

# Technology Dynamics MOT1412

Lecture III

September 2022

# Lecture III

Trial exam

Quick Feedback from last time

Follow-up Chapter 2

3. Technological and sectorial innovation systems:  
Discussion (B/F)

Introduction: Exercises for this afternoon

B/F blended learning/flipped classroom

Dr. Claudia Werker



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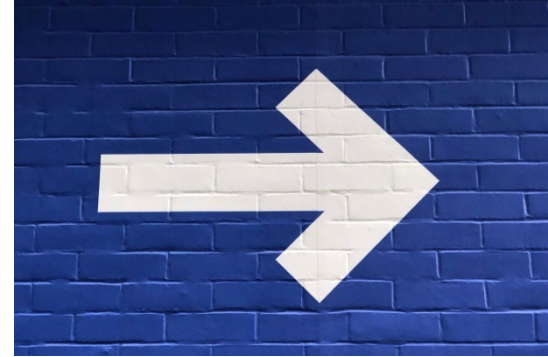
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# (Trial) Exam

(Trial) exam questions

- will look like the **more advanced exercises**
- can be **questions about the cases you know** (texts on these cases will **not** be provided)
- can be **questions** comparable to the questions in the exercises **about another case** (text will be provided and you have time to read it)
- number of points given = minutes you spend



**The exercises of the chapters you have to prepare yourself!**  
**For the trial exams you will get an assessment sheet.**

# Skill:

## How to answer questions to exercises?

Chapter 2, Exercise 2a: “Please **figure out the differences** between the **innovation systems approach** and the **Triple Helix approach**.”



- relevant concepts: innovation system, triple helix, **not linear model of innovation (READ THE TEXT of the EXERCISE!)**
  - figure out the differences: comparison of definitions
  - finding the definitions:
    - Innovation system: slide 19 (Lecture II) and Reader, Chapter 2.2 Defining Innovation Systems including reference given
    - Triple Helix approach: reference as given in the exercise
- LOOK UP the information the READER and on the SLIDES!**

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# Quick feedback from Last Time I

Not covered today: answers to questions

1. we deal with in the future, e.g. examples for technologies or innovation systems, decision processes of innovative agents, connection public-private, proximity
2. about details you do not need to understand the next chapters, e.g. the linear model of innovation (although **relevant!**)
3. that go beyond the scope of this course, e.g. details on entrepreneurship or about policy measures influencing innovation systems

for 2. please read the reader and the literature provided and ask concrete questions if necessary during the groups work sessions

for 3. if you are interested you find some references in the reader



# Quick feedback from Last Time II

## Covered today

- differences between innovation and entrepreneurship

**Innovation:** novel idea developed and transformed into a product, process or service or has been commercialized

**Entrepreneurship** is the process by which new enterprises are founded and become viable,

- if progressive factors technological opportunities and innovative potential play a role for starting up a firm: overlap between innovation and entrepreneurship
- if they do not play a role: no overlap

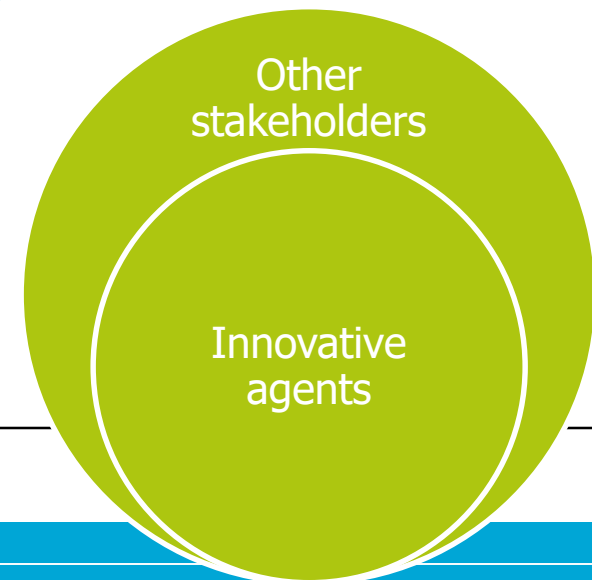




# Quick feedback from Last Time III

## Covered today

- entrepreneur/intrapreneur:
  - Entrepreneur: usually start-up
  - Intrapreneurship: entrepreneurial processes within large companies/government, partly spun-off
- relationship between innovative agents and other stakeholders
- how other stakeholders are relevant to innovation systems



# Quick feedback from Last Time IV

## Covered today

- universities as nodes between intra- and interregional linkages
  - Relationships in the region: often interdisciplinarily
  - Relationships between regions: often disciplinary
  - Universities connect these relationships
- use of innovation systems approach by policy
  - e.g. OECD (Lundvall as one of the fathers of the innovation systems approach worked for OECD and implemented the concept there)
  - European Innovation Scoreboard uses elements



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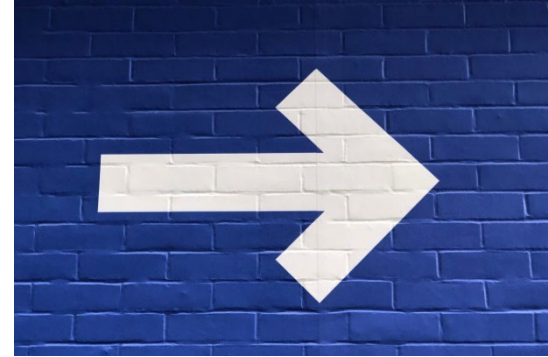
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# Follow-up Chapter 2

Learning Goals

Innovation Systems versus  
Triple Helix approach

Lochem versus The Hague case



# Follow-up Chapter 2

## Learning Goals

Innovation Systems versus  
Triple Helix approach

Lochem versus The Hague case



# Learning Goals Chapter 2

- address the strengths and weaknesses of the linear innovation model
- define an innovation system
- identify innovative agents and other stakeholders
- define and identify important relationships using the proximity approach
- define and identify relevant informal and formal institutions
- analyse an innovation system by pointing at its weaknesses and strengths



# Follow-up Chapter 2

Learning Goals

Innovation Systems versus  
Triple Helix approach

Lochem versus The Hague case



# Innovation Systems versus Triple Helix approach

What are the similarities of and differences between

- the **innovation systems** and
- the **triple helix** approach?





# Follow-up Chapter 2

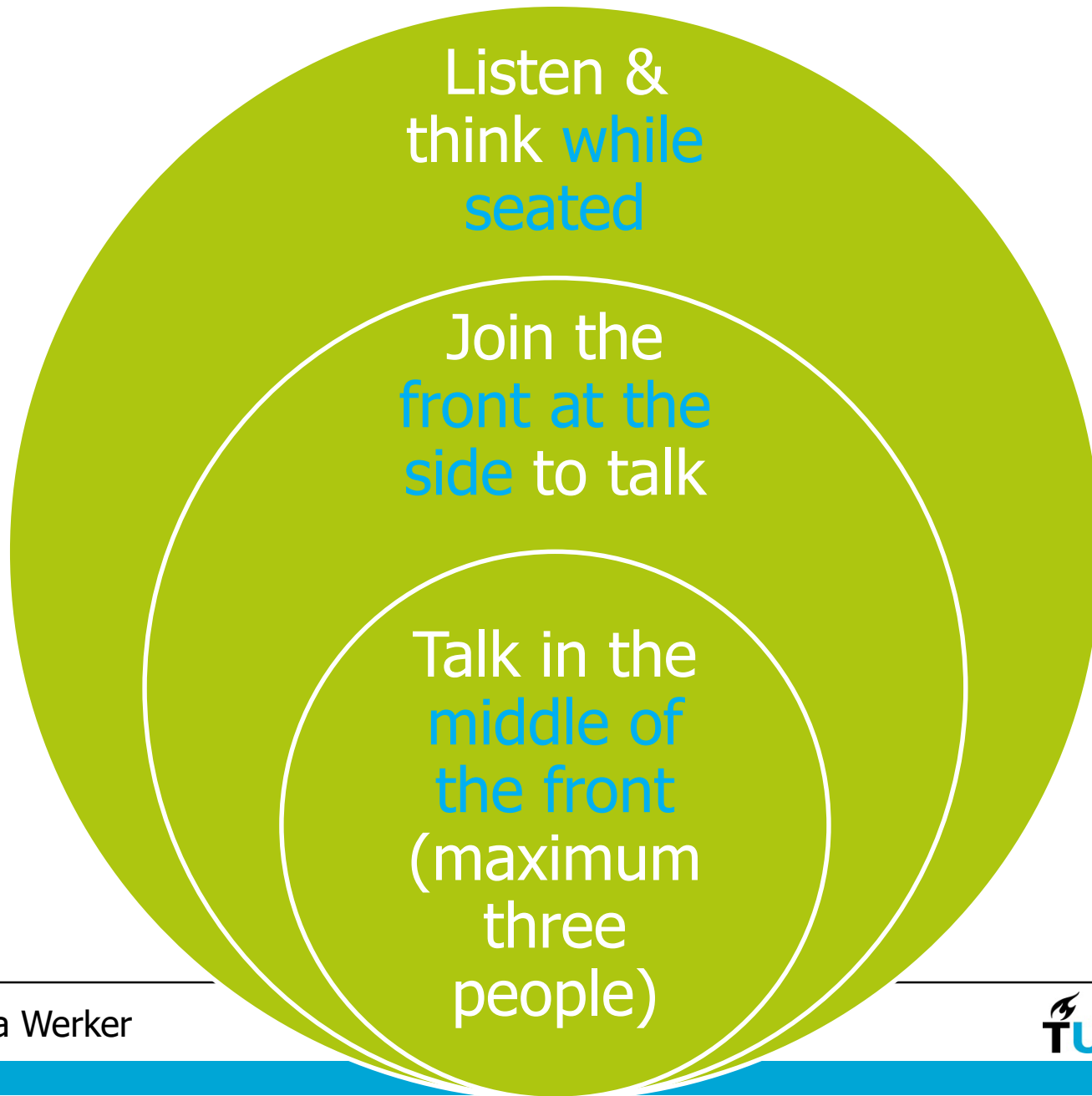
Learning Goals

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# Lochem versus The Hague case: The Fishbowl Method



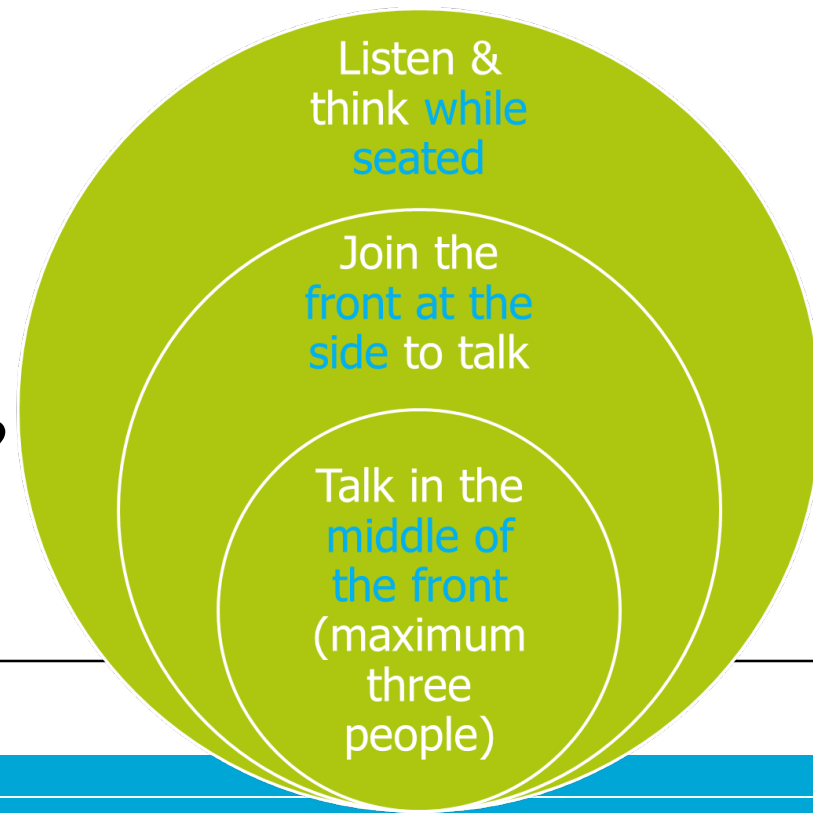
# Lochem versus The Hague case

Who are the crucial agents and stakeholders in the Lochem and the The Hague case driving and leading progress in the respective **innovation system**?

In which case is the **Triple Helix** functioning better?

- Lochem case
- The Hague case

Why is it functioning better, e.g. proximity between stakeholders?



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# Chapter 3: Learning Goals

- describe a technological innovation system (TIS)
- distinguish te. from sectors, industries and markets
- identify the context structures of the TIS
- identify a TIS including its innovative agents, other stakeholders, their relationships and the institutions
- analyse a TIS by pointing at weaknesses and strengths



### 3. Technological and Sectorial Innovation Systems

Please explain the muddiest point you identified!



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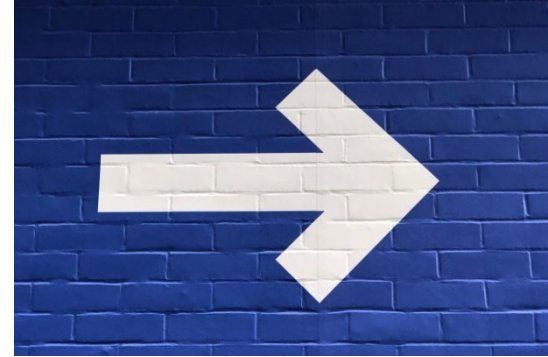
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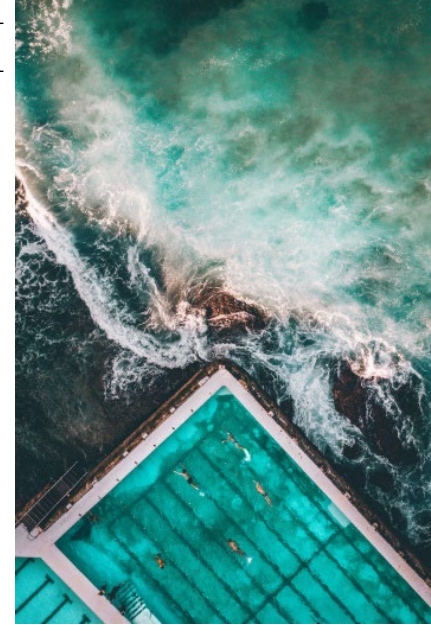


# Introduction: Exercises for this afternoon I

## Chapter 3, Exercise 2 (40 minutes)

Please

- quick-read the paper by Nevzorova, 2022, individually;
- determine as a group which parts to read in detail to answer the following questions:
  - What is the focal TIS of the Russian biogas industry?
  - What is the sectoral context?
- do the reading individually;
- answer the questions jointly on half a page and
- upload the document on Brightspace at the end of the day the latest.



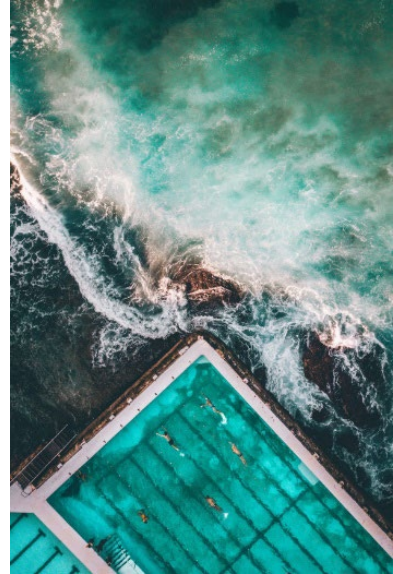
**BREAK**



# Introduction: Exercises for this afternoon II

## Chapter 4, Exercise 1 (40 minutes)

With this exercise you use blended learning and prepare the flipped classroom for Chapters 4.1 and 4.2. Chapter 4.3 is about the cases covered in Exercise 3 of Chapter 4.



Please

- read Chapter 4 and watch the respective videos (see Reader) individually;
- quick-read the Readings of Chapter 4 individually;
- determine as a group which (parts of) of the papers you need to read in detail to fully understand Chapter 4.

# Introduction: Exercises

## Chapter 2 III

### Exercise 2b

- ...
- As a group compare the two cases. Summarize your findings on minimum one page and **upload the document on Brightspace by the end of the day the latest (25 minutes).**





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