



UNIVERSITY OF AMSTERDAM

Institute for Interdisciplinary Studies

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*Dr. Coyan Tromp*  
*28 Jan 2025*

# **Unleashing students' creative potential via scenario development**



# Who am I?

Curriculum Developer for the Institute of Interdisciplinary Studies:

- Bachelor Future Planet Studies (FPS), amongst which the courses:
  - Reflexive Design Project.
  - **Scenario Planning.**
- Lecturer at FPS and elsewhere:
  - Philosophy of Science.
  - (Future) rol of Generative AI in education (honours course).



Modern Campus: Personalized Learning with AI Integration



Virtual Study Space: Personalized, AI-Driven Learning  
"Using a projector | text = adaptive learning, tailored to your pace"



Research lab: Vibrant and Innovative with AI



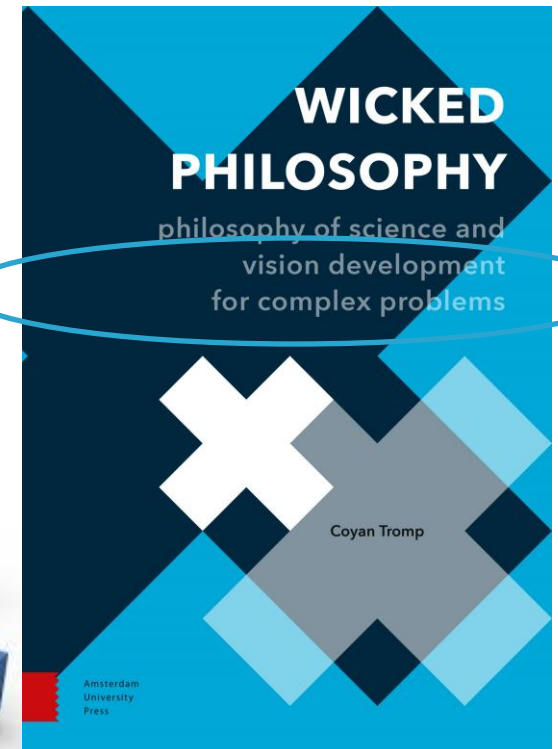
Modern Classroom: Inclusive and Empowered by AI



# Wicked Philosophy – for Philosophy of Science & Scenario Planning

## Ch6 - The Future of Science:

- Vision-Based Science and Science-Based Visions.
- Science and Futures Thinking: Combining Know-What with Know-How.





# The Scenario Method

1. Identifying Focal Issue & Problem Analysis
2. Trend Analysis & Selecting Driving Forces
3. Design Scenario Matrix & Develop Scenarios
4. Reflect on Policy Implications & Formulate Policy Advice

See knowledge  
clip [Introduction  
to the Scenario  
Method](#)

*Week 1*

Identifying  
Focal  
Point



*Week 2*

Identify  
Driving  
Forces



Identify  
Critical  
Uncertainties



*Week 3*

Develop  
Plausible  
Scenarios



*Week 4*

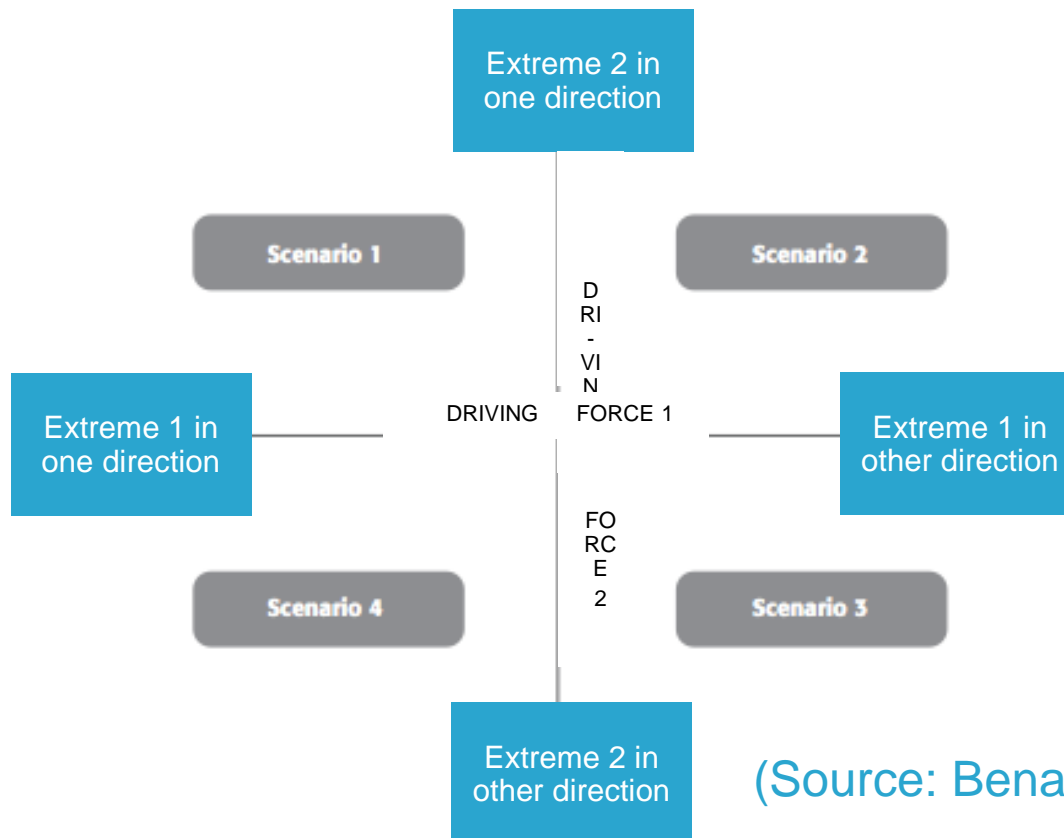
Discuss  
Implications  
& Paths



(Source:  
[scenarios2  
strategy.com](#))



# Scenarios: possible futures

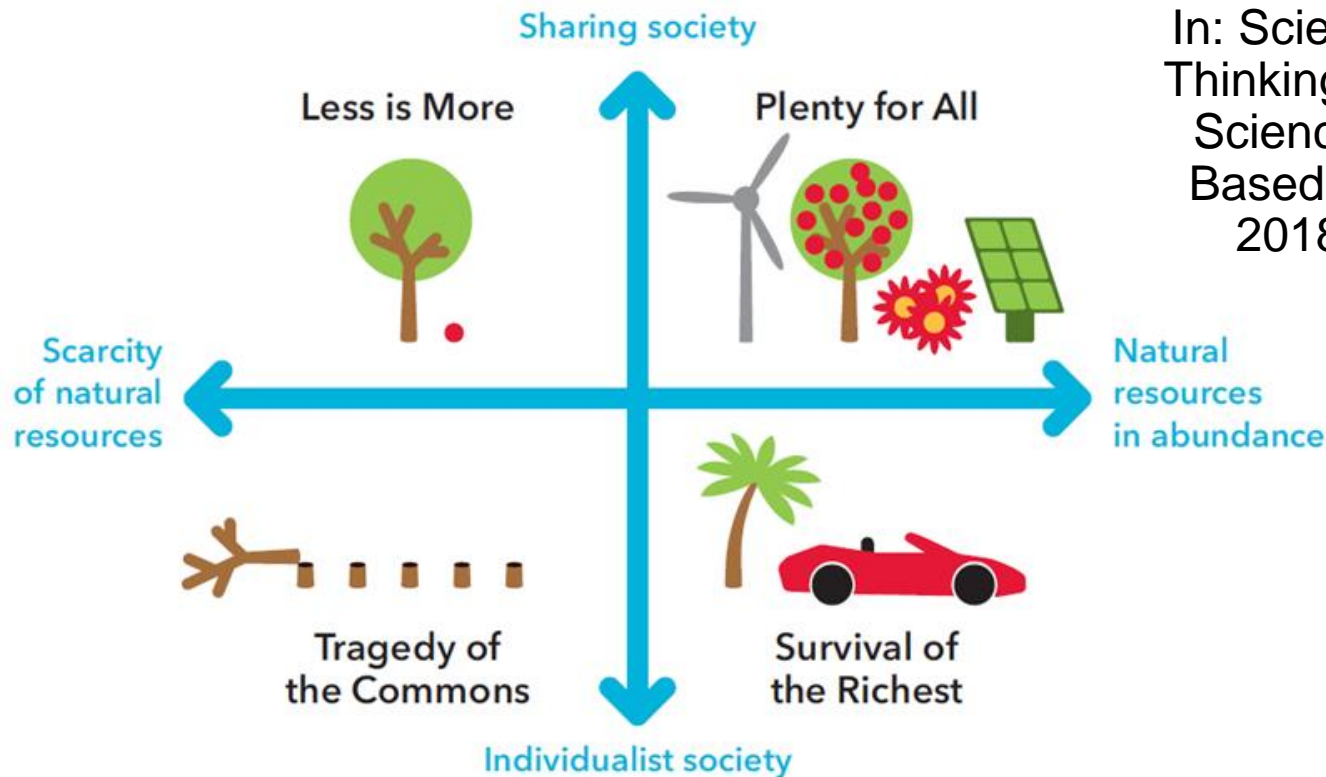


(Source: Benammar *et al.*, 2006, p. 11)



# Future Visions – Future Scenarios

## Four possible worlds



In: Science and Futures Thinking & Vision-Based Science and Science-Based Visions (Tromp 2018, p. 142-153)





# Knowledge clips, amongst others:

Introduction into the scenario method, including

- An explanation of how to select the main drivers for a matrix.
- Explanation of the six pillars of the STEPLE(D) approach, which can help students detect important drivers and also help to develop their future scenarios.

## POLITICS

- Government type and policy
- Funding, grants and initiatives

## ECONOMY

- Inflation and interest rates
- Labour and energy costs

## SOCIAL

- Population, education, media
- Lifestyle, fashion, culture

## TECHNOLOGY

- Emerging technologies, Web
- Information & communication

## LEGAL

- Regulations and standards
- Employment law

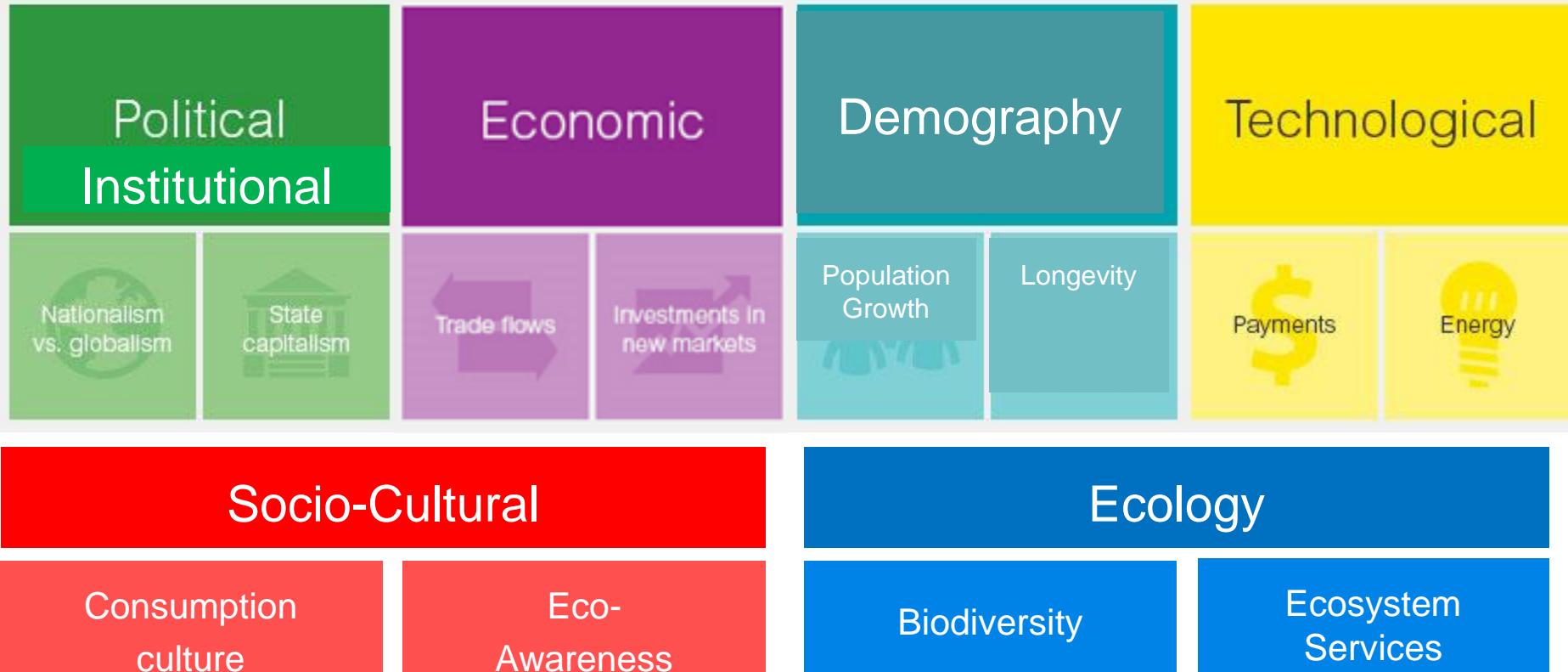
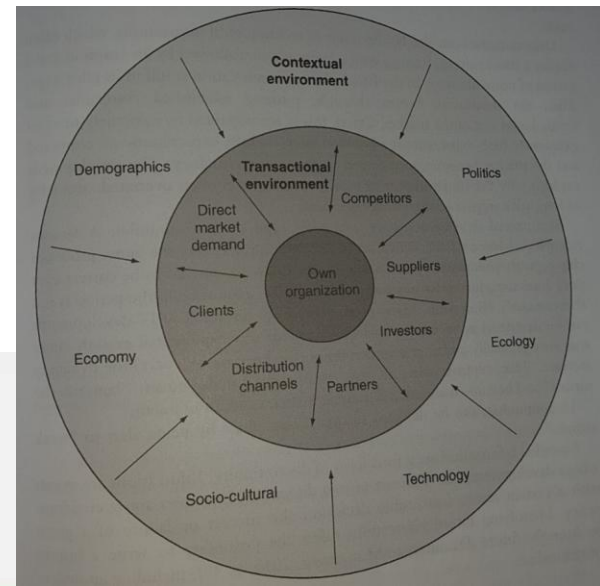
## ENVIRONMENT

- Weather, green & ethical issues
- Pollution, waste, recycling



# Developing Scenarios

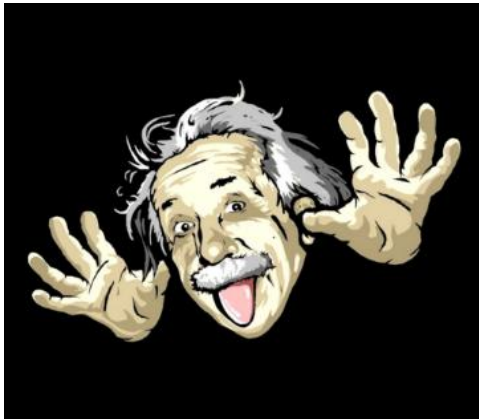
Using the STEPLE(D) method  
(cf. Nekkers, 2016, p. 19 →)





# Knowledge clips, amongst others:

Scenarios: Science or Fiction?



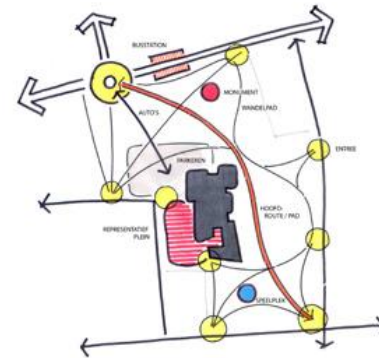
- Preferably, scenarios are based on both quantitative and qualitative analyses.



# Knowledge clips, amongst others:

Scenario development as source of inspiration:

- Stimulation of creativity and outside-the-box thinking.
- Developing inspiring and leading / binding visions (using narratives and metaphores).
- Bending threats into the direction of challenges.





# Masterclass Imaginative Thinking with theater makers

- What is the role of art and our imaginative capacities in scenario development? How can it help us to envision possible, desirable future worlds?
- Presentation of various future climate scenarios, mixing cabaret and science, guiding the audience on an imaginative journey about the consequences of climate change.
- For our students: exercises in out-of-the-box thinking and stimulating their imagination, applied to their context, to their chosen topics for scenario development.

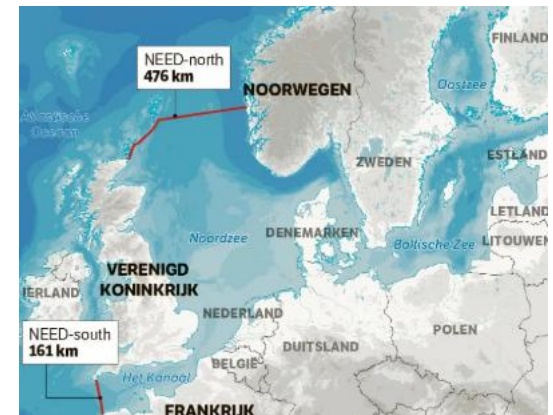
# Masterclass Imaginative Thinking with theater makers

- Are there any scenarios, any future world visions that are taboo?
- If so, why is that?
- What can we learn from imagining such 'forbidden' world visions?
- What insights do they provide for now and in the future?
- Can you think of a taboo scenario for your own topic?



# Masterclass Imaginative Thinking with theater makers

- Other show: 'Overvloed' (Superfluous / Abundance), together with Physical Oceanographer Sjoerd Groeskamp.
- To protect 15 European countries against sea level rise, he proposes to build massive sea dams across the North Sea and English Channel, which will cut off the North Sea from the rest of the Atlantic Ocean.
- Radical scenario to raise awareness and enhance discussion.





# Masterclass Imaginative Thinking with theater makers

- Show: How do you think things are going?
- Singing a 'Scenario Song' in which the future is going to look ever more grimm.
- Thus making people realize we really need to do something if we want to avoid the worst case scenario from happening.
- Highlighting the role storytelling can play in developing desirable futures or to avoid undesirable futures.



**Cor Burger**



# Scenario Development & Planning

- Much desired skills on the labour market - see for instance the challenges of:

JORIAN BAKKER (COHORT '09)  
Master: EARTH SCIENCES  
Work: CONSULTANCY AGENCY BALANCE WHICH HELPS PROVINCES, MUNICIPALITIES, WATER BOARDS, ENERGY COMPANIES AND OTHERS TO REALIZE THEIR SUSTAINABILITY AMBITIONS.

**HORIZON**  
Challenge: 2030

**SOIL REMEDIATION AND AREA DEVELOPMENT IN THE BROEKPOLDER.**

In the '70s, silt from the Rotterdam harbor containing heavy metals and pesticides was disposed in the Broekpolder. The Province wants to align sanitation of the polder with area development, enhancing its use as nature and recreation area. Various owners, users, government agencies, business and citizens are involved in the process. The Province invites concerned parties to come up with initiatives.

YORICK VINK (COHORT '11)  
Master: URBAN ENVIRONMENTAL MANAGEMENT  
Work: ADVISOR SUSTAINABILITY REGION UTRECHT

**HORIZON**  
Challenge: 2040

**THE NETHERLANDS OFF THE GAS**

In order to reach climate neutrality in 2050, an energy transition is needed. Turning off the gas is a crucial part of the strategy. All municipalities need to develop a heating plan indicating when and how districts will turn to other sources of energy. Cooperation of the inhabitants seems important to make it all happen. But municipalities find it difficult to balance the task to involve inhabitants with the task to come up with feasible technical solutions.

IMME GROET (COHORT '10)  
Master: INDUSTRIAL ECOLOGY  
Work: CONSULTANT AT NON-PROFIT ORGANISATION C-CREATORS, PLATFORM FOR ACCELERATING THE CIRCULAR ECONOMY

**HORIZON**  
Challenge: 2050

**HOW CAN WE REALIZE A TRANSITION TOWARDS A CIRCULAR ECONOMY?**

The construction sector is responsible for 40% of all material flows and 33% of energy demand of a country. Most of the waste flows of the construction sector are currently not reused or recycled due to lack of knowledge and organisation structures. The large demand on housing and construction in the metropolitan region of Amsterdam demands that circular construction projects are scaled up by employing networking, tools and knowledge sharing.

FELIX BEHREND (COHORT '18)  
Master: SUSTAINABLE DEVELOPMENT – ENERGY & RESOURCES  
Work: ASSISTANT PROJECT LEADER FOR TEAM 'ENERGY TRANSITION' AT THE MUNICIPALITY OF AMSTERDAM

**HORIZON**  
Challenge: 2040

**HOW CAN WE MAKE AMSTERDAM NATURAL GAS FREE IN 2040?**

The city of Amsterdam has the ambition to use 100% alternative energy sources instead of natural gas in 2040. This comes down to a transition of 40 houses each day. With an old inner city there is a need for custom solutions. At the same time the new energy system needs to be open, affordable and sustainable. This asks for close cooperation on different levels, from project leaders to policy makers.



# Favorite slogans within Future Planet Studies:

“We cannot predict the future,  
but we can prepare for it.”

