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Research & Innovation  
For Cities & Citizens



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„ALEXANDRU IOAN CUZA“  
din IAȘI

# Living Labs – challenges and opportunities for Citizen Science

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26.09.2023, RI4C2 – LL CONFERENCE





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# WP6 – EC2U Knowledge ecosystems

**COORDINATOR: UNIVERISTY OF IASI**





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## TOWARDS the Pan-European Knowledge Ecosystem (PEKE)

WP 6 answers to the Transformative module 6:

“embedding [...] active engagement of citizens, civil society, local and regional communities and public/cities authorities in all stages of the research and innovation process”

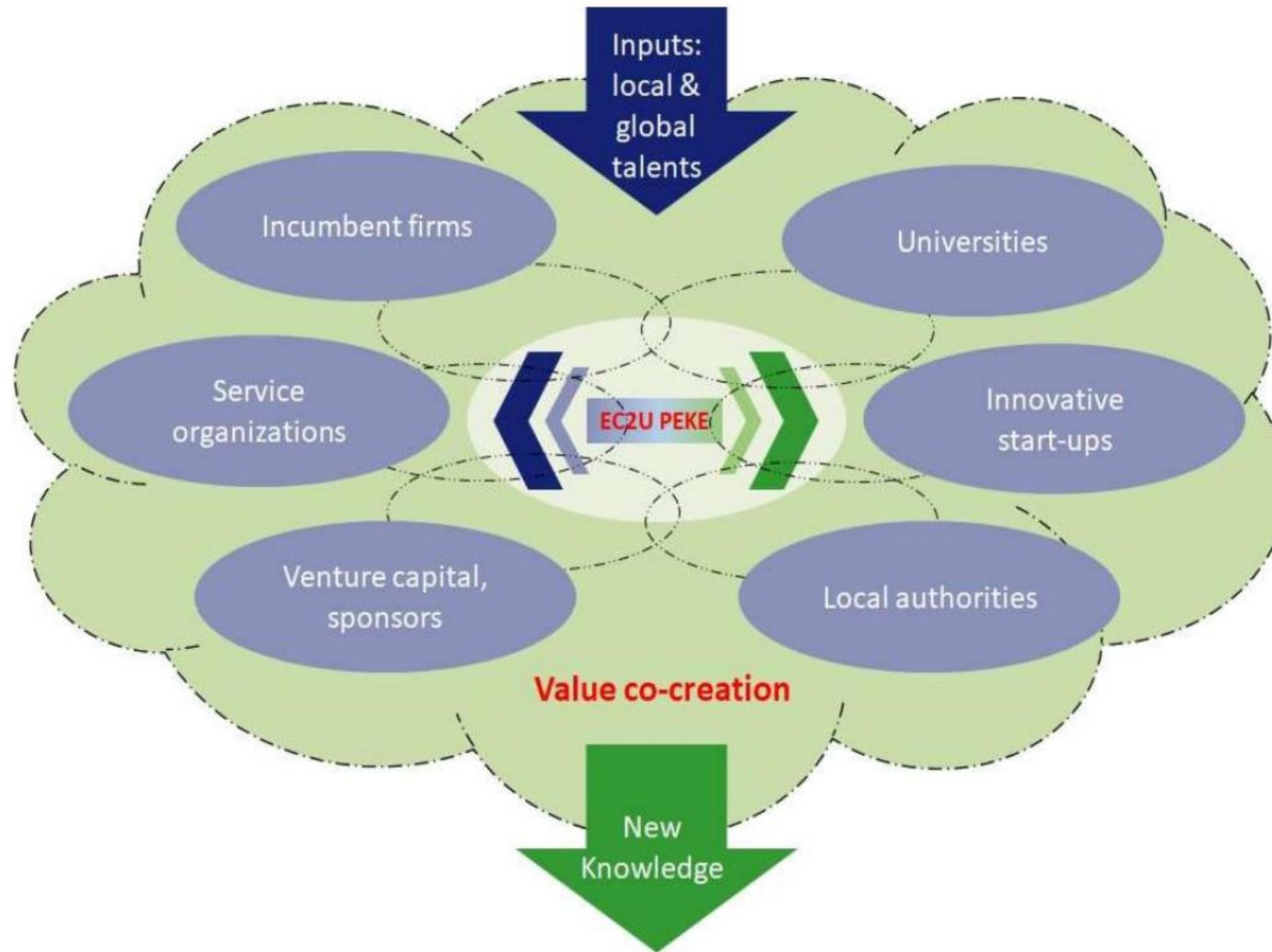


# EC2U local Knowledge Ecosystems

## RESULTS

- ☞ A common framework for the 7 local knowledge ecosystems
- ☞ Citizen Science Champions and relevant topics in citizen science
- ☞ 3 Pilot living labs for Citizen Science
- ☞ Action plan for citizen science in the EC2U 3 Virtual Institutes





**Figure 4.** Concept of the Pan-European Knowledge Ecosystem (PEKE).

# **EC2U local Knowledge Ecosystems**

## **RESULTS**

- **Citizen science champions - preliminary lists of the most active Stakeholders at local level Knowledge Ecosystem**
- **A policy paper on the Vivid EC2U Local Knowledge Ecosystems**
- **A toolkit for measuring civic engagement of R&I activities**
- **A selection of the relevant Research and Innovation topics for Citizen Science**



# **WP6 EC2U local Knowledge Ecosystems**

## **RESULTS AND PLANS**



- **3 Pilot living labs for Citizen Science**
- **First Citizen Science projects**  
(Aug 2024)

# RI4C2 Topics for Living Labs

*Living labs = a platform for scientific dialogue between citizens, researchers and innovators.*

No.	The relevant R&I TOPIC for Citizen Science in VI GLADE
1	Healthy (Home) Office Habits

NO	The relevant R&I TOPIC for Citizen Science in VI VIQE
1	Teaching for the Languages in Communities and Approaching Cultural Biases from multiple perspectives

NO	The relevant R&I TOPIC for Citizen Science in VI SCC
1	Perceptions of building environment. Indoor environment and quality of air





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# What is a Living Laboratory?

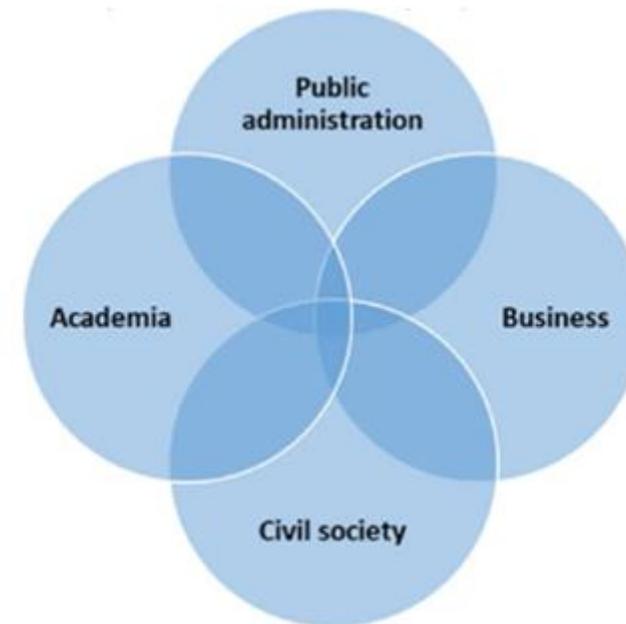


*Living labs (LLs)* = **open innovation ecosystems in real-life environments using iterative feedback processes throughout a lifecycle approach of an innovation to create sustainable impact.**

*European Network of Living Labs –ENoLL- an international, non-profit, independent association of benchmarked Living Labs;  
<https://enoll.org/>*

## DEFINITIONS:

- ☞ 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**, namely:



# LL concepts - Romania

- „Open science - early and open research sharing (...) and engaging all relevant knowledge actors, including citizens, civil society and end-users in co-creating agendas and research and innovation contents (such as citizen science)”

[A4\_1\_Description of open science practices within the Horizon Europe 2021 – 2027 programme. Briefing document. (2022). <https://uefiscdi.gov.ro/>]

- Open Innovation Ecosystems, Co-creation and testing facilities, Real-life framework, User-centered

[UVT Digital & Green Living Lab, West University of Timișoara; <https://www.uvt.ro/cercetare/cercetare-si-inovare/inovare-si-transfer-tehnologic/enoll-prin-uvt-digital-green-living-lab/>, 2023]



# LL concepts - Germany

- The term "real laboratory" refers to a novel form of cooperation between science and civil society that enables mutual learning in an experimental environment.

[German Parliament „Bundestag”,  
<https://www.bundestag.de/resource/blob/550742/8f269b6399b3098eabf9d5b09f31f88f/wd-8-017-18-pdf-data.pdf>]

- The Living Lab approach comprises a user-centered, real-world research environment in which not only science, industry and organizations jointly conduct research and development, but above all the users themselves take an active role within the innovation processes.

[Følstad 2008, Niitamo et al. 2006]



## LL concepts - Portugal

- Zonas Livres Tecnológicas (ZLT) - means a physical environment, geographically located, in a real or quasi-real environment, for testing and experimenting with innovative technology-based technologies, products, services and processes, with direct and permanent monitoring by the competent entities, namely in terms of testing, provision of information, guidelines and recommendations, corresponding to the concept of a regulatory sandbox.

*[Decree-Law 67/2021, of 30 July]*

- They provide a "safe space" in which companies can test innovative products, services, business models and delivery mechanisms without immediately incurring all the normal regulatory consequences related to the activity in question.

*[<https://portugaldigital.gov.pt/acelerar-a-transicao-digital-em-portugal/testar-e-incorporar-nova-tecnologia/zonas-livres-tecnologicas-zlt/>]*



# Why Living Labs? Opportunities

- flexible and adaptable innovation approach;
- complex challenges cannot be solved by single stakeholders;
- different goals (solution for practice vs publishable results);
- different approach (solution driven to problem driven);
- quickly find solutions that have been thoroughly evaluated from different perspectives and that can be scaled more easily;
- is build on the **three core principles of user centered innovation, real life experimental setups and private-public-people partnerships.**

[ - Agroecosystem Living Laboratories - Executive Report - [https://www.macs-g20.org/fileadmin/macs/Annual\\_Meetings/2019\\_Japan/ALL\\_Executive\\_Report.pdf](https://www.macs-g20.org/fileadmin/macs/Annual_Meetings/2019_Japan/ALL_Executive_Report.pdf), 2019

- Nations-Living Lab Essentials & How to set up a Living Lab, 22.06.2023, <https://nati00ns.eu/events/living-lab-essential-how-set-living-lab/> ]



## A Living Lab is not=

- **TEST BED** - “Pre-Living Lab” setting enabling rigorous, transparent, and replicable testing of scientific theories, computational tools and new technologies in a controlled environment with users (often mainly researchers);
- **FABLAB** - a small-scale workshop offering digital fabrication;
- **HOMELAB** - focus 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;

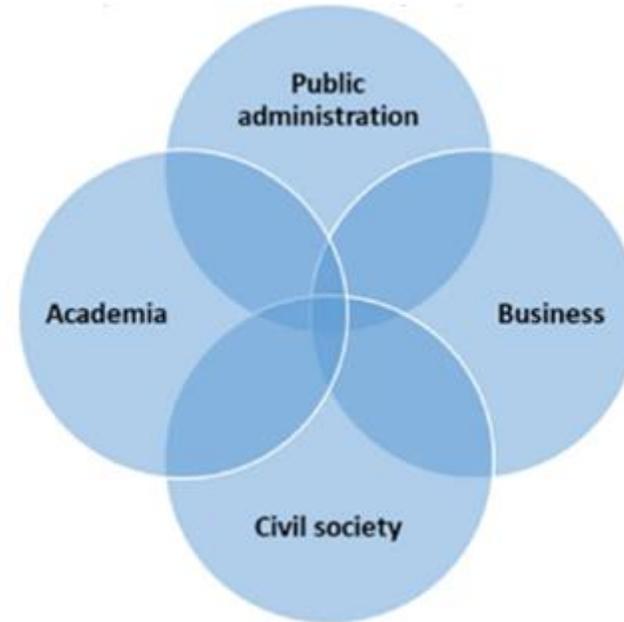
- Natioons-Living Lab Essentials & How to set up a Living Lab ( 22.06.2023), <https://natio00ns.eu/events/living-lab-essential-how-set-living-lab> ]



# Participants in the Living Labs: Quadruple Helix

*European Network of Living Labs –ENoLL- an international, non-profit, independent association of benchmarked Living Labs;  
<https://enoll.org/>*

Schools, colleges, universities, research institutes and innovation labs of all types, whether in the public, private or civil sectors



Central, regional & local governments, intergovernmental organizations, public administrations & other publicly-owned entities

Firms, companies, entrepreneurs, SMEs, corporates, commercial ICT & technology sectors

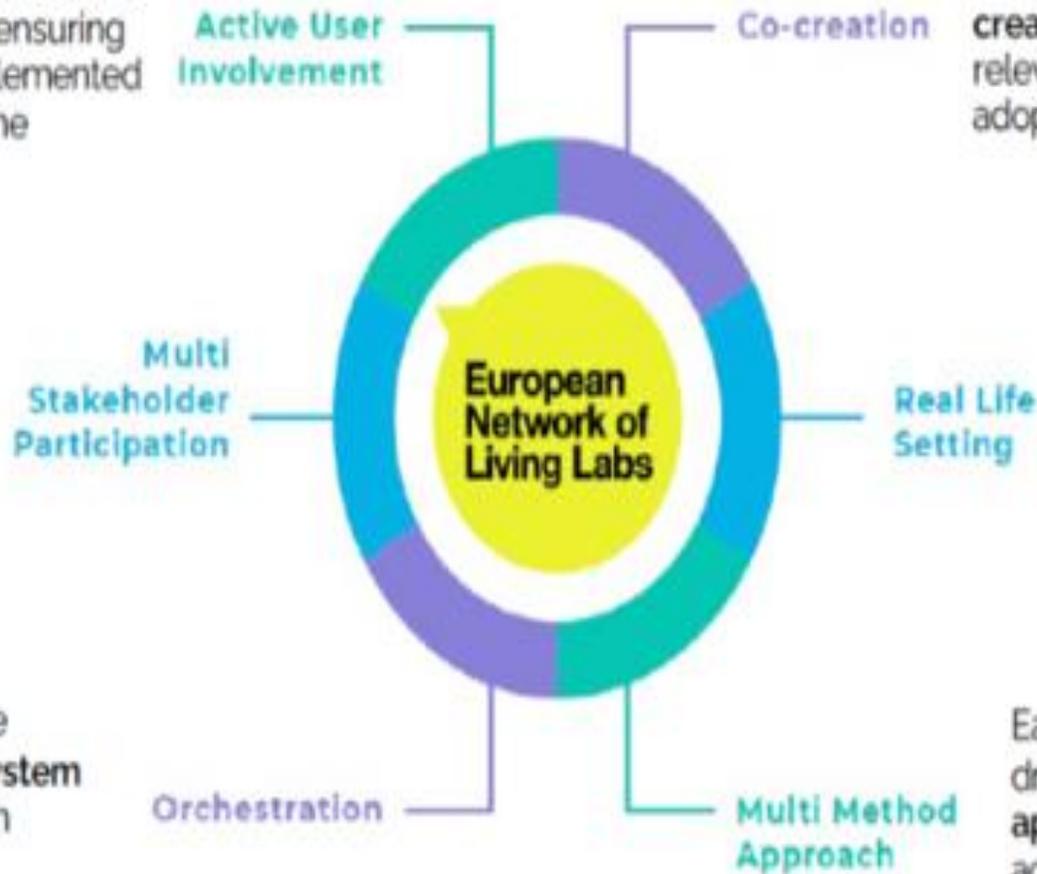
Citizens, civil society & users, NGOs, charities, foundations, associations, trades unions & social entrepreneurs



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.

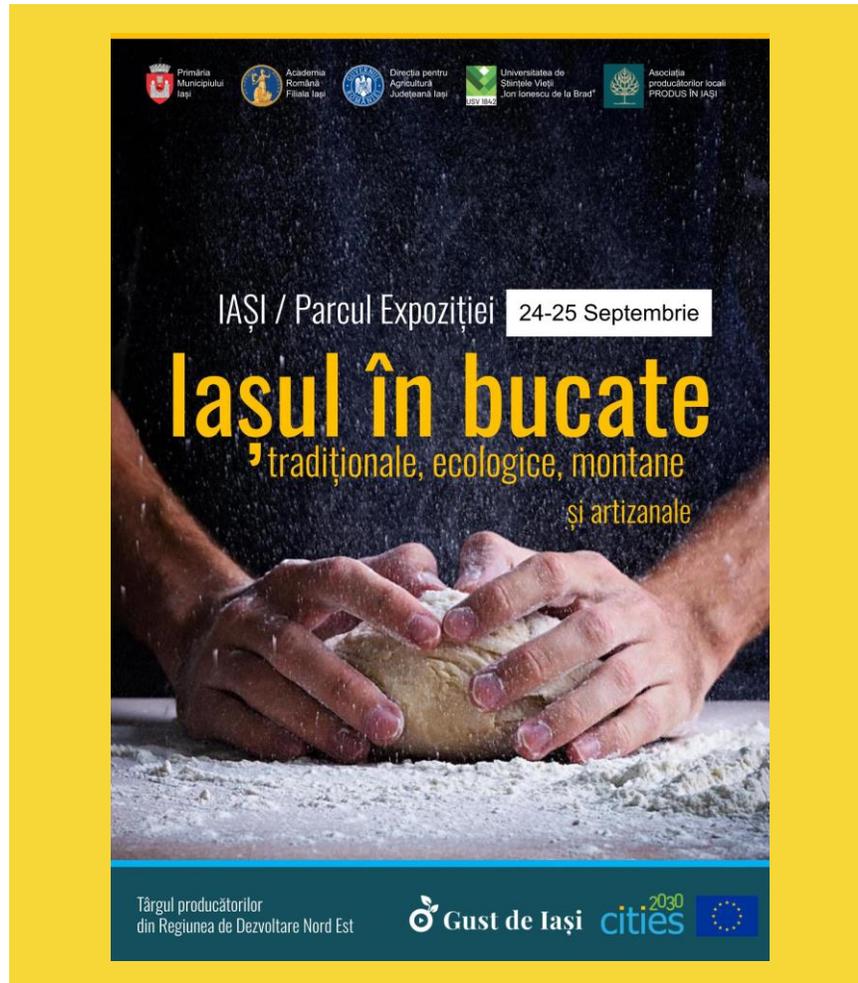


In a Living Lab values are **bottom-up co-created** not only for but also by all relevant stakeholders, ensuring a higher adoption at the end.

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 Lab examples



## Food for Iași Living Lab (Romanian Academy, Romania)

- An innovative collaborative hub whose main purpose is to develop a sustainable local development

- © Scientific research and development of urban food system
- © Supporting local producers
- © Knowing and promoting the local gastronomic culture
- © Encouraging participatory governance

(<https://fill.rdrp.ro/>)



## Living Lab examples



### Medialab USAL, ARTE, TECNOLOGÍA y SOCIEDAD

(University of Salamanca, Spain)

- focuses on new ways of learning, fostering creativity and experimenting with digital technologies to promote social innovation;
- use of electronics in multidisciplinary projects;
- use of Virtual reality in different teaching innovation projects;
- involve and train the university community to provide more creative solutions to real problems, which can have a positive impact on society.

<https://medialab.usal.es/>



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# Living Lab examples



## ❖ Gérontopôle Nouvelle-Aquitaine (Autonom'Lab)

(University of Poitiers ,France)

- is a sustainable public investment, intended to encourage and support projects to improve aging well, in the general interest;
- wishes to promote the entire Silver Economy Sector and, in fact, contributes to the development of innovation in the service of healthy aging, whether organizational, social or technological.

[www.autonom-lab.com](http://www.autonom-lab.com); <https://gerontopole-na.fr/>

**Thank you!**

**WELCOME TO THE EC2U/RI4C2 LIVING  
LABS!**



[www.ec2u.eu](http://www.ec2u.eu)

<https://www.uaic.ro/ri4c2-uaic/>

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