

6. Living Labs

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Living Labs involve conducting research activities in a real-life environment. They provide interaction spaces where participants collaborate on new technologies, services, products, or systems. Living Labs are becoming a popular way to address societal challenges and have been used in various domains such as urban development, mobility, education, and sustainability. The format Living Labs take is widely interpreted: some are heavily co-creative, whereas others focus on testing research-led approaches or moving innovations beyond laboratories and academia.



LIVING LABS AT-A-GLANCE

- Aim to tackle real-life issues in the context of participants' lives, usually through a co-ownership approach; this can lead to better outcomes.
- Highly variable in format, and may require tailored equipment, as well as scientific, human interaction, and management skills.



Benefits

1. Tackles complex real-life issues, using data from a real application context.
2. May identify unexpected market opportunities and ways to tailor products/services to specific needs.
3. Can promote sustainable practices and technologies by involving final users in innovation creation and testing processes.
4. Versatile tool to empower communities, help refine new policies and support evidence-based decision-making whilst providing a learning environment for diverse stakeholders.



Challenges and limitations

1. **Resource intensive** to ensure full consideration of factors within the real-life environment context, and the technologies or solutions being tested may of course fail.
2. **Limitations in generalising** the findings from one (localised) Lab.
3. **Possible selection bias** towards certain stakeholder groups.
4. **Ethical concerns** related to privacy, data protection and conflicts of interest need to be considered from the outset.

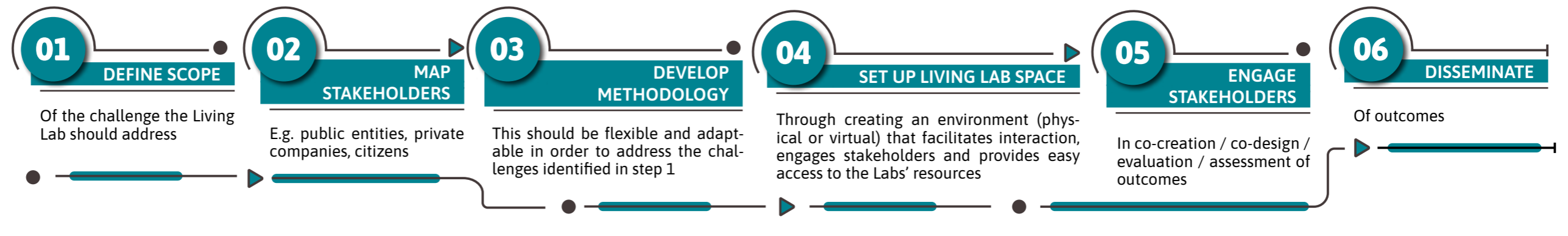


Participants

Living Labs are very widely interpreted and thus have been used to target a wide range of stakeholder groups, depending on their specific purpose. These can be researchers, policymakers, public organisations, businesses, end-users, communities, and others who are encouraged to collaborate on a problem, establish a common ground and gain benefits. The number of stakeholder groups and total participants can, similarly, vary significantly.

STEPS

Whilst there are many approaches for the implementation of a Living Lab, general steps include:



Timeframe: Highly variable, from short-term user testing of a specific new technology to ongoing Labs with no set end date



OUTCOMES AND IMPACT

One way to categorise the outcome of a Living Lab is by the innovation driver: **Utiliser-driven** generates new knowledge for a product and/or business development (e.g. sustainable transportation solutions designed via user preferences and behaviour); **Enabler-driven** results in a shift to a preferred direction in a strategy (e.g. sustainable urban planning that promote sustainable living environments); **Provider-driven** creates new knowledge to support the development of operations within a living lab (e.g. development of new protocols to better engage stakeholders); **User-driven** develops solutions to users' everyday-life problems (e.g. testing and validation of new energy-efficient technologies). Living Labs can aim to have an impact on individuals, local communities, national governments, international policies and beyond, depending on a specific purpose.



RESOURCES NEEDED

Equipment needed depends on the purpose of the Living Lab, and can range from 'low-tech' flipcharts through to simulation software to smart home devices. Organisational skills, scientific skills (data collection, processing, analysis), facilitation skills, communication skills, human interaction and management, and project management are also required. Finally, access to the networks of stakeholders relevant to the Living Lab topic either needs to be in place, or be developed at the start.

LEARN MORE

- European Network of Living Labs - An umbrella organisation for living labs around the world
- Hossain, M., Leminen, S. and Westerlund, M., 2019. *A systematic review of living lab literature*. *Journal of Cleaner Production* 213, pp.976-988
- Schäpke, N., Bergmann, M., Stelzer, F., Lang, D., J. 2018. *Labs in the Real World*. *GAIA - Ecological Perspectives for Science and Society*, 27(1), pp. 8-11

REAL LIFE EXAMPLE: WRI

The World Resources Institute (WRI) [Living Lab for Equitable Climate Action](#) is supporting justice-centred behavioural policies and practices, and quantifying population-level behaviour change impacts in transport, energy, and food choices in Mexico, India and the US.