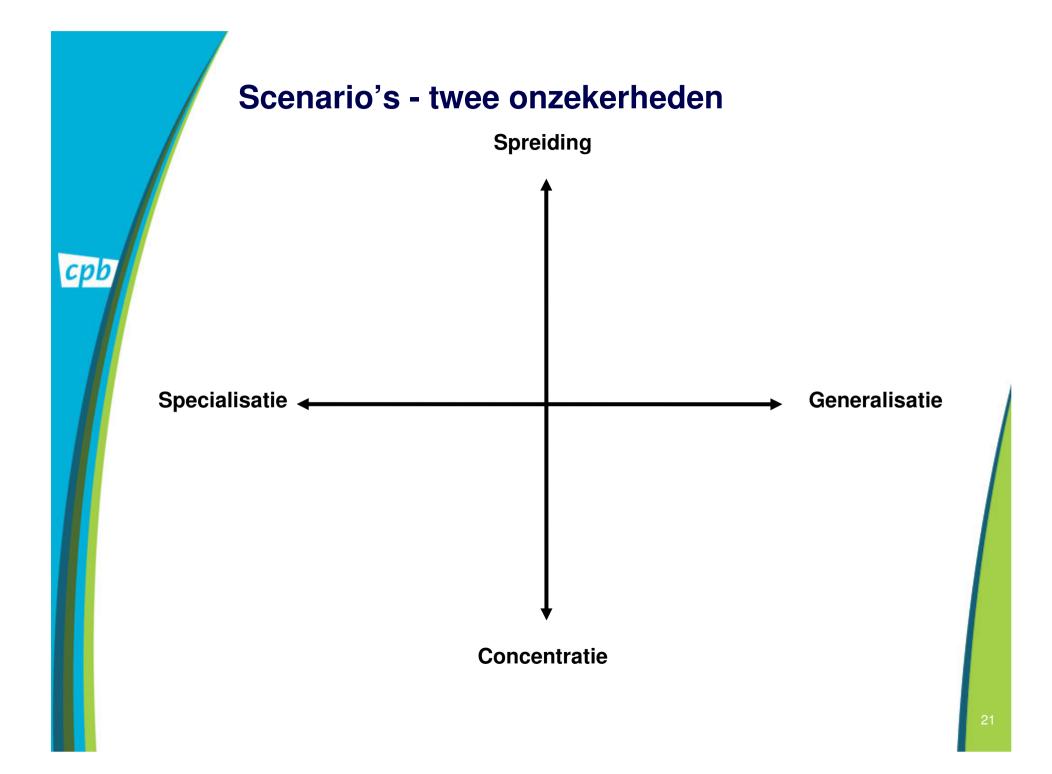


Five Lessons

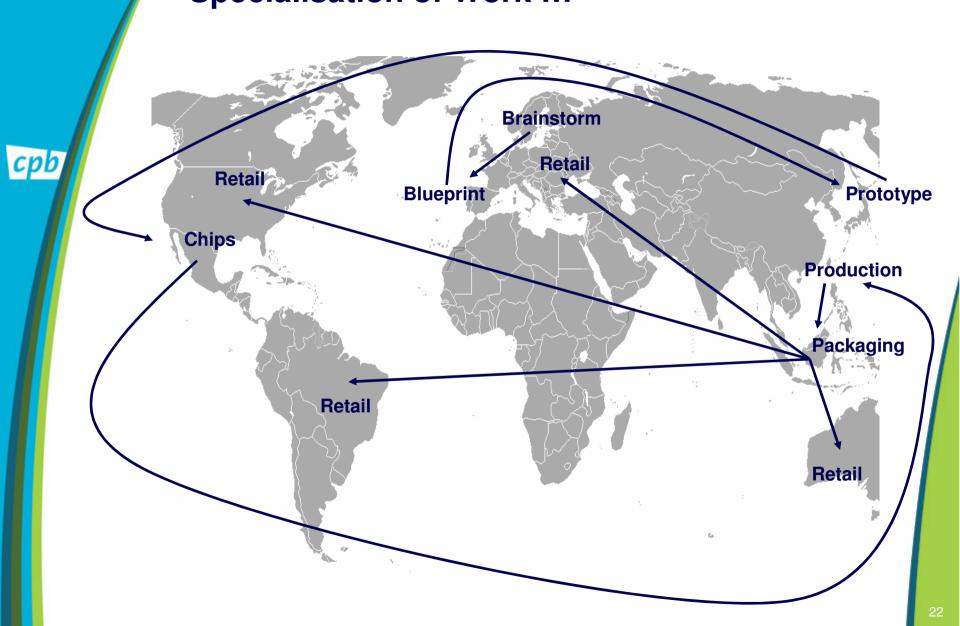
- 1. Big events are overweighed
- 2. Focus on technological trends
- 3. New developments tend to be overlooked
- 4. Change occurs slowly
- 5. Imagination is crucial
- Scenario's: consistent stories of possible futures

Part II – the cooking





Specialisation of Work ...



Organisation of Work

► CEO Manager's information costs Communication Cost of managers costs acquiring information, Cost of measured using the transmitting presence of ERP information Plant Plant Plánt between CEO Manager 2 Manager 1 Manager 3 and PM, and between PM and workers. Worker's measured by information presence of costs networks Cost of workers acquiring information, measured -->Workers Workers Workers using presence of CAD/CAM

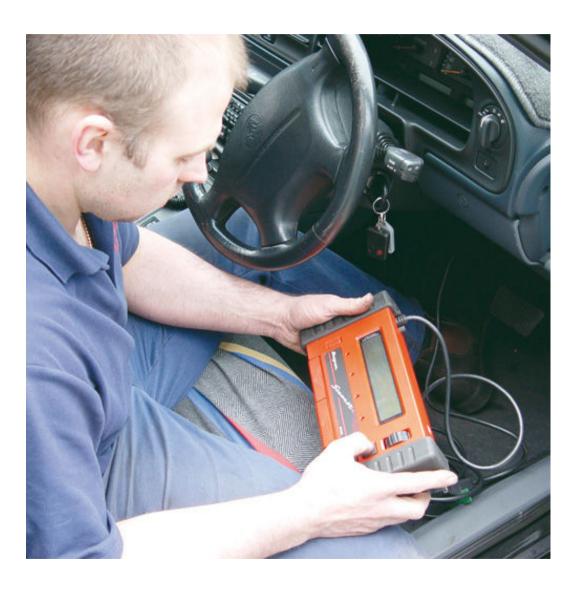


Smart People



- Communication technology ...
- ... leads to unbundling of tasks ...
- ... global knowledge exchange ...
- ... and production by specialist workers

... or Generalisation of Work





Smart People

- ... or generalisation
 - Mechanics masters more complex systems
 - Insurance agents with broad portfolio
 - Expert system to diagnose illness
 - Design programmes
 - Write your own emails





Smart People



- Communication technology ...
- ... leads to unbundling of tasks ...
- ... global knowledge exchange ...
- ... and production by specialist workers

Generalisation

- Information technology ...
- ... bundles tasks ...
- med by autonomous workers

Cities Are the Place to Be



Concentration of Economic Activity ...







Strong Cities

- Concentration
 - Economies of scale ...
 - ... with face-to-face interactions ...
 - ... to develop new technologies

... or Scattering of Economic Activity







Strong Cities



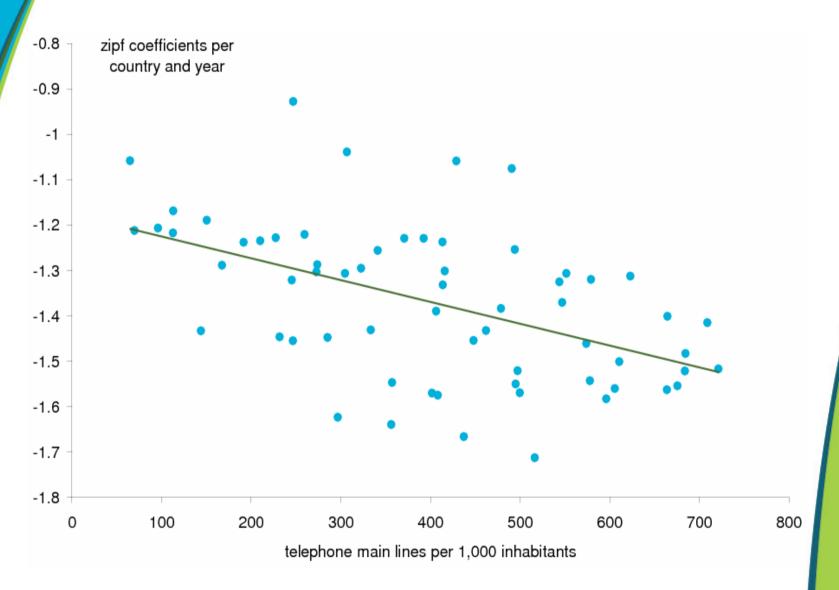
- Economies of scale ...
- ... with face-to-face interactions ...
- ... to develop new technologies

Scattering

- Networks of small cities ...
- ... with excellent connections ...
- ... facilitated by ICT



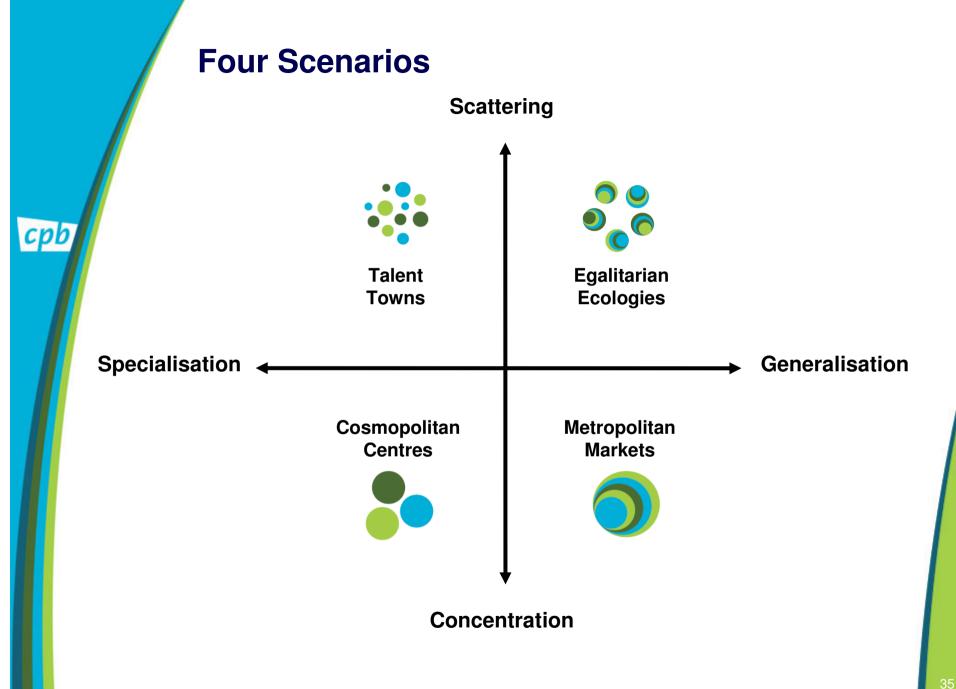
Changes in Urban Structure and ICT





Part III - main course





Talent Towns









Talent Towns

- Communication technology: specialists
- Interaction and surroundings: small cities
- Very dynamic: opportunities and challenges
- High incomes, yet high competition
- Low incomes under pressure
- Netherlands: business services
- Manufacturing to Asia





Cosmopolitan Centres











Cosmopolitan Centres

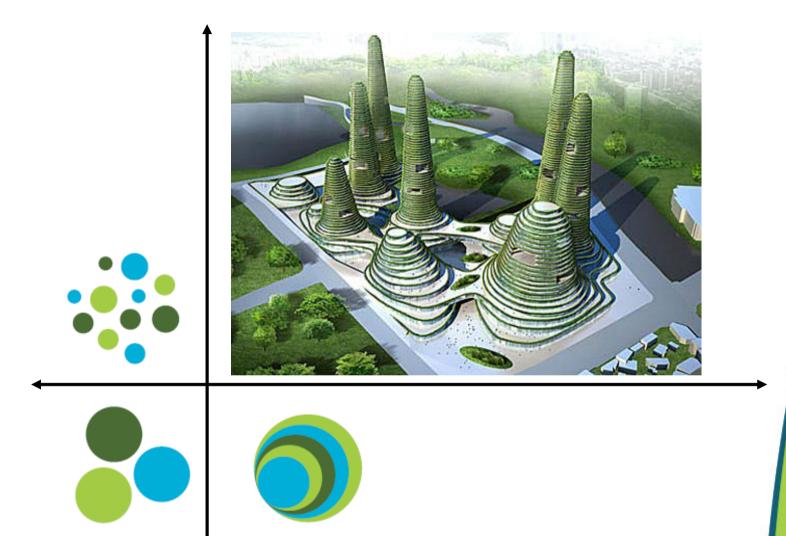




- Bio- and nanotechnology: science based
- Communication: global division of tasks
- Cities: clusters of specialised activity
- Risk: other city takes over
- Substantial income inequality
- Examples of possible Dutch clusters:
 - water, biomass, medical, logistics, creative



Egalitarian Ecologies



Egalitarian Ecologies

- Information technology: generalists
- Product variation: local demand
- Medium-sized cities: quality
- Moderate growth of incomes:
 - Limited technological progress
 - Wealth to raw materials suppliers
- East and south of Netherlands flourish







Metropolitan Markets











Metropolitan Markets







- Bio- and nanotechnology break through
- Large firms: marketable applications
 - Research centres and face-to-face contact
- Metropolis attracts firms and people
- Hinterland lags behind
- Large income inequality
- Netherlands large enough?

Part IV: dessert (or desert?)





Sound policy making

Dessert

Desert

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Uncertainty Be prepared Fata morgana

Imagination

Take your chances

Protection of 'old' industries / firms

Economics

Sound cost-benefit Solve today's analysis

problems only

Infrastructure

- Uncertainty
 - Connection in TT
 - Ring road in MM
 - Imagination
 - Wubbo Ockels
 - Old solutions may not be the best solutions for new problems
 - Road pricing?
 - Economics
 - Invest, only if benefits ≥ costs

Smart People Innovate More







Egalitarian Ecologies

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Excellence

Creation

Public-private cooperation

Targeted policies

Cosmopolitan Centres



Accessibility

Utilisation

Innovation credits

Generic policies



Metropolitan Markets

Ease of doing business in 2040

■ TT

- Wereldwijde infrastructuur goederen en ideeën
- Lage belastingen op arbeid en goederen
- Level-playing field in EU/wereld

◆ CC

- Kennisintensieve infrastructuur binnen stad
- Belasting op bedrijven en agglomeratie
- Level-playing field in wereld

SEE

- Vrijhandel in goederen en ideeën
- Relatief hoge lokale belastingen op arbeid en agglomeratie
- Land als belangenbehartiger

■ MM

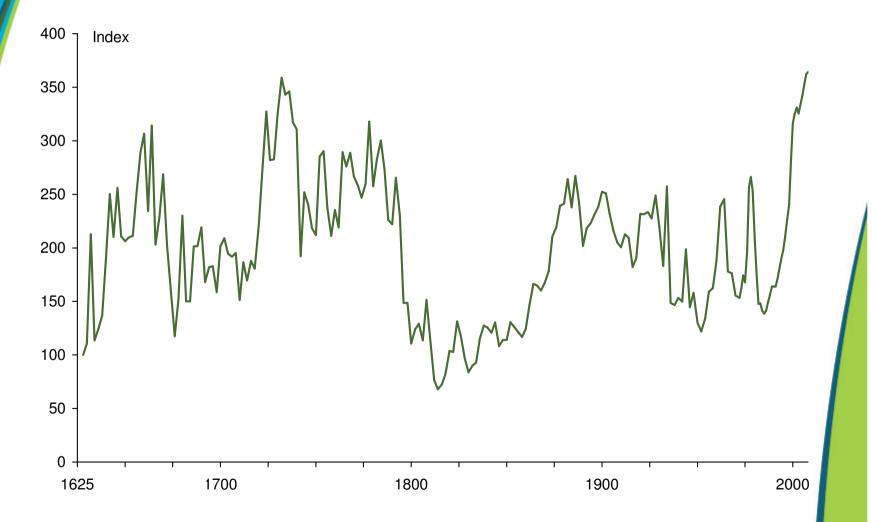
- Megasteden met goede interne structuur
- Hoge lokale belastingen
- Stad als economisch powerblock

Stelling 2

De overheid doet niks om de Nederlandse industrie te beschermen

- Onzekerheid welke industrie?
- Verbeelding investeer!
- Economie externe effecten
- When economic revolutions take place and/or new technologies evolve, the city of Amsterdam flourished

Huizenprijzen in Amsterdam: de herengracht index 1629-2007



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