# **Editorial: Living Labs**

# Seppo Leminen & Dimitri Schuurman

#### From the Guest Editors

A special issue on the theme of Living Labs in the Technology Innovation Management Review was selected and developed from papers presented at the DLDD and the XXXII ISPIM Innovation Conference, both held virtually in 2021. "DLDD stands" for Digital Living Lab Days 2021, which is organized by the European Network of Living Labs. ISPIM - the International Society for Professional Innovation Management - is a network of researchers, industrialists, consultants, and public bodies who share an interest in innovation management for which the innovation conference is their main annual event.

We understand "living labs" as physical regions or realities where stakeholders public—private—people partnerships (4Ps) of firms, public agencies, universities, institutes, and users meet, where stakeholders in collaboration create, prototype, validate, and test new technologies, services, products, and systems in real-life contexts (Westerlund & Leminen, 2011). There are growing interests and needs from extant research to further understand and conceptualize what living labs include, but not limited to, typologies (Leminen et al. 2012), research avenues (Leminen & Westerlund, 2016), bibliometric research (Greve et al., 2020; Greve, Vita, Leminen, & Westerlund, 2021), topic modelling (Westerlund et al., 2018), systematic research (Ballon et al., 2018; Hossain et al., 2019; Dekker et al., 2020), and impact (Schuurman et al., 2016; Ballon et al., 2018). Moreover, a lot of other collaborative innovation types and labs that operate in parallel with living labs have emerged such as Fab Labs, makerspaces, innovation labs, innovation spaces, and policy labs, etc. (Schuurman & Tõnurist, 2017; Leminen et al., 2021). Further, there are also a plurality of themes and topics (Nyström et al.; 2014; Leminen et al., 2020), as well as industrial sectors, as well as their theoretical and managerial underpinnings (Schuurman, 2015; Leminen & Westerlund, 2019; Greve et al., 2020; Greve et al., 2021).

This special issue on living labs projects shows a range of diverse perspectives, including categorization of user involvement methods, key components, scenarios for living labs, learning outcomes, objectives, outcomes, public sector innovation, urban living labs, and user involvement. It not only further positions living labs as one of the main innovation approaches in the context of

wicked problems and new technological opportunities, but also reveals various methods and techniques applied in living labs.

The first article by De Vita and De Vita analyses 14 project in JOSEPHS® LL, which is located in Nuremberg (Germany) to reveal eight categories of outcomes on the project level in living labs . The study contributes manyfold to the living lab literature. Among them, the study proposes This qualitative study reveals findings that add to our understanding of the potential objectives, outcomes, and involvement of stakeholders in living labs.

The next paper by De Witte et al. analyses four cases of Living & Care Lab (LiCalab), located in Flanders, Belgium. The study focuses on human factors in living lab research. The authors contribute to the living lab literature by arguing to incorporate this method within healthcare and other living labs for generating safer and more responsible products and services.

In the third article, van den Heuvel et al. present a literature review by focusing on how to understand learning environments and living labs. To put it differently, the study provides a scoping review of higher education in the context of living labs. Their results encourage involving higher education for analyzing learning activities in living lab contexts to improve learning outcomes.

The fourth article by Hansen et al. analyses 21 in-depth European case studies in nine EU-countries, and also reviews living labs for public sector innovation. The authors propose several contributions to the literature on living labs by discovering three main patterns and scenarios for living lab actors and their organization.

Habibipour et al. in the fifth article focus on empirical data from a single project, "DigiBy" in Sweden's Norrbotten Region. The study focuses its attention on rural living labs, as a counterpart to the dominant urban living lab activities. The paper contributes manyfold to the living lab literature. For example, the study results in five key components that steer the design of digital transformation pilots for emerging rural areas and their stakeholders.

The sixth article by Blezer and Abujidi focuses on three

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cases under the criteria of urban living labs and deals with them by means of a comparative case study with three cases in one city. The study offers multiple contributions for living lab researchers as it sheds more light on the relationship between financing, stakeholder roles, and actual project outcomes.

The final article by Hong Huang and Thomas conducts a bibliometric literature review of user involvement methods during innovation processes in living labs. This conceptual paper analyses and contributes to the living lab literature by discovering eight categories of user involvement methods, which support further theory-building, as well as practitioners looking for practical guidelines.

The selected articles offer and draw a cross-section of living lab research relevant for researchers and managers. We warmly acknowledge the multiple contributions of the selected articles for the living lab field in this special issue, while also further encouraging scholars around the world to enrich the extant research traditions of living labs to tackle innovation challenges that are visible in real-life environments and with multiple stakeholders.

This year we celebrate the 10-year anniversary of the Special Interest Group (SIG) on living labs within the International Society for Professional Innovation Management (ISPIM). This group has fostered yearly contributions to the innovation conferences, including invited speaker sessions, dedicated sessions with paper and practitioner presentations, development sessions, and workshops. We invite researchers to submit their living labs papers for the next ISPIM Innovation Conference on "Innovating in a Digital World" to be held in Copenhagen, Denmark from June 5th-8th, 2022 and to join us in celebrating the 10-year milestone of the SIG, as well as the 15-year anniversary of the European Network of Living Labs (EnoLL).

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