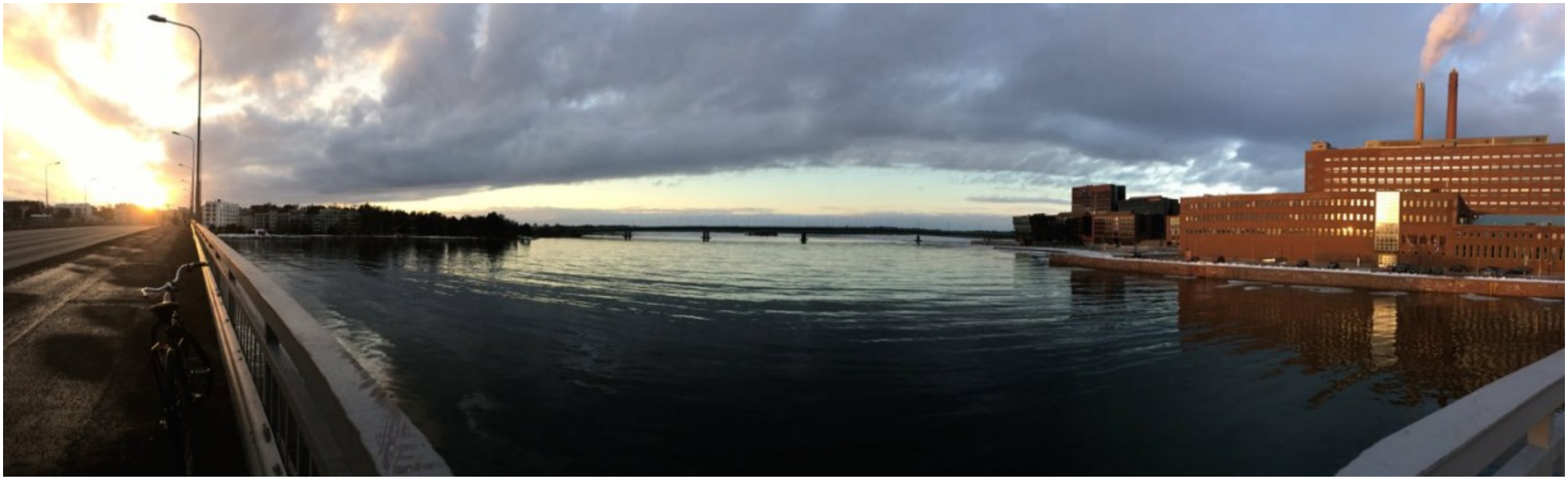


WELCOME TO WAT COURSE!

(i.e. WAT-E1100 course)

Please let us know
if you were not in
WAT Orientation Days last week

KINDLY NOTE THAT WE WILL RECORD THIS SESSION

→ Recording will be only available for WAT students and teachers

NOTE: If you don't want your comment to be recorded (or e.g. have a personal issue to be discussed during the break), just let me know and I will turn of the microphone for that.

OBJECTIVES FOR TODAY MORNING

1) Understand the **concept** of WAT Course

→ Structure, assignments, assessment + 'meta-themes'

2) Discuss and agree **how Group Work works**

→ Also setting up your group's own Rules of Work

SO STARTING QUITE EASY – BUT WITH FUNDAMENTALS

→ Today lays the foundation for the rest of WAT Course

AGENDA

9.00- Introductions: forming WAT Course groups

Introduction to WAT Course

WAT Essential elements

BREAK

~10.30- Session on team roles and group work

→ Different phases and roles in the group

→ Project & time management

→ *First group work task (submit to MyCourses):*
agree on your own Rules of Work for your group

ANY QUESTIONS / SUGGESTIONS?

INTRODUCTIONS
Who are we?

MARKO KESKINEN

Associate professor,
WAT Programme Director
+ WAT Course Responsible Teacher

Interested in water resources management, sustainability, governance – and WAT!

people.aalto.fi/marko_keskinen

TEEMU KOKKONEN

Senior University Lecturer,
Coordinating the Weekly Exercises of WAT course

Interested in hydrological modelling urban hydrology + geospatial computing

people.aalto.fi/teemu_kokkonen

ELINA PAAVONEN

Course coordinator,
University Teacher (sub.)

Plus our other professors, university lecturers and teaching staff

→ You'll meet them during WAT Course

GROUPS!

FIRST: How many we are?

→ Do you know of someone missing still?

Someone missing?

THEN: Do you have a group?

→ If you don't find yourself in any of these groups, join one!

→ BUT: each group must have min. 4 and max. 5 members

Group 1	**Group 2**	**Group 3**	**Group 4**	**Group 5**	**Group 6**
Alarik	Chenyue	Emma	Annina	Emanuela	Alisson
Daniel	Christine	Nabila	Mira	Hanna	Iiris
Qalandar	Wei	Nisha	Reeti	Iida	Soila
Tuomas	Zaahid	Suchi	Riku	Meri	Veera
				Petra	

YOU SAY WAT?

How would you define Water & Environmental Engineering with just one sentence?

1) Think first alone, write key things down

→ *Themes, methods, aims?*

2) Discuss your definition with a pair

3) Write your joint definition to presemo.aalto.fi/wat

Btw, this method is called Me-We-Us

Prepare to explain your definition to everyone!

YOU SAY WAT?

09:28 » This program incurs technical knowledge and skills focusing on water and environmental issues, and bringing modern day solutions for sustainable environment and society
09:27 » Water and environmental engineering aims to create a sustainable solution for the world and a future with limited recourses and changing climates.
09:27 » Water and environmental engineering uses technology and science to protect and conserve natural resources to create a more sustainable world.
09:26 » Finding sustainable and environmental friendly, economical means to address water and environment issues, contributing to human society and nature.
09:25 » As engineers we design systems which provide clean water and conserve the environment via water treatment and management.
09:25 » Water and environmental engineering is a field that studies water-related issues (water governance, water supply, hydrological resources) locally and globally combining theoretical and practical knowledge and methodology.
09:25 » Water and environmental engineering provides skills and knowledge for the management of water systems ie. drainage, watersheds, municipal systems, treatment and design of those systems for everyone and how natural water sources work and act.
09:22 » The field of engineering looking to provide new sustainable technologies for water management, development, treatment, and different environmental issues.
09:22 » studies water systems and sustainability
09:20 » Development and Management of Water Resources
09:20 » Using engineering mindset and methods to solve water related problems and to build a more sustainable society.

YOU SAY WAT?

So what is Water & Environmental Engineering?

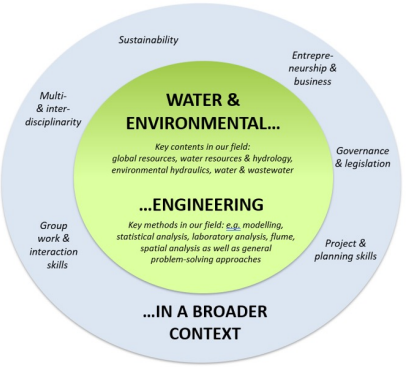
SOME KEY ELEMENTS AND THEIR EXAMPLES

CONTEXT	THEMES	APPROACH	AIM
“globe”	“sustainability”	“planning and management”	“Making the world work”
“city”	“water supply”	“problem-solving”	“Ensuring sustainable and functioning society”
“agriculture”	“natural resources”	“computational methods”	
	“surface waters”	“together”	

Essential elements

...for 'ensuring a functioning and sustainable society'

Three + one critical elements that are essential for the WAT Course (and entire WAT programme)



- Sustainability (the aim & crosscutter)
- Society (the context)
- Systems (the way to think)

→ Science (our teaching is based on our research)

Re-cap from WAT Orientation

SUSTAINABILITY

Sustainability = a state of a **system**, where system maintains its critical functions under change

Sustainability is the ability of a human, natural or mixed system to withstand or adapt to endogenous or exogenous change indefinitely.

Sustainable development is therefore a pathway of deliberate change and improvement which maintains or enhances this attribute of the system, while answering the needs of the present population.

Dovers & Handmer 1992

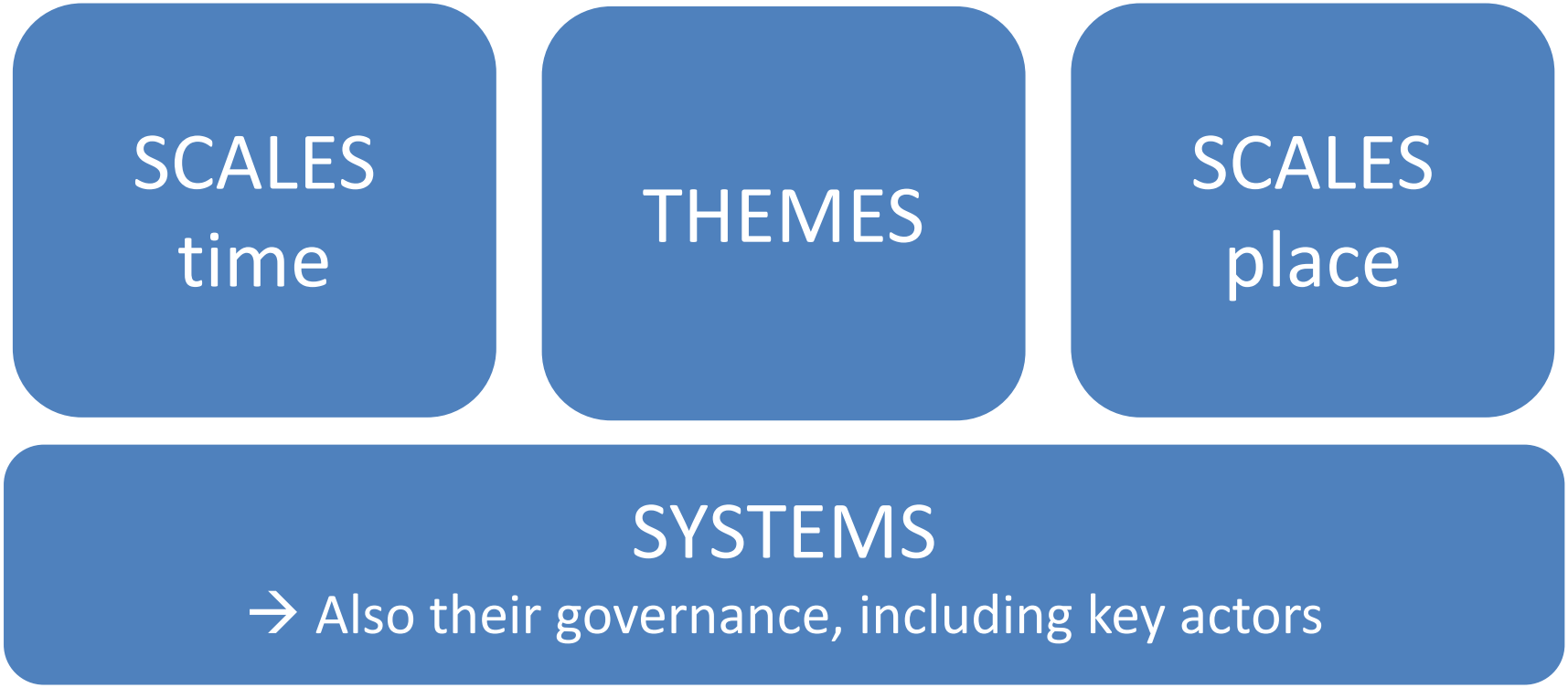
→ *Sustainability = about how to live our lives on this one planet, to prosper as human beings now and in the future*

→ *Sustainable development = a pathway or process that maintains and, hopefully, enhances sustainability*

When we talk about sustainability, we typically talk about it from the view point of us, humans (and with certain value-laden assumptions)

SUSTAINABILITY

Several elements that could (and should) be considered



SUSTAINABILITY

SCALES
time

Intergenerational equity

"meeting the needs of the present without compromising the ability of future generations to meet their own needs"

Our Common Future i.e. Brundtland Report 1997

Past + present = future

- Need to understand history to understand today
- Need to understand today to propose (sustainable) future actions

→ Links also to **path dependency**: (systemic) change not always that easy or feasible, even if its general benefits would be clear

SUSTAINABILITY

Local - national - regional - global

All scales naturally matter

→ Scales usually nested: actions and impacts do sum up

Ultimate scale: global

Having just one planet with its limited resources

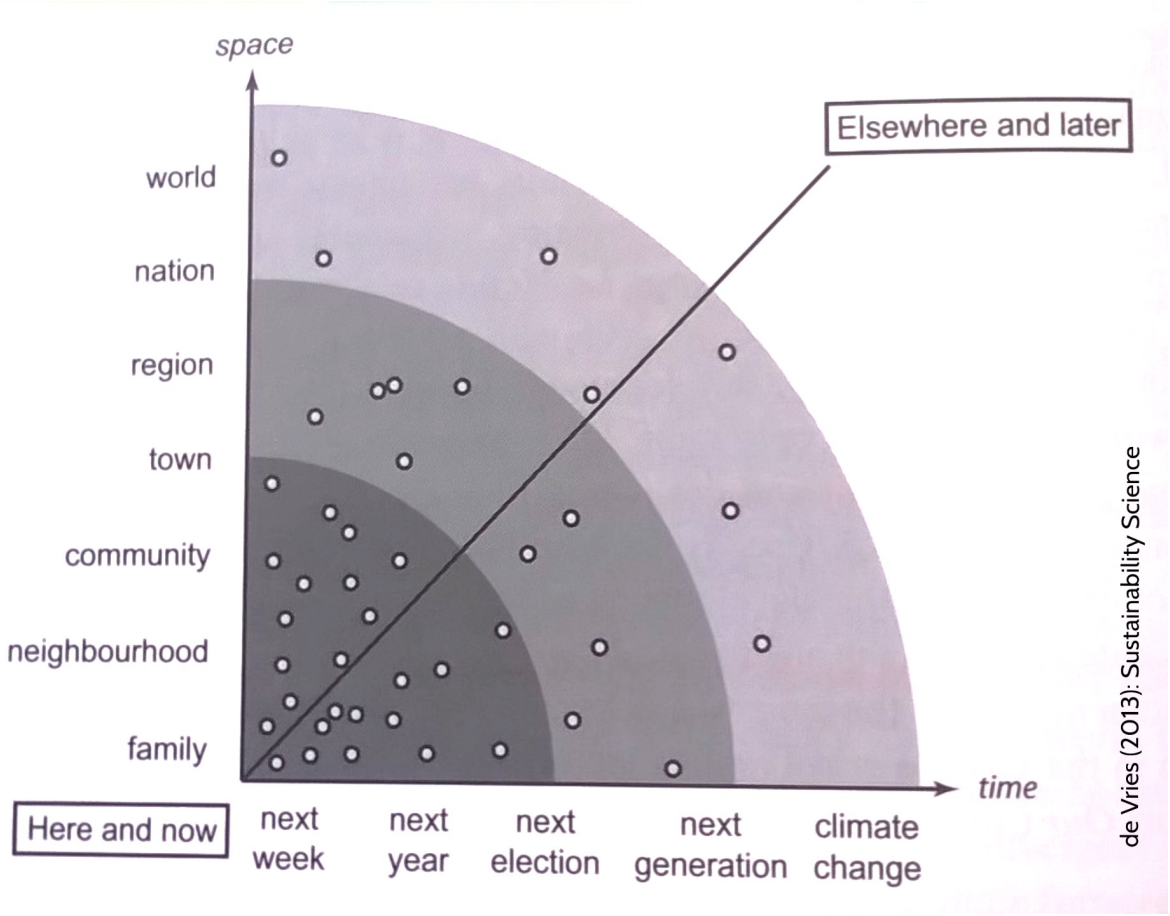
→ Our system in focus

→ Sets also the logical **boundary** for sustainability

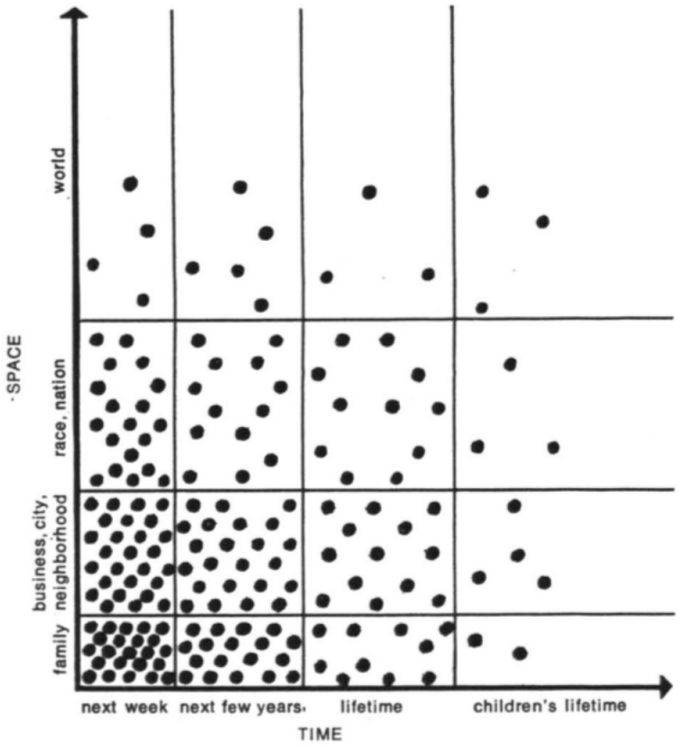
SCALES
place

SUSTAINABILITY

Time and place do connect!



de Vries (2013): Sustainability Science

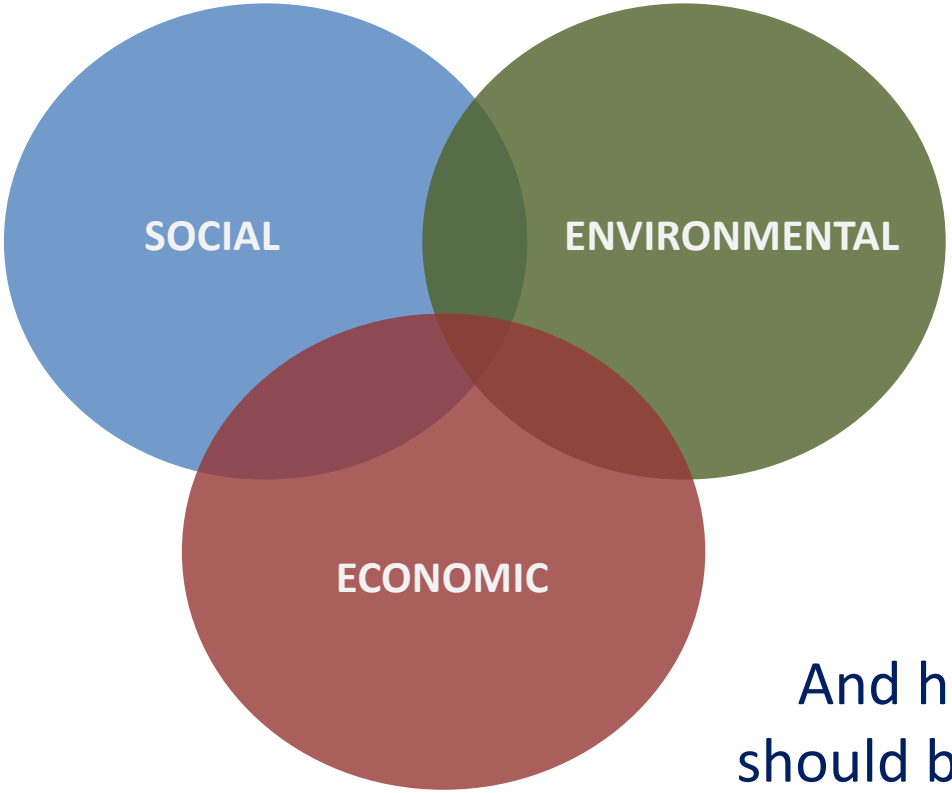


Meadows et al. (1972): Limits to Grwoth

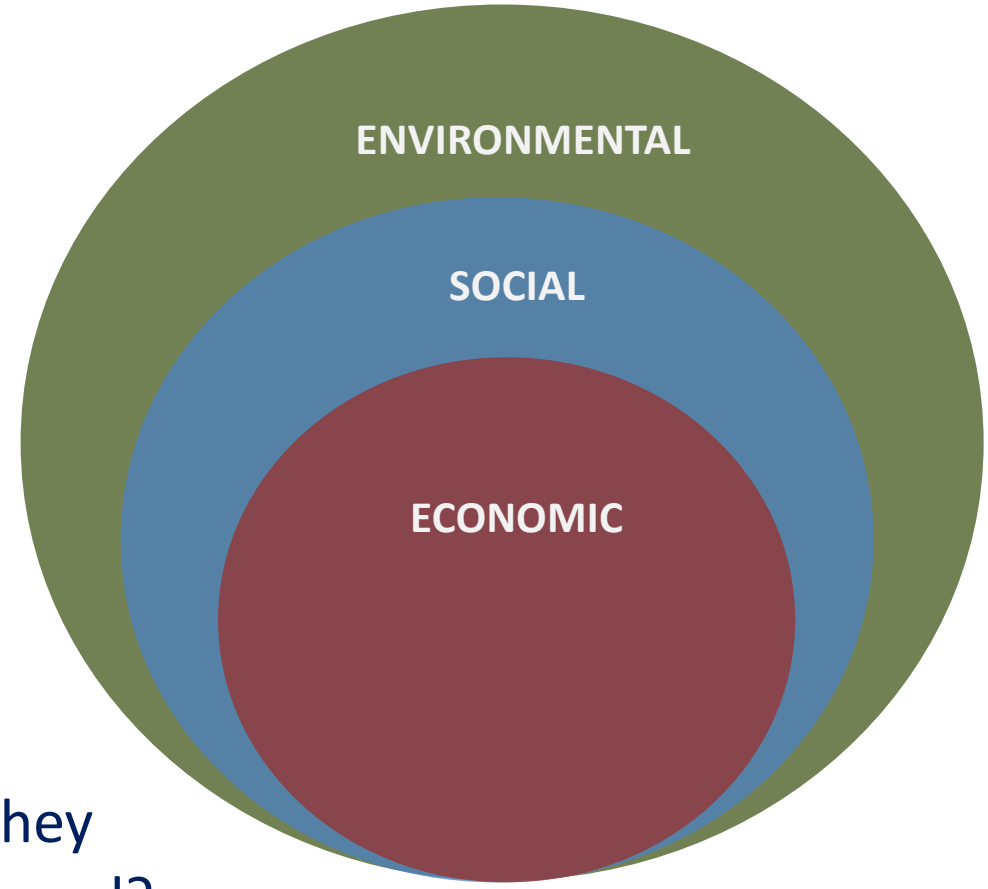
Although the perspectives of the world's people vary in space and in time, every human concern falls somewhere on the space-time graph. The majority of the world's people are concerned with matters that affect only family or friends over a short period of time. Others look farther ahead in time or over a larger area—a city or a nation. Only a very few people have a global perspective that extends far into the future.

THEMES

What three themes, or pillars?



SUSTAINABILITY

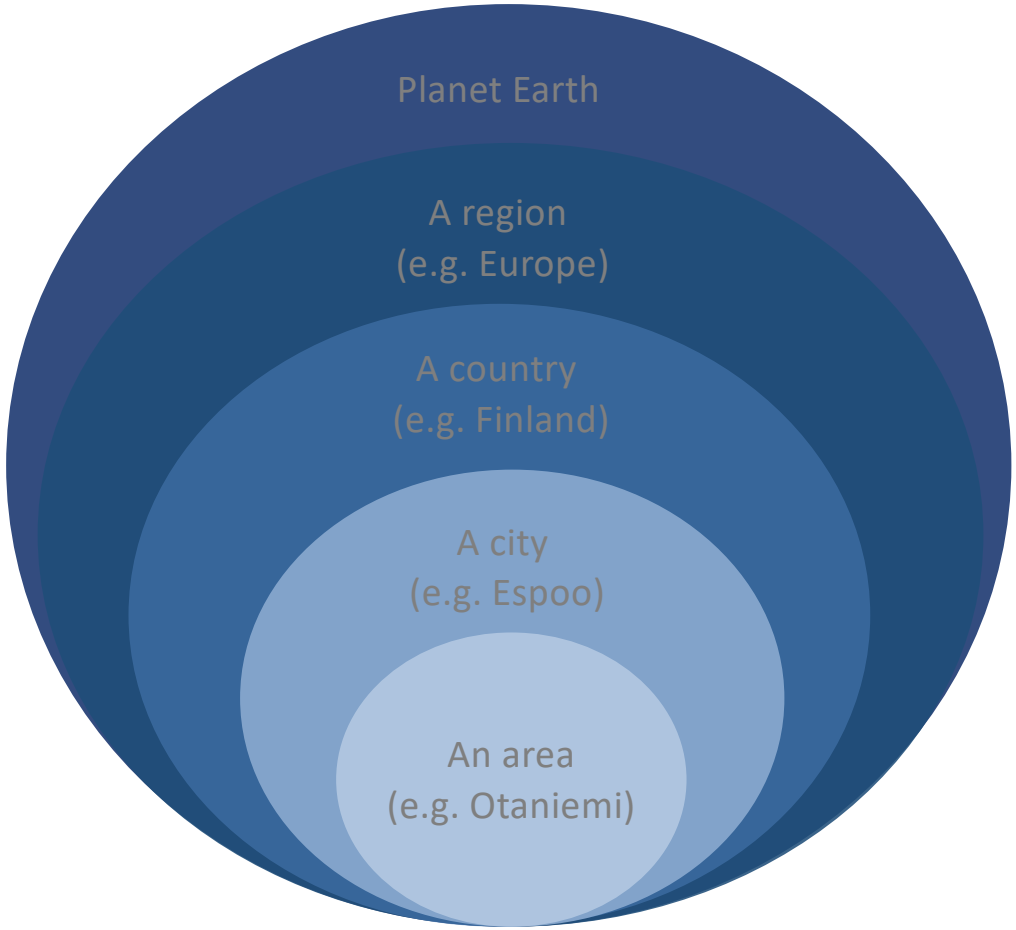


And how they should be viewed?

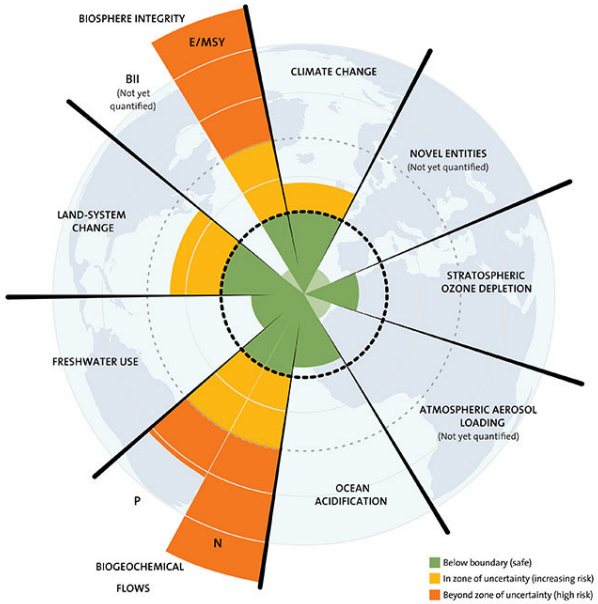
SYSTEMS

Multiple nested systems, but the ultimate system = planet Earth

SUSTAINABILITY



Links also to the boundaries of the system
→ Planetary boundaries



SYSTEMS' governance

Systems can and should be governed

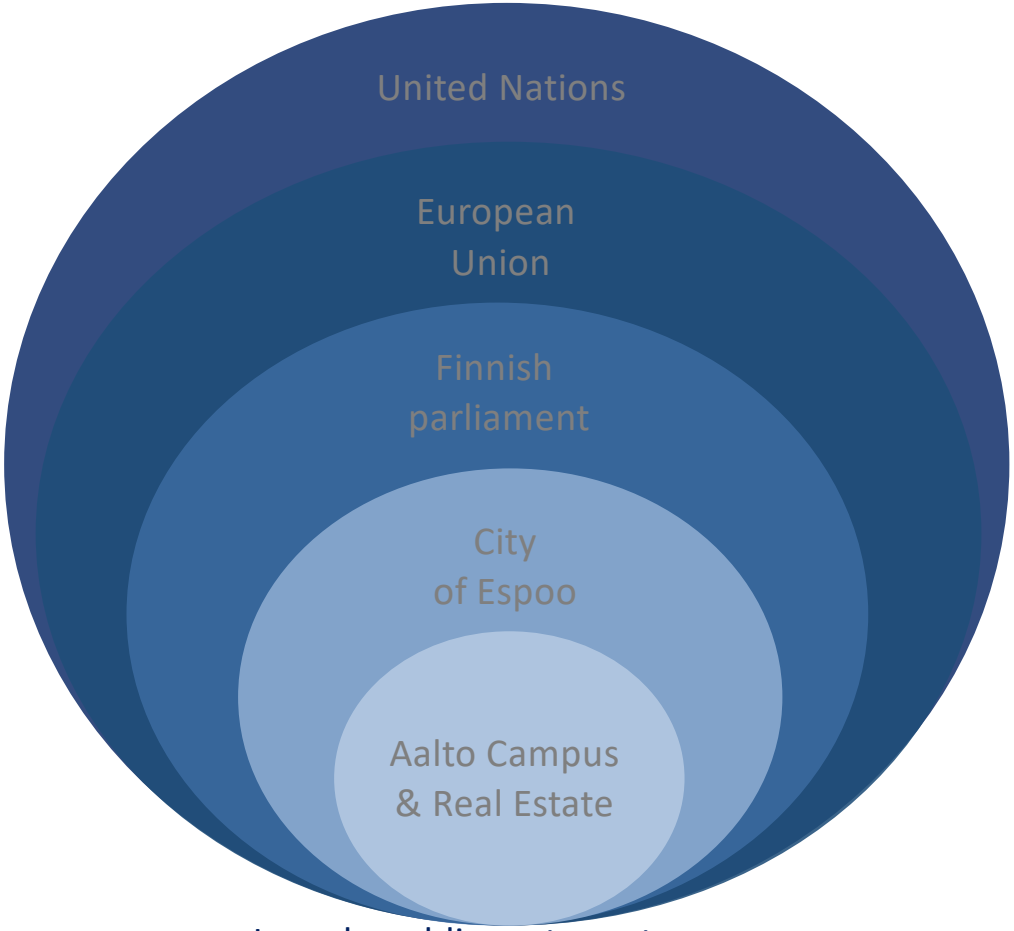
"Governance is a social function centered on steering human groups toward desired outcomes *Young 2013*

→ Essentially deciding together what we want and how we get there

Variety of actors and related institutions and organisations for that

→ 'The society'

SUSTAINABILITY



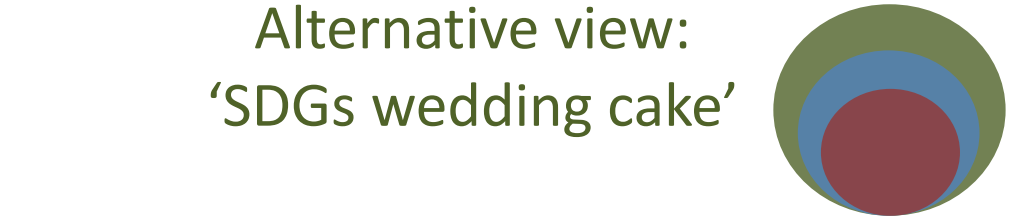
Largely public sector actors

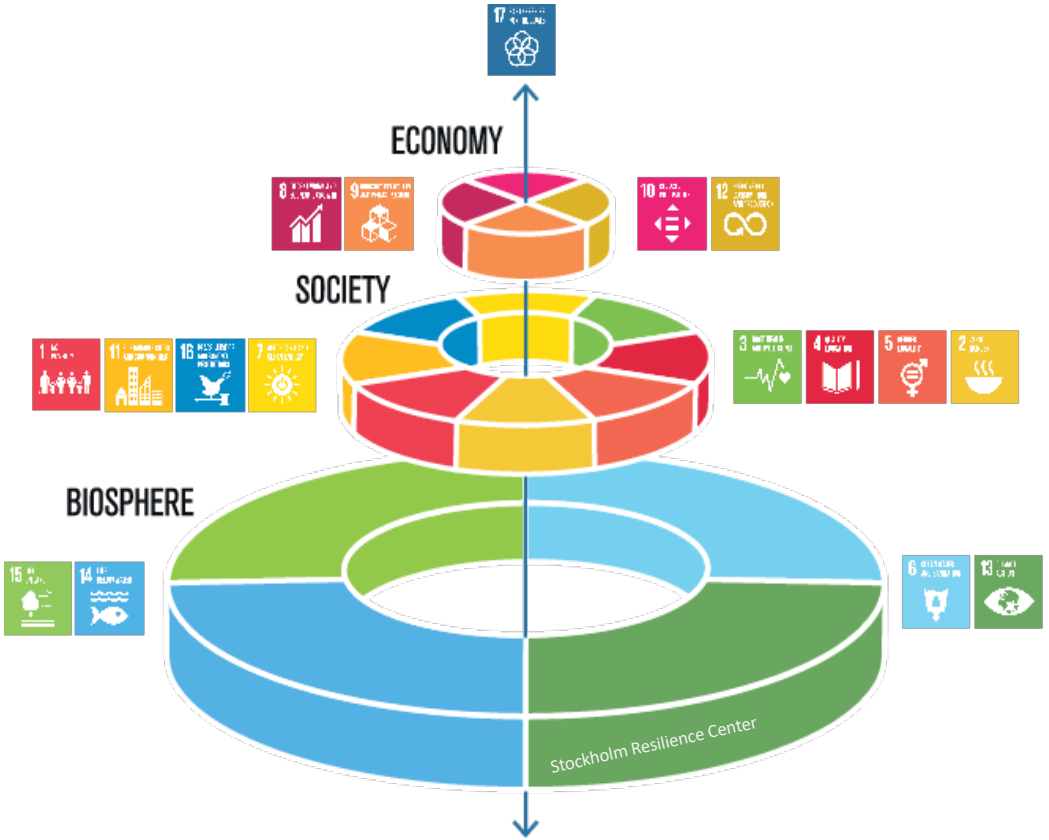
→ But also private sector, civil society, academia…

SDGs provide the global governance framework for promoting sustainable development currently

→ But also concerns on how well SDGs work, given their sectoral focus and lack of systemic view

Alternative view:
'SDGs wedding cake'





SUSTAINABILITY

Lot of additional information, for example these:

- Giddings et al. (20002): Environment, economy and society
- Kates et al. (2005): What is sustainable development?
- Kates et al. (2001): Sustainability Science
- Raworth (2012): A Safe and Just Space for Humanity
- Rockström et al. (2009): A safe operating space for humanity
- Rockström et al. (2023): Safe and just Earth system boundaries
- Steffen et al. (2015): Planetary boundaries: Guiding human development on a changing planet
- de Vries (2013): Sustainability Science
- UN Sustainable Development Goals SDGs: https://sustainabledevelopment.un.org

Also check the work by WAT researchers Matti Kummu, Miina Porkka, Maija Taka, Olli Varis & co on these themes!

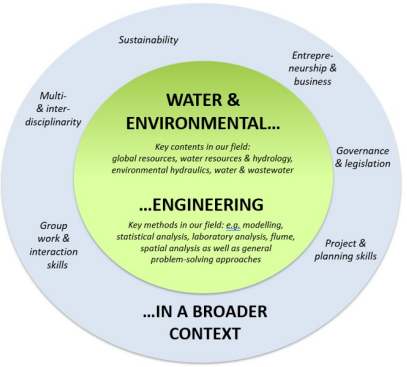
→ E.g. Zipper et al. (2020): Integrating the Water Planetary Boundary With Water Management From Local to Global Scales

→ E.g. Taka et al. (2021): The potential of water security in leveraging Agenda 2030

Essential elements

...for 'ensuring a functioning and sustainable society'

Three + one critical elements that are essential for the WAT Course (and entire WAT programme)



- Sustainability (the aim & crosscutter)
- Society (the context)
- Systems (the way to think)

→ Science (our teaching is based on our research)

QUESTIONS?

YOUR EXPERTISE

- You are a diverse set of students, with varying backgrounds and existing expertise

  → As discussed last week: see group posters ☺

- It is really nice!

  → Provides opportunities for co-learning + linking our teaching your existing experience

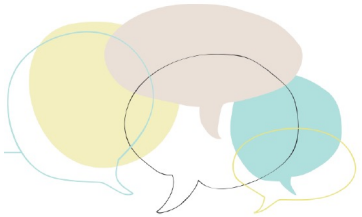
  → Also means that we are not so much teachers, but facilitators of your joint learning process

Note: do not use this as a short cut in your assignments!

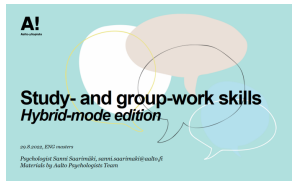
→ If you e.g. have a GIS wizard in your group, don't let they to do your GIS task, but use they as a mentor!

BE ACTIVE!

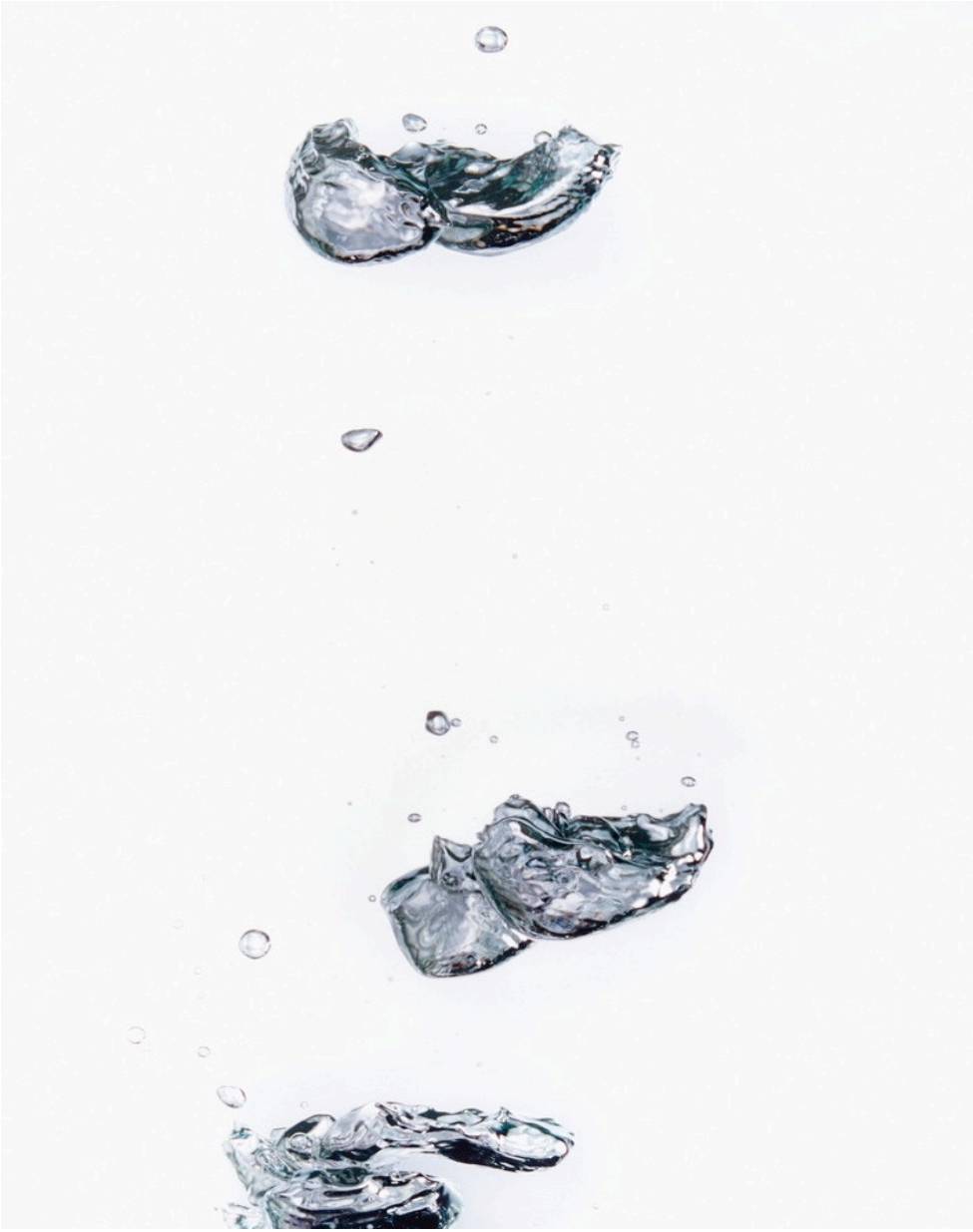
- Learn from each other
  - → As we cannot teach you as one uniform group, you must also learn from each other (so plenty of group work coming)
- …think wisely about your group work
  - → Your expertise should NOT mean that everyone does what they already know in the group (as no-one learns then)
  - → Rather: do what you don't know so well yet – and use your group members as your mentors to learn it!
- …and let us know of your expertise, too!
  - → Tell us already beforehand if you are expert on some of the themes or methods we teach

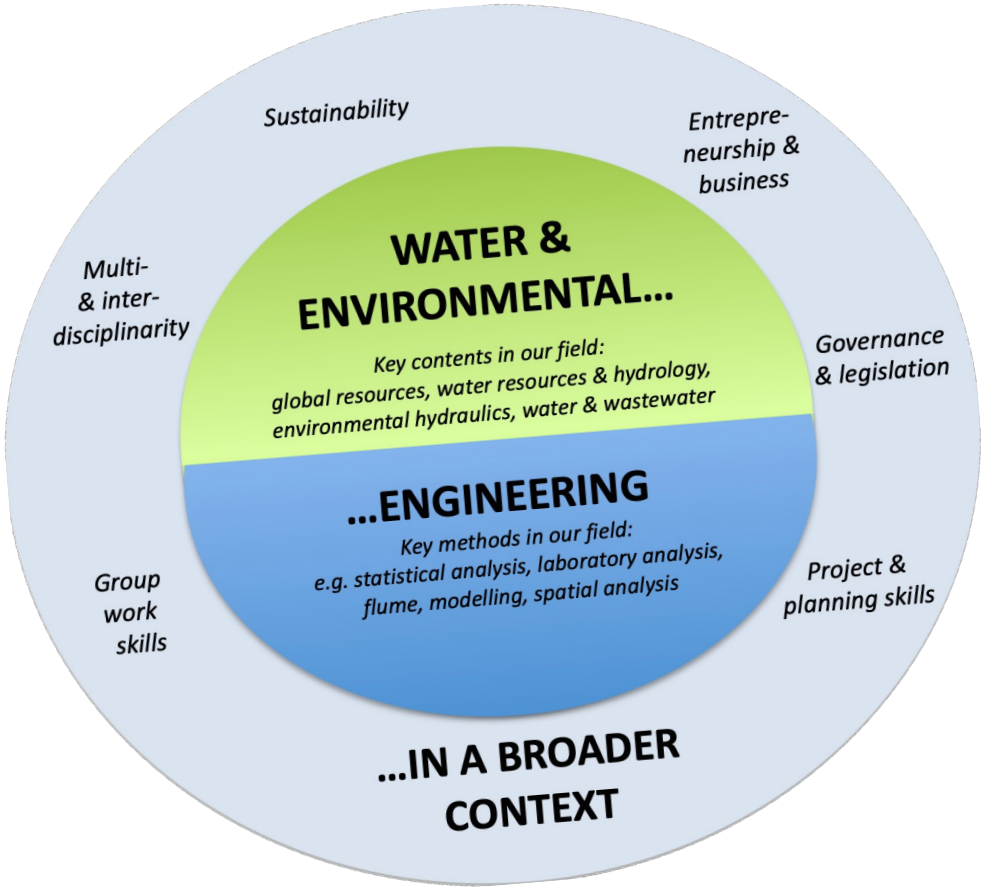


"Building knowledge is a shared process"



Questions, comments?





Note: lot of information, so please return to these slides also later on through MyCourses

WAT Course introduction

First something about WAT Course and WAT more generally (re-cap from WAT Orientation Days)

Three Elements of WAT course

'WATER & ENVIRONMENTAL' (our key themes)

'…ENGINEERING' (our key methods)

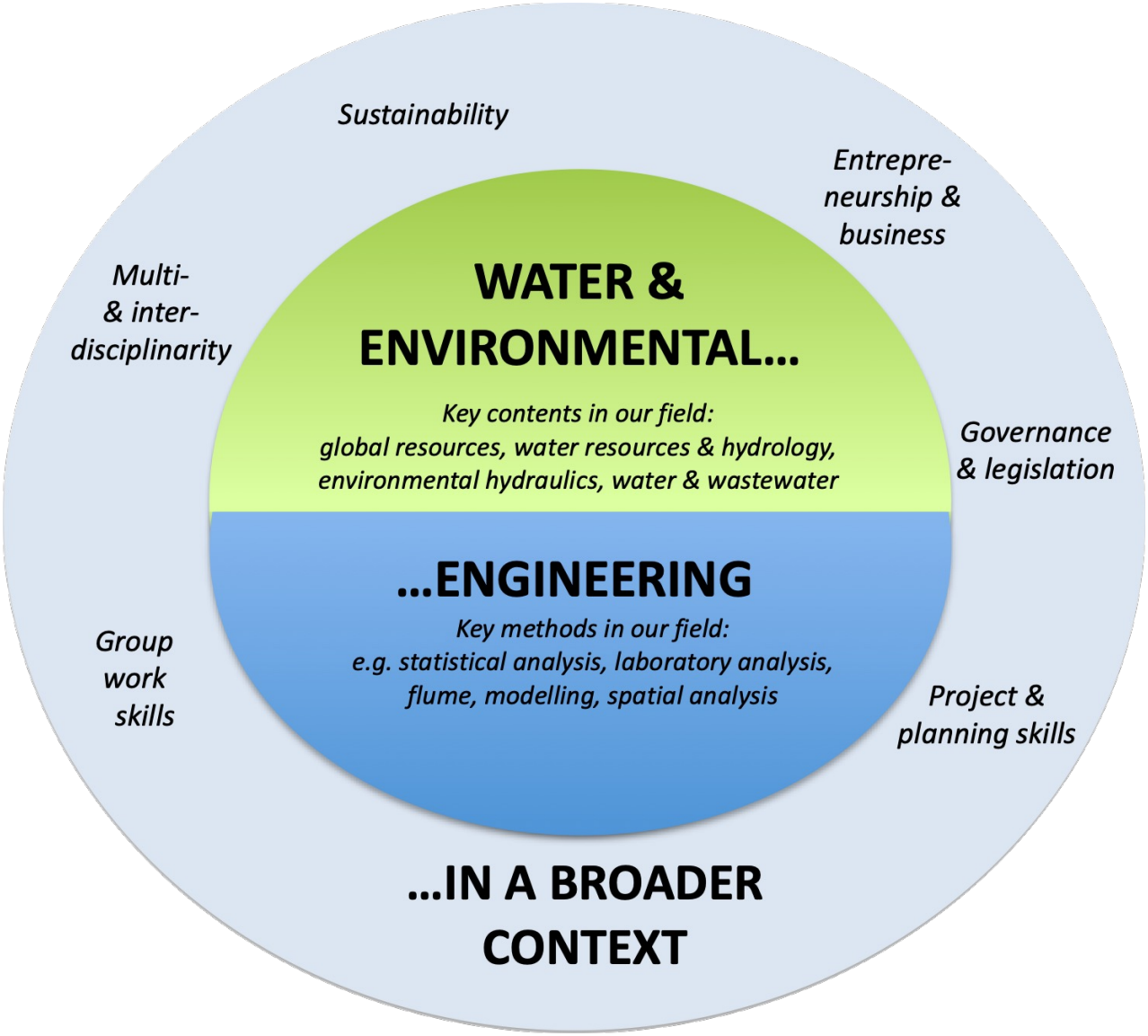
'…IN A BROADER CONTEXT' (our context)

You have to get our themes and methods right
to be a water & environmental engineer

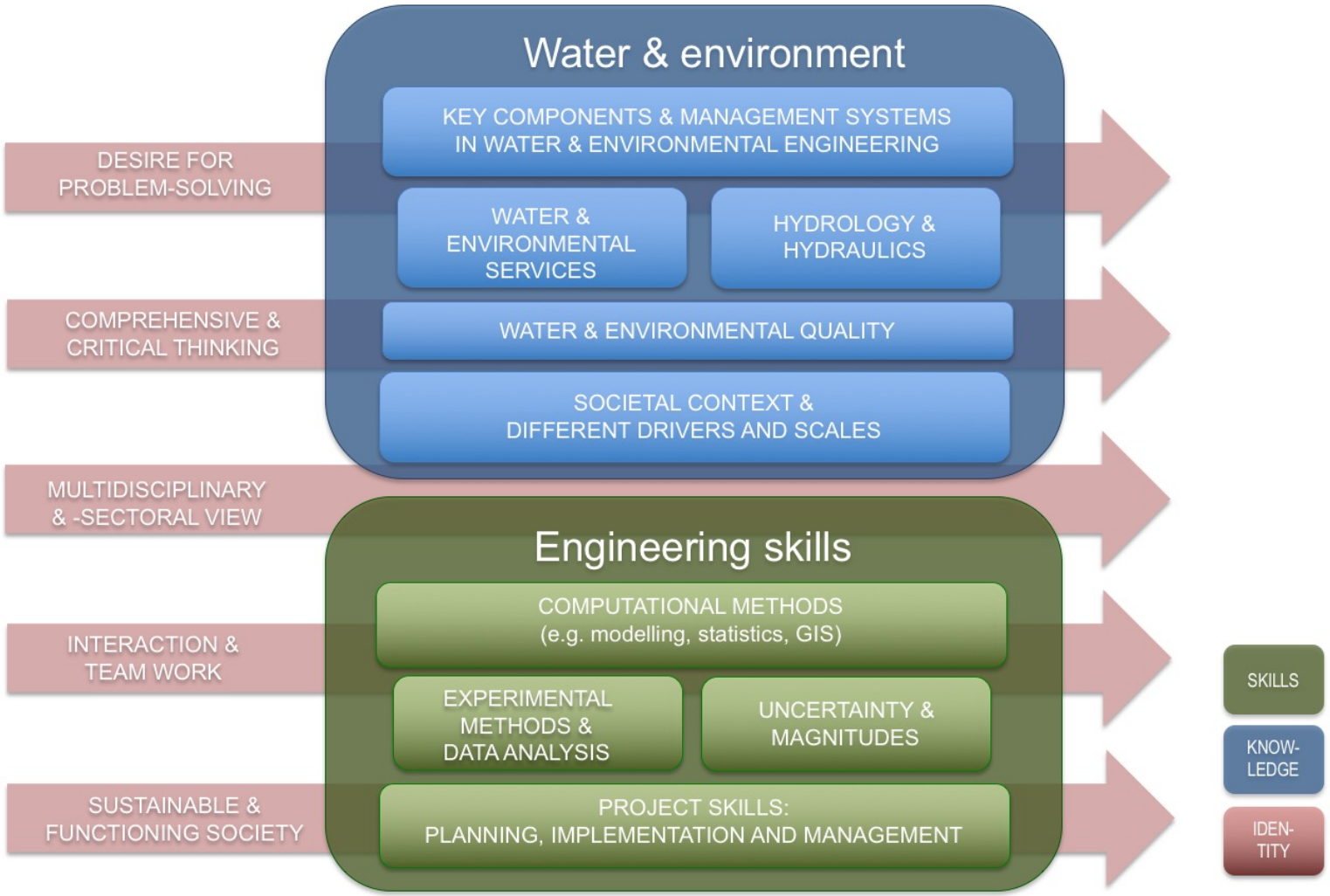
→ But to be able to do your work well, you need
also to understand the broader context

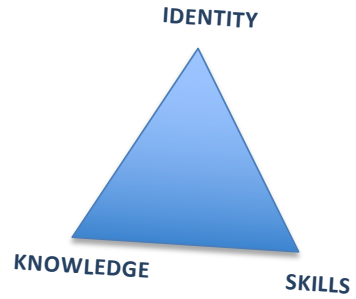
→ Our advanced courses focus on our themes and methods;
in-depth expertise on context you have to get elsewhere

WAT Course provides an in-depth introduction to water and environmental engineering + its context



WAT COMPETENCES





WAT Course provides you an introduction on all of these: advanced courses provide then more in-depth expertise on your preferred themes and methods

Intended Learning Outcomes ILOs

Check these from SISU / MyCourses' Syllabus: gives you an idea what the course is about + also is our quality promise to you

After the completion of the course the student is able to…

- Recognise and describe the main characteristics of the water and environmental engineering field, including its link to sustainability [knowledge]
- Understand the principles of the hydrological cycle and water resources management, including the role of hydraulic structures [knowledge]
- Understand the key principles of good environmental and water quality [knowledge]
- Define the main aspects of water and environmental services and related infrastructures, particularly those related to water supply and sewerage systems [knowledge]
- Identify the broader societal context relevant to water and environmental engineering, including the key governance and entrepreneurial aspects [knowledge]
- Create their Personal Learning Portfolio, and in this way is able to recognise, assess and communicate their own key competences and strengths [identity]
- Work interactively as part of the group, with relevant communication and group working skills [identity]

Intended Learning Outcomes ILOs

Check these from SISU / MyCourses' Syllabus: gives you an idea what the course is about + also is our quality promise to you

In addition, the student:

- knows the key computational methods related to water and environmental engineering [knowledge]
- can apply basic water and environmental measurement methods and related basic analyses in the laboratory and in the flume [skill]
- understands the basic concepts of storing and processing spatial data in GIS [knowledge]
- knows how linear regression and statistical testing can be applied in water and environmental engineering related problems [knowledge]
- is able to quantify errors associated with hydro-environmental measurements [skill]
- understands basic concepts of applying simulation models to problems related to water and environmental engineering [knowledge]
- is aware of the potential of using computational methods in solving water and environmental problems [identity]

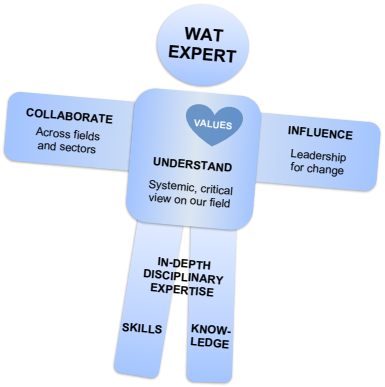
Your combined competence profile

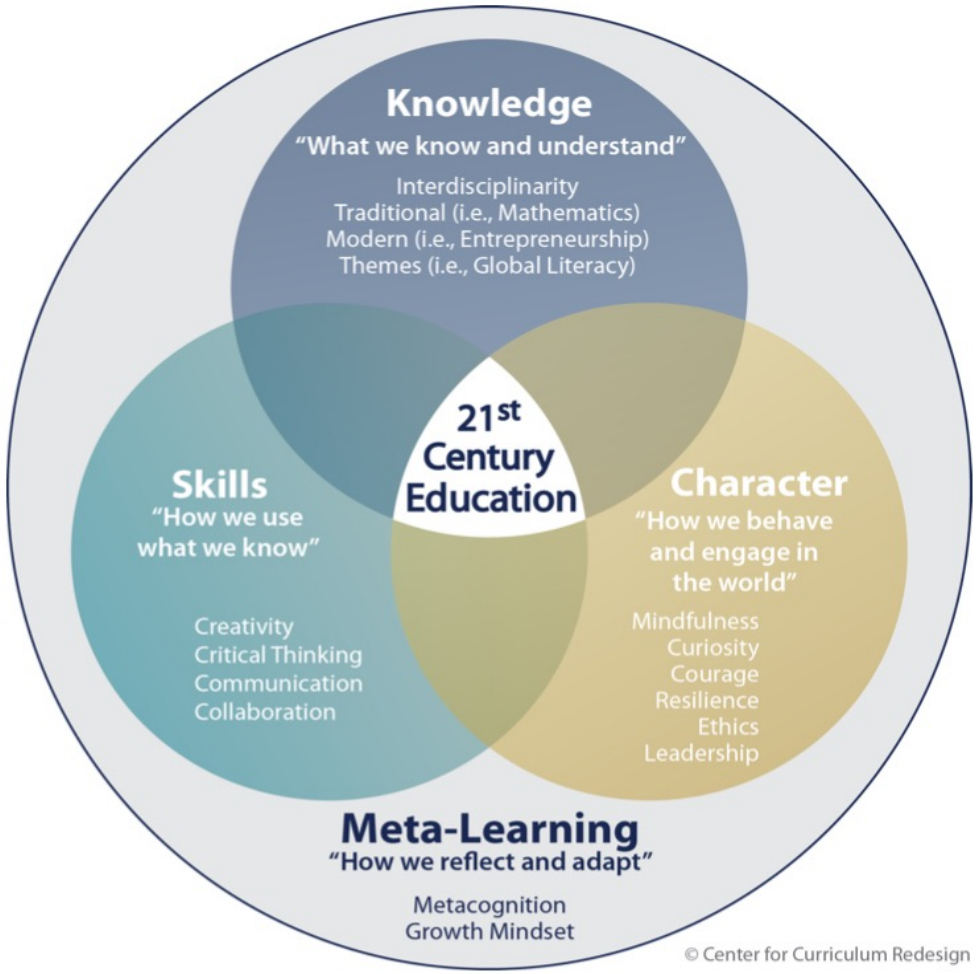
The course ILOs link to your competence-building

→ A combination of knowledge, skills and identity skills (’character’)

→ T-shaped learning profile as an aim

(see WAT orientation)





Source: Fadel, Bialik & Trilling 2015

WAT COMMON + ADVANCED COURSES

15 ECTS

WAT Course (WAT-E1100)

Provides you wide view on our field, not so much depth: general introduction

45 ECTS

- WATER RESOURCES MANAGEMENT & ENV. HYDRAULICS
- WATER & DEVELOPMENT
- WATER & WASTE WATER ENGINEERING

Advanced courses are organised according to three study themes / paths:
provide you with a more detailed expertise on your selected themes and methods

Note: while the three study themes differ, the methods and tools taught in different courses are useful across all three themes!

Three themes but also two general advanced courses:

- WAT Project Course
- WAT Special Course

WATER RESOURCES

- Groundwater hydrology
- Environmental hydraulics
- Hydrological modelling
- Surface water resources

WATER & DEVELOPMENT

- Sustainable built environment
- Sustainable Global Technologies SGT Studio (10 ECTS)
- Water and governance
- Water and people in a changing world

- WAT Project Course
- WAT Special Course

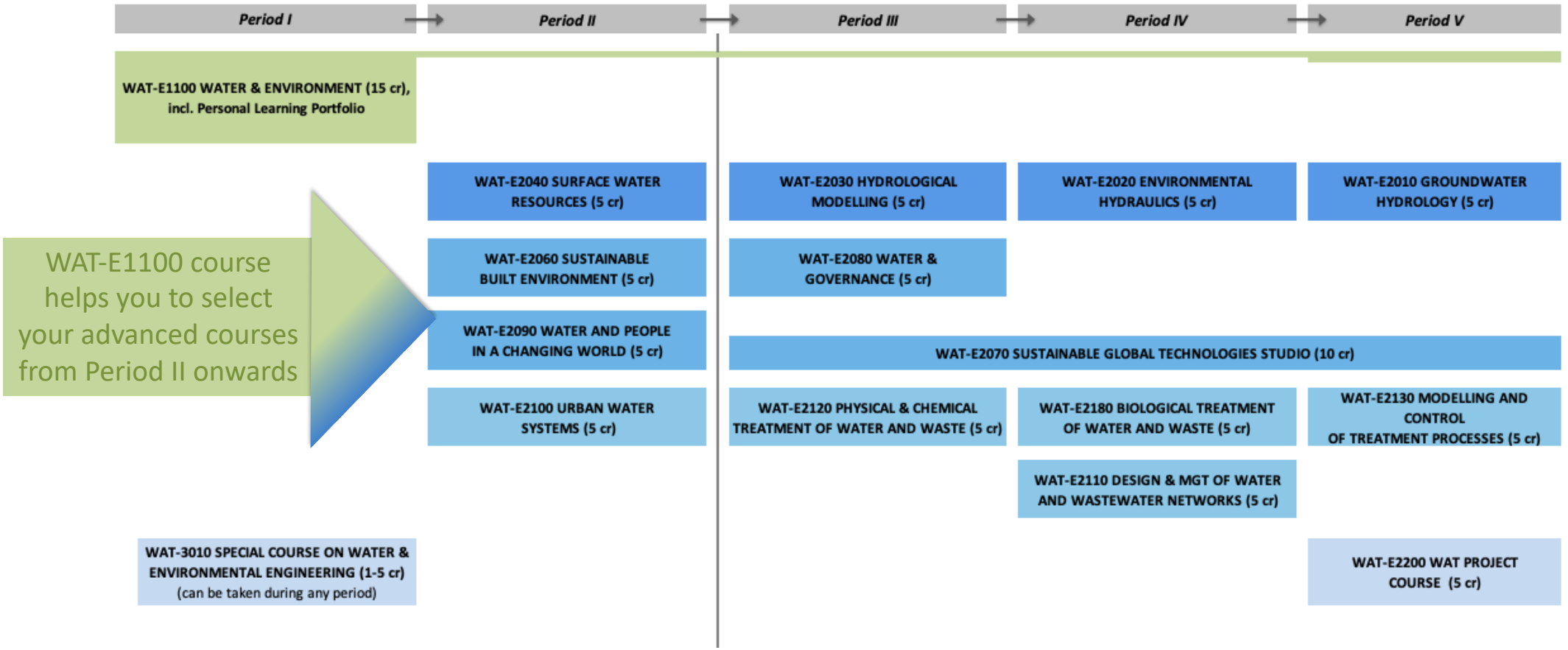
WATER & WASTEWATER

- Urban water systems
- Design and management of water and wastewater networks
- Physical and chemical treatment of water and waste
- Modelling and control of treatment processes
- Biological treatment of water and waste

Water & environmental engineering (15 cr.)

In-depth introduction to the key themes and problem-solving methods in our field, through variety of group work and individual tasks.

WAT COMMON & ADVANCED COURSES



WAT Course introduction

Then to the actual WAT Course practicalities ☺

WAT COURSE: WEEKLY STRUCTURE…

WAT Course themes tied together with a common weekly structure
(that change a bit each week as every week is different)

General weekly structure

	Mon	Tue	Wed	Thu	Fri
Morning (9.00-)	CONTEXT SESSION	CONTACT SESSION/ GROUP WORK	THEMATIC TASK: individual / group work	WEEKLY EXERCISE	WEEKLY EXERCISE: Individual / group work
Afternoon (-4pm)	CONTACT SESSION	THEMATIC TASK	THEMATIC TASK: individual / group work	WEEKLY EXERCISE: Individual / group work	WEEKLY EXERCISE

Draft showing the overall schedule – not all weeks → e.g. some weeks weekly method comes earlier

Timetable for each week can be found from
WAT-E1100 MyCourses: check them out!

...WITH WEEKLY THEMES + METHODS

WEEKLY THEMES

1) Water & development MATTI & OLLI
2) Hydrology & water resources management HARRI
3) Water & wastewater engineering ANNA
4) Water and environmental quality ILKKA
5) Environmental hydraulics ELIISA & JUHA
6) Env. management and sustainability MEERI
7) Synthesis MARKO

WEEKLY METHODS

1) Statistical analysis
2) Simulation modelling
3) Spatial analysis
4) Laboratory analysis
5) Hydraulic flume & modelling
6) Life Cycle Assessment LCA

WAT CONTEXTS

- Team roles & group work (Week 1)
- Entrepreneurship & business (Week 3)
- Governance + science (Week 7)

WEEKLY TIMETABLE: WAT-E1100 Water and Environmental Engineering

1st WEEK — Water & development (Matti, Olli, Matleena) + Intro (Marko)

	Mon 4.9.	Tue 5.9	Wed 6.9	Thu 7.9	Fri 8.9
Morning (9.00-)	CONTEXT SESSION: Intro + group work practices [Marko]	CONTACT SESSION: sustainability, global resources + SGT cases [Olli, Julia, Matleena]	THEMATIC TASK: individual / group work	WEEKLY EXERCISE: Lecture Guided exercise workshop	WEEKLY EXERCISE: Individual / group work
	DRAFT SHOWING THE OVERALL STRUCTURE: FINAL SCHEDULE IN MYCOURSES' WEEKLY SUB-PAGE				
Afternoon (-4pm)	CONTACT SESSION: global water & food issues [Matti]	AALTO DAY ONE: no contact sessions	THEMATIC TASK: SWOT wrap-up [Matti & co]	WEEKLY EXERCISE: Guided exercise workshop	WEEKLY EXERCISE: Guided exercise workshop

2nd WEEK — Hydrology & water resources management (Harri & co)

	Mon 11.9.	Tue 12.9.	Wed 13.9.	Thu 14.9.	Fri 15.9.
Morning (9.00-)	CONTACT SESSION: water resources management & hydrology [Harri & co]	THEMATIC TASK: HBV modelling [Harri]	WEEKLY EXERCISE: modelling	WEEKLY EXERCISE: Individual / group work	THEMATIC TASK: individual / group work
	DRAFT SHOWING THE OVERALL STRUCTURE: FINAL SCHEDULE IN MYCOURSES' WEEKLY SUB-PAGE				
Afternoon (-4pm)	CONTACT SESSION: water resources management & hydrology [Harri & co]	THEMATIC TASK: individual / group work	WEEKLY EXERCISE: modelling	WEEKLY EXERCISE: modelling	THEMATIC TASK: HBV wrap-up [Harri]

3rd WEEK — Water & wastewater engineering (Anna)

	Mon 18.9.	Tue 19.9.	Wed 20.9.	Thu 21.9.	Fri 22.9.
Morning (9.00-)	CONTACT SESSION: Water & wastewater engineering [Anna] Rural area solutions [Harri M.]	CONTEXT SESSION + TASK: GIS INTRODUCTION [Teemu]	WEEKLY EXERCISE: spatial analysis & GIS	WEEKLY EXERCISE: Individual / group work	THEMATIC TASK on ENTREPRENEURSHIP: communication clinics
	DRAFT SHOWING THE OVERALL STRUCTURE: FINAL SCHEDULE IN MYCOURSES' WEEKLY SUB-PAGE				
Afternoon (-4pm)	CONTACT SESSION: Introduction to entrepreneurial mindset by AVP	THEMATIC TASK on ENTREPRENEURSHIP: group work / interviews	ENTREPRENEURSHIP SESSION by AVP Analysing the interviews & creating a value proposition	ENTREPRENEURSHIP: introduction to customer communication	ENTREPRENEURSHIP PRESENTATIONS + WRAP-UP with AVP

Weekly timetable available in MyCourses
→ But remember to check the weekly sub-page for final, detailed timetable

4th WEEK — Water & environmental quality (Ilkka)

	Mon 25.9	Tue 26.9	Wed 27.9	Thu 28.9	Fri 29.9
Morning (9.00-)	CONTACT SESSION + TASK: water & enviromental quality [Ilkka & co]	WEEKLY EXERCISE: introduction to laboratory work	WEEKLY EXERCISE: laboratory work & analysis *(Groups 3-4)*	WEEKLY EXERCISE: laboratory work & analysis *(Groups 1-2)*	WEEKLY EXERCISE time to prepare the presentations
	DRAFT SHOWING THE OVERALL STRUCTURE: FINAL SCHEDULE IN MYCOURSES' WEEKLY SUB-PAGE				
Afternoon (13.00-)	Time to read for the home exam: individual work	WEEKLY EXERCISE: laboratory work & analysis *(Groups 5&6)*	WEEKLY EXERCISE: laboratory work & analysis *(Groups 3-4)*	WEEKLY EXERCISE: laboratory work & analysis *(Groups 1-2)*	TASK &WEEKLY EXERCISE WRAP-UP

5th WEEK — Environmental hydraulics (Eliisa & Juha)

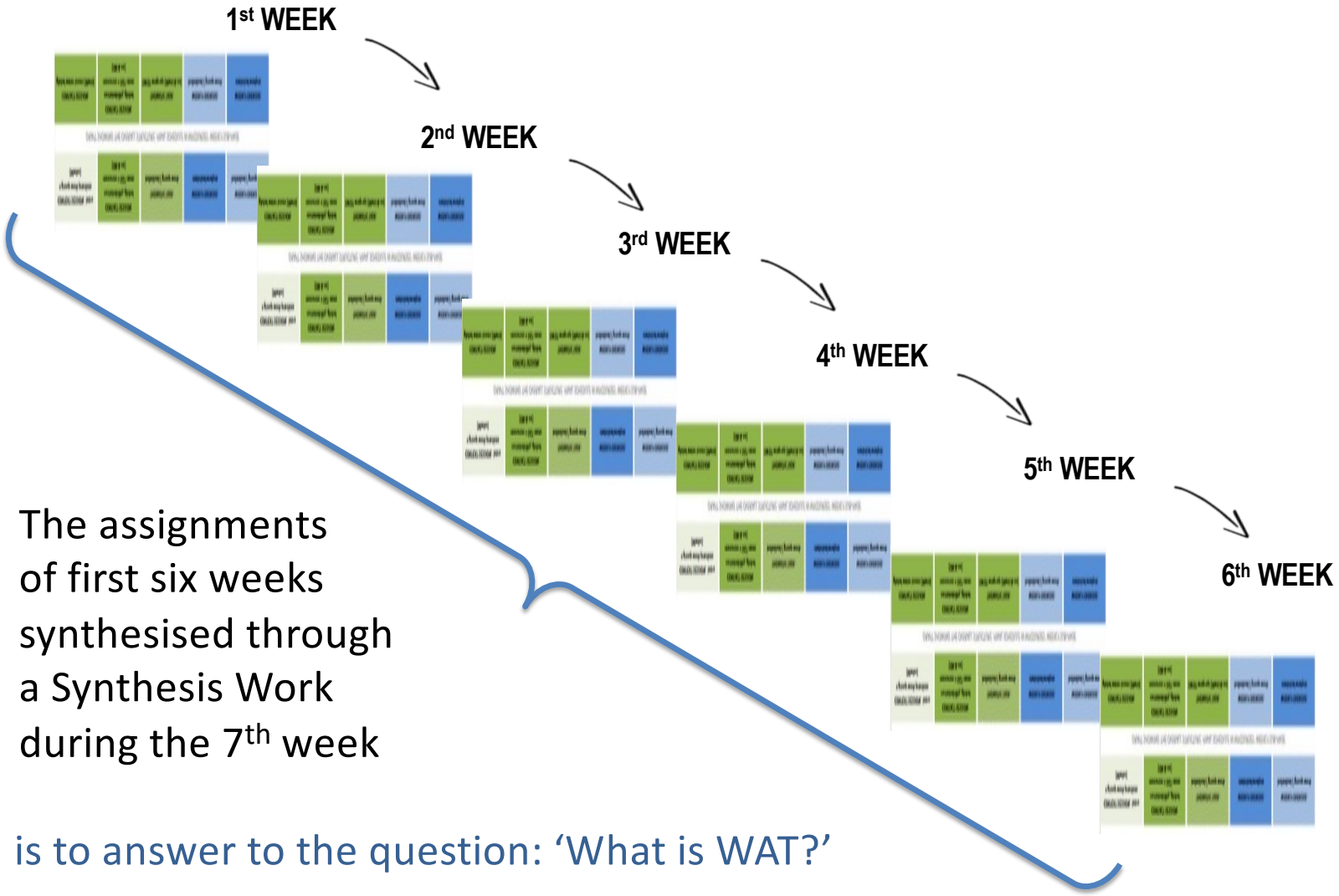
	Mon 2.10.	Tue 3.10.	Wed 4.10.	Thu 5.10.	Fri 6.10.
Morning (9.00-12:00)	CONTACT SESSION: Environmental hydraulics & hydro-environmental engineering solutions [Juha]	THEMATIC TASK: EHL flume measurements in groups [Juha]	CONTACT SESSION: lecture and group work (hydraulic modelling) [Eliisa]	Independent work: weekly exercise (HEC-RAS model). Help-desk at 10-11 am [Erik]	Independent work time: Work on weekly exercise (HEC-RAS model)
	DRAFT SHOWING THE OVERALL STRUCTURE: FINAL SCHEDULE IN MYCOURSES' WEEKLY SUB-PAGE				
Afternoon (13:00-16:00)	THEMATIC TASK: EHL flume experimental research intro [Juha]	THEMATIC TASK: flume analysis & reporting by groups	WEEKLY EXERCISE: [Erik] HEC-RAS model application, instructions and task starts	Independent work: Weekly exercise (HEC-RAS model). Help-desk at 1-2 pm [Erik]	CONTACT SESSION: lecture and wrap-up (results of the task) [Eliisa & Erik]

6th WEEK — Environmental management & sustainability (Meeri)

	Mon 9.10.	Tue 10.10.	Wed 11.10.	Thu 12.10.	Fri 13.10.
Morning (9.00-)	WEEKLY EXERCISE: Life Cycle Assessment	WEEKLY EXERCISE: Individual / group work	WEEKLY EXERCISE WRAP-UP	THEMATIC TASK: individual / group work	CONTACT SESSION: Dilemma board game [Meeri]
	DRAFT SHOWING THE OVERALL STRUCTURE: FINAL SCHEDULE IN MYCOURSES' WEEKLY SUB-PAGE				
Afternoon (9.00-)	WEEKLY EXERCISE: Individual / group work	WEEKLY EXERCISE: Individual / group work	CONTACT SESSION: environmental and sustainability management [Meeri]	THEMATIC TASK: individual / group work	TASK & WEEKLY EXERCISE WRAP-UP

7th WEEK — Synthesis (Marko)

	Mon 16.10.	Tue 17.10.	Wed 18.10.	Thu 19.10.	Fri 20.10.
Morning (9.00-)	CONTEXT SESSIONS: Governance + Science [Marko]	SYNTHESIS WORK: Individual synthesis + group work	FEEDBACK & WAY FORWARD SESSION [Marko]	TIME FOR FINALISING YOUR ASSIGNMENTS	TIME FOR FINALISING YOUR ASSIGNMENTS
Afternoon (-4pm)	SYNTHESIS WORK: Individual synthesis + group work	SYNTHESIS SESSION [Marko]		*(possibility for mentor meetings + planning your studies and preparing your Personal Learning Portfolio)*	*(possibility for mentor meetings + planning your studies and preparing your Personal Learning Portfolio)*



The assignments of first six weeks synthesised through a Synthesis Work during the 7th week

→ Aim is to answer to the question: 'What is WAT?'

→ Links to your study plan and portfolio process

COURSE MANAGEMENT + TEACHERS

- WAT Course responsible teacher is Marko,
  with Teemu having the main responsibility for methods part
- Course coordinator Elina responsible for practical arrangements

→ Each week has also Weekly Leader(s) who are responsible for weekly tasks and exercises + actual teaching:
Weekly Leaders visible under Weekly themes

WEEKLY THEMES

1) Water & development MATTI & OLLI

2) Hydrology & water resources management HARRI

3) Water & wastewater engineering ANNA

4) Water and environmental quality ILKKA

5) Environmental hydraulics ELIISA & JUHA

6) Env. management and sustainability MEERI

7) Synthesis MARKO

COURSE PRACTICALITIES

- The course is organised live in Water Building and other locations

  → Particularly exercises also elsewhere in the campus,
  as many require computer rooms

  → But easy rule of thumb: **the week starts on Monday at 9.00 in Water Building's Lecture Hall 286/287 i.e. here** ☺

- Independent group work sessions you can agree as you see best

  → Live/online: Rules of Work help to define these

COURSE PRACTICALITIES

- Key online platforms: MyCourses + Teams
  - **MyCourses:** all information about the weeks, including sessions locations + lecture material, assignments as well as submissions

    → Also official announcement: follow carefully!

  - **Teams:** communication channel for e.g. questions regarding the assignments: use weekly sub-channels!

    → Also possible session recordings there

Are you already in MyCourses?

Instructions for joining Teams in MyCourses

SESSION RECORDINGS

- The sessions build on active interaction with you. Many sessions also combine lectures with (group) learning activities.
- It is thus generally **not** possible to attend the sessions remotely

→ But if you are absent e.g. due to sickness, let us know as soon as possible and we will see what we can do (e.g. a compensatory task)

→ Also, we aim to provide session recordings for the key sessions such as those introducing assignments: will become visible in the course's Teams channel under that week (and may also be streamed live)

COURSE ASSIGNMENTS

- Each week includes two assignments
  1) Thematic Task: mainly done in groups
  2) Weekly Exercise: individually or in groups/pairs
  → Some weeks include also a small Context Task

Laboratory safety exam for Weeks 4 & 5: DL for the exam is on 24.9.

The groups have a rotating *Weekly Chair*

- Responsible for chairing your meetings and being contact point for teachers

- Also responsible –together with the group– for submitting group assignments

→ The group decides themselves the Weekly Chairs:
everyone should be a chair at least once!

USE of AI?

- The use of artificial intelligence (e.g. ChatGPT) is emerging also in our teaching: something we as teachers are also learning

→Aalto guidance: the use of AI is allowed, if not otherwise indicated

→Yet, comes with potential challenges so i) think carefully when to use (if you decide to use), and ii) be open about its use i.e. state it clearly

For more information, see Aalto guidance and tips:

https://www.aalto.fi/en/services/guidance-for-the-use-of-artificial-intelligence-in-teaching-and-learning-at-aalto-university

https://www.aalto.fi/en/services/tips-for-using-artificial-intelligence-for-students

LATE SUBMISSIONS

- The general practice: submit your tasks on time, by the given deadline (naturally)
- You are able to submit late, but this will automatically result in -**30% of the grade** of that particular assignment
  → Can even be more depending on situation
- Note that even then you must submit the assignment **within a week from the deadline**

Note: we have a similar basic rule also in our WAT advanced courses, with slight differences between the courses

In possible *force majeure* situation, please contact the teacher who is responsible for the assignment and we'll figure things out!

COURSE ASSESSMENT

The course is assessed in three parts, with following weights:

Assessment done by teachers

1. Grade for Thematic tasks: weight 40%
2. Grade for Weekly exercises: weight 50%

Some tasks and exercises may be assessed with pass/fail

Assessment done by you

3. Grade from Self & Peer Assessment: weight 10%

→ As you to work plenty in groups, also assessment done partly by yourselves

Final grade = weighted average of the three

SELF + PEER ASSESSMENT

- You will assess yourself and your group members (peers) input for your group work activities during the course
  → A possibility to reflect your group work process
  → Also learning to give constructive feedback to your peers, and to receive it yourself ☺

- Will be done after the course through online questionnaire
  → Complemented by self-facilitated 'I like, I wish' exercise that we will do in groups during Synthesis Week

SELF + PEER ASSESSMENT

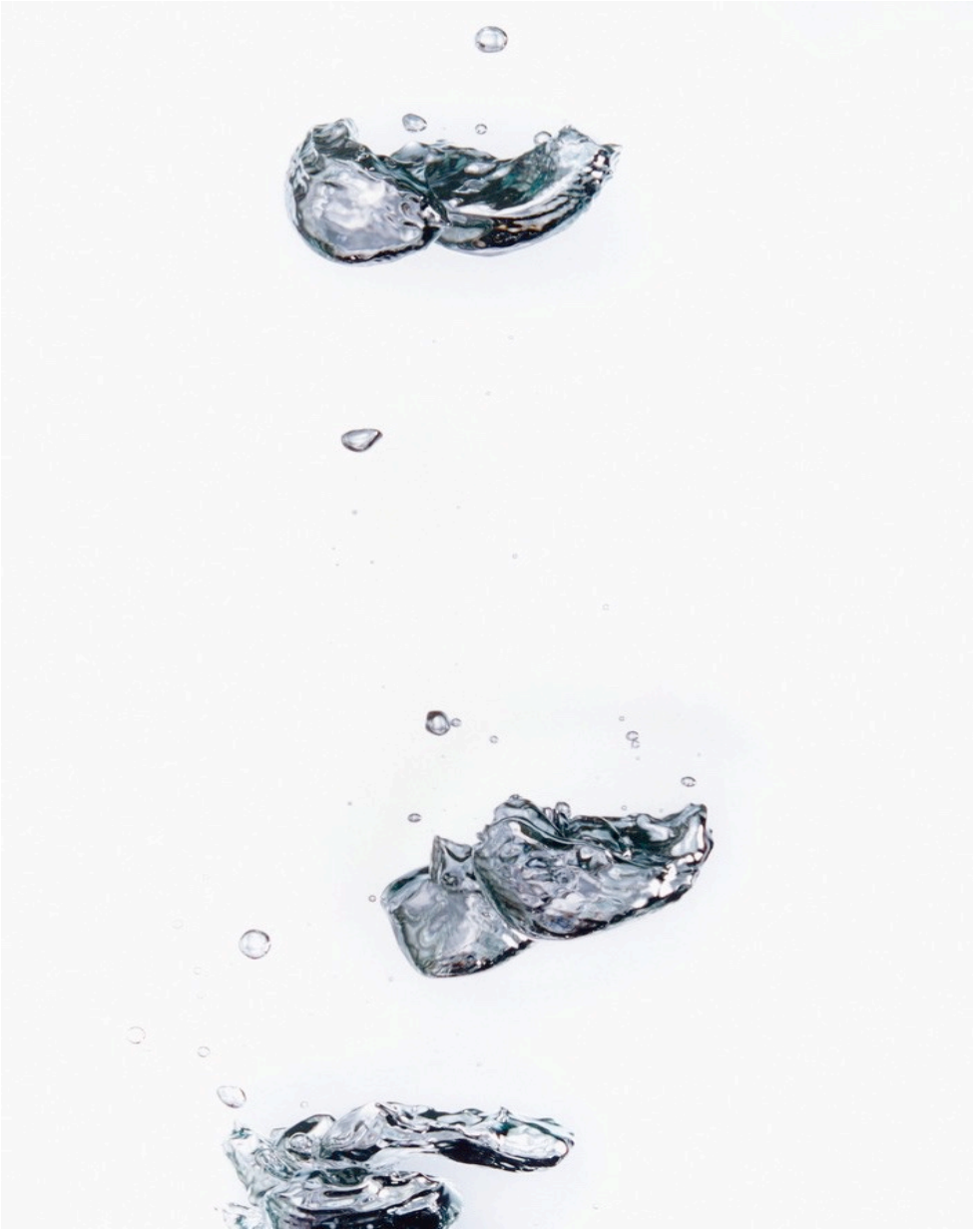
- Assessment done person by person (incl. yourself) for two indicators that have a similar weight:
  - **Content**: person's contribution to the content of the group work (knowledge, ideas, analysis etc.)
  - **Interaction**: person's contribution to the group and its functioning (interaction skills, including listening, leadership etc.)

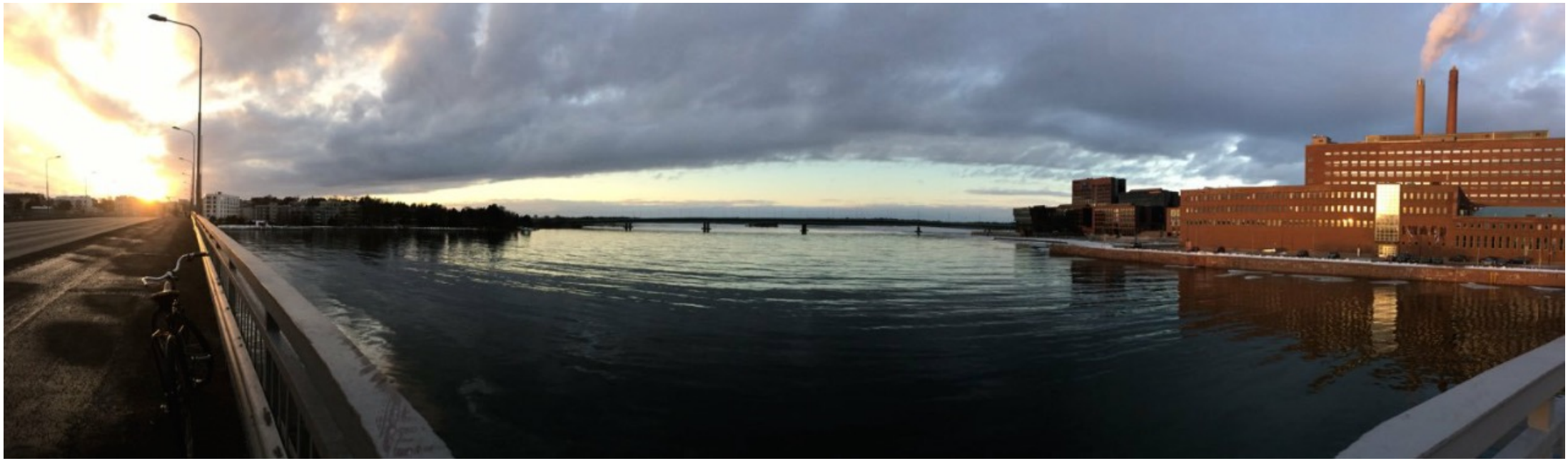
The grade is complemented by a short explanation for both grades: this is thus your possibility to provide anonymous feedback to the person.

COURSE FEEDBACK

- We have fine-tuned the course based on earlier feedback
  - → We know it is hard work, but trying to improve it by e.g. clarifying the structure and increasing focus
  - → Yet, the concept means you will have several separate tasks, and that you'll learn many new things every week
- Your feedback is very valuable!
  - → Come to talk to us!
  - → Anonymous feedback box in MyCourses
  - → Course feedback questionnaire (Webropol) after the course: answering the feedback questionnaire is compulsory part of the course

Questions, comments?



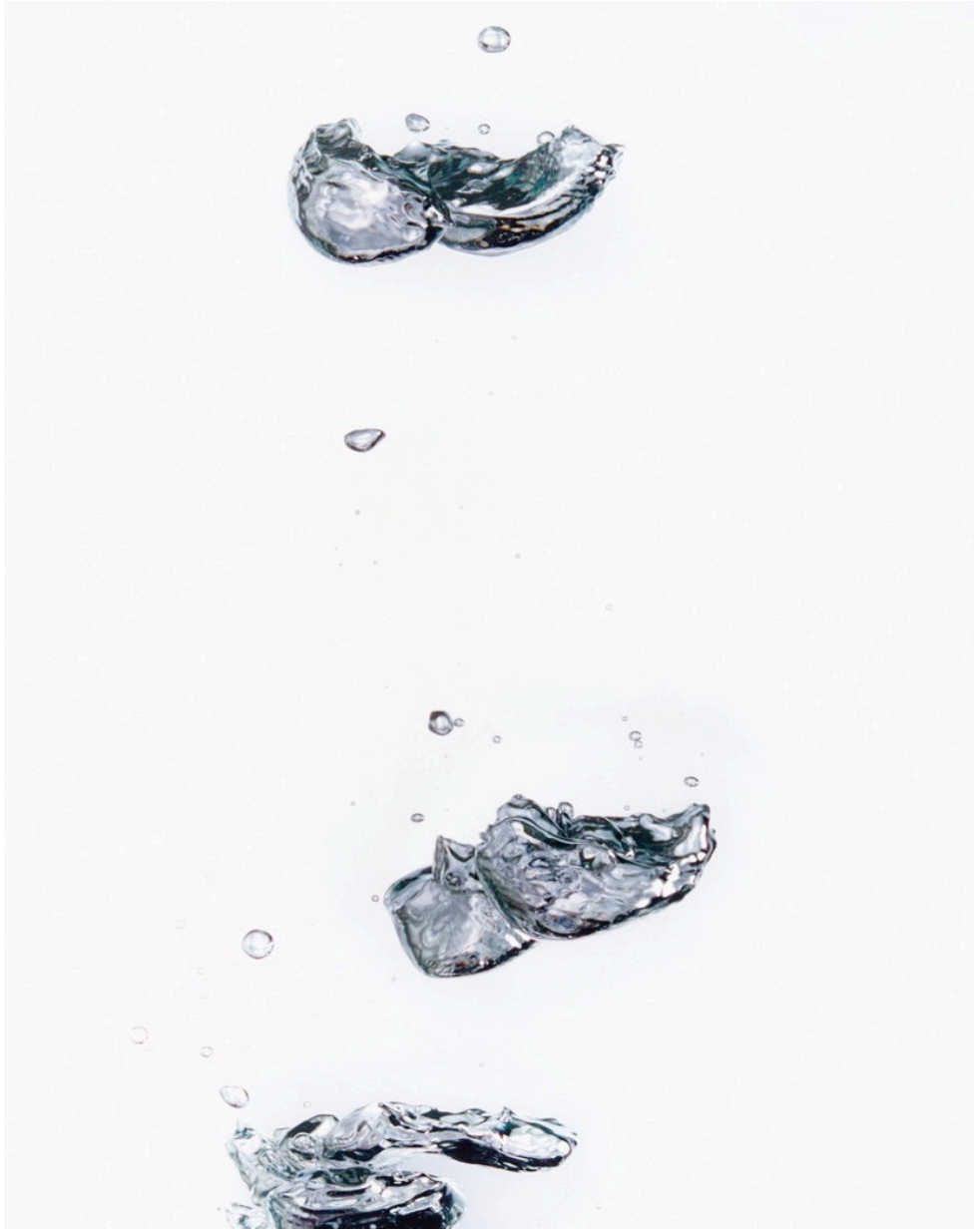


More information through MyCourses pages of WAT Course:
https://mycourses.aalto.fi/course/view.php?id=39153

Note: MyCourses has separate pages for each year, so check that you are viewing this year's course ☺

Questions, comments?

Feew, lot of information - you need a BREAK!



AGENDA

9.00- Introductions: forming WAT Course groups

Introduction to WAT Course

WAT Essential elements

BREAK

~10.30- Session on team roles and group work

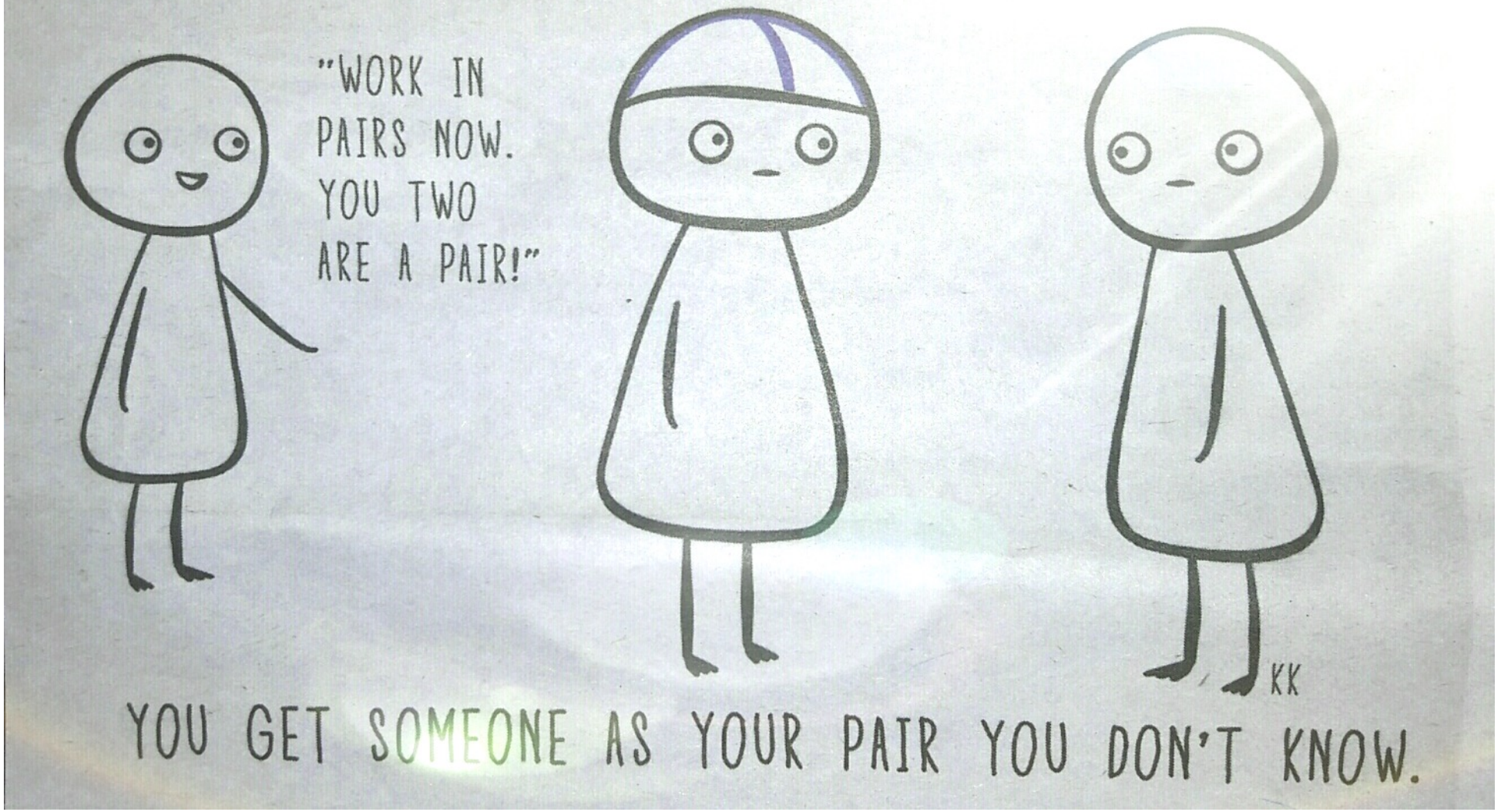
→ Different phases and roles in the group

→ Project & time management

→ *First group work task (submit to MyCourses):*
agree on your own Rules of Work for your group

Group work introduction

Karoliina Korhonen: Finnish Nightmares

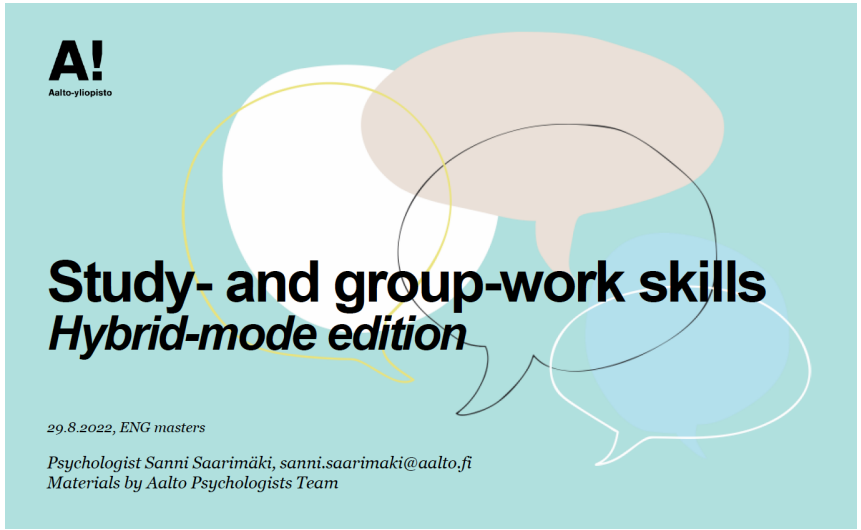


ENG Orientation Week

Useful presentations on e.g. scientific writing, intercultural communication, studying skills – and group work!

→ Check the presentations:

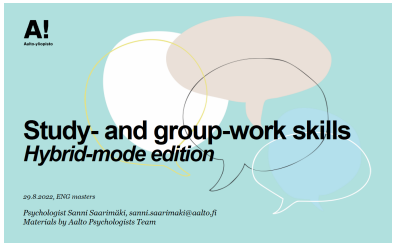
https://mycourses.aalto.fi/course/search.php?search=ENG-E3010

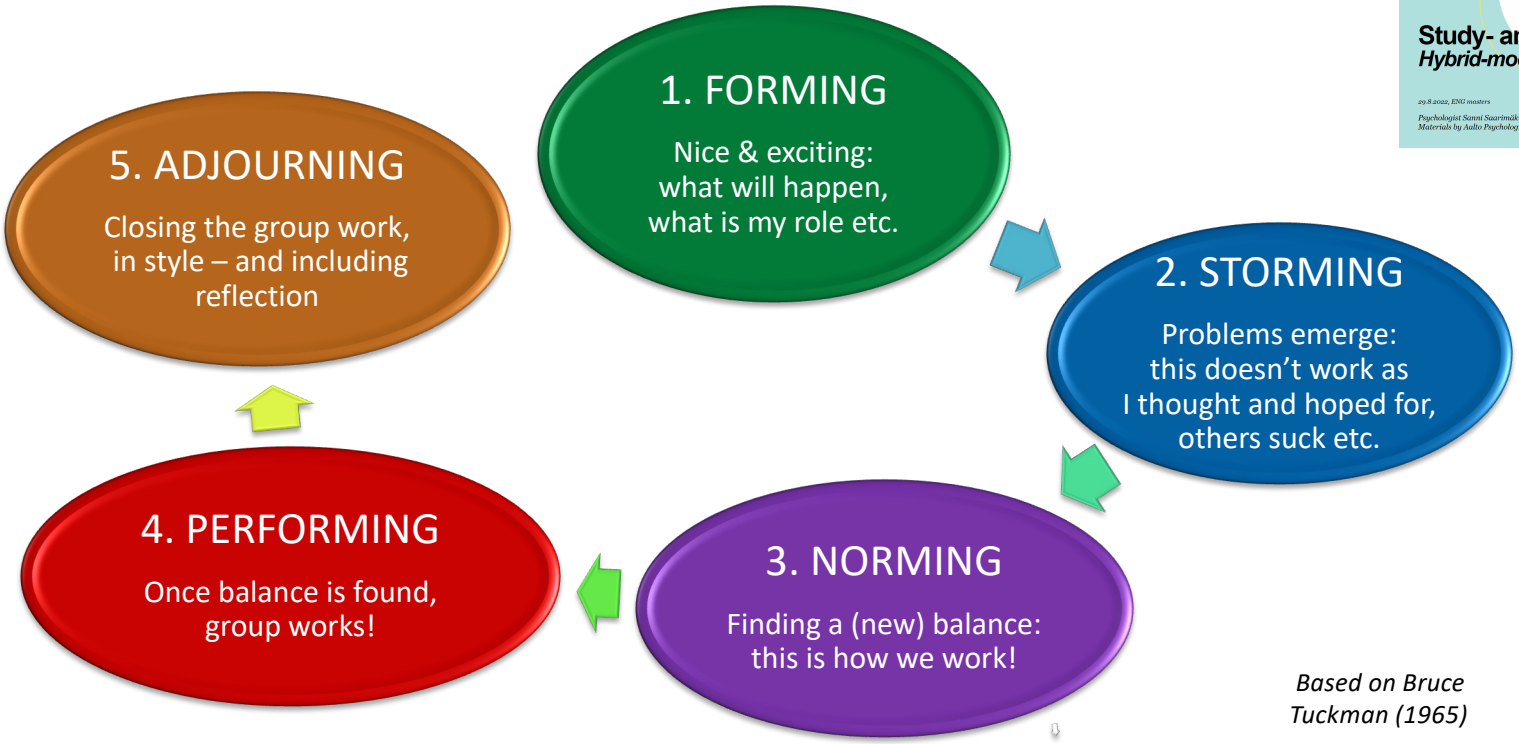


GROUP WORK

- Group working is fun! …and hard.
- Who knows the five common stages of group work?

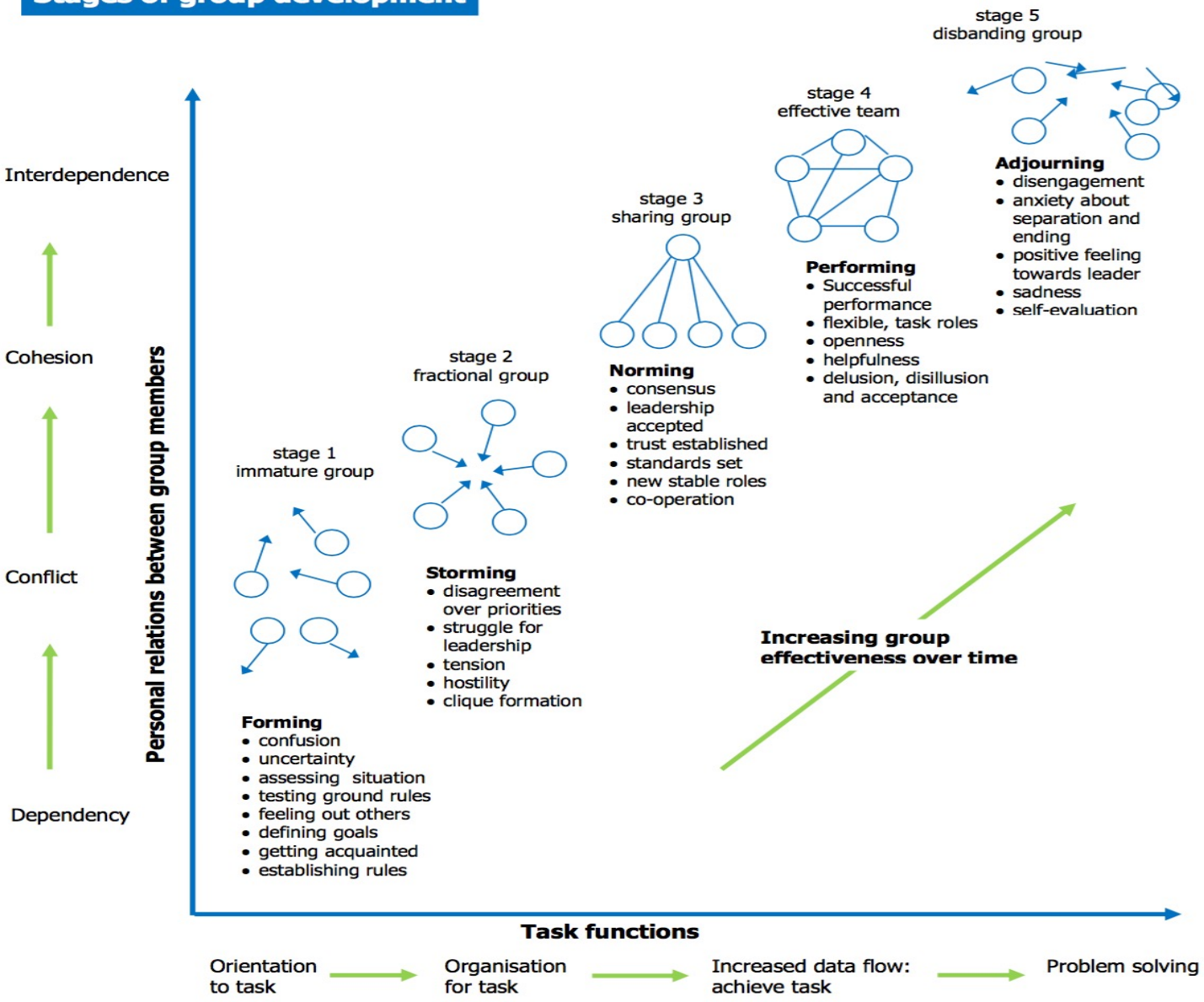
→ Be ready for storms, too: part of the learning process





Based on Bruce Tuckman (1965)

Stages of group development



OUR AIM:
TO GO
THROUGH
THIS ENTIRE
PROCESS
DURING NEXT
7 WEEKS

Source: Aurora / Tuckman
http://bit.ly/2cPGiFa

ROLES IN GROUP

- Group = a set of different people in different roles

  → Everyone takes and/or is given a certain role in a group

  → The roles can also change over time

- Roles that people take depend on many things

  - Your personal preferences:
    how you like to work, where you are good at
  - Your past experiences in a group
  - Group dynamics
  - Your ambition level for the group work:
    do I want to it very well, or just get it done?

ROLES IN GROUP

- Roles can be beneficial or harmful for the group work
  → In ideal situation different roles support each other
  → In practice, however, many groups have a set of roles that can together be less beneficial or even harmful for the work

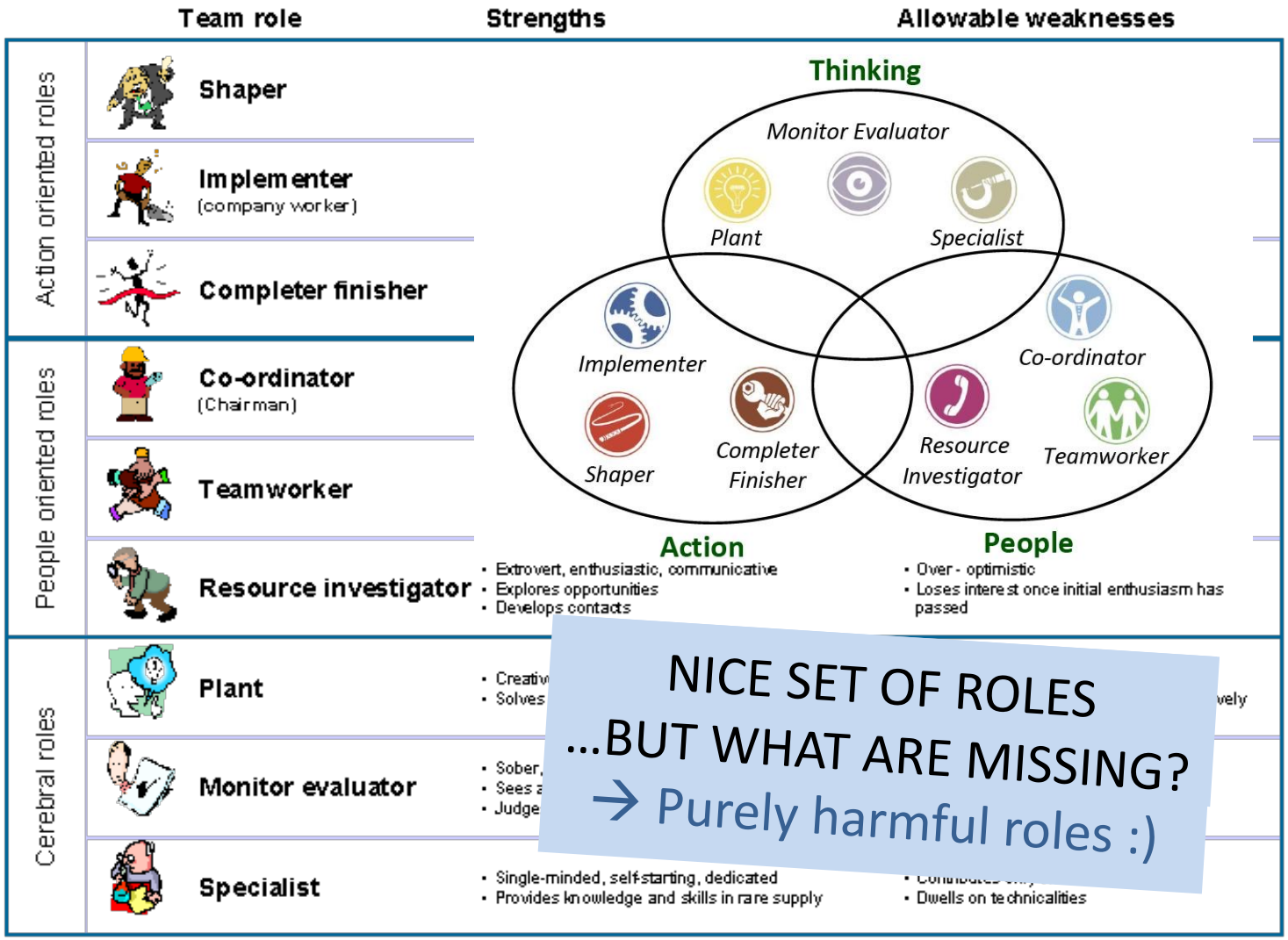
- Very important to be aware of the roles that you and other group members have (particularly as a Chair)
  → Try only to take roles that:
    1) are beneficial for the group
    2) allow you to learn most from the group work
  → Also encourage your group members to do the same (you are hereby given the permission to note them if not)

TEAM ROLES by Belbin

	Team role	Strengths	Allowable weaknesses
Action oriented roles	 **Shaper**	• Challenging, dynamic, thrives on pressure • The drive and courage to overcome obstacles	• Prone to provocation • Offends people's feelings
	 **Implementer** (company worker)	• Disciplined, reliable, conservative and efficient • Turns ideas into practical actions	• Somewhat inflexible • Slow to respond to new possibilities
	 **Completer finisher**	• Painstaking, conscientious, anxious • Searches out errors and omissions • Delivers on time	• Inclined to worry unduly • Reluctant to delegate
People oriented roles	 **Co-ordinator** (Chairman)	• Mature, confident, a good chairperson • Clarifies goals, promotes decision-making, delegates well	• Can often be seen as manipulative • Offloads personal work
	 **Teamworker**	• Co-operative, mild, perceptive and diplomatic • Listens, builds, averts friction	• Indecisive in crunch situations
	 **Resource investigator**	• Extrovert, enthusiastic, communicative • Explores opportunities • Develops contacts	• Over - optimistic • Loses interest once initial enthusiasm has passed
Cerebral roles	 **Plant**	• Creative, imaginative, unorthodox • Solves difficult problems	• Ignores incidentals • Too pre-occupied to communicate effectively
	 **Monitor evaluator**	• Sober, strategic and discerning • Sees all options • Judges accurately	• Lacks drive and ability to inspire others
	 **Specialist**	• Single-minded, self-starting, dedicated • Provides knowledge and skills in rare supply	• Contributes only on a narrow front • Dwells on technicalities

http://w2.uco.fr/~cbourles/OPTION/Theorie/Belbin/Belbin's_team_roles_fichiers/belbin.gif

TEAM ROLES by Belbin



NICE SET OF ROLES
...BUT WHAT ARE MISSING?
→ Purely harmful roles :)

http://w2.uco.fr/~cbourles/OPTION/Theorie/Belbin/Belbin's_team_roles_fichiers/belbin.gif

What is closest to yourself?
Have you seen other roles, too?
→ Talk with a pair

SOME GROUP ROLE CARICATURES

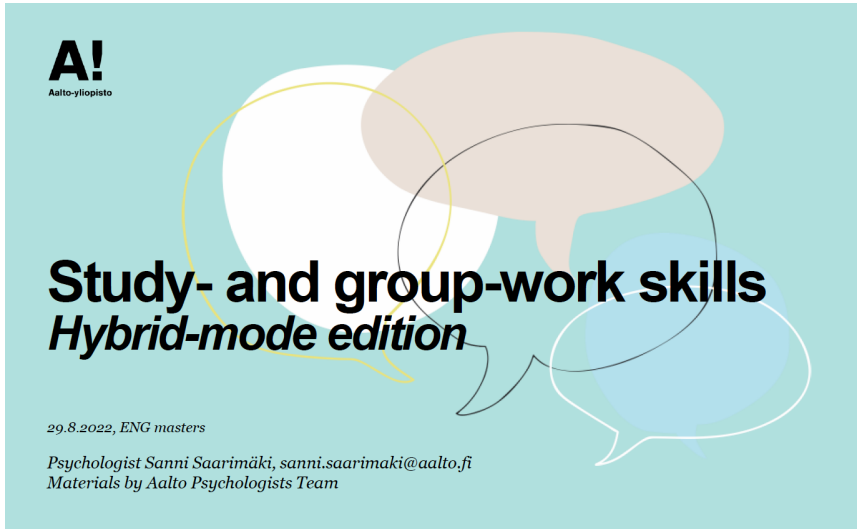
- SHAPER comes up with new ideas and provides structure
- OVERACHIEVER aims high, even at the cost of team spirit
- COORDINATOR focuses on the job + keeps up good spirit
- WITHDREWER stands back, does only what is asked to
- IMPLEMENTER focuses on implementation
- FREE-RIDER let’s others do the work, but takes credit
- SPECIALIST brings in-depth (but selective) knowledge

ENG Orientation Week

Useful presentations on e.g. scientific writing, intercultural communication, studying skills – and group work!

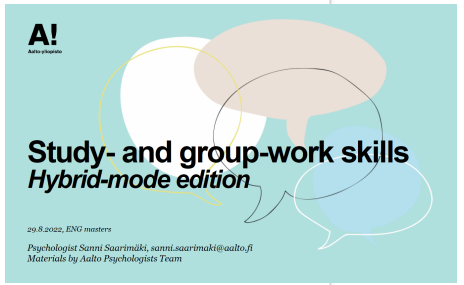
→ Check the presentations:

https://mycourses.aalto.fi/course/search.php?search=ENG-E3010



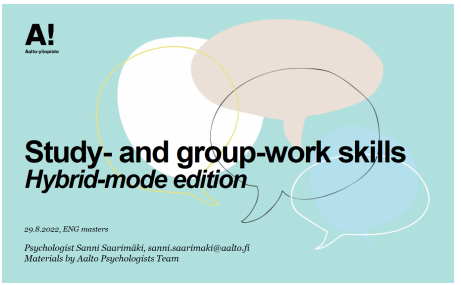
Next some selected slides from these two presentations

An Effective Team



- Shared and accepted goals
- Roles and tasks clearly defined
- Interaction, communication
- Resources, schedule

Communication in a Group



Task-oriented Skills:

- Communicating thoughts clearly
- Defining and analyzing problems
- Asking for specifications and reasons
- Finding and evaluating options

People-oriented Skills:

- **Listening**
- Showing empathy and support
- Creating good team spirit
- Encouraging others
- Solving conflicts

Misunderstanding vs Miscommunication

- **Misunderstanding**
  - ‘Language’ related

- **Miscommunication**
  - Misunderstanding of another’s norms, values and practices

Zhu (2014, pp. 115-129)

MISUNDERSTANDING

How to solve it?

- **Clarification & negotiation strategies**
  - **Confirmation checks**
    - e.g. 'Have you understood my explanation?, 'Did I understood it right?', 'Yeah?', etc.

Repetition

  - **Clarification request**
    - e.g. 'Can you explain a bit further?', 'Can you make it more simple?', 'Can you repeat?', 'When you said xxx, what did you mean?'

Identify a trouble source +
Ask open/non-judgemental Qs!

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MISCOMMUNICATION

Directness/Indirectness

- Understanding "directness" and "indirectness" as **a spectrum**
- Being **polite/nice** (Indirectness) ←----------?----------→ Being **clear** (Directness)

Socio-emotional processes?

Metacommunication

Task-related processes?

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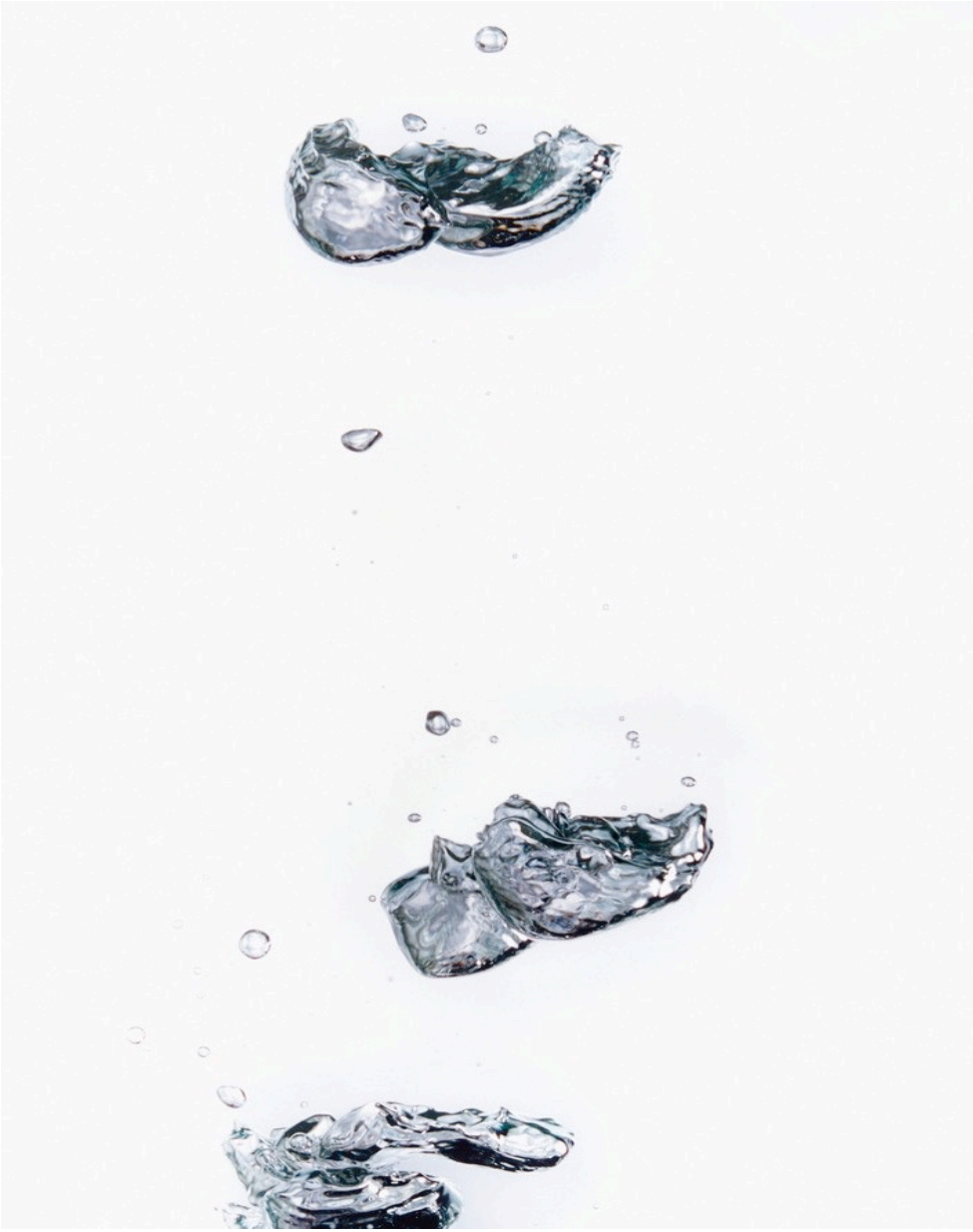
Questions, comments?



Group discussion

How does this all sounds?
Any surprises?

How you ensure **your group** would work well?

GROUP WORK: CHAIR

- Group will have a rotating Weekly Chair
  → Everyone should be a chair at least once; you decide the order
- Chair is responsible that group's weekly assignments are done well and on time
  → Makes sure that everyone contributes to the assignments in an equal manner: decides on division of responsibilities
  → Solves possible disagreements
  → Acts as group's contact person towards teachers

→ In sum, a great possibility to learn a lot!

YOUR GROUP! YOUR PROJECT!

- The group also forms your project team
  - → Your project: to successfully compete the different (group) assignments during the course
  - → Take this as an opportunity to practice your project planning and management skills as well: these are important part in our programme as well as your entire career

PROJECT PLANNING + MANAGEMENT

WHAT IS A PROJECT?

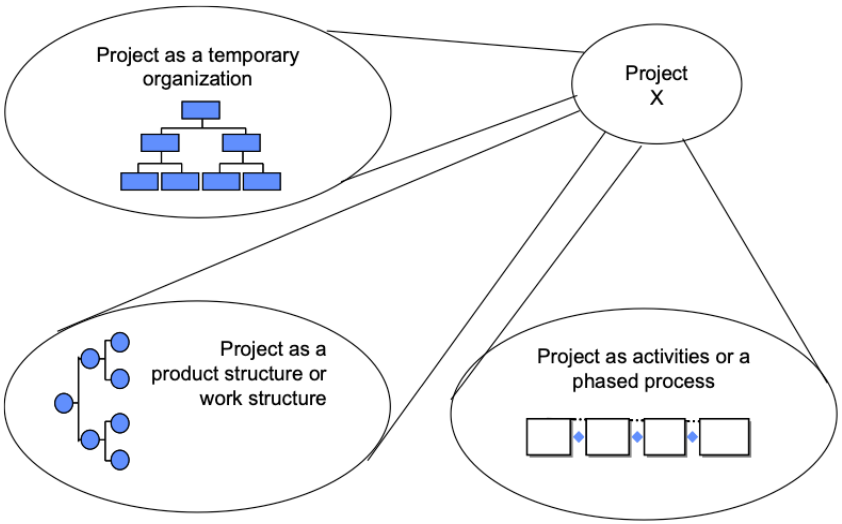


Figure 5. Three perspectives on projects

PROJECT LIFECYCLE

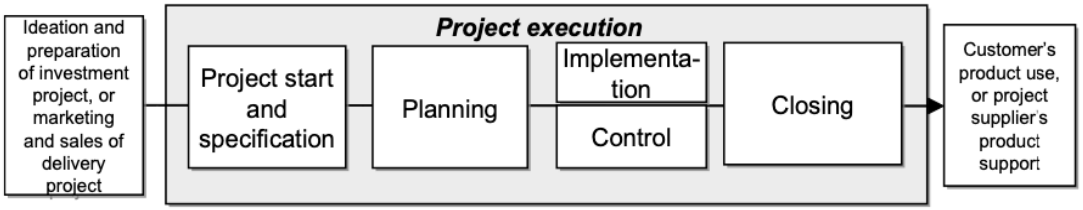


Figure 10. Project lifecycle and project execution

HOW TO MANAGE A PROJECT?

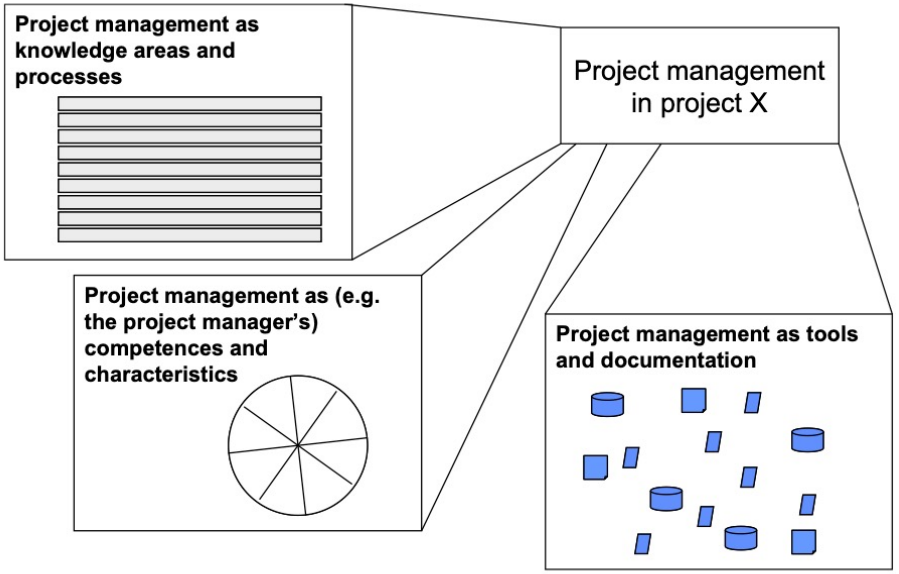


Figure 8. Three perspectives on project management

Artto et al. (2011): Project Business
→ Available in WAT-E1100 MyCourses

PROJECT + TIME MANAGEMENT

- Your tasks and exercises form your group's project
  → We give you the main aim and timeline i.e. deadline

- Based on the aim & timeline:

1) divide the aim into objectives and related activities

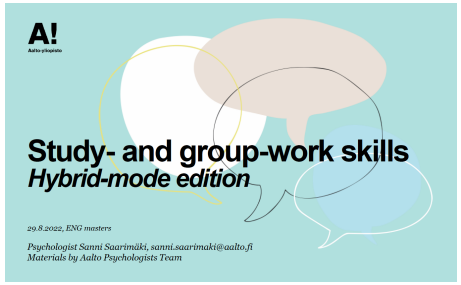
2) agree on the division of responsibilities (who does what)

3) plan and manage your time

→ Use SMART objectives

→ Decide on the 'level of enough'
i.e. when something is ready

Specific: what are we going to do?
Measurable: how to measure it is done?
Achievable: can we do it in the given time & resources?
Relevant: will this objective contribute to our main aim?
Time-bound: when will the objective be accomplished?

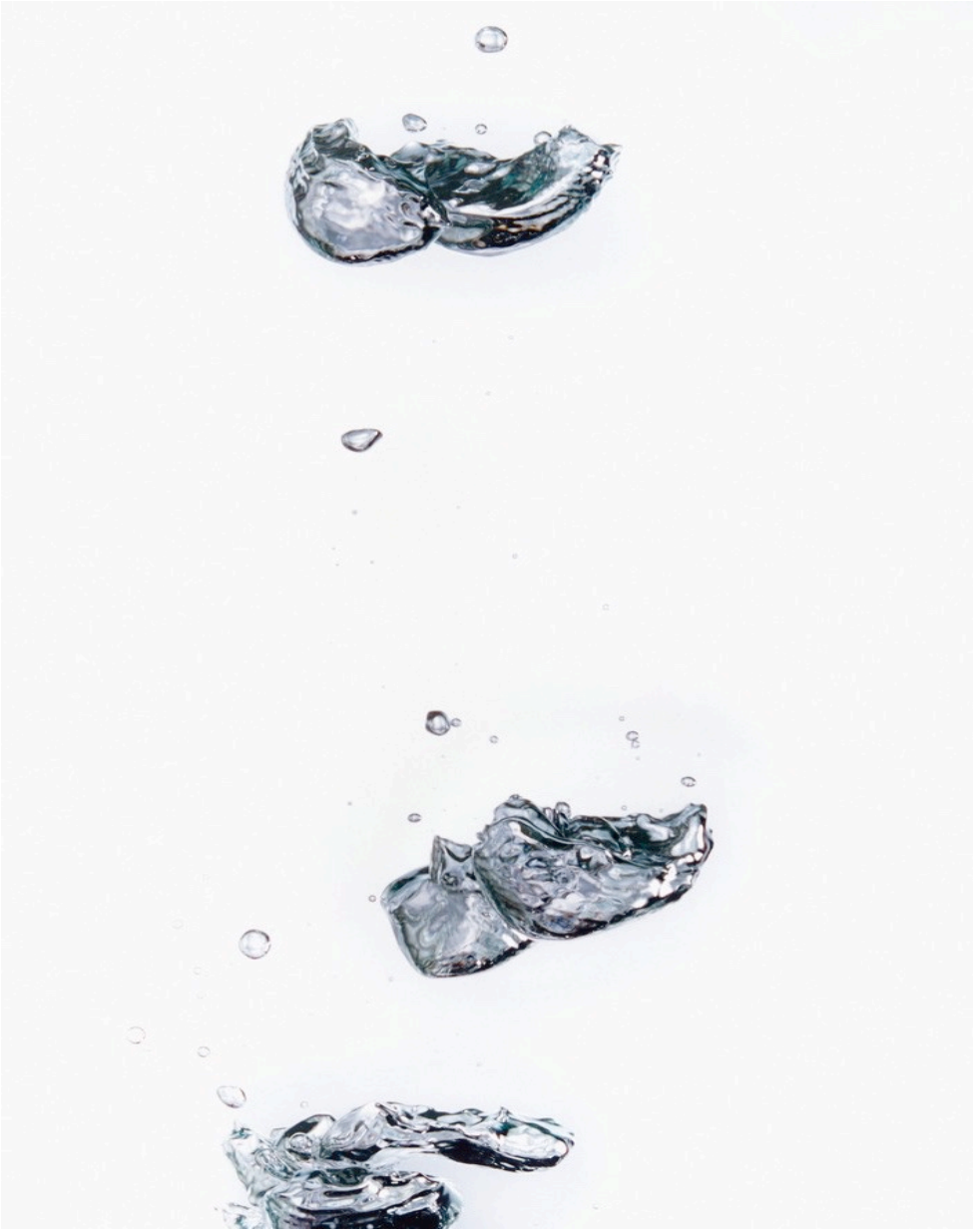


TIME MANAGEMENT

Important also for your studies in general

	Urgent	Not urgent
Important	• Crisis • Fire fighting • Pressing problems • Deadline-driven projects	• Planning • Preparation • Relationship building • Personal development • True recreation
Not important	• Interruptions • Some e-mails or phone calls	• Time wasters • Escape activities • Some e-mails or phone calls

Questions, comments?



YOUR RULES OF WORK

Based on this presentation and your discussions, agree on **Rules of Work** for your group (your first context task)

→ A clear set of rules that defines the principles for your group & group work, including communication

→ Also agree **how you deal with two kinds of challenges**:
1) 'storms' including entire group, and
2) negative team role that an individual takes

Not easy, so agree on constructive ways to do this

→ Write down your rules and submit through MyCourses by the end of the week (this week's chair submits)

Thank you!

More information through MyCourses pages of WAT Course:
https://mycourses.aalto.fi/course/view.php?id=39153