

Urban sustainability – what a ‘living lab’ has to do with it?

Pekka Jokinen

MAB (Environmental Policy), Tampere University

pekka.jokinen@tuni.fi

Methods Festival 2019, Session “What is?”

27.8.2019, Tampere

- Clarifying the meaning of the urban living lab.
- An illustrative empirical case: *Hiedanranta* district in the city of Tampere.
- Observations on ULL as a platform for research and on the multidisciplinary potential of the approach.
- *Urban* living lab; environmental *social* science; sustainability, transition.

Background

- Global environmental problems have brought cities to the center of sustainability thinking.
- Urban research more and more comprehensive and system-oriented; yet, the origin of research on sustainability transitions is in national-scale analyses of socio-technical transitions.
- Many cities are adopting *circular economy* as an important part of their sustainability agendas, action plans and projects of urban development – yet, not much profound research so far on urban transitions toward circularity.

Table 2.9

Elements of the Conceptual Field of Environmental Policy by the Early 2010s

<i>Metaconcepts</i>	<i>Mesolevel analytic and management concepts</i>
Environment	Resilience
Sustainable development, sustainability	Ecosystem services
(<u>Green economy?</u>)	Natural capital
	<u>Low-carbon society, economy, transition, development</u>
<i>Core problem or issue concepts</i>	Environmental security
Climate change	Environmental equity, environmental justice
Biodiversity and nature conservation	<u>Sustainable production and/or consumption</u>
<u>Renewable energy, energy efficiency</u>	
Pollution	<i>Policy approaches and instruments</i>
	Environmental information
	Life cycle analysis
	Carbon pricing
	Emissions trading
	Green procurement, sustainable procurement
	Feed-in tariffs, renewable portfolio standards
	Carbon budgets
	<i>Concepts invoked in wider policy debate</i>
	Decoupling, the Anthropocene, planetary boundaries, <u>circular economy</u> , climate crisis, climate justice, climate refugees, degrowth

Meadowcroft & Fiorino (2017)

- In short, 'living lab' refers to an arena and to an approach catalysing societal changes and transformation by the means of collaborative knowledge production.
- The living lab approach is increasingly popular in universities due to its promise to bring various actors together to knowledge co-production.

Urban living lab?

- An explicit form of intervention delivering sustainability goals for cities.
- Not just technological or economic issues but also social issues (e.g. consumption, lifestyles; i.e. “real life”).
- Operating by bringing purposefully together multiple actors (i.e. “user-centric”).
- Integrating scholarly and applied research and fostering learning through forms of open and engaged experimentation.

Living Lab for circular economy experiments



How does a circular economy feel? Or does it feel anything? Hiedanranta acts as a living laboratory for various circular economy experiments that can be experienced and tested on the spot.

➤ Take a look at the available opportunities (in Finnish)

<https://www.tampere.fi/en/housing-and-environment/city-planning/development-programs/innovative-hiedanranta/participate-in-innovation-activities.html>

- Tampere (235,000 inhabitants) is the most growing city area after Helsinki metropolitan area.
- Hiedanranta is an old industrial area (pulp mill) under brownfield redevelopment for up to 25,000 new inhabitants. The planning of housing for the incoming residents is going on.
- A lot of experimental CE projects are already taking place in the area. Companies, citizen groups and research institutions carry them out in industrial buildings and outside the buildings.



<https://www.tampere.fi/en/housing-and-environment/city-planning/development-programs/hiedanranta/innovative-hiedanranta.html>

In May 2018, there were altogether 39 research and development projects, an initial CE ecosystem with some companies, academic and college education, 25 operating actors (companies, communities, traders) and 40 000 visitors during previous year in Hiedanranta. Citizen activity has increased and developed diversely in the area, including many participatory elements.

(pictures: Scan-Foto, Architecture studio NOAN)



Two examples of research projects

- Dwellers in Agile Cities (DAC): A research consortium funded by the Academy of Finland Strategic Research Council, 2016-2019. Led by doc. Helena Leino

<http://www.agilecities.fi/en/>

“The objective of the DAC–project is to recognize future living needs and create novel models for cooperation between varied actors, such as housing companies, immigrants, elderly, remote workers, construction companies, housing estates and state and city officials.”

- Circular Economy Catalysts (CICAT2025). A research consortium funded by the Academy of Finland Strategic Research Council, 2019-2023. Led by prof. Leena Aarikka-Stenroos <https://cicat2025.turkuamk.fi/in-english-2/>

“CICAT2025 explores a wide range of circular economy catalysts that have the potential to accelerate the adoption of circular economy principles in society and markets.”

Findings

- Multi-actor processes: the intersection between the city, citizens, activist groups, business, research...
- The generation of collective agency → the need to conceptualise agency!
- The case study approach.
- A bottom up approach (yet, the local versus the transnational exchanges and connections).
- The coexistence of diverse experiments.
- Multiple data and methods.

Concluding: Urban living labs

- The potential to identify novel and multidisciplinary issues.
- The potential of strong impacts on society.
- Yet, doing multidisciplinary research is not simple in practice. (theoretical and conceptual discussion; “the whole is just greater than the sum of its parts”; a common problem field).
- Urban living labs: real impacts on urban development and multidisciplinary sustainability research?
- Lessons from knowledge co-production and the science-policy interface (a problem based approach; co-development of research; development of shared knowledge).

Key reading

Bulkeley, Harriet & Coenen, Lars & Frantzeskaki, Niki et al. (2016). Urban living labs: governing urban sustainability transitions. *Current Opinion in Environmental Sustainability*. 22. 13-17. 10.1016/j.cosust.2017.02.003.

Evans, James & Jones, Ross & Karvonen, Andrew & Millard, Lucy & Wendler, Jana (2015). Living Labs and Co-Production: University Campuses as Platforms for Sustainability Science. *Current Opinion in Environmental Sustainability*. 16. 1-6. 10.1016/j.cosust.2015.06.005.

Leminen, Seppo & Westerlund, Mika (2015). *Cities as Labs: Towards Collaborative Innovation in Cities*. Aalto University.

von Wirth, Timo & Fuenfschilling, Lea & Frantzeskaki, Niki & Coenen, Lars (2019) Impacts of urban living labs on sustainability transitions: mechanisms and strategies for systemic change through experimentation, *European Planning Studies*, 27:2, 229-257, DOI: 10.1080/09654313.2018.1504895

www.tampere.fi/en/housing-and-environment/city-planning/development-programs/hiedanranta/innovative-hiedanranta.html (27.8.2019)

Thank you!