DEEP TRANSITIONS LAB
FOR TRANSFORMATIVE INVESTMENT

Introduction to Complex Systems: Deep Transitions Lab Session

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Learning Objectives

- Explore key concepts of the Deep Transitions (DT) framework and put them into practice through interactive exercises.
- Reflect on the current food, energy, and mobility systems and how systems thinking can bring about a transition towards a just and sustainable future.

Proposed Structure

The session consists of two blocks. The main objective of the first block is to provide an entry to the DT framework and systems perspective. The second block focuses on the concept of niches and aims to illustrate how a systems perspective is needed to tackle the challenges ahead.

Time	Activity
14:30-14:45	Introduction to DT Lab and DT conceptual framework (socio-technical systems, systems, rules, surges, systems change vs. system optimisation)
14:45-15:15	Interactive exercise: Identifying vulnerable and resilient rules of the three systems
15:15-15:30	Break
15:30-15:45	Introduction to the concept of 'niche'
15:45-16:15	Interactive exercise: Niche from the Future game
16:15-16:50	Interactive exercise: Building niche clusters
16:50-17:00	Reflections and closing

Contents

Introduction to DT conceptual framework

In this section, we will explore the notion of socio-technical systems, systemic change, and the difference between optimising and changing systems. These are building blocks to understanding how sustainability transitions happen in the deep transitions framework.

Interactive exercise: Identifying vulnerable and resilient rules of three systems

For this exercise, students are divided into three groups, each working on a different socio-technical system: food, mobility, and energy.
Each group will work on a canvas containing the dimensions of the system so they can explore the current dominant configuration of the food/mobility/energy system. Using the figure and a pen, each group will discuss and identify their assigned system's vulnerable and resilient rules.
Vulnerable rules refer to an established practice within a system susceptible to disruption or challenge due to external pressures and changes in societal values, technological advancements, or environmental conditions. Identifying and addressing vulnerable rules is crucial since they may act as

starting points to changing dominant practices, thereby enabling systemic change. This exercise aims to show that developing strategies to transform vulnerable rules in the current (un)sustainable systems is strategically advantageous, as the impact and leverage of efforts are amplified when directed towards these rules.

Introduction to the concept of 'niche'

In this section, we introduce the Multi-Level Perspective (MLP) and explain in detail the concept of niches and their importance in advancing and accelerating systems change. We also introduce the three visions of desirable futures developed by the DT Lab.

Interactive exercise: Niche from the Future game

In this section, students will be divided into groups to play the 'Niche from the Future' game.

The Niche from the Future is a fun and accessible card game that helps players imagine and invest in desirable futures using conceptualisations from Deep Transitions. Players compete to develop the most thought-provoking and imaginative niches that could function in our three future world scenarios.

The game aims to be a playful and social experience that will allow students to engage with the three future worlds in a new, creative way. Sparking their imagination encourages a closer connection and ownership of each world and a more concrete idea of which niches could form part of it. The game is helpful for brainstorming and discovering transformative niches to invest in – enabling participants to translate abstract concepts into tangible and actionable configurations.

For a demonstration of this game, see: https://vimeo.com/681860173

Interactive exercise: Building niche clusters

This exercise invites students to think of the different ways of enabling systems change, encouraging them to move beyond technological solutions and think of systems change in terms of clusters and complexities.

Students are divided into three groups; each assigned a 'keystone niche' - a niche that might sit at the centre of a larger regime, such as slow travel, intercropping, or solar photovoltaic panels. The group uses the representation of the dimensions of the system and thinks of complementary niches and actions that might support, protect, accelerate, mature, and consolidate the keystone niche. This exercise aims for students to build on the keystone niche and think of different interventions around it (across social and technological dimensions) that would unlock the system's change potential. The core message is that any single innovation is not enough - clusters and bundles of mutually supporting innnovations across both social and technological dimensions (including across systems) are needed and that thinking in clusters, niches, regimes, and systems can help unlock a more holistic perspective on how to create change.

Preparation

In preparation for the workshop, students will be asked to read a briefing document introducing the core concepts covered in the session. Some students may be interested in supplementing their reading with the theory behind this project. For this reason, the document also contains a list of references for further reading, including key foundational academic papers that lay out the Deep Transitions theoretical framework.