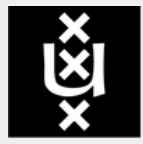


MSc Complex Systems & Policy (CS&P)

Online information session, November '24

Vítor V. Vasconcelos and Elisabeth IJmker



Today's Programme Team



Vítor Vasconcelos

- Programme director



Elisabeth IJmker

- Curriculum developer



Roos Vervelde

- Communication officer



What first comes to mind when you hear the word Complexity?

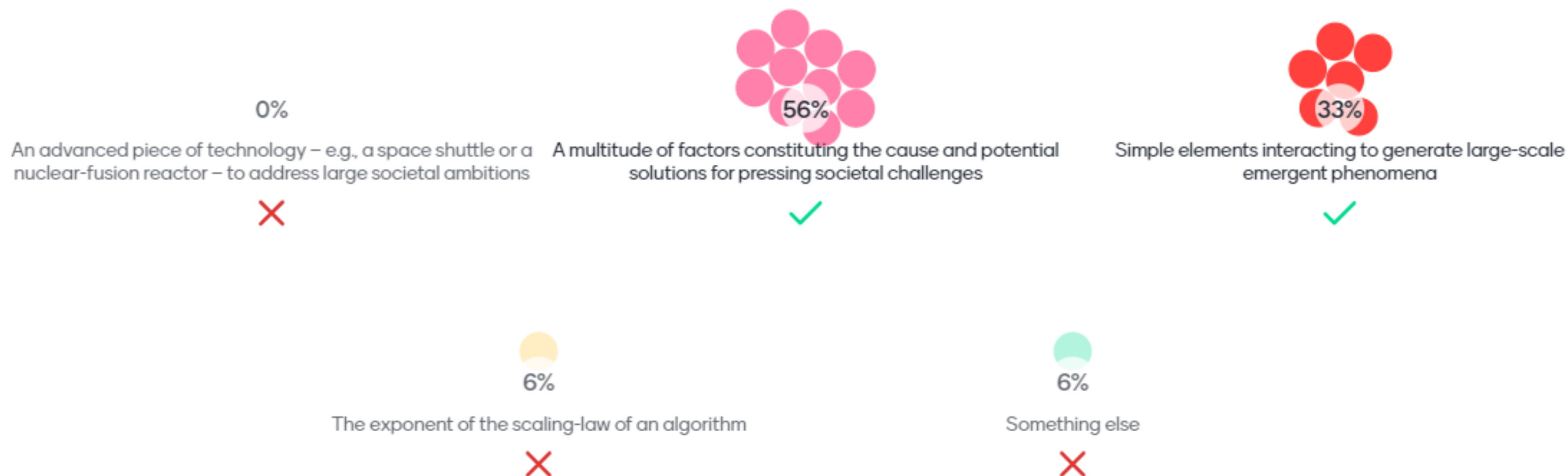
- 1. An advanced piece of technology – e.g., a space shuttle or a nuclear-fusion reactor – to address large societal ambitions*
- 2. A multitude of factors constituting the cause and potential solutions for pressing societal challenges*
- 3. Simple elements interacting to generate large-scale emergent phenomena*
- 4. The exponent of the scaling-law of an algorithm*
- 5. Something else*

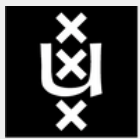


<https://www.menti.com/alon5ru8qk1i>



What first comes to mind when you hear the word **Complexity**?

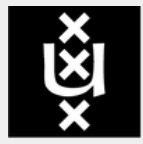




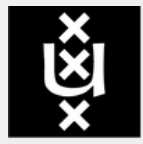
What is Complex Systems & Policy



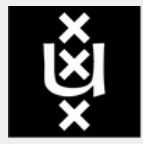
The MSc CS&P anticipates the future where *complex systems tools* are an *integral part of policymaking and analysis*. It seeds the collaborative space where students, stakeholders, and researchers from various academic fields jointly gain deep and encompassing insights into policymaking, addressing urgent societal challenges.



- Why?



- Why?
- Who?



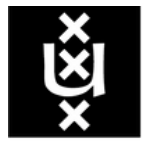
- Why?
- Who?
- How?



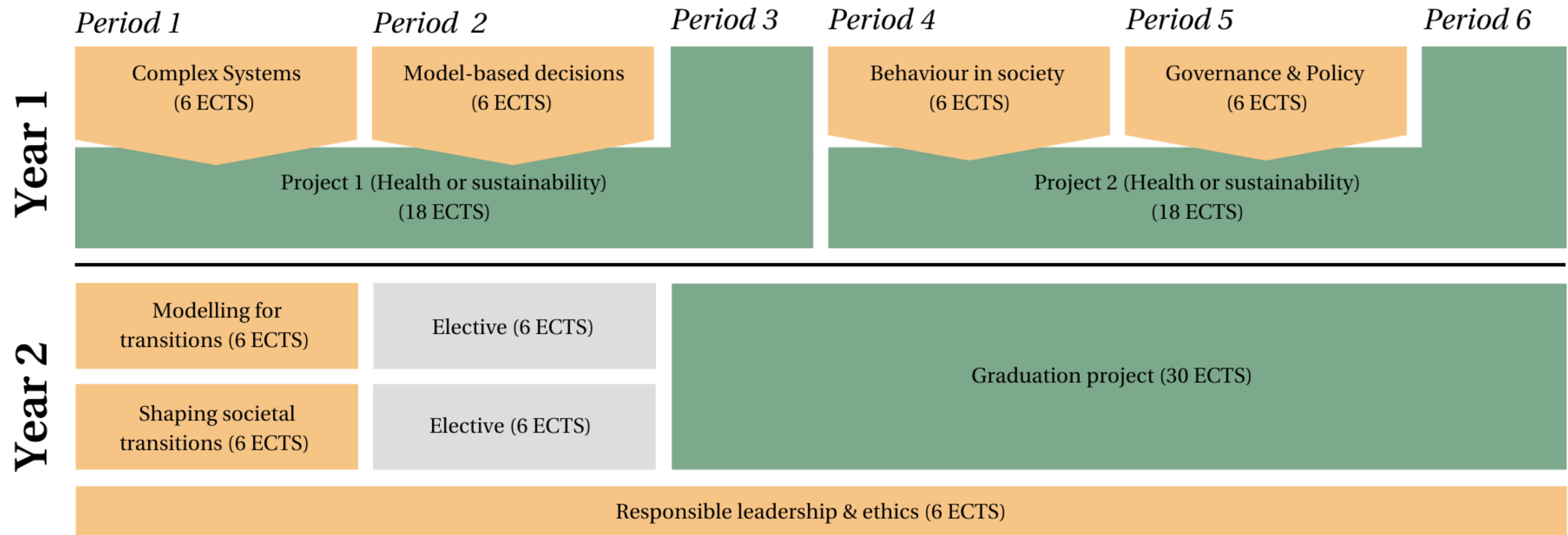
- Why?
- Who?
- How?

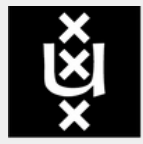


- Why?
- Who?
- How?
- What?



Curriculum

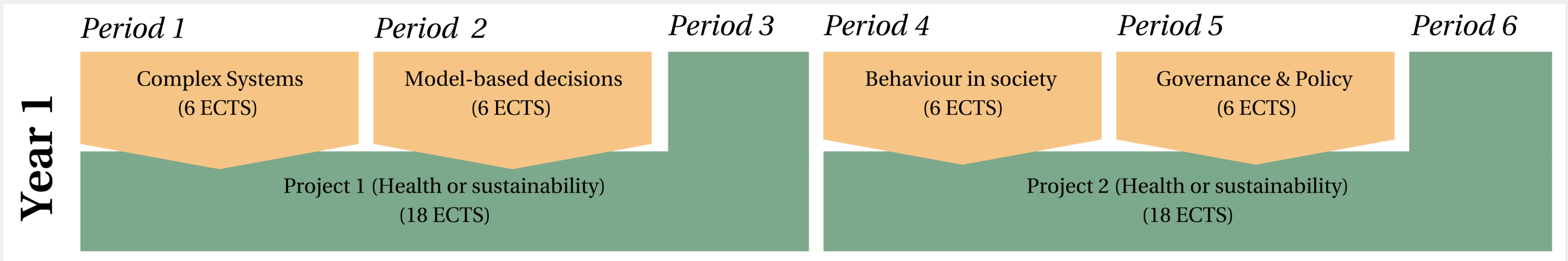


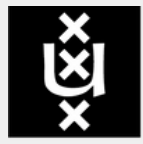


First year

Developing a common language with transdisciplinary education

Focused on fundamentals and challenge-based education





Second year

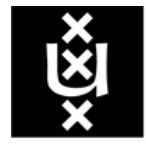
Advanced core courses on transition thinking

Electives: deepen knowledge (sustainability/health), and/or computational/policy skills

Find your compass and show your skillset in the graduation project

Year 2





UNIVERSITY OF AMSTERDAM
Institute for Interdisciplinary Studies



Questions so far?



*Example of Research project, based
on research at IAS*





Institute of Advanced Studies

<https://ias.uva.nl/>



Institute for Advanced Study (IAS)



Research themes

Community

News & events

About the IAS

Apply



Institute for Advanced Study (IAS)

Where outstanding researchers bridge disciplines, scales and paradigms to unravel wicked problems

Upcoming events

[View all upcoming events →](#)

Future of Energy Seminar (on-site)
11 Nov 2024
Future of Energy seminars bring together researchers from

The Anthropocene is Largely Urban-driven. Can We Invest City Systems Back Within Planetary Boundaries?

Methods of Misinformation
22 Nov 2024
This 1-day workshop aims to stimulate interdisciplinary dia



Social tipping points

A platform for collaboration

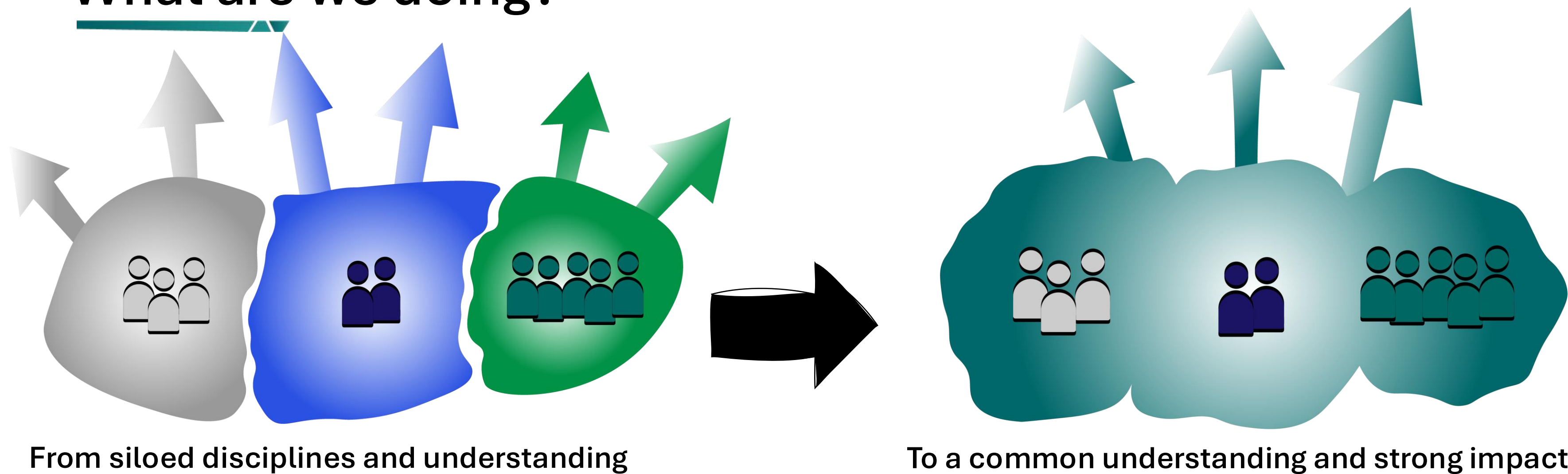
This cross-faculty collaboration uses a complexity theory lens to bring together leading experts from diverse fields, such as sociology, psychology, economics, environmental science, and computer science, to explore the mechanisms and dynamics of social tipping points. We aim to leverage these critical junctures to address pressing global challenges, including the protein transition, energy transition, and lifestyle-related diseases.

Why is this relevant?

- Policy measures are often ineffective due to negligence of complexity and social dynamics in the policymaking process
- **Social tipping points** manifest within complex adaptive systems, rendering them inherently challenging to understand due to the intricate interplay of multiple interconnected components and feedback loops.
- Studying social tipping points can help spur positive changes in society and inform policy interventions



What are we doing?



Platform for exchange and learning

Umbrella to collaborate in doing research across disciplines and institutions

Connecting policymakers and academics

PLANTING CHANGE

Leveraging social tipping points for the protein transition in Netherlands.



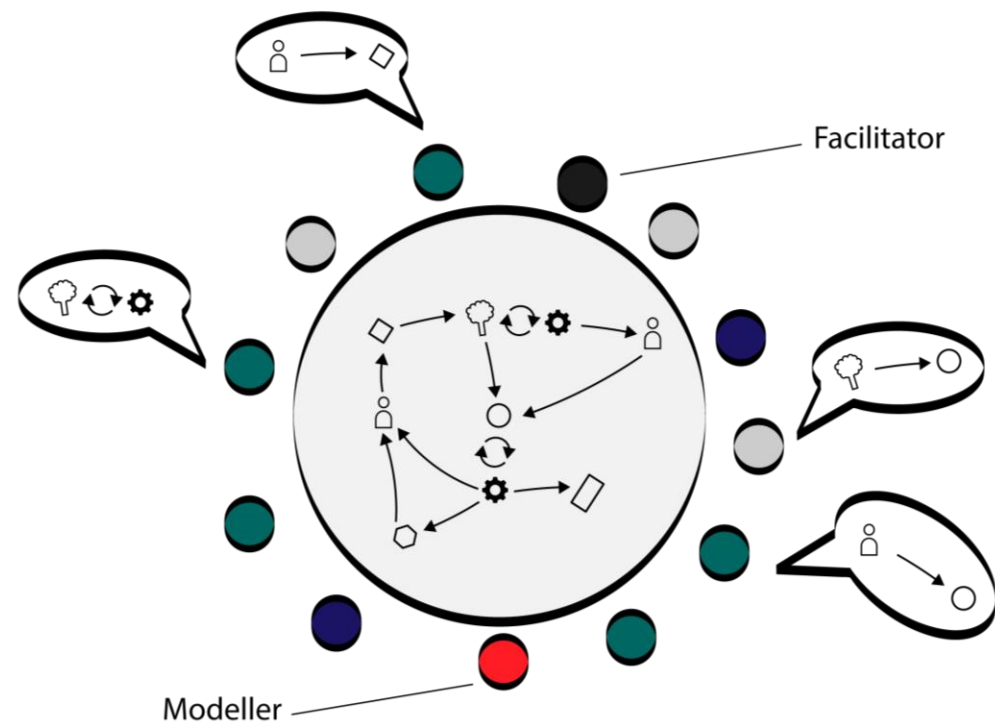
Main research question

How can different styles of communication trigger or prevent the adoption of more plant protein in our diets and support for related policies?

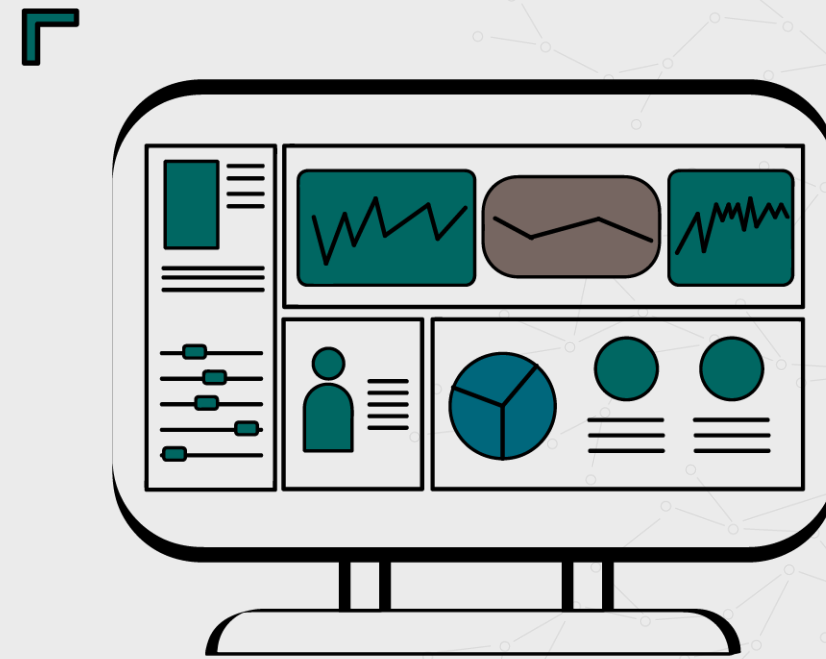


The research structure

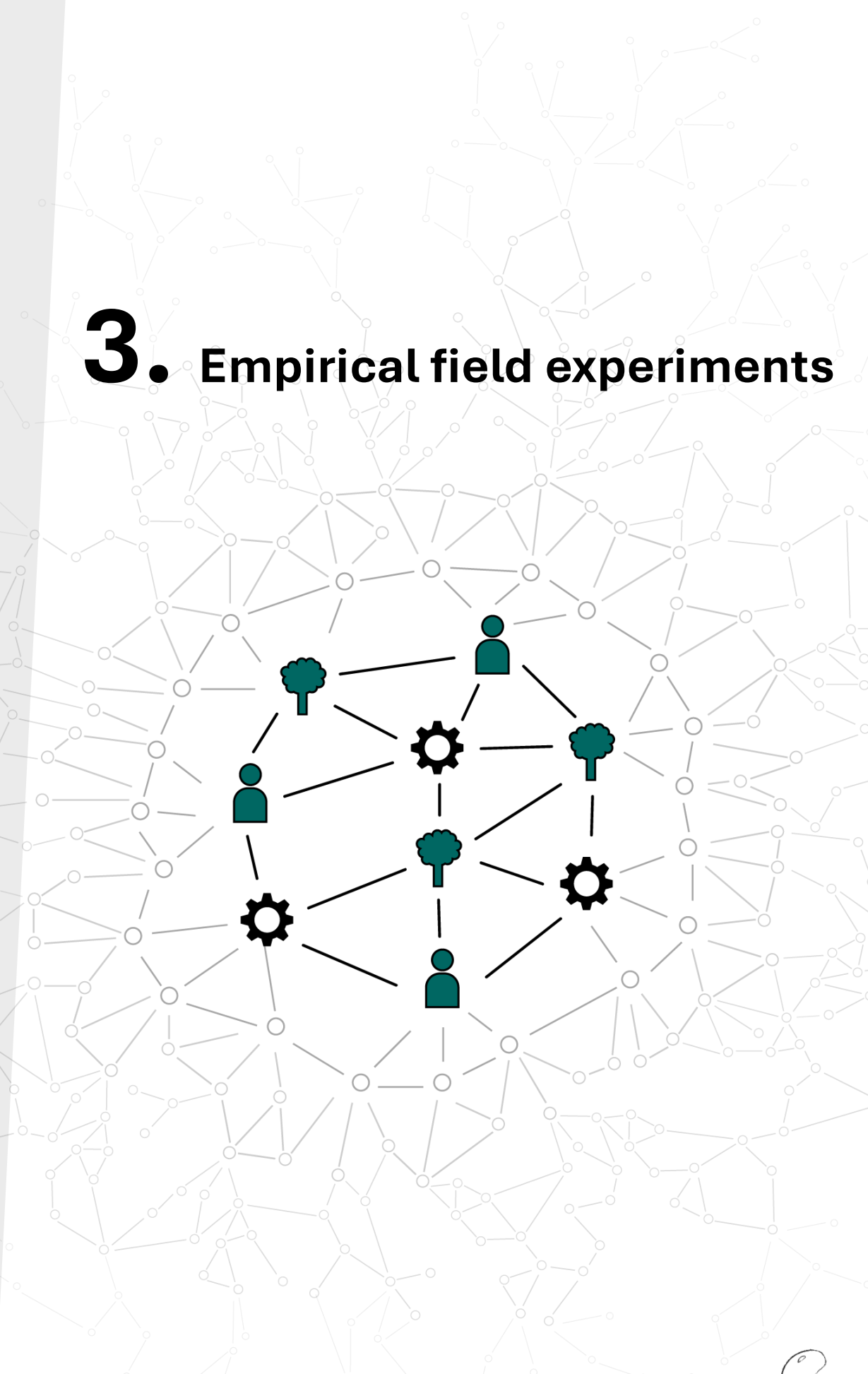
1. Participatory modelling



2. Policy simulations



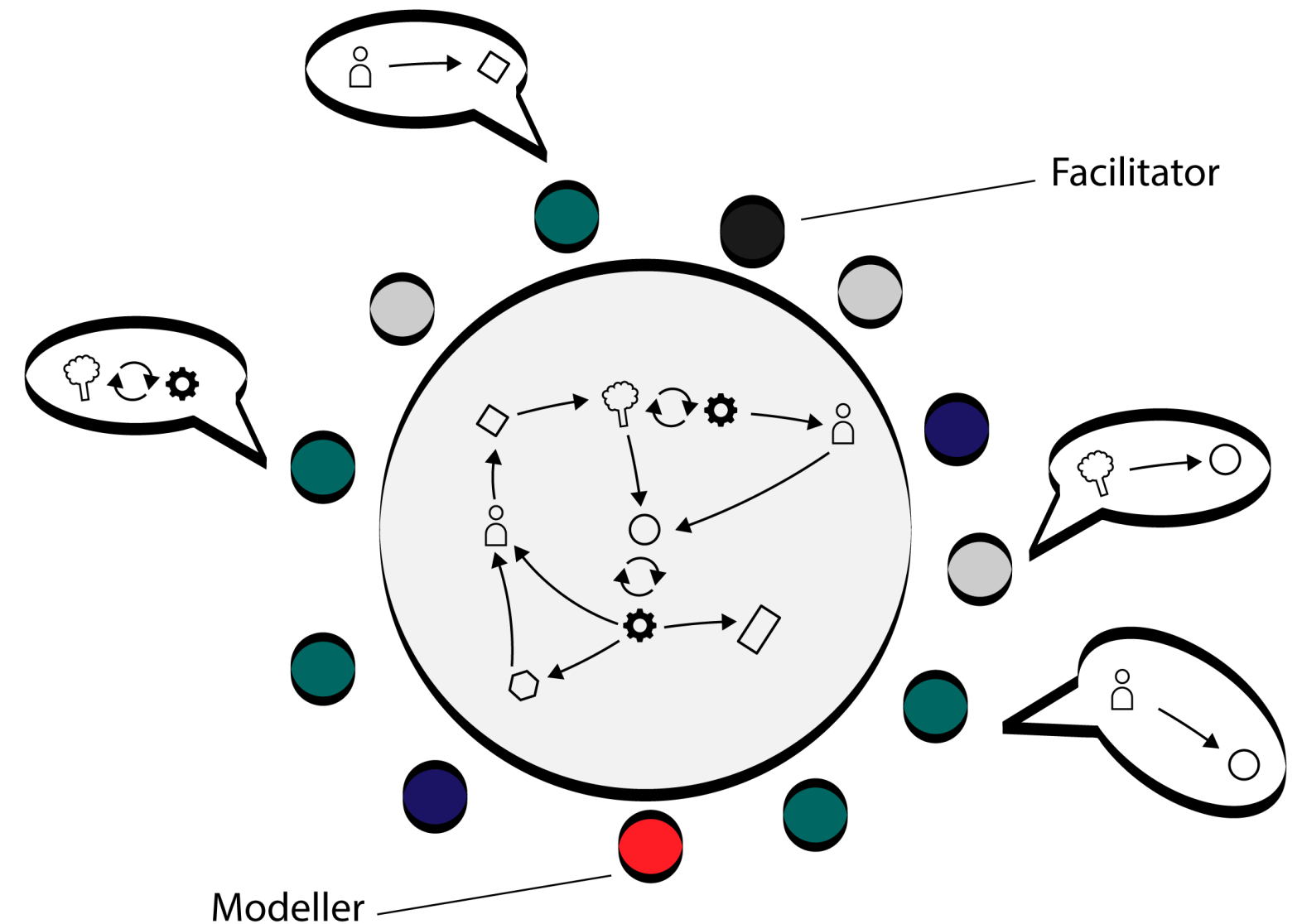
3. Empirical field experiments



1. Participatory modelling

Bring together a **diverse set of problem stakeholders** to create an **initial shared understanding of the problem**:

- potential causal relations in the system
key leverage points will emerge.
- leads to empirical experiments that
inform a policy simulation interface



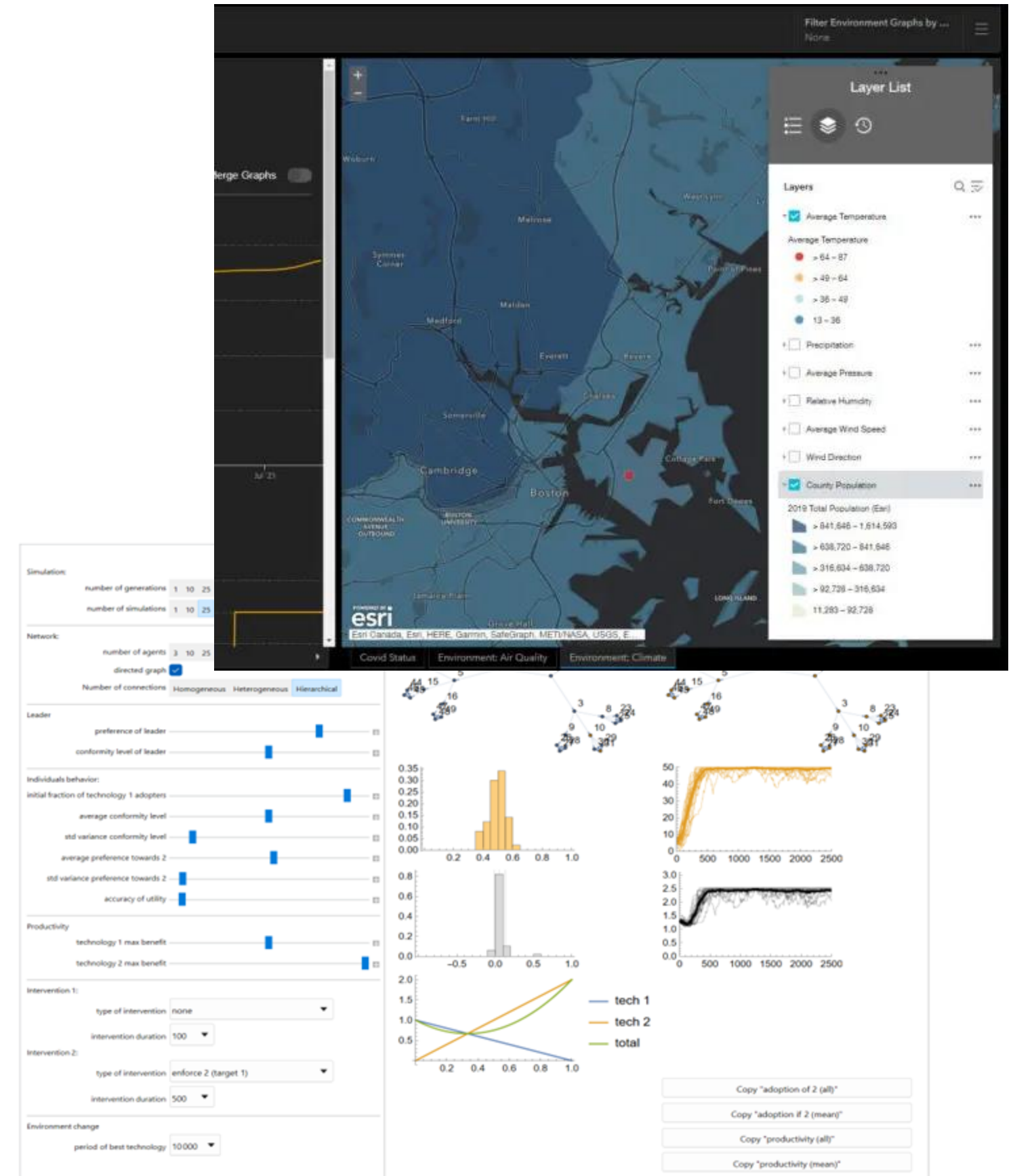
2. Policy simulations

Modelling and experiments lead to

- **Simulation interface** (e.g., using agent-based modelling)
- Stakeholders **simulate risk-free intervention** scenarios to understand their potential impacts and virtually test policy interventions.
- Can be refined with new data on pilot interventions.

[ENROADS](#) is a good example of simulation dashboard.*

*this is an example of how a simulation dashboard look like.



3. Empirical research

Empirical field experiments will be done across different scales and themes.

Example of potential empirical field experiments (t.b.d. through participatory modelling)

1. Influence of source. E.g., municipal vs national vs corporate vs community and combined communication.
2. Field studies in different socio-economic settings.
3. Communication of plant-based diets and related policy on a residential/neighbourhood level. Stimulating social contagion on a community level.

**EXAMPLE
EXPERIMENT
DESIGN**

<i>Spatial</i>	<i>Source</i>	<i>Theme</i>
LOCAL	GOVERNMENT	MEAT ADVERTISING BAN
REGIONAL	CORPORATE	TRUE PRICING
NATIONAL	SCIENCE	GOVERNMENT AS A ROLE MODEL
	COMMUNITY	COMMUNITY SOCIAL CONTAGION

Empirical field experiments are done with partners across spatial scales

NATIONAL-REGIONAL



Ministerie van Landbouw,
Natuur en Voedselkwaliteit



Centraal Bureau
voor de Statistiek

LOCAL

gemeente **Wageningen**

✘ Gemeente
✘ Amsterdam
✘

Gemeente
Groningen



Den Haag

ACROSS SCALES AND FUNDAMENTAL RESEARCH






Rijksinstituut voor Volksgezondheid
en Milieu
Ministerie van Volksgezondheid,
Welzijn en Sport

Planting change



With this research partners will gain:

-  A systemic understanding of the patterns and behaviours on a societal scale.
-  Evidence-based potential policy interventions for behaviour change.
-  A clear understanding of the role, and the degree of agency, of the partner in the broader system.

Deliverables

- ☪ Publication of scientific papers.
- ☪ An evidence-based policy simulation interface to test policy interventions.
- ☪ Practical field experiments, yielding new insights into consumer behaviour.



Research lab

Fundamental

Working on fundamental knowledge development for social tipping dynamics.

Partners

RIVM

Researchers

1 Postdoc

2 Principal investigators

National-regional

Working on the national-regional scale to research effective intervention for tipping behaviour towards plant-based protein consumption.

Partners

LVVN

Provinces

Industry partner (s)

Retail partner(s)

Local

Working the local scale to research effective interventions for tipping behaviour towards plant-based protein consumption on a municipal scale.

Partners

Gemeente Amsterdam

Gemeente Groningen

Gemeente Wageningen

Gemeente Den Haag

LVVN

Retail partners



Planting change



We are excited to explore this collaboration and to engage in impact-driven research.



Contact

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Jan Willem Bolderdijk
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Institute for Interdisciplinary Studies



 **125 jaar**
Centraal Bureau
voor de Statistiek

Statistics Bureau
Netherlands

 Ministerie van Volksgezondheid,
Welzijn en Sport

 Ministerie van Economische Zaken
en Klimaat


National or local government

TNO
innovation
for life

Netherlands Organisation for
Applied Scientific Research

 **GGD**
 **Amsterdam**


Public Health Service Amsterdam

 Planbureau voor de Leefomgeving

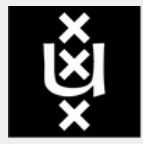
WKR Wetenschappelijke
Klimaatraad

Advisory agencies

Career examples

 UNIVERSITEIT VAN AMSTERDAM

PhD student: “*Successful aging through resilience:
Exploring determinants and opportunities for intervention*”



Application & admission

Application

- *Deadlines**
 - *Dutch/EU: April 30th, 2025*
 - *Non-EU: January 31st, 2025*

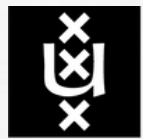
Entry requirements

- *Both natural and social sciences*
- *Pre-approved programs*

Admission

- *By application committee*
- *Self assessment*
- *Intake interview*

* *Depending on the accreditation and finalisation of the programme*



More information

UNIVERSITEIT VAN AMSTERDAM Instituut voor Interdisciplinaire Studies Q EN

Over het IIS Onderwijsontwikkeling Onderwijsaanbod Actueel Contact

Instituut voor Interdisciplinaire Studies > Complex Systems and Policy

MASTER Vergelijk

Complex Systems and Policy

The Master's programme Complex Systems & Policy (CS&P) offers a unique approach to future-focused policymaking. It draws from a variety of academic fields, including social sciences, data science, and modelling. The programme aims to equip you with the tools to navigate and address complex societal challenges, and to foster collaboration across

Language of instruction: English Mode: Full-time

Location: [Science Park](#)

- Engage with real life societal challenges
- Co-create with academia and non-academic stakeholders
- Focus on personal and professional development
- Good career perspective

NOV 04 Nov Master's Week: 4-8 FEB 10 Feb Master's Week 10-14

[More information on the UvA Master's week →](#)

<http://www.uva.nl/msc-csp>

<https://ias.uva.nl/>



August de Heij (study advisor):

studieadviseur-iis@uva.nl

Programme:

csp-iis-science@uva.nl

Live Meet & Ask 13 February,

UvA Science Park

Please note! This study is pending accreditation. Registration is not yet possible. Are you interested? Sign up for the newsletter to be the first to hear when registrations open.

[Keep me informed →](#)



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Q&A