



EDITORIAL INTRODUCTION

SPECIAL ISSUE ON LIVING LABS

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With this special issue eJOV builds on its tradition to serve as a forum for the discussion of novel developments and emerging concepts in network research. In order to facilitate debate and knowledge creation in an early stage of the life-cycle of a topic, the journal accepts peer reviewed publications to be built the foundations of a scholarly body of knowledge. This issue notably explores the relation between networks and innovation, which currently draws increased attention, not only from scholars but equally from practitioners.

“Living Labs” is a term that has been adopted in the European Research Area and is implemented into its funding mechanisms, the framework programs. Since their conception in the 1980ies, these European strategic innovation programs (in the beginning known by their abbreviation ESPRIT) have brought together networks of academic research, industry and public administrations in collaborative research programs. For network research, these have for a long time been a source of empirical data (e.g. Ghoshal and Bartlett, 1990, Sydow, 1992). The term Living Lab has been introduced to the public discussion by the Finnish prime minister during his term as EU president in 2006. His aim was to launch a new innovation instrument in reply to the apparent innovation performance lack of Europe, the so called Lisbon agenda, for turning advanced levels of research into measurable economic growth. With the creation of the network of European Living Labs, this instrument was given a political body and institutional frame initially with nineteen Living Lab members across Europe, which the Portuguese and Slovenian EU presidencies extended to 51 regions. The French EU presidency will further extend the network inside Europe and internationally in the second semester of 2008.

On a project level of analysis Living Labs build on a longer history of stepwise complementing basic research projects with innovation activities in Europe. In the early beginning, European research projects were asked to validate their scientific results and to develop prototypes of products, which then could be communicated to a general public audience through dedicated dissemination work packages. Then so-called concentration meetings, networking between projects in similar domains were introduced. Until the 1990ies, research projects in fact were contractually obliged to clearly stay in the pre-competitive arena because of public concerns on interference with market competition. This changed with the internet hype when first exploitation plans on individual and consortium level were made compulsory deliverables of each project in order to anticipate the use of results after project completion. With the latest program, projects are evaluated on their “impact creation” during the life-span of the project for which they should integrate basic research and concurrent innovation activities.

Performance expectations for projects thus have changed and now are largely in conflict with the organizational reality of the integrated projects and their deeply rooted linear project management approaches and innovation models that progress from basic research to technical development and further to product development and commercialization. There is need for change, which is structurally enforced. For example the fact that recently funding for research has generally been limited to 75% of the actually incurred project cost means for research institutes and universities that the remaining 25% have to be raised as complementary revenues from other partners in the innovation network. For project managers, therefore, the Living Lab initiative follows a practical need in the search of project management approaches and organizational infrastructures that deliver according to the expectations.

To approach Living Labs conceptually, it seems worthwhile to link the discussion to networked innovation in several relevant academic domains. In their current shape, Living Labs share the regional dimension of the economic perspective on innovation in clusters or innovative milieus. Especially for technology transfer Living Labs can play a role in the coordination of different players in the innovation systems, which points to an operational and organizational role of Living Labs.

With the open innovation (Chesbrough, 2003) trend of management research, Living Labs share the belief that inter-organizational collaboration becomes increasing relevant for innovation for various reasons. From a corporate point of view the cost of control for own research and development and the necessary competencies inside the firm has become excessively high. Moreover, time-based competition on a global scale requires extended external collaboration in target markets.

The organizational dimension of collaboration is an aspect that Living Labs share with network research. More specifically, the Living Labs inspire a number of concrete R&D management questions, for example to understand R&D processes and projects in networked settings, and what managerial, organizational and technological infrastructures are needed to

support them. Industrial engineering has developed operational methods and tools for the broadening scope of concurrency of activities and in extended, networked settings.

The phenomenon of Living Labs emerges alongside the current trend of research, development and innovation increasingly moving outside the traditional boundaries of the firm. This calls for a clearer assignment of responsibility in the no-man's-land of innovation. The multiple backgrounds from which the vacuum on innovation in networks is being filled bring about a large heterogeneity of established scholarly knowledge and research methods in the field, which is a challenge to establishing quality criteria for research.

Beyond trans-disciplinary academic heterogeneity, the term Living Lab obviously furthers a blend of the scholarly laboratory research with engagement in real live settings. While the laboratory is a controlled environment, the Living Lab is not. Still it is meant as an environment for experimenting and – close to action research – engaging the research in the process. Given the broad scope of some Living Labs, they pose quite unique challenges in terms of requiring the cooperation of multi-disciplinary research teams. Currently, academia is not well prepared institutionally or methodologically to deal with the resulting challenges. E.g., engaging with reality (van de Ven, 2007) requires special methodological techniques, which are not always easily aligned with the prevailing positivist set of scholarly research instruments. The discussion on Living Labs therefore comes back on the tension between the goal of rigorous scholarly basic research on the one side and the relevance or practical usefulness of applied research and development on the other side. Again, this has a practical dimension. With the increasing commercialization of the university system, the pressure on universities and ultimately scholars increases to bring in third party funding while dealing with the career pressure on producing publication. Stokes (1997) questions that the two objectives of research are opposite ends of a continuum and refers to Louis Pasteur as an example of what he calls “use-inspired basic research” that simultaneously serves practical purposes and creates fundamental insights. His argument is that the use context has value in the creation of new theories and not only in their empirical testing. Rather than simply claiming that “either-or” could be turned into “and-and”, his point is that dedicated methods need be developed to exploit the theoretical content of the context.

Many of the Living Labs address innovations in the telecom, information, media, or entertainment industry (TIME), which is particularly prone to the shift from a product based industry to a service based industry. In particular this brings with it a different interaction with the user, not only for the use of the new services, but as well for their conception. As with the development of the open source model of software development by the professional users of the produced code, this industry could provide a model for other domains as well. But, while open source software development is user-driven, like the development of surf boards and mountain bikes (van Hippel, 2005) in that they are undertaken by a small number of highly engaged users, the discussion on Living Labs touches on the limits on engaging a larger number of less engaged users in the innovation process. The term user centricity is sometimes employed to stress lesser levels of user engagement. Information system

research has established a knowledge base on the interrelations between information technology, its users, and developers, which is helpful to explain information technology related innovation of individual behaviour, processes and organizations.

At the crossroads of the current debates, this special issue offers an initial set of six papers, with which we aim at providing a first compendium on scholarly thinking about Living Labs. The papers are exploring some conceptual and methodological facets of developments around Living Labs and show three concrete cases of Living Labs.

Asbjørn Følstad reviews in his paper *“Living Labs for Innovation and Development of Information and Communication Technology”* the early references to the term Living Lab in the literature. The role of this paper in this special issue is to provide the start of a repository or archive on Living Labs – and the proposition of future research direction for the domain. He points to the dual roots of the discussion on Living Labs: on the one side the pragmatic origins of Living Labs in mostly regional innovation activities, and on the other side the ongoing conceptual work in the innovation management field.

Esteve Almirall and Jonathan Wareham, *“Living Labs and Open Innovation: Roles and Applicability”*, explores the conceptual relation between Living Labs and open innovation, which he observes both on the user demand side of innovation as well as on the innovation’s supply side through cooperation for research, development and joint test beds.

Peter Gall and Janice Burn, in their paper *“Creating and Testing a New Operational Sustainability Instrument”*, build on the pragmatic background of Living Labs and contribute an industrial engineering view on designing and operating collaboration environments and ecosystems which are the organizational foundations for Living Labs.

The other three papers report on concrete Living Lab cases: Asbjørn Følstad, *“Towards a Living Lab for Development of Online Community Service”*, presents the case of a Living Lab for innovation and development of services for online communities through user involvement in Norway. Ingrid Mulders, Walter Bohle, Shela Boshomane, Chris Morris, Hugo Tempelman, and Daan Velthausz, *“Real-World Innovation in Rural South Africa”*, present a concrete case of rural development in Africa, which sheds light on two conceptual elements of Living Labs, the understanding of the use context and user involvement in services innovation in a developing country. And last not least, Arthur Tatnall and Salim Al-Hajri, *“Technological Innovation and the Adoption of Internet Banking in Oman”*, report the case of user involvement in process innovation in the banking sector of Oman, where users are not consumers but knowledge workers in an organizational context.

As in the past, eJOV will make use of its online publication technology to accept further publications in the domain of this special issue in order to build and maintain an archive and baseline of the knowledge on Living Labs.

REFERENCES

- Chesbrough, H.W. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston MA: Harvard Business School Publishing.
- Ghoshal, S. & Bartlett, C. A. (1990). "The Multinational Corporation as an Interorganizational Network," 1990. *The Academy of Management Review*, 15 (4), 603-625.
- van Hippel, E. (2005). *Democratizing Innovation*. Cambridge MA: The MIT Press.
- D. E. Stokes, D. E. (1997). *Pasteur's Quadrant - Basic Science and Technological Innovation*. Washington D.C.: Brookings Institution Press.
- Sydow, J. (1992). *Strategische Netzwerke - Evolution und Organisation*. Wiesbaden: Gabler.
- van de Ven, A. (2007). *Engaged Scholarship*. Oxford: Oxford University Press.