#### **TECHNOLOGY INNOVATION AND ENTREPRENEURSHIP**



# Characterizing technological incubators as "Innovation Reefs": **A Social Innovation Approach**

**David Nunes Resende** University of Aveiro **Carlo Castellanelli** University of Aveiro / Ku Leuven Carlos Eduardo de Andrade Lima da Rocha University of Aveiro / Fiocruz

# Background

"Innovation Reef" is an ecosystem that integrates stakeholders that work collaboratively to transform raw innovation into products, companies, and services with value to the region (Pogue et al, 2016). Stakeholders interact to form relationships of mutual benefit, facilitating technology commercialization and accelerating the transformation of technology innovations into economic result. According to the authors, the Austin Technology Incubator (ATI) provides a model of innovation ecosystems that resemble a coral reef representing unique ecosystems within the broader ocean environment. The coral reef is characterized by a rich relationship with a specific environment containing many organisms that trade in a variety of biological currencies, including shelter, protection, nutrient processing, and cleaning. Although this proposed model intends to include a flow back of the created value of the innovation to the region, we understand that technological incubators can only be characterized as an "Innovation Reef" if they go beyond of pursuing the commercial outputs of the innovation as a main target.

# Methodology

In order to understand how technological incubators can function as innovation reefs, we will apply a qualitative/quantitative approach with data collection through interviews and surveys in technological incubators in Europe, drawing mainly from the concept of Social Innovation. We intend to highlight: the focus on social value creation and community development and not only on commercial gain; the importance of collaborative action and the role of networks; the fact that novel solutions are proposed to satisfy the identified social needs and SI must cross multiple social boundaries to reach more people and different people, more organizations and different organizations, organizations nested across scales (from local to regional to national to global) and linked in social networks.

# Results

This research is in its early stages. Attributes and indicators are being developed by the team, as well as a thorough search is being made to select incubators / regions that will be targeted in the study. The main expected output of this research is to contribute to identify best practices in technological incubators and to define the needed attributes to characterize incubators as strong and collaborative social organisms (Innovation Reefs), creating a model on how technological incubators should be targeting important societal challenges with intense participatory and democratic processes in all stages.

### Conclusions

At the IC2 Institute at the University of Texas, Innovation reefs have been explored using the Austin Technology Incubator (ATI) as a model. We want to go beyond the initial model / research highlighting that the new societal paradigm must be applied to the technological incubators, since the concept of inclusion is not only about poverty reduction, but also about reducing inequalities, and also not only about sharing the benefits of development, but also about participating in shaping the process of development. This paradigm also implies unorthodox ways of thinking, a great deal of innovation policy design and collaborative decision-making, and improving the understanding of how innovation and innovation policies impact different groups and vice-versa.

