Living labs for regional innovation ecosystems

WHY INVEST IN PROMOTING LIVING LABS?

Living Labs are defined as user-centred, open innovation ecosystems based on a systematic user co-creation approach integrating research and innovation processes in real life communities and settings. In practice, Living Labs place the citizen at the centre of innovation, and have thus shown the ability to better mould the opportunities offered by new ICT concepts and solutions to the specific needs and aspirations of local contexts, cultures, and creativity potentials

The Helsinki Manifesto[1] (November 2006 Finnish EU Presidency) first pointed at Living Labs as a first step towards "a new European R&D and Innovation System, entailing a major paradigm shift for the whole innovation process". After that a number of strategic policy documents have highlighted the relevance of human and social aspects for better design and implementation of Research, Development and Innovation (RDI) projects. The Green Paper on RDI policy reform recommended that all future programmes "should provide more [European] added value, increase [their] leverage effect on other public and private resources and be used more effectively to support the strategic alignment and pooling of national and regional funds, to avoid duplication and [fragmentation]". The flagship initiative Innovation Union invited Member States to overcome traditionally "compartmentalised approaches" between research and innovation financing, setting a narrower focus on the outcomes to be achieved by meeting the two ends of the RDI value chain, possibly in relation to grand societal challenges and to clearly stated policy objectives.

Thus, the rationale of EU sponsored public intervention in this domain merges the aspiration to push the technology frontier ahead to improve community life with the pragmatic requirement of translating RDI results into new products and services that meet market expectations and ultimately lead to the creation of "more and better jobs". Not only have these recommendations shaped the research agenda of Horizon 2020, but also inspired the provisions for RDI within Cohesion Policy and Territorial Cooperation Programmes for 2014-2020, particularly through the Smart Specialisation Strategies now defined for all EU Regions and Member States, most of which also providing the implementation framework for the EU Digital Agenda at local level.

Additionally, Living Labs allow a bottom-up policy coherence to be reached, starting from the needs and aspirations of local and regional stakeholders, creating a bridge between Horizon 2020, Smart Specialisation, the Urban Agenda, Cohesion Policy, and so forth. In this context, Living Labs can be somehow thought of as a transversal, ICT driven, 'lead market' meeting the requests of the Council and the EP for "strengthening synergy between EU support policies in the area of research and innovation" and placing regions and cities as leading actors in Europe's innovation strategies.

> **Citilab[2]** is a centre for social and digital innovation located in Cornellá de Llobregat, Barcelona. It is a mix between training and research centre and an incubator for business and social initiatives. It sees itself as a centre for civic innovation, using the Internet as a way of innovating

1 https://www.scribd.com/doc/290101063/Helsinki-Manifesto-201106
2 http://www.citilab.eu/en

in a more collaborative manner, integrating citizens in the core process.

Laurea Living Labs[3] are hosted by an R&D oriented university of applied sciences in the Helsinki metropolitan area and focus on service innovations. Through several locations and innovation processes based on Learning by Developing principles, Laurea acts both as host organisation and a promoter of innovation in public and business services, focusing on welfare, knowledge intensity and social responsibility.

iMinds[4] is Flanders' digital research & entrepreneurship hub connecting five universities across the Region as a platform for demand-driven applied research, including pre-seeding and incubation of new businesses. iMinds iLab.o is a networked service provided to SMEs throughout the Flanders Region, supporting the development of innovative products and services using Living Lab methodologies and tools.

In **Apulia Living Labs,**[5] ERDF funds have been used to promote high impact RDI carried out by ICT Living Labs that effectively respond to specific requirements previously stated by the potential beneficiaries (belonging to public administration and the third sector) who are directly involved in the project partnerships with the task of managing the pilot phase.

The **Basque ICT cluster GAIA**[6] is an example of a new cluster model where Living Labs are a priority, aligned to the Basque smart specialization strategy and working through its Living Labs at the frontline of innovations in different technology fields.

In the **Vallée d'Aoste** region,[7] the Quadruple Helix scheme has been adopted in the framework of pre-commercial procurement to inform and characterise the pilot phase of funded projects.

The **Alcotra Innovation project** involving two French and three Italian regions, has developed and tested a set of guidelines[8] for the implementation of cross-border Living Labs in four thematic domains of relevance for the respective innovation strategies.

BENEFITS, BARRIERS & CHALLENGES

All Living Lab experiences have in common a user-centric co-design process for development and implementation of innovative ICT-based products and services. This can help European Regions identify and valorise their respective economic niches and competitive advantages in the perspective of Smart Specialisation.

Living Labs can be very diverse in structure and focus, ranging from universities and science parks adopting user-driven approaches to regional clusters enabling a joint Quadruple Helix approach, up

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[3] http://www.laurea.fi
4 http://www.iminds.be
[5] http://livinglabs.regione.puglia.it/en/home
[6] http://www.gaia.es
[7] http://all.alcotra-innovazione.eu/
[8] http://www.alcotra-innovazione.eu/livingLabs/dwd/Alcotra

to social actors and entrepreneurs aiming at excellence driven innovations at local and international level. However the common 4P governance model adopted allows opening up local innovation systems to new actors such as urban planners and designers, technology SMEs selling in global markets, creative people, digital artists, and a myriad of grassroots communities. This fits very well into the entrepreneurial discovery and related variety principles, two of the basic tenets of Smart Specialisation Strategy.

Living Labs can be instrumental to the integration of RDI with territorial development policy, assuming three possible configurations (which depend on the structure of the underlying innovation system):

- As vertical tools for promoting user-driven RDI in a given sector (e.g. eHealth, Mobility, eGovernment, Cultural Heritage or eInclusion), thus attracting investments and talents (or simply tourists) into a city or region and contributing to the implementation of smart specialisation in the territory;

- As 'orchestration' agents between individual users, citizens, grassroots communities (bottom-up) and the other 4P stakeholders. Therefore, playing a "more encompassing and systemic role" in structuring and providing meaning to user engagement and citizen empowerment in RDI processes within the broader context of territorial innovation policy;

- As territorial innovation or "Smart Regional" models, including guidelines for a proactive behaviour of public administration, grounded on a successful mixture of technological, social and organisational RDI activities, to valorise local intellectual capital and increase knowledge for development.

Multiple examples of Living Lab initiatives can be found in the CIP ICT PSP Smart City portfolio.[9] Knowledge and results from those projects (e.g. CitySDK,[10] Commons4EU,[11] and OpenCities[12]) have been utilised for example in the Finnish 6Aika – The Six City Strategy Open and Smart Services,[13] the first national strategy built on the open and agile cities approach, part of the Finnish implementation of the European Commission cohesion policy 2014 – 2020. The international city-led movement Open and Agile Smart Cities (OASC),[14] launched in March 2015, is strongly contributing to the European need of a common Smart Cities framework to create a lead market, taking advantage of the potential of this sector for jobs and growth, by deploying innovative and replicable solutions increasing the competitiveness of businesses, avoiding vendor lock-in, improving the services offered by cities, and enabling more widespread participation in service development through community engagement. Over 70 cities representing 15 country networks in Europe, Latin America and Asia Pacific have already joined the OASC initiative.

The INTERREG IVa BALLAD[15] MED Medlab[16] and CEE CentraLab[17] projects have analysed the partner regions ICT-related Living Lab structures, work, processes and methods, including their ecosystems,

9 https://ec.europa.eu/digital-agenda/en/ict-psp-running-projects
10 http://www.citysdk.eu
11 http://commonsforeurope.net
12 http://opencities.eu
13 http://www.forumvirium.fi/en/sixpackstrategy
14 http://www.oasc.org
15 http://projects.centralbaltic.eu/project/431-ballad

and gathered good practice cases from each of them. Other EU-funded initiatives (such as the INTERREG Cliq[18] project) have underscored the important relationship between local 4Ps and Living Labs. A clear example of this is the case of Bird Living Lab, supported by the Territorial OP 2007-2013 POCTEFA, which was proposed by the Euroregion of the Pyrenees for the Smart Regions Award.

All the referenced initiatives show the richness of methods and tools for applying the Living Lab approach. These were the focus of the MEDCAP programme's CreativeMED project,[19] which developed a creativity-based model of innovation specifically in the framework of regional RIS3 policies. While focusing on the challenges of the Mediterranean regions, the policy framework and insights on implementation issues are potentially relevant across the whole Europe.

HOW TO ACT

Perhaps the most complete compendium of Living Lab initiatives applied to territorial development, with a particular focus on urban challenges, is a guidebook jointly authored by the European Network of Living Labs (ENoLL) and the World Bank. Entitled "Citizen-driven Innovation: a Guidebook for City Mayors and Public Administrators"[20] [23][24], the publication provides a step-by-step guide to adopting the Living Lab approach, supported by the evidence of 15 case stories from both European settings and developing countries. In closing, a Starter Pack presents a synthetic overview of seven of the main technology paradigms, methods, and policy approaches for implementation.

Regions wishing to invest in the Living Lab approach can count on the support of ENoLL, the European Network of Living Labs.[21] Constituted with the Helsinki Manifesto and supported by the European Commission through a sequence of support actions particularly focusing on SMEs, ENoLL counts today over 170 active Living Labs members worldwide (395 historically recognised over 9 years), with several active members in 20 of the 28 EU Member States and 2 of the candidates and it is present in the 5 continents in addition to Europe. Directly as well as through its active members, ENoLL provides co-creation, user engagement, test and experimentation facilities targeting innovation in many different domains such as energy, media, mobility, healthcare, agrifood, etc. As such, ENoLL is well placed to act as a platform for best practice exchange, learning and support, and Living Lab international project development.

FURTHER READING

http://s3platform.jrc.ec.europa.eu/living-labs
ENoLL and Living Lab publications (http://www.openlivinglabs.eu/node/923)
Citizen Driven Innovation guidebook (https://openknowledge.worldbank.org/handle/10986/21984)

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16 http://www.medlivinglab.eu
17 http://www.centralivinglab.eu
18 http://www.cliqproject.eu/en
19 http://www.creativemed.eu/
20 https://openknowledge.worldbank.org/handle/10986/21984 ; http://www.openlivinglabs.eu/news/official-version-citizen-driven-innovation-handbook-out
21 http://www.openlivinglabs.eu.