## IAF BUSINESSES AND INNOVATION SYMPOSIUM (E6)

Innovation: The Academics' Perspectives (3)

Author: Dr. Katlyn Turner Massachusetts Institute of Technology (MIT), United States

Ms. Kristi Acuff
Massachusetts Institute of Technology (MIT), United States
Prof. Sebastian Pfotenhauer
Technische Universität München, Germany
Prof. Danielle Wood
Massachusetts Institute of Technology (MIT), United States

## ANALYSIS OF THE GREATER BOSTON INNOVATION ECOSYSTEM THROUGH THE LENS OF CO-CREATION: URBAN ENERGY, ROBOTICS, AND THE SPACE SECTOR

## Abstract

This project examines geographically and culturally embedded innovation ecosystems through the lenses of co-creation. Utilizing case studies of specific technology sectors and a qualitative analysis, we aim to understand how co-creation facilities in Greater Boston are innovating, how they define success for themselves, to what extent are they meeting their success criterion, and to what extent do principles of inclusivity play a role in their practices. This project is situated in Greater Boston, a metropolitan area that is known for globally cutting-edge innovation in many sectors due to the confluence of major factors in the area-research universities and colleges, supportive local and state governments, and infrastructure-for example. We have examined innovation practices in three technology sectors in Greater Boston: urban energy and sustainability, robotics, and the space sector. Through conducting case studies of individual co-creation facilities and living labs within each of these sectors, we have gained insights into how each of these three technology sectors innovate themselves, with respect to each other, and with respect to the Greater Boston ecosystem as a whole. In order to understand existing innovation practices in these areas, we have employed systems architecture, a systems engineering framework which examines technologies through a sociotechnical lens. Through utilizing a systems architecture framework, we are able to learn about how innovation facilities in the study conceptualize their goals, stakeholders, operations, outcomes, opportunities, constraints, and the environment in which they are a part. This paper will focus on insights gained throughout the overall project, which has been a multi-year endeavor. In particular, we discuss the question of for whom innovation is intended in Greater Boston, and how this central question impacts the ways innovation facilities conceptualize success, failure, inclusion, and other factors. We discuss the differences and similarities of the three technological sectors examined in this project, as well as a narrative of innovation in Greater Boston.