

Operationalization of Strategic Niche Management by Living Labs as Leverage for a Sustainable Transition: Illustration by Student Work on Tourism Infrastructure in the Tanzanian Context

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Content

Introduction

- Observation regarding (un)sustainability in the built environment
- Promising and agreed counteraction
- Objective

Core

- Identification: Theoretical background on SNM & Living Labs
- Contribution: Interpretation for HEIs for Architecture & Planning
- **Illustration: UH student Living Labs in the Tanzanian context**

Retrospection and outlook

Introduction – Observation

- Urge for a sustainable development, for sustainable building > **TRANSITION**
- Despite agreed urgency: tangible actions are limited, successes are rather rare

1. Sustainability = ‘wicked’, ‘complex’, ‘messy’, ...

- High amount of requirements (and ever increasing)
- Size and multi-disciplinarity of design teams expand
- Infinite possibilities, solutions, sources of information
- Limited time frame of design processes (DPs)
- Costs of not succeeding is high (for project team members, users, ...)

2. Building industry = socio-technical system

- Consists of many elements, of parts and wholes
- High resistance to radical change & innovation

1 + 2 Challenge for required sustainable transition

- (aggravated by the often immature nature of the aspect of sustainability)

Introduction – Counteraction & Objective

- Strategic Niche Management (SNM) operationalized by Living Labs
 - Focuses on the development of inexistent proto-markets by the creation of real-life projects as test-beds, for learning and enhancing the rate of diffusion of new innovation, by exploring and identifying processes, objectives and possibilities
- Objective
 - Contribute to a sustainable transition
 - Provide incentives to close the gab between ‘rhetoric’ and ‘reality’
 - Highlight the relevance and importance of Living Labs as ‘short cut’ towards a sustainable transition
 - Identify and promote student design projects as Living Labs
 - Provide incentives for the creation of more real-life projects, of niches for radical innovations for sustainability, for tourism

Core – Theoretical background of SNM & Living Labs

- **Changes, Innovation, Transition:**

- How does it happened and do happen throughout human history?
- What mechanisms had been and are at work?

Quest for researchers:

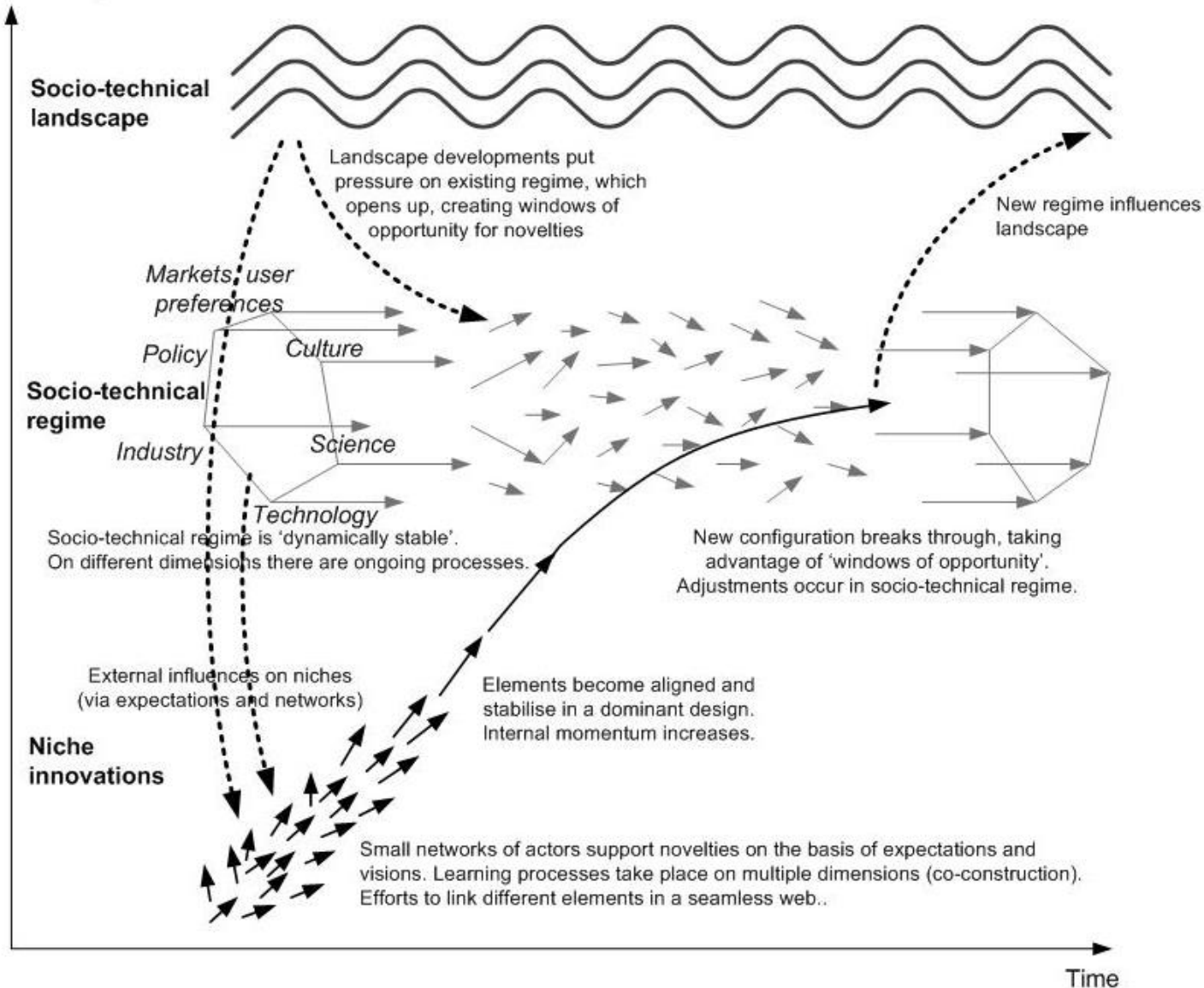
> Initially the focus was on sectorial technological breakthroughs and innovations

> **However, the scope became much broader over the latest years to include the relationship between technology and social structures.**

Particularly relevant: the multi-level perspective of Geels (2005), as it describes a pathway towards change

Core – Theoretical background of SNM & Living Labs

Increasing structuration of activities in local practices



Core – Theoretical background of SNM & Living Labs

- **Living Labs:**

- Operationalizes SNM, as there are

“... conceived as spaces where designers and researchers find inspiration by observing users and where they may test hypotheses through experimentation.” (Dutilleul, Birrer and Mensink, 2010)

- > Bottom-up development of new niches by test-beds / experiments, that might lead to a system-wide innovation / transition.
- > **Start of pathway towards change in multi-level perspective**

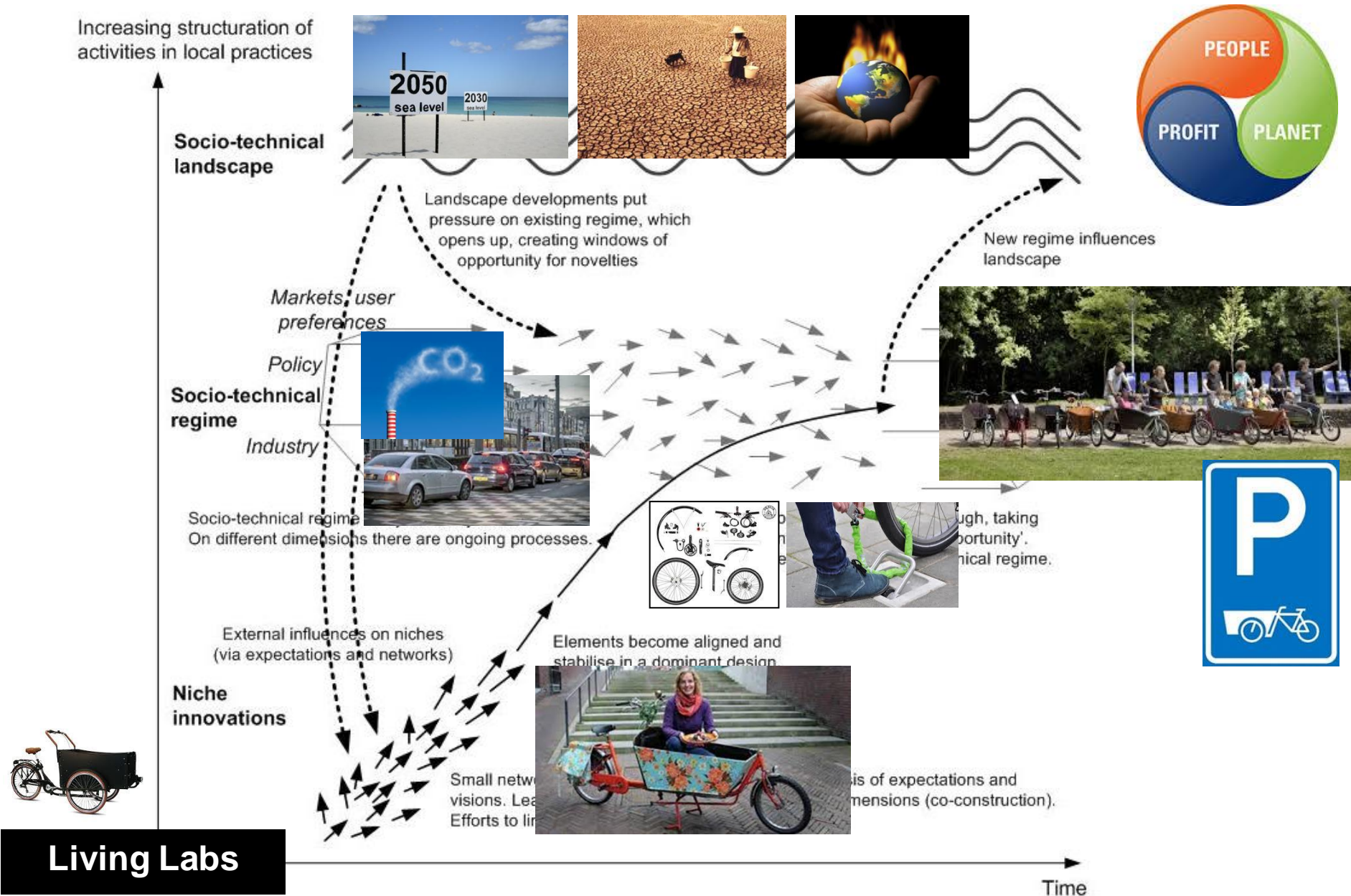
Core – Theoretical background of SNM & Living Labs

- Illustration of the theory



> What happened here? (e.g. Antwerp, Belgium)

Core – Theoretical background of SNM & Living Labs



Core – Interpretation for HEIs for Architecture & Planning

- **Design studio work**

- On real-life assignments
- In view of a specific quest (e.g. sustainability, tourism)
- Isolated social space (students, lectures, client, advisors, specialists, ...)
- Output: **Sketches, plans, 3D visualizations, scale models and texts**

Used for communication, dissemination, provide incentives for discussion and follow-up adjustments or (research) projects

- **Design & Build Projects / Live Projects**

- Traditional design studio work supplemented with a built component
- Possibly result in Best-Practice projects
- Ever increasing model for education
- Output: **+ tangible prototypes, (part of) buildings / sites**

Core – Interpretation for HEIs for Architecture & Planning



Design & Build project / Live project, conducted in Nairobi by students of the Technical University of Munich (TUM), Germany: from design, over testing and prototypes to construction and use

Living Labs as Leverage for a Sustainable Transition

Core – UH student Living Labs in the Tanzanian context



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- **Balance: impact and lessons learned**
 - **UH student Living Labs in the Tanzanian context**
 - > successful outcomes, appreciated by academics, practitioners and policy
 - > increased the awareness of possibilities (e.g. sustainable tourism)
 - > maybe/hopefully contributed to a sustainable transition (as short cut)
 - **Lessons learned for future work**
 - add/expand the social network (+diversification of network)
 - include a follow up
(evaluation of outcomes, uptake/diffusion of outcomes)
 - > **even increased potentials if a build component could be added**
 - set up of a Design & Build project
(increased visibility and trialability)

power to take practitioners, policy makers, ... on step further,
and to incentivize and inspire the rigid socio-technical building
industry

Retrospection and outlook

SNM and Living Labs sees structural change as the result of upscaling niches, under specific windows of opportunities

- **Promising for sustainable transition**
 - > articulates (new) policy (make it tangible and coherent)
 - > stimulates needed radical change
 - > **Adjustments in socio-technical regimes**

- **Interpretation for HEIs in Architecture and Planning:**
 - > Research & Design studio work
 - > Research, Design & Build Projects / Live Projects
 - > **Perspective UH**
(trialability, visibility, ...)

Thank you for your attention!

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