

# Understanding Bio Health Technologies Entrepreneurial Ecosystems: An Intellectual Capital Approach

João Leitão, UBI, NECE, CEG-IST, PT  
 Dina Pereira, UBI, CEG-IST, NECE, PT  
 Ângela Gonçalves, UBI, PT  
 María del Mar Fuentes, UGranada, SP

## Background

### Aim of the study

Identify the role played by intellectual capital in fostering the sustainable success of the entrepreneurial ecosystem: understand how the incubator/accelerator and their stakeholders can influence the ecosystem's performance.

### Entrepreneurial Ecosystems

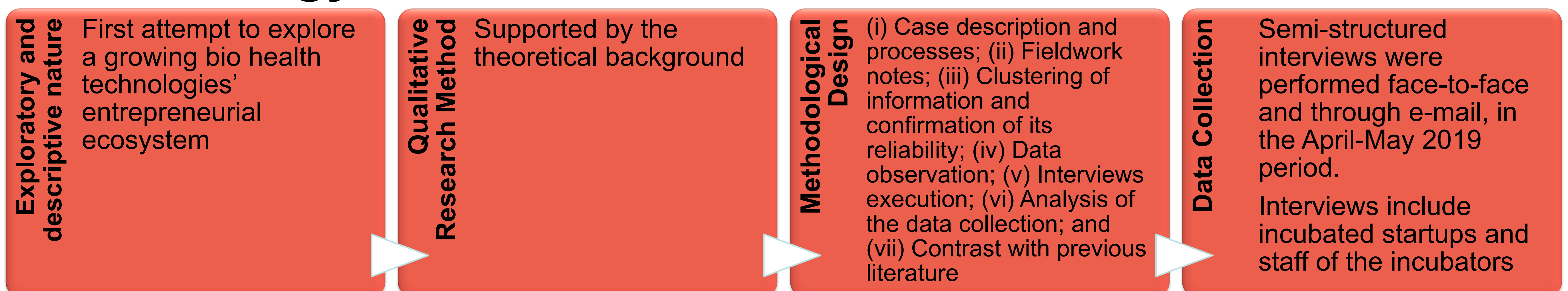
Group of interacting actors, firms and institutions that interdepend on each other. This implies a shared location provided by science parks, incubators, offering opportunities for knowledge transfer between incubates (Berger & Norman, 2008); shared culture, institutions and networks within a region (Stam & Spiegel, 2008).

### Intellectual Capital

Valuable knowledge to an organization (Campanella *et al.*, 2014) critical to new ventures success (Peña, 2002; Hormiga & Batista-Canino, 2010), embracing 3 capital dimensions: structural; relational; and human capital; which are part of the set of intangible assets of an organization (Pedro *et al.*, 2018).



## Methodology



## Results

IC's dimensions	Incubation staff' perspectives on most important IC's dimensions for performance	Incubated companies' perspectives on most important IC's dimensions for performance
<b>Structural capital</b>	<ul style="list-style-type: none"> <li>Pricing policy</li> <li>FabLab and specialized labs</li> <li>Physical infrastructures for networking and meeting</li> <li>Incubation services (fundraising, grants writing, lab services, business planning, internationalization, IP, liaisons with university/external stakeholders - investors, banks, local power, companies, co-creation support, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Incubation services (fundraising, grants writing, lab services, business planning, accounting, internationalization, IP, liaison with university/external stakeholders - investors, banks, local power, companies, co-creation support)</li> <li>Physical conditions (labs, meeting and networking space, communications)</li> <li>Dynamic and proactive staff</li> </ul>
<b>Relational capital</b>	<ul style="list-style-type: none"> <li>Network of partners</li> <li>Connection with local/regional powers</li> <li>Connection with the university</li> <li>R&amp;D joint projects</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of interactions and entrepreneurial environment</li> <li>Networking activities</li> <li>Synergies with customers/investors/academia through projects and contracts</li> <li>Promotional events of startups in fairs/congresses/meetings with external firms</li> <li>Organization of missions, workshops and training</li> </ul>
<b>Human capital</b>	<ul style="list-style-type: none"> <li>Proactiveness and dynamism of the incubator's team</li> <li>Qualification of the incubator's human resources</li> </ul>	<ul style="list-style-type: none"> <li>Dynamic staff (e.g. human resources from the incubator team and companies) with adequate expertise</li> <li>Importance of prior experience acquired by staff of the incubate companies</li> <li>Importance of prior entrepreneurial experience of the incubator staff</li> </ul>

## Conclusions

- × **IC's dimensions** considered as more **crucial for the success** of the bio health technologies entrepreneurial ecosystems are: **structural capital**; and **relational capital**.
- × **Physical structures, level of professionalism**, as well as the **personal connections** of the management team, and supporting services tend to be highly valued in terms of **structural capital**.
- × **Access to networks** involving potential clients and also potential partners in R&D projects, as well as **co-creation schemes**, are of utmost importance for the **relational capital**.
- × **Human capital** is perceived as a basic prerequisite for fostering the entrepreneurial ecosystem's performance.
- × **Working conditions, wellness, nontoxic relationships, cooperation** and **motivation** are highly valued for fostering an innovative and entrepreneurial environment, in collective terms.