Aalto University
School of Arts, Design
and Architecture

Design Approaches to Sustainable Consumption

Session 8: Communicating & scaling-up sustainability

Tatu Marttila
Thursday 1.2.2024

Agenda

9:15–11:00 **Visitor: Michael Lettenmeier (Helsinki University; D-mat)**
(separate slides…)

11:15–12:00 **Recap & preparations for next week role-play session**

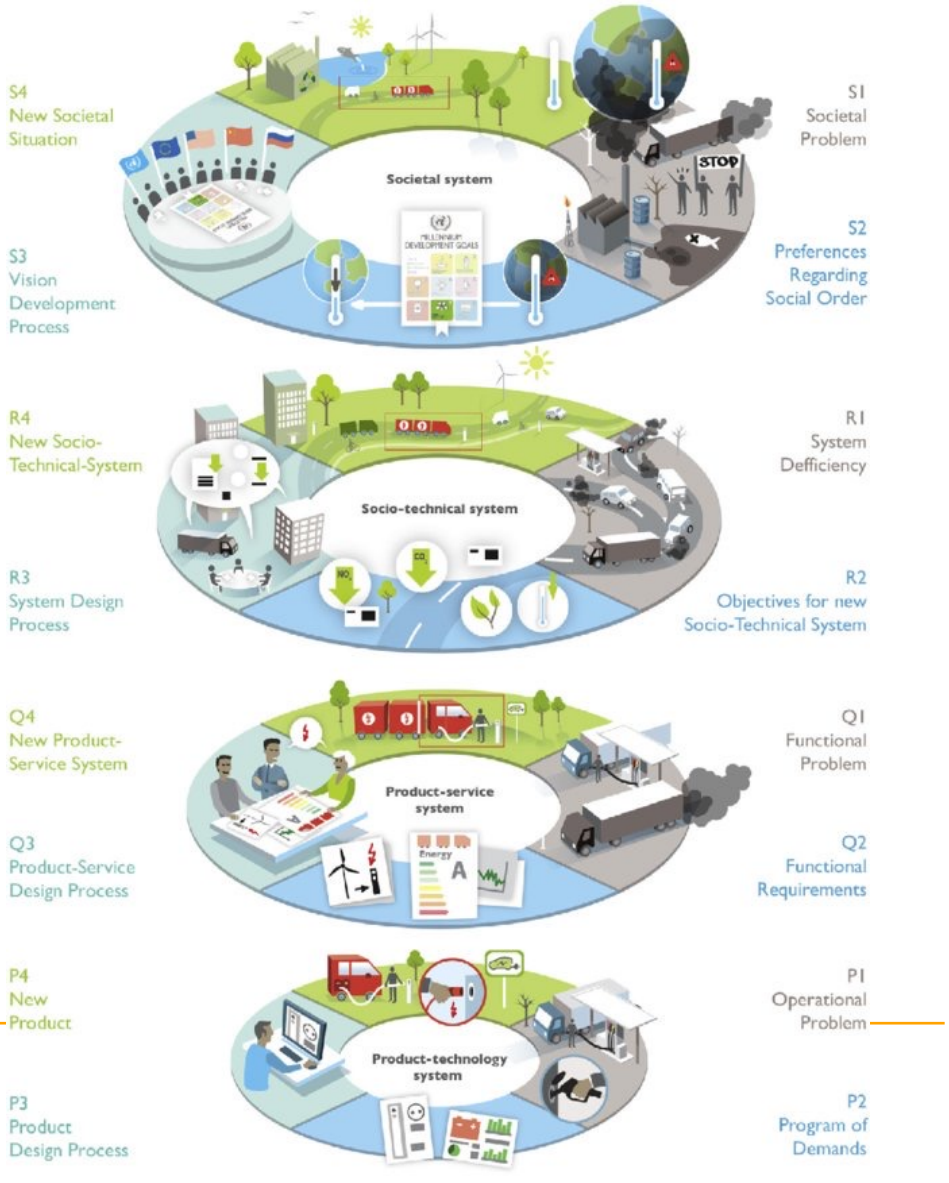
Recap and connecting to communication and scaling-up

Multilevel focus for design

Multilevel perspective adapted to design:

”The role of designers is broadening, from the creators of physical arte-facts to the potential role of facilitators of complex societal change processes. To support the widening role of the designer, there is a need for a design supportive model.”

Multilevel Design Model (MDM) by Joore & Brezet (2014)



Communicating sustainability in/with design

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Communicating sustainability in connection with DfS action

Different ‘units of analysis’ to assess and communicate:

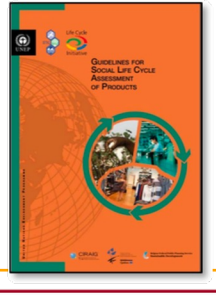
- Environmental/social input (investments) vs. output (impacts, value) throughout product life-phases
- Environmental/social input/output in product-service-system (on what tier-level?)
- Environmental/social input/output per service encounter
- Environmental/social input/output per ‘functional unit’ that a product-service system offers (e.g. washing a shirt; driving 1 km etc.) -> Material Input per Service (MIPS)

Design amplifying and scaling-up sustainability considerations and solutions, and enabling connecting to action!

Golden standards for sustainability assessment

Sustainability

	Natural	Manufactured and financial	Human and social
Capitals			
Tools	(E-) LCA Environmental life cycle assessment	LCC Life cycle costing	S-LCA Social life cycle assessment
Origins	SETAC (1991 on)	Multiple – EU, US, Other	UNEP/SETAC (2009) (2)
Methods	ISO 14000 series (1997 onwards)	Technical cost modeling(1)	
EduPack Tools	Eco-audit tool	Eco-audit with cost Part-cost estimator	



(1) http://ec.europa.eu/environment/gpp/pdf/WP-LifeCycleCosting.qx.pdf

(2) http://www.unep.fr/shared/publications/pdf/dtix1164xpa-guidelines_slca.pdf

Communicating impacts: Product view

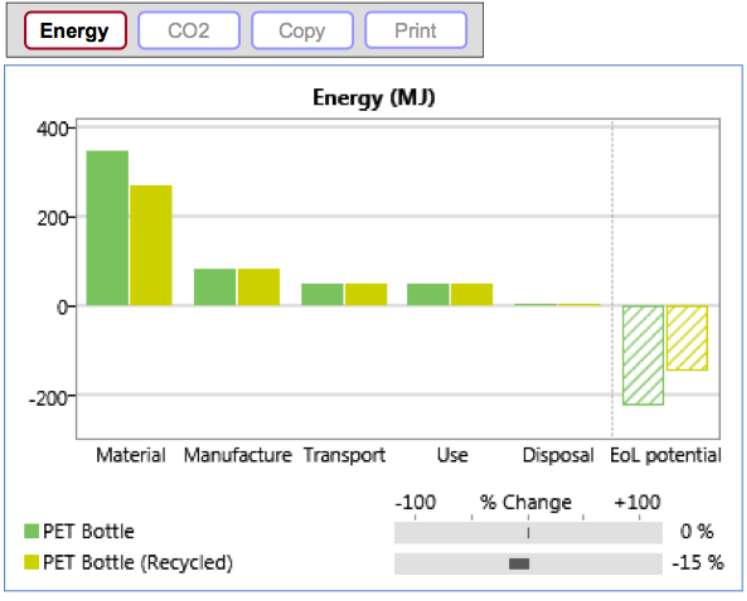
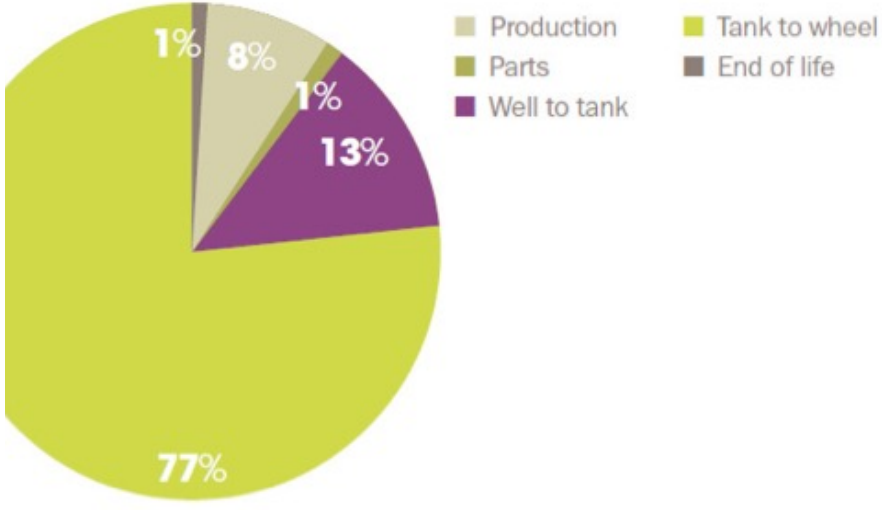


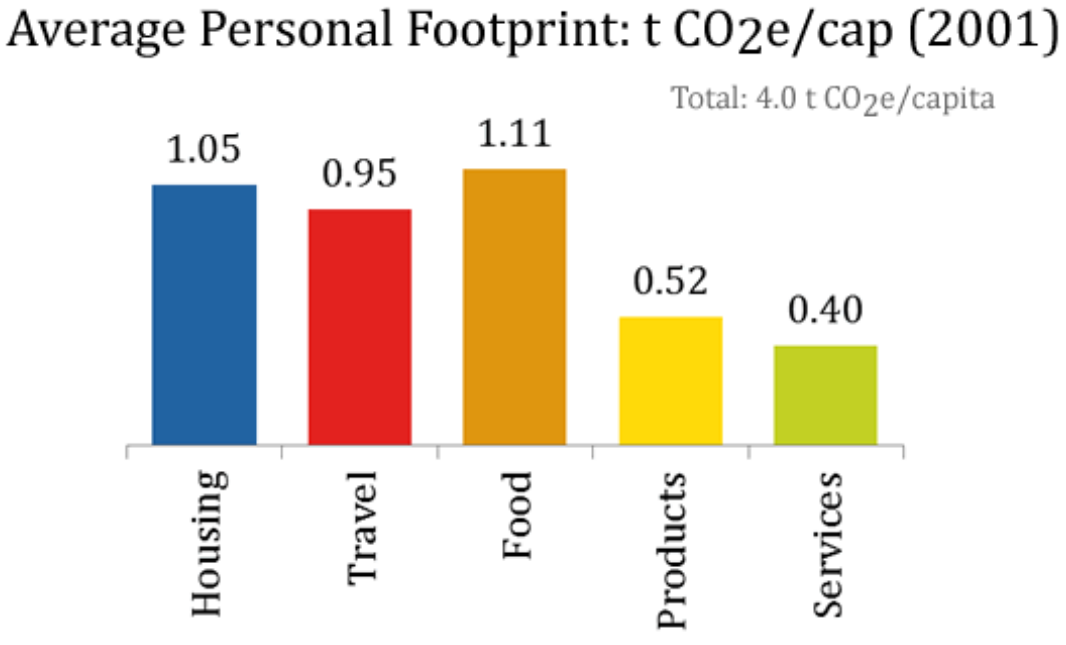
FIGURE 6. Environmental impacts during the lifecycle of a car



http://www.interfacecutthefluff.com/wp-content/uploads/2013/04/Screen-Shot-2013-04-18-at-16.37.32.png

Communicating impacts: Perspective in personal consumption

(For example, see: https://lifestyletest.sitra.fi/)

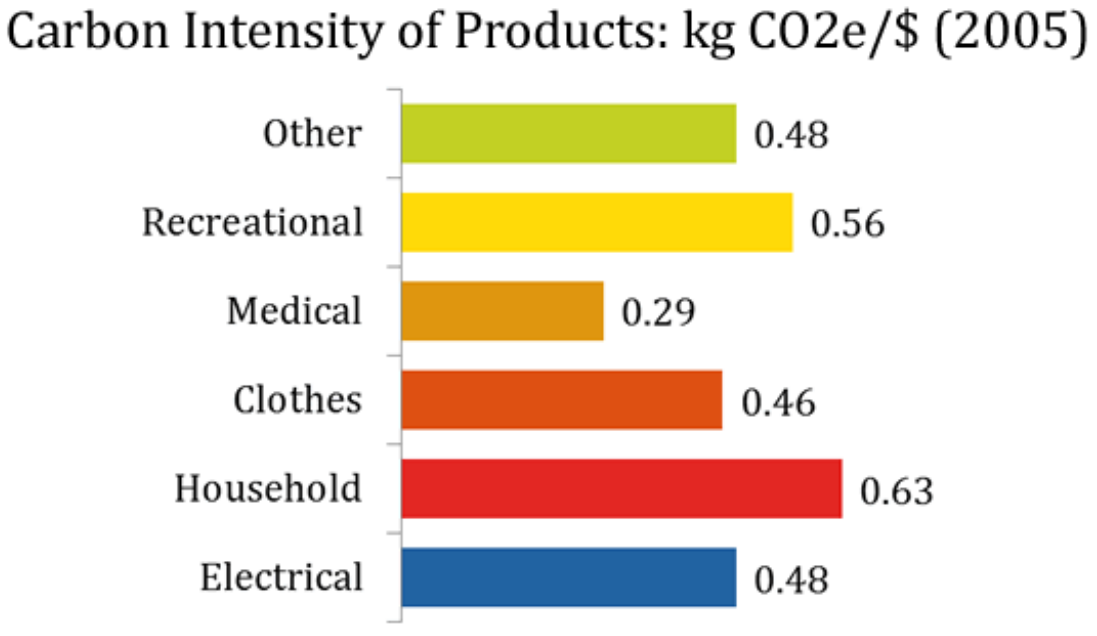


Note: Based on the average global footprint per capita in carbon dioxide equivalents. Figure excludes capital, government and land use change emissions. In 2010 the average personal footprint is estimated to be about 5.0 t CO_2e/capita.

Sources: Hertwich & Peters 2009, WRI

Shrink That Footprint

Communicating impacts: Carbon intensity of consumption expenditure

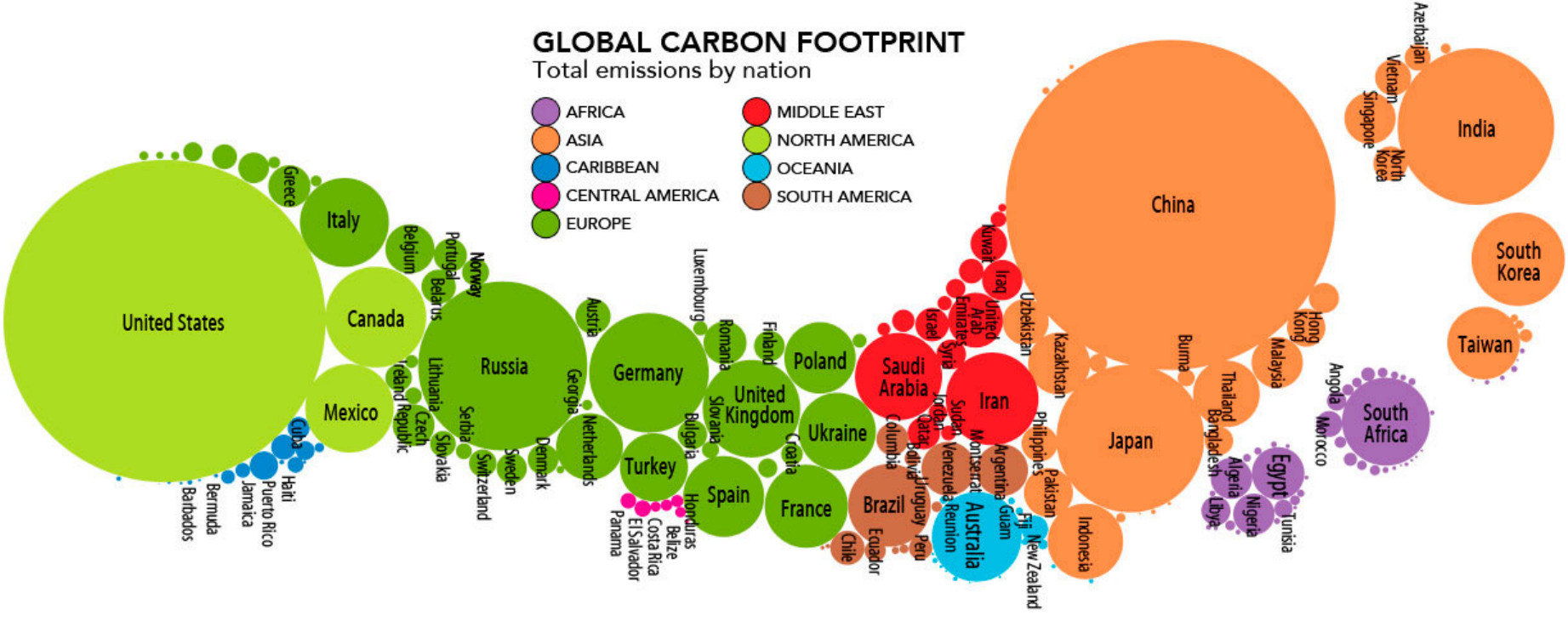


Note: All results are kilograms of carbon equivalents per 2005 US dollar (kg CO_2e/$). Based on authors own calculations for each group average using multiple sources. Due to aggregation of numerous goods within each groups average intensities appear quite similar. This aggregation disguises large variation between individual products.

Sources: EPA, IO-LCA studies

Shrink That Footprint

Communicating impacts: Global/spatial view



Communicating with Sustainable Development Goals

Communicating with consumer labels, ratings, guidance

Communicating sustainability with design, style, and material choices

Hapé Eco-toys

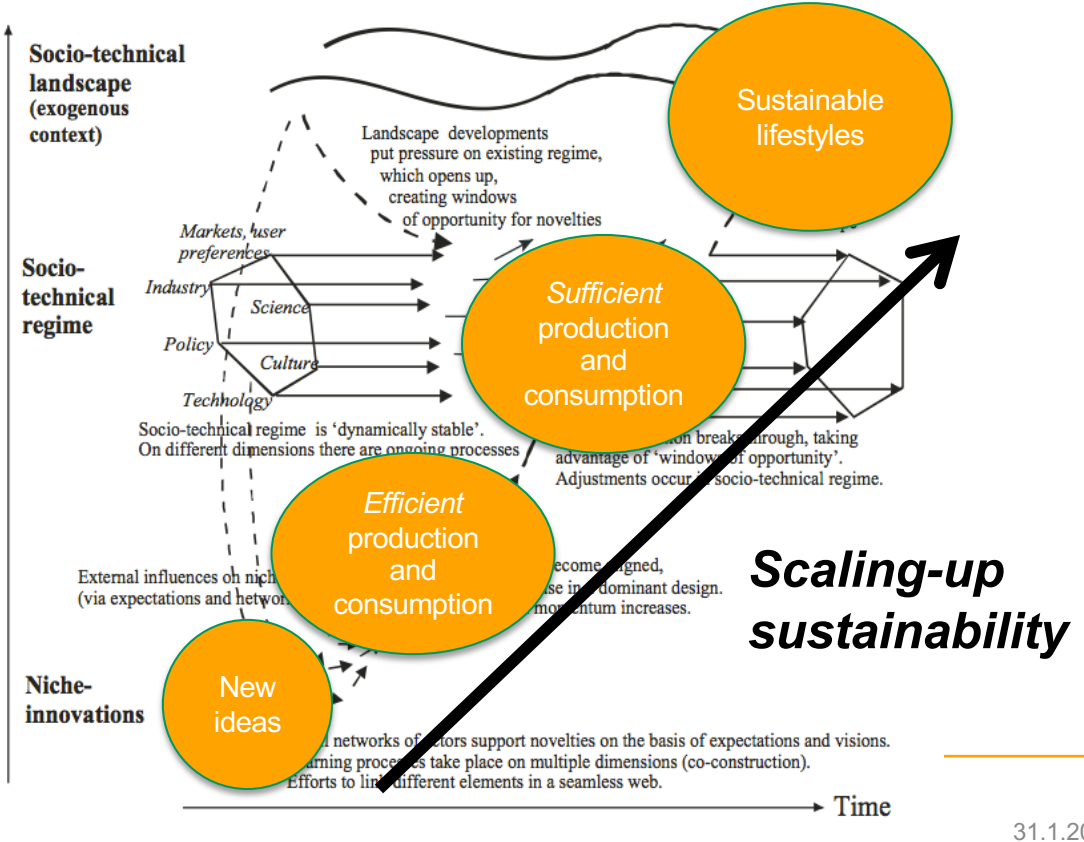
FAIRPHONE

ETHLETIC™ THE ETHICAL ALTERNATIVE

Design connecting with potential for scaling-up

Scaling-up sustainability transitions within the socio-technical context includes…

Communication with different stakeholders in different phases of work, for different purposes, and with different messages.



Source: Geels, F. (2011) Multi-level perspective on sustainability transitions

Next week sessions

Course and project work schedule

Working days	Tuesdays (13:15-17:00)	Thursdays (9:15-12:00)
Week 1 (9.1 & 11.1.)	Introduction to course; DfS introduction (F101)	Designing for sufficiency (visitor: Mikko Jalas) (Q201)
Week 2 (16.1. & 18.1.)	**Project work: Kick-off** (A-Grid Mordor)	Sustainable PSS design & systems design (Q201)
Week 3 (23.1. & 25.1.)	Socio-technical experimentation & social innovation (F101)	**Presenting case work ideas** (A-Grid Mordor)
Week 4 (30.1. & 1.2.)	Design for sustainability transitions (Q201)	Communicating and scaling-up sustainability (visitor: Michael Lettenmeier) (A-Grid Mordor)
Week 5 (6.2. & 8.2.)	Sustainability games (visitor: Tommi Vasko) (A-Grid Mordor)	**Project work tutoring & finalisation** (Q101)
Week 6 (13.2. & 15.2.)	**Project work: Final presentations** (F101)	Feedback session (A-Grid Mordor)

Next week sessions: Topics & agendas

Tuesday (6.2.):
Sustainability games (visitor: Tommi Vasko) (A-Grid Mordor)

Session agenda:

- Lecture on sustainability games 13:15 onwards
- Role-playing session, board games

Lecture preparations:

- Each group prepares characters and scenario according to instruction
- Material is shared directly to another group (see next slides)
- **Materials need to be shared before/by this Friday (preferably today)!**

Thursday (8.2.):
Project work tutoring & finalisation

Session agenda:

- Session held only online
- Session starts at 9:15 with shared intro on deliverables and status
- From 10:00 onwards tutoring slots for groups (schedule to be agreed on the morning)

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Preparations for next week game session

Preparations for next week role-play (1/4)

Already for this Thursday (1.2.), each group needed to do a bit of preparations for next week role-playing and gaming session.

Instructions for next Tuesday (6.2.) role-playing session:

- Before this Thursday (1.2.) your group needs to define and describe 3-5 relevant stakeholders for your project (use 'character sheets' from MyCourses -post)
- You also need to describe a situation that will be 'role-played' through in the specific roles (use 'script sheet')
- Each group has another group as their pair, with which the playing is performed.
- Prepare this material by Thursday (1.2.) as we will share these with your peer group by/during the Thursday session!

For general and/or practical questions, you can also contact Tommi Vasko (@aalto.fi)

Preparations for next week role-play (2/4)

Groups will utilise character sheets (shared via MyCourses) to describe selected important stakeholders. Characters do not have to be completely realistic, you can emphasise some aspect/feature of the character in the sheet as well as in acting it out.

Examples of roles depending of your case:

- Proactive user of a new service / User unwilling to change habits
- Citizen/spectator (techno-utopist vs. deep ecologist)
- Campus representative / Designer of the service / Representative of the maintenance
- Critical social sustainability expert
- Investor/grant reviewer

DASC role-play session (Tue 6.2.): Character sheet

Name of the Character and their professional identity (if it matters).

Write here…

What does the character pay attention to? What tools does it use in work and everyday life?

Write here…

What is the history, current relationship or job, and future desires of this character in relation to the project?	What are the roles this character has had, and would wish to have in relation to this project?
Write here…	Write here…

How would the character like to influence or change the project (what are the characters values), and how does the project change the character?	Additional information about the character. How does it understand sustainability, or anything more random.
Write here…	Write here…

Preparations for next week role-play (3/4)

Groups will also need to think about the situation that will be played at the session. The situation should be somehow relevant to your case. The situation does not need to be in the present day but can project a future setting!

Examples of some situations for scripting:

- Selected scenario of interaction within theme/service (consider also potential conflicts!)
- Projected future setting for a selected thematic situation/interaction
- Discussing aims of the service in informal setting (cafe/afterwork)
- Investor/steering group/management meeting
- Expert group (planning/feedback?) meeting with user representatives
- Family meeting to overcome hindering perceptions for sustainable transitions

DASC role-play session (Tue 6.2.): Play session backstory, context & setting

Describe the overall situation that the role-play takes place. Is it a casual event, an interaction around your concept idea, a developmental meeting, a family gathering? What is the purpose (if any) for the situation? Connect the situation to your characters for the role-play.

Write here...

Describe the physical setting: Where does the interaction take place? When does the interaction take place (consider also further in future)? In what type of world does the interaction take place (did something go very differently)?

Write here...

What is the backstory in greater detail? Are there hidden agendas or other potential contradictions between participants? What could go wrong?

Write here...

Preparations for next week role-play (4/4)

Groups will need to share the materials with their peer group by/before Friday (today?). Each group shares the character sheets (3-6) and script sheet with another group according to the listing below.

Group pairings:

G1 & G2 **G3 & G7** **G4 & G5** **G6 & G10** **G8 & G9**

- Ideally each character sheet is sent to only one person from the other group, who then focuses to adjust to the role
- Script sheet is shared with all the members of the other group
- See group members from the table on next slide, emails should be (@aalto.fi)

Groups' pairs for the role-play and material sharing:

Group 1:
Food systems + Ecodesign & PSS

1. Miina Heikkinen
2. Trine Leisso
3. Minerva Laitinen
4. Aqib Javed
5. Petra Salkoviiri
6. Nina Sirén

Group 2:
Food systems + Strategic/transitions

1. Veera Parkkonen
2. Devayani Mohanraj
3. Shita Padmi
4. Jimin Hong
5. Salla Kyyrö
6. Eeli Haapala

Group 3:
Food systems + Speculative/strategic

1. Vilma Ylösjoki
2. Elli Törnqvist
3. Manuel Díaz Tufinio
4. Valeria Escobar Molina
5. Dinah Coops
6. Freja Schalin

Group 7:
Housing & buildings + Ecodesign/speculative

1. Dumindu Fernando
2. Kamilla Gramer
3. Tuomas Laakkonen
4. Niilo Tenkanen
5. Jason Selvarajan
6. Dorottya Füleki

Group 4:
Mobility systems + Strategic/transitions

1. Beste Polatkal
2. Tianyi Yu
3. Roosa Laakso
4. Sonja Mäkelä
5. Ilmari Hieta
6. David Bertl

Group 5:
Mobility systems + Participatory/ strategic

1. Nathan Pottier
2. Laura Pohto
3. Chin-Ying Chu
4. Leevi Kangas
5. Regina Kazanjian
6. Siiri Aaltola

Group 6:
Housing & buildings + Ecodesign/strategic

1. Sandra Sonneborn
2. Yury Tupikin
3. Lien Pham
4. Anna Farrell
5. Sofia Pascolo
6. Jenni Lehtinen

Group 10:
ICT & appliances + Strategic/transitions

1. Md Asadur Rahman Khan
2. Jeanne Lallemand
3. Martina Maci
4. Ronja Chydenius
5. Topias Elg

Group 8:
Housing & buildings + Participatory & collab.

1. Jaana Pippola
2. Callisté Mastrandréas
3. Mayu Matsuyama
4. Meri-Tuuli Moilanen
5. Annette Asplund
6. Skye Pham

Group 9:
Textile & fashion + Ecodesign & PSS

1. Thekla Weißkopf
2. Jan Kulhánek
3. Monika Kokko
4. Tiia Kiuru
5. Saara Luukkainen
6. Shuyi Liu
7. Ada Tola

- **Share materials with the members of your pair group according to the table above! (pairs color coded)**

Thank you!