Understanding Living Lab concepts and co-creation

Module 1 – Set-up of Living Labs

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ALL Ready

www.all-ready-project.eu

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Living Labs basics, Long-term vision and Openness of innovation

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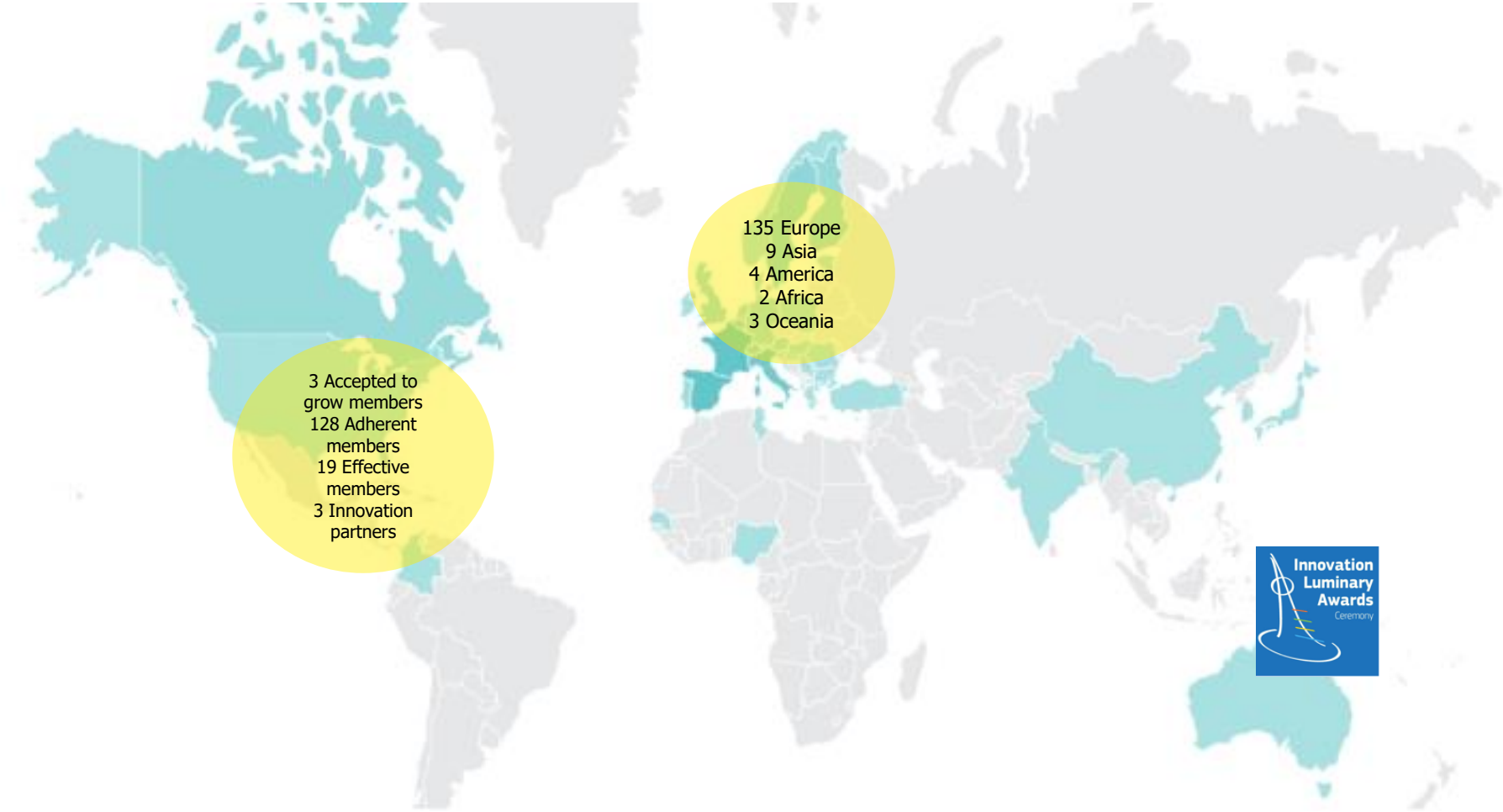
Your trainer

- PhD. In Innovation Management at the Faculty of Economics at the University of Rome La Sapienza (Italy)
- Senior researcher at imec (Belgium) in the Smart Cities unit
- Contributed to create and develop more than 35 European Commission funded projects in the fields of Open Innovation, Energy & Environment, Smart Cities, ICT, etc.
- A true passion for Living Labs and for enacting Open Innovation

The European Network of Living Labs



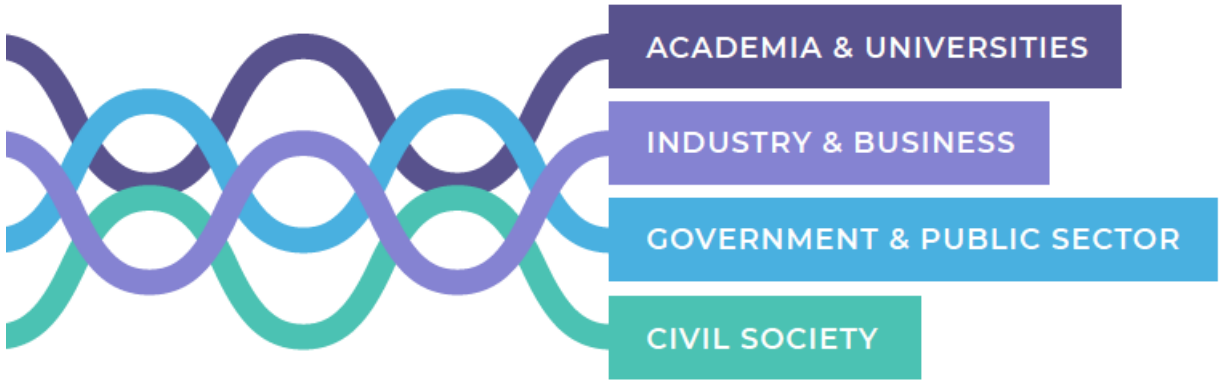
Living Labs basics

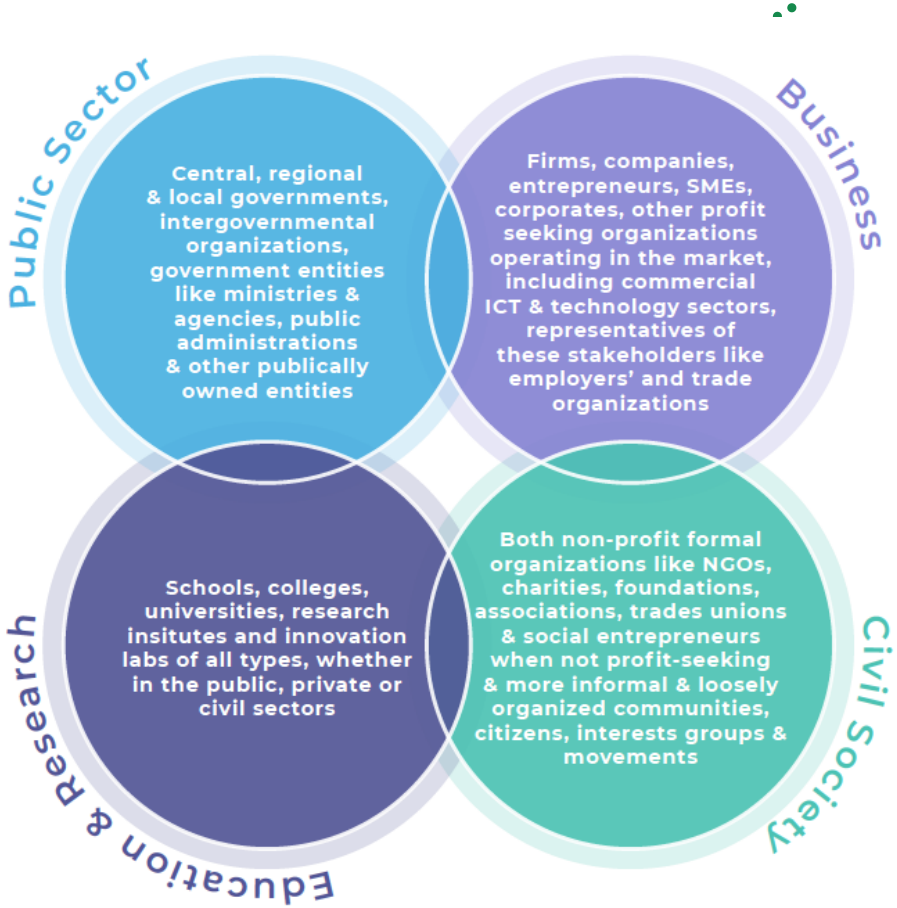
What is a Living Lab?

Living Labs are real-life test and experimentation environments that foster co-creation and open innovation among the main actors of the Quadruple Helix Model.

Quadruple helix

Industry, Academia, Public Authorities and Citizens are part of the so-called Quadruple Helix model (QHM), where **users** are placed **at the heart of the innovation ecosystem**. This means that **citizens/users must be considered as actors, not factors**, of the innovation process.





and what is not a Living Lab?

- A **Test Bed** is a "Pre-Living Lab" setting enabling rigorous, transparent, and replicable testing of scientific theories, computational tools and new technologies in a controlled environment (**not in real-life**), with users often represented mainly by researchers. Compared to Living Labs, they show a **smaller scale** and level of analysis (e.g. one building compared to a city).

- A **Fablab**: "fabrication laboratory" is a small-scale workshop offering digital fabrication. A fab lab is typically equipped with an array of flexible computer-controlled tools that cover several different length scales and various materials, for developing technology-enabled products to mass production.

- A **Home Lab** (originated at MIT with Prof. Mitchell) they focused on testing and adapting new technologies based on their fit with the daily home environment.

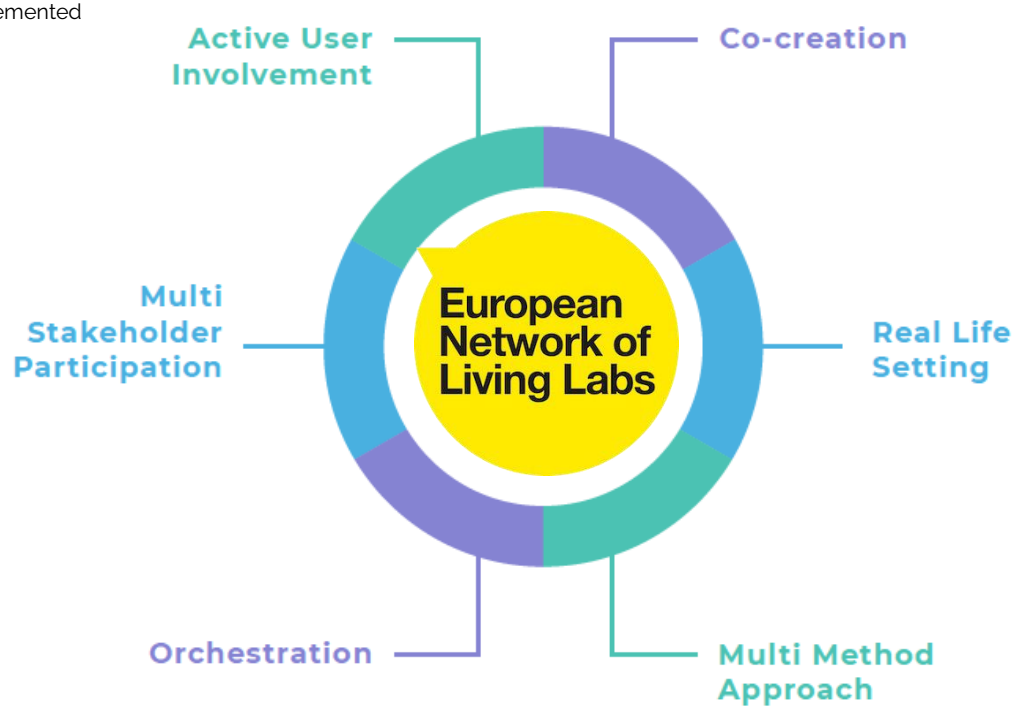
Ballon, Pieter & Schuurman, Dimitri. (2015). Living labs: concepts, tools and cases. info. 17. 10.1108/info-04-2015-0024

Essential building blocks

A Living Lab involves relevant stakeholders 'actively' in all relevant activities, ensuring their feedback is captured and implemented throughout the whole lifecycle of the innovation.

Taking a holistic view on society, involving stakeholders from the quadruple helix model: government, academia, private sector and citizens.

The Living Lab operates as the orchestrator within the ecosystem to connect and partner up with relevant stakeholders.



In a Living Lab values are bottom-up co-created not only for but also by all relevant stakeholders, ensuring a higher adoption at the end.

A Living Lab operates in the real-life setting of the end users, infusing innovations into their real life instead of moving the user to test sites to explore the innovations.

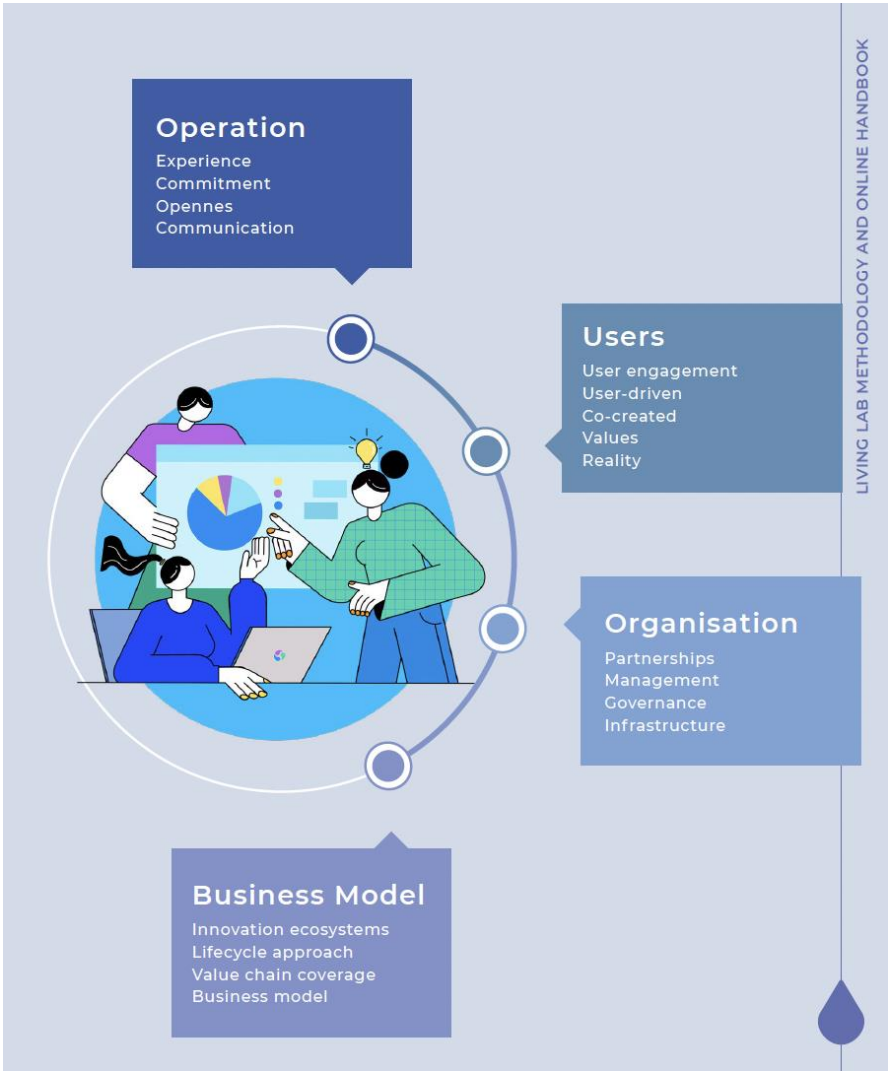
Each Living Lab activity is problem driven. Therefore, the methodological approach towards every individual activity will be selected based on the expected outcomes of the activity and the stakeholders who needs to be involved.

Living Labs essentials

Benefits

of using the Living Lab methodology

1. CO-CREATING INNOVATION/SOLUTIONS
2. MASTERING THE VALUE CHAIN OF THE GIVEN PROJECT
3. IDENTIFYING KEY STAKEHOLDERS
4. UNDERSTANDING THE BUSINESS OF KEY STAKEHOLDERS
5. RECOGNIZING THE VALUE CREATED FOR THE STAKEHOLDERS
6. DEVELOPING MANAGEMENT CAPABILITIES TO CREATE VALUE FOR THE STAKEHOLDERS
7. PROVIDING STRATEGIC INTELLIGENCE TO GUIDE STAKEHOLDERS INTO VALUE CREATION
8. KNOWLEDGE TRANSFER TO IMPROVE VALUE FOR STAKEHOLDER



3-layered model

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https://biblio.ugent.be/publication/5931264/file/5931265.pdf

Living Labs Pitfalls and Challenges

Theoretical & Methodological Challenges

- Lack of comparative/cross-cultural studies
- Lack of quantitative studies
- New data collection & analysis methods in real-life setting
- Integrating social and technical aspects of LL activities
- Lack of pre-determined objectives in LL research
- Development of a standardized LL model
- Scalability of the results
- Balance between research and development

Governance & Process-related Challenges

- Multi-business collaboration and the issue of openness
- Visibility and dissemination of the LL activities
- Flexibility and fast changing requirements
- Collaboration and communication with stakeholders
- Financial issues
- Technical and infrastructural challenges
- Integrating social and technical aspects of LL activities
- Balance between research and development activities

Actors' Motivations, Needs and Expectations

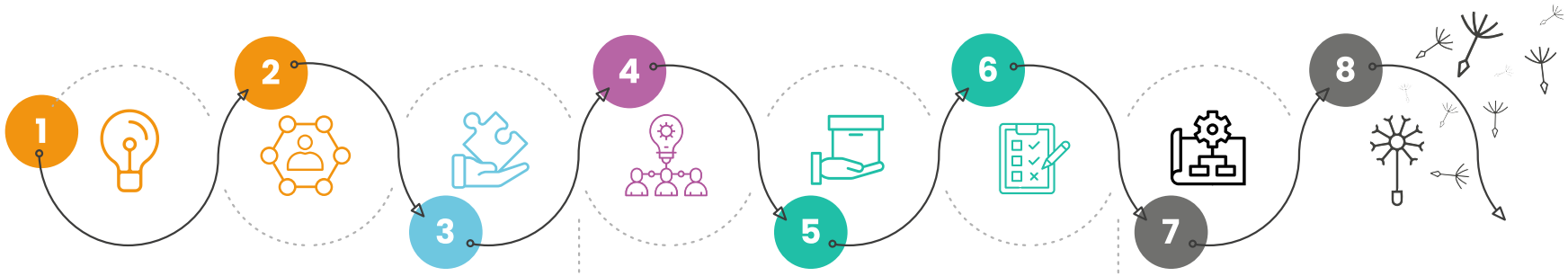
- User recruitment challenges
- Building commitment with stakeholders
- Identifying relevant parties and contacts
- Cultural factors on user motivation and engagement
- Motivation of all stakeholders, not only users
- Motivating factors in online groups
- Ensuring continuous and active participation

Ethical Challenges

- Informed consent
- Unwitting participation
- Voluntariness on participatory research
- Privacy and use of participants' data
- Overlooking user's interest in LL activities
- IPR in LL activities

http://www.diva-portal.org/smash/get/diva2:1239574/FULLTEXT01.pdf (Habibipour 2018)

Living Lab Integrative Process - Design thinking



Select a practice

The context is researched to understand the socioeconomic and cultural setting. User behaviours and social practices are understood.

Integrate stakeholders

A People Public Private Partnership (PPPP) Model is used to integrate stakeholders.

Uncover barriers

Community based social marketing helps to uncover barriers.

Co-design plan

A common vision and shared goals enables mash up and then co-design with the users and not for the users.

Pilot an intervention

Real-life experimentation is carried out in the field.

Evaluate performance

Measurement, verification and performance scorecards enable scale up.

Demonstrate the system

Actual system proven in operational environment.

Exploit the solution

Test the solution outside the initial scope. Enlarge the solution, pollinate it and replicate it in other settings.

*Adapted from Mastelic, 2019

Living Labs operations

Looking at a Living Lab from an operational perspective offers the possibility to judge not only the Living Lab's experience, maturity of projects and activities, but also their way of developing an open-minded perspective when it comes to all stakeholders from the quadruple helix (academia, industry, government, and civil society).

Important aspects in this part of the evaluation are, among others, **proof of Living Lab activities, stakeholder engagement and communication strategy**, evidence of **how the co-creation trajectory** has been established, the level of **effectiveness of communication** and how this is handled to keep a deeply **transparent approach among all the stakeholders**.

Value creation and value chain in a Living Lab

Creating a viable **business model** that offers **value** to all different types of new and/or involved stakeholders is key to the sustainability of a Living Lab. Critical elements to be considered are, for example, funding sources, value proposition, lean approach, impact, purpose, and key metrics.

In addition, all the phases of a lifecycle approach should be considered: from **ideation to design, experimentation and validation**. Important aspects in this part of the evaluation are, among others, **proof of integration** of the Living Lab operations into innovation ecosystems, **SWOT-analysis** of a Living Lab, a roadmap for the future, and a **value chain approach** throughout the operations of a Living Lab.

Access to Living Lab Infrastructures and Transnational experimentations

Discover ENoLL members via https://enoll.org/network/living-labs/

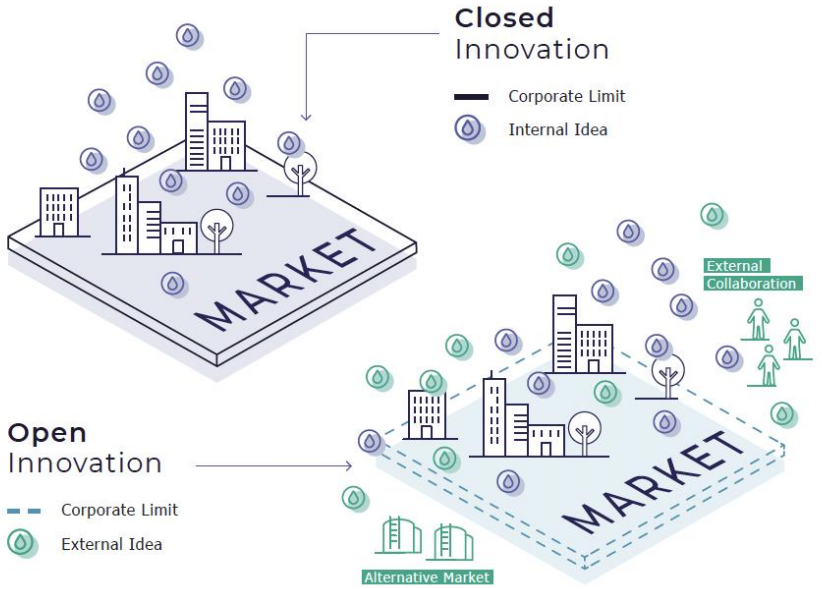
Open Innovation processes within Living Labs

The basic premise of Open Innovation, is to open up the innovation process to all active players so that knowledge can circulate more freely and be transformed into sustainable products and services for all.

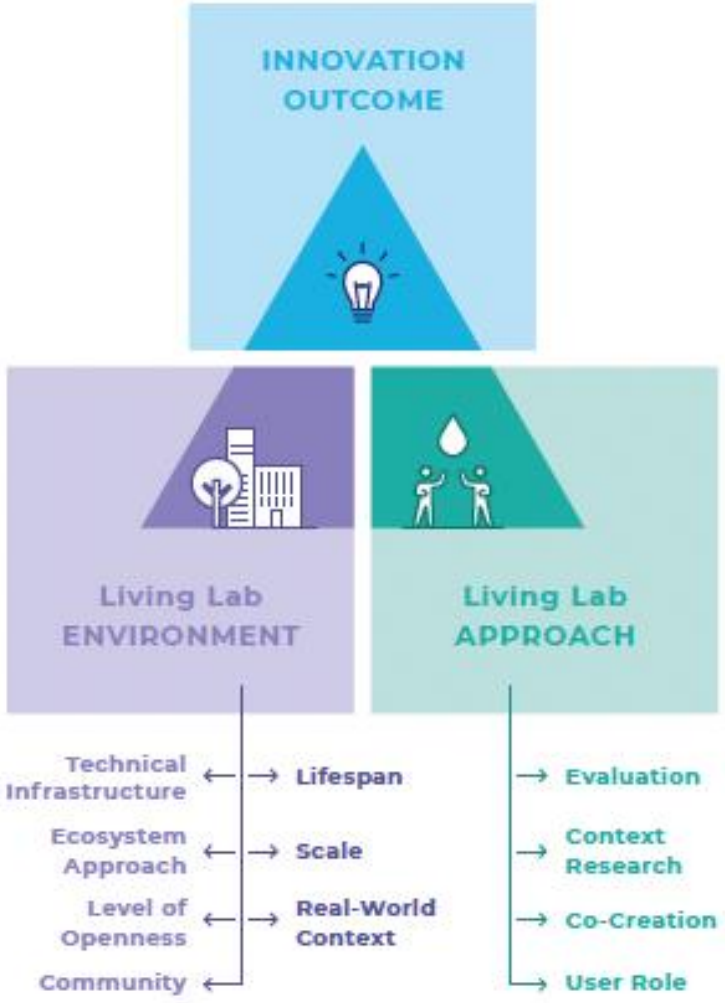
Innovation can no longer be the result of predefined and isolated activities but the outcome of a complex co-creation process involving knowledge flows and absorptive capacities from all actors involved across the entire economic and social environment (European Commission, 2016).

> Living Labs are increasingly facilitating new ways to stimulate innovation.
> They offer the possibility to catalyse how innovation can be carried out, focusing on user communities supported by information technology. [2]
>
> Maurice D. Mulvenna
> 2011

> Living Lab services can lead to an increased visibility, a shortened development process, improved products, and an enhanced learning and understanding about innovation processes and user involvement.[3]
>
> Anna Ståhlbröst
> 2013



Innovation outcomes and long-term multistakeholder partnerships in Living Labs



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- Visibility and dissemination of LL activities
- Flexibility and fast changing requirements
- Collaboration and communication with stakeholders
- Financial issues
- Technical and infrastructural challenges
- Integrating social and technical aspects of LL activities
- Keeping user motivated, in the LL projects
- Balance between research and development activities
- Mutual learning

Veeckman, C., Schuurman, D., Leminen, S., & Westerlund, M. 2013. Linking Living Lab Characteristics and Their Outcomes: Towards a Conceptual Framework. Technology Innovation Management Review, 3(12): 6-15

Contact Information

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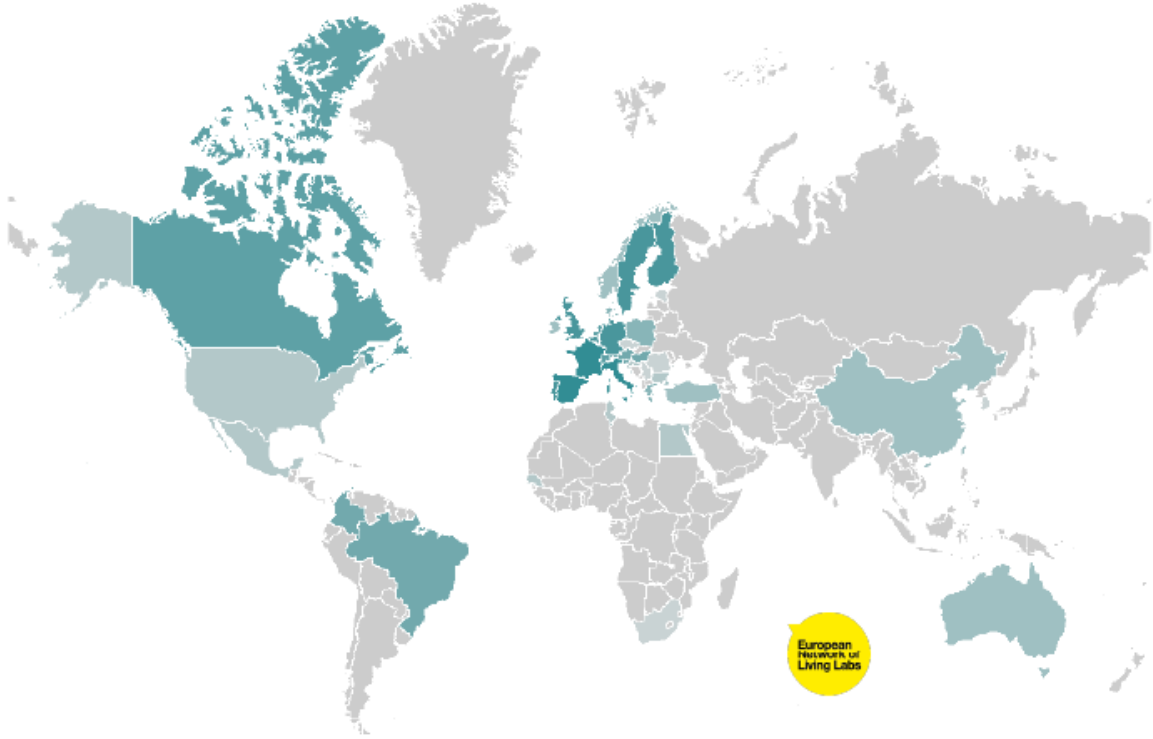

Thank You!

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