Living Labs in food systems research – learnings from Food Trails

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Agenda

- START – accelerating the green transition
- Research driven and user driven Living Labs – HUBs
- Example of project applying a living lab methodology
  - Foodtrails
- Networking platform and collaboration - working with living labs across the projects

Innovation and theories of change

- Tackling societal challenges
- Leadership challenges
- Crosscutting activities
- Wicked problems
- Path dependency

- User involvement
- Open innovation
- Real life experimentation
- Piloting with citizens and users
- Path creation

MIT – Prof. Bill Michell, Eric von Hippel, etc

- Particpatory design
- Social experiments
- Cooperation

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Horizontal innovation networks—by and for users

Eric von Hippel

Innovation development, production, distribution and consumption networks can be built up horizontally—with actors consisting only of innovation users (more precisely, "user/self-manufacturers"). Some open source software projects are examples of such networks, and examples can be found in the case of physical products as well. In this article, we discuss three conditions under which user innovation networks can function entirely independently of manufacturers. We then explore related empirical evidence, and conclude that conditions favorable to horizontal user innovation networks are often present in the economy.

ESSAY

Innovation by User Communities:

Learning from Open-Source Software

Creating complex products with limited manufacturer involvement is a growing phenomenon occurring in markets as diverse as windsurfing gear and open-source software.

Eric von Hippel

Imagine product development without manufacturers. Today's user innovation communities are making that idea increasingly real. Open-source software projects, among others, have led to innovation, development and consumption communities run completely by and for users. Such communities have a great advantage over the manufacturer-centered development systems that have been the mainstay of commerce for hundreds of years. Each using entity, whether an individual or a corporation, is able to create exactly what it wants without requiring a manufacturer to act as its agent. Individual users in a user innovation community do not have to develop everything they need on their own but can benefit from others' freely shared innovations.

Examples of User Innovation Communities

User innovation communities existed long before the advent of open-source software and extend far beyond it. They are not limited to information products such as software code. Some develop physical products. Consider and compare two examples of early-stage user innovation communities — one in software, the other in sports.

Apache Open-Source Software Apache open-source software is used on Web server computers that host Web pages and provide appropriate content as requested by Internet browsers. Such computers are the backbone of the World Wide Web.

The server software that evolved into Apache was developed by Rob McCool (at that time a University of Illinois student) for, and while working at, the National Center for Supercomputing Applications (NCSA). The source code as developed and periodically modified by McCool was posted on the Web so that users at other sites could download, use, and further modify and develop it.

When McCool departed NCSA in mid-1994, a small group of webmasters who had adopted his server software for their own sites decided to continue developing it. Eight users gathered all the documentation and bug fixes and issued a consolidated patch. This "patchy" server software evolved over time into Apache. Extensive user feedback and modification yielded Apache 1.0, released on Dec. 1, 1995.

After four years and many modifications and improvements contributed by many users, Apache became the most popular Web server software on the Internet, garnering many industry awards for excellence. Despite strong competition from commercial software developers such as Microsoft Corp. and Netscape, it is currently used by approximately 60% of the millions of Web sites worldwide.

High-Performance Windsurfing High-performance windsurfing, the evolution of which was documented by MIT doctoral candidate Sonali Shah in a March 2000 MIT Sloan working paper (http://opensource.mit.edu), requires gear suitable for midair jumps and turns. Previously, windsurfers used their boards essentially as small, agile sailboats, and the boards' specifications reflected that.

The fundamentals of high-performance windsurfing were developed in 1978 in Hawaii by users. Larry Stanley, a pioneer in the sport, explained to Shah how a major innovation in technique and equipment came about.

"In 1978," Stanley recalled, "Jurgen Honscheid came over from West Germany for the first Hawaiian World Cup and discovered jumping, which was new to him, although Mike Horgan and I were jumping in 1974 and 1975. There was a new enthusiasm for jumping, and we were all trying to outdo each other by jumping higher and higher. The problem was that … the riders flew off in

Living Lab

- ”(…) user-centered, open innovation ecosystems based on systematic user co-creation approach, integrating research and innovation processes in real life communities and settings” (European Networks of Living Labs (ENoLL))

- 5 principles
  - Active user involvement
  - Real-life settings
  - Multi-stakeholder
  - Multi-method approach
  - Co-creation

Ballon, P. and Schuurman, D. (2015) ‘Living labs: concepts, tools and cases’, *Info*, 17(4), pp. 1–11

Research methodologies

- Technology and innovation – with a systems pespective
- Idea generating phases
- Basic research
- Data collection and analysis

Reflected typologies of actors

Educational/
research
institutions

Farmers

Local authorities
/ municipal
administrations

Wholesalers

Citizens

Procurers

Staff in
(public) kitchens

Consultants

Chefs

Knowledge and research based transition of agrifood systems – reflecting Food2030 contexts

- *European cities are key actors in prompting changes towards a more sustainable food system under the international frameworks of the MUFPP, SDGs and Food 2030*

- *Sharing strategic research through City Labs and Food Living Labs for developing sustainable agrifood systems*

The European Commission's Food 2030 priorities

- Sustainable diets. Relevant education, health promotion and communication programmes, and developing sustainable dietary guidelines.
- Public procurement. Reorienting school feeding programmes and other institutional food services to provide food that is healthy, locally or regionally sourced, seasonal and sustainably produced.
- Urban agriculture. Local food production, strengthening urban and periurban food production, supporting short food-supply chains.
- Food Waste Prevention. Saving food by facilitating recovery and redistribution for human consumption of food donation.

Urban experimentation: the Fit4Food2030 city labs

- 14 city labs (also referred to as food labs), built around science centres, museums and science shops that develop and implement hands-on (in)formal training sessions to build the competences of students and professionals, bringing a wide variety of actors together in the process;
- 11 national policy labs that mobilise food-system stakeholders in order to align R & I policies and investment schemes; and
- an EU think tank that links project activities with the European Commission and shapes the field via policy briefs.

- a holistic food-systems approach
- and responsible research and innovation (RRI).

About

Food Trails is a four-year EU-funded Horizon 2020 project aiming to translate in Europe the Milan Urban Food Policy Pact's collective commitment to integrated urban food policies into measurable and long-term progress towards sustainable food systems.

Read More

Food Trails - 2020-2024, 19 partners

From visions and interests → Integrated urban food policies for systemic change

- Multi-actor approach: Living labs in each participating city
  - Researchers' role: methodological advisors, document and analyse the processes, included in the living labs alongside other actors

11 European city-regions: Bergamo (IT), Birmingham (UK), Bordeaux (FR), Copenhagen (DK), Funchal (PR), Grenoble (FR), Groningen (NL), Milan (IT), Thessaloniki (GR), Tirana (AL) and Warsaw (PL).

Eurocities, Slow Food associazione, EAT foundation, Cardiff University, Stichting Wageningen Research, Roskilde University, Cariplo Factory srl

Funded by the European Union

How to reach and involve vulnerable groups?

How to integrate actor involvement with political strategies and priorities?

How to navigate contesting opinions?

How to find resources?

Mapping of existing research and practices

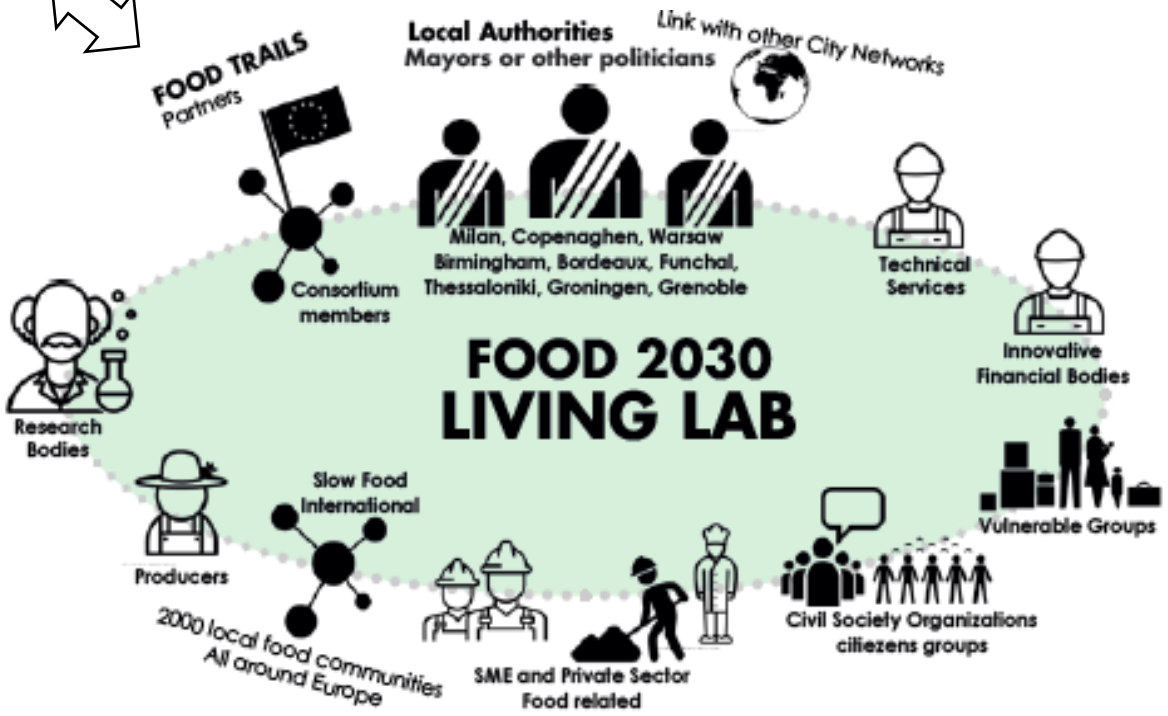
Co-design

Test and evaluate urban food policies

Knowledge-sharing between cities

From living labs to systemic change: How to up- and outscale experiences?

Sustainable urban food systems



Funded by the European Union

Example from FT LL in the City of Copenhagen

- *2002: decided aims to use 90 % organic ingredients in the meals in the public food system. 2016: 88 % organic.*
- *Data on the school canteen service:*
  - *80.000 daily meals, 40.000 daily dinners*
  - *7.375 tonnes of food procurement, 142 tonnes weekly*
  - *1.100 kitchens in 925 locations, 1.700 kitchen staff*
  - *€40.300.000*
- Investigate the potential in procurement instrument
  - Innovate criteria in line with SDG's
  - Scaling for local and central methods
  - The power of procurement

Methodological steps & tools in LL research

- The LL methodology is a dynamic approach to innovation and research that emphasizes real-world experimentation and collaboration between various stakeholders, including researchers, businesses, government agencies, and end-users

- Research design

- Ethnographic methods

- Mapping and analysis

Potentials for scaling through Living Labs

- Upscaling
- Out scaling
- Deep scaling – down scaling

Perspectives

- Developing theory of change for green transition
- Developed policy recommendations for decision makers
- Developed tools and methods for praxis

Thank you for your attention

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