

# **Towards the quadruple helix model of innovation: An empirical study of living labs in Catalonia region**

Huong Nguyen

Department of Business, Universitat Autònoma de Barcelona, Barcelona, Spain.

[HuongThu.Nguyen@uab.cat](mailto:HuongThu.Nguyen@uab.cat)

## **ABSTRACT**

Since the emergence of the concept early 2000s, living lab has inspired the creation of diverse innovation environments in Europe. However, after 2011, there is a decreasing number of new living labs participating in the European Network of Living Labs (ENoLL), while among existing members, at least 40% turns into inactive status due to ‘lack of funding and/or interest of the participating actors’. This paper aims to increase the rate of living lab survival and success by identifying the reasons why living labs have been established, who joins them and how to engage such stakeholders for innovation purposes using the quadruple helix model (governments, academia, industry and users). With a qualitative research design, the paper presents a multiple case studies of six living labs in Catalonia region. Catalonia is the second most populated autonomous region in Spain and home of one third Spanish living labs which are currently adherent and effective members of ENoLL. Primary data of semi-structured interviews with leaders/coordinators of living labs is the main basis for analysis. The findings show that living labs in Catalonia region are more public sector and citizens oriented, initiated by public sector, academia or remarkably, citizens. While governments, research centres and users are present actively in all studied organisations, the participation of universities and companies is not consistent. These findings are discussed for future collaborations and to inform further evidence-based policy.

## **KEYWORDS**

Quadruple helix, innovation, living lab, Catalonia region