

New Metropolitan Perspectives

NMP2018

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How knowledge, innovation and place work together to design Entrepreneurial Discovery Process: insights from Maps-Led project

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Smart Specialisation Strategies and the urban dimension of innovation

- After almost 4 years since Smart Specialisation Strategies (S3) the increasing importance of the cities in following and supporting the wave of innovation grounded on the Knowledge-based economy is contributing to underline the ***evolution path that S3 has taken***, especially with respect to cluster policies and cluster organizations
- The crucial element for making S3 implementation tailored to the context relates the activation of the Entrepreneurial Discovery Process (EDP), which is triggered by entrepreneurial knowledge, the main ingredient of a process of smart specialisation.
- However, EDP activation process resulted problematic and different among EU regions, due to several risk factors such as the lack of preconditions or innovation, especially in lagging regions.
- The process of investigation on THE linkages between space/place and innovation was conducted in seeking cognitive elements converged in the identification of a new concept of the urban dimension in the context of S3 in emphasizing the role of the Entrepreneurial Discovery Process (EDP).

The contribution took the perspective that the spaces in which innovation concentrates at urban level - namely innovation spaces- appear as catalysts for knowledge dynamics. They catch innovation and feed transformation processes towards a knowledge-based society through the convergence of entrepreneurial knowledge

Innovation Spaces as knowledge convergence hotspot in the Knowledge Based Urban Development era.

- Innovation spaces are widespread In many EU and US cities, where knowledge dynamics are spurring the interaction among actors involved in the production and use of innovation supported by public policies (local economic development strategies, urban policies, and planning tools)
- At the urban level, such dynamics are feeding the so-called Knowledge based urban developmetn phase, reshaping cities through a re-interpretation of the relationship between innovation and space.
- Knowledge-Based Urban development (KUBD), is “***a new strategic development approach that involves management of value dynamics, capital systems, urban governance, development and planning***” is commonly associated with the urban environments.
- This phase is taking the shape of ***innovation district***, which supply the ***growing demand of spaces*** for research, development and networking activities coming from the local entrepreneurial community, which plays a relevant role in innovation processes oriented both at the production or the use of innovation.
- In such spaces, the complex and dynamic ***community of innovators cluster, interact and connect with private and public actors***
- These spaces are “physical manifestations of the current socio-economic and cultural forces” enabling and supporting innovation, and facilitating the creativity and critical thinking (of the participants)
- Wagner and Watch identify eight main typologies of innovation spaces in the US: ***incubators, accelerators, co-working spaces, start-up spaces, innovation centers, maker spaces, research institutes, innovation civic hall.***

- This contribution integrates the information deriving from the spatialization of clusters with an on-line survey provided to users of innovation spaces. The main aim of the survey is to comprehend how innovation spaces are coming to the light as emerging factor of the new demand for innovation-oriented physical transformation. For the purposes of this paper, here are presented the results of the survey distributed to the users of the Cambridge Innovation Center (CIC).
- The on-line survey was developed through the Survey Monkey web-tool and distributed to the **two main target categories: members and visitors** of the CIC
- **The survey included 38 closed questions**, which the authors have grouped into **three main drivers: place, knowledge and innovation**. The first is related to **spatial factor** (localization, proximity, attractiveness). The second is related to the **activities and service** provided by the CIC (network activities, co-working spaces, advice, financial support). The last provides information on the **actors** (company typology, business sectors R&D activities, interaction with other companies) involved in the innovation process.
- The total users reached by the survey are 53, the majority of them (71.7%) are CIC members

MAPS-LED: the CIC case selection

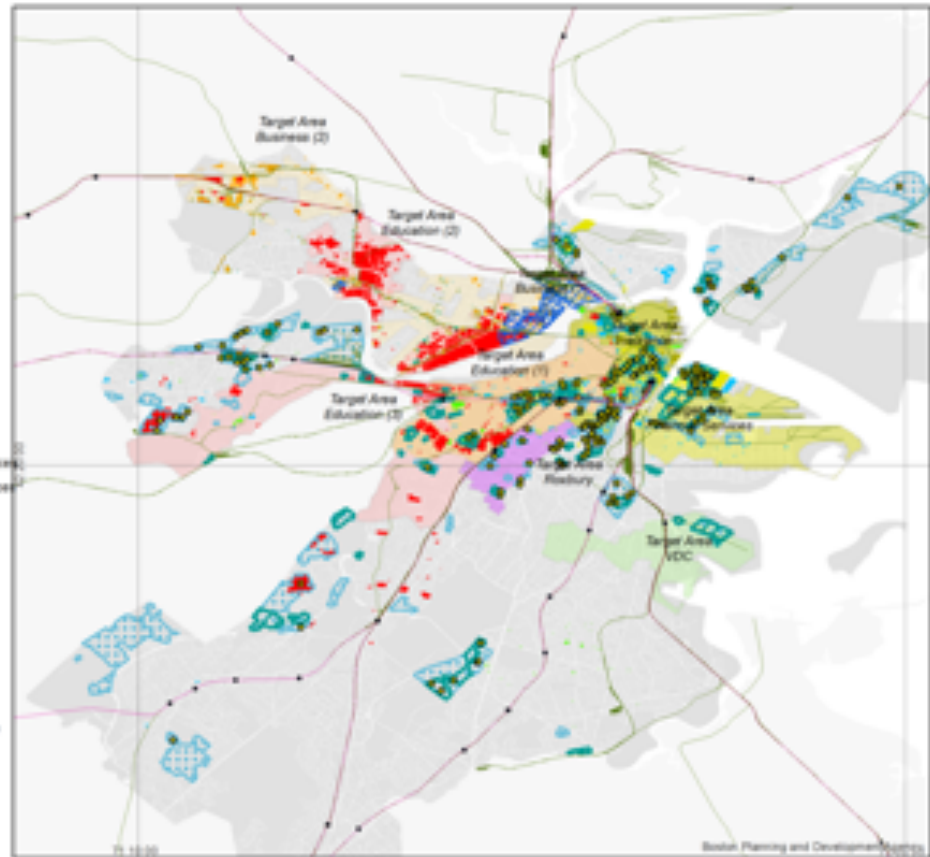


CLUSTER
+
TARGET AREAS
+
INNOVATIVE
ORIENTED
TOOLS
(PUD/PDA)

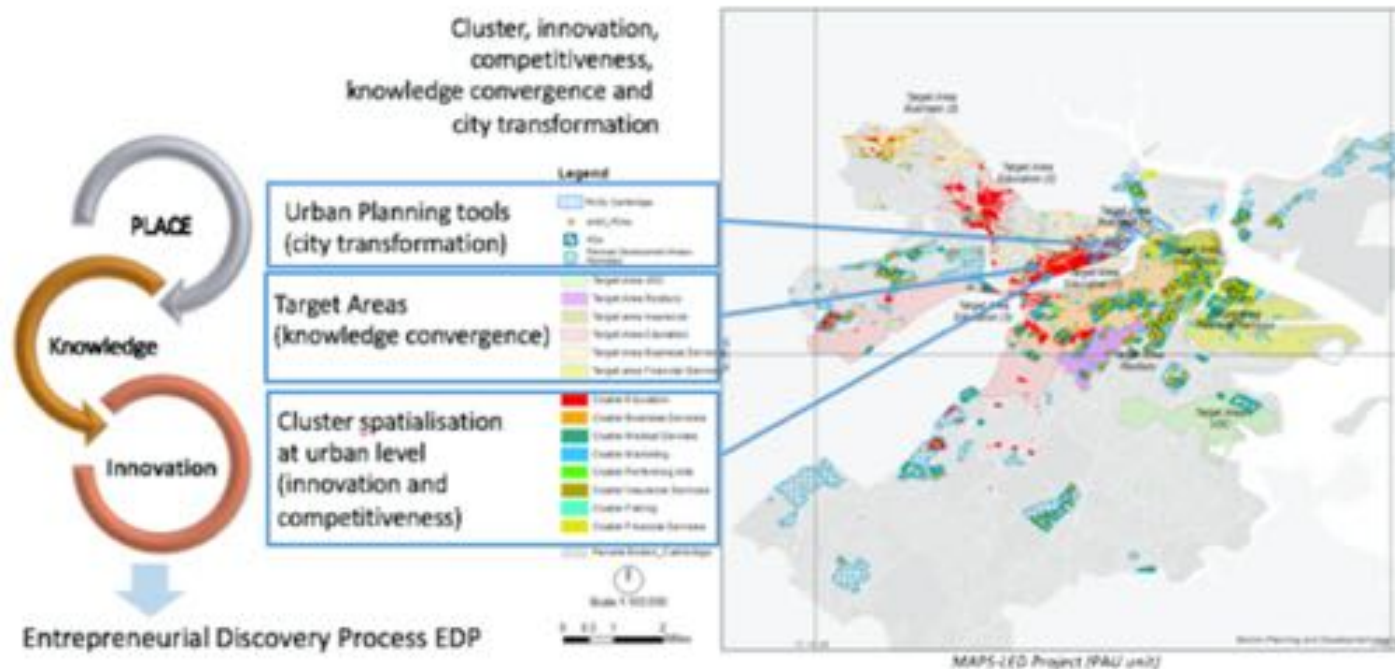
Legend

- Train Stations
- MBTA Commuter Rail
- Rail Lines
- ▨ PUDs Cambridge
- AMB_PDA
- PDA
- ▨ Planned Development Areas - Permitted
- ▨ Target Area VDC
- ▨ Target Area Roxbury
- ▨ Target Area Insurance
- ▨ Target Area Education
- ▨ Target Area Business Services
- ▨ Target Area Financial Services
- ▨ Cluster Education
- ▨ Cluster Business Services
- ▨ Cluster Medical Devices
- ▨ Cluster Marketing
- ▨ Cluster Performing Arts
- ▨ Cluster Insurance Services
- ▨ Cluster Fishing
- ▨ Cluster Financial Services
- ▨ Parcels Boston, Cambridge

Scale 1:100,000
0 0.5 1 2 Miles



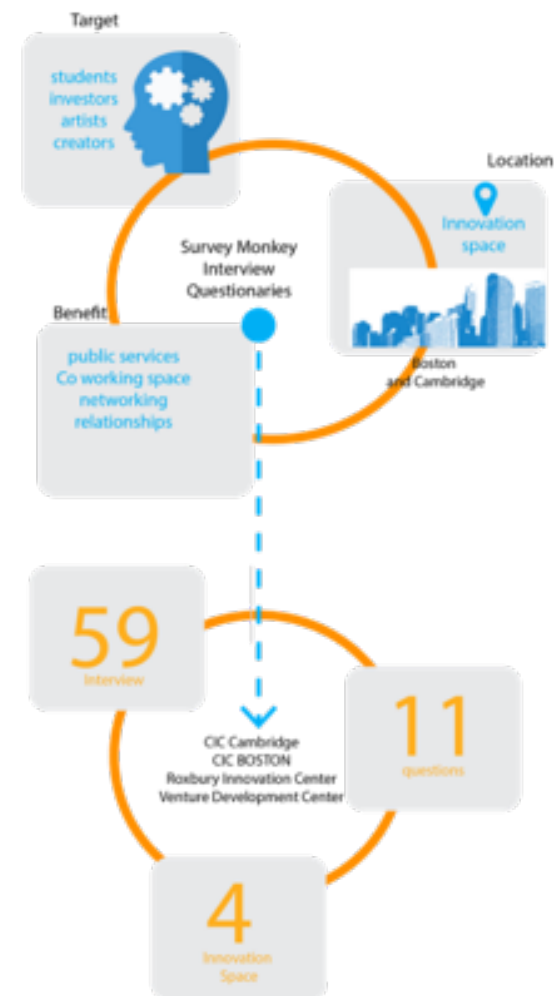
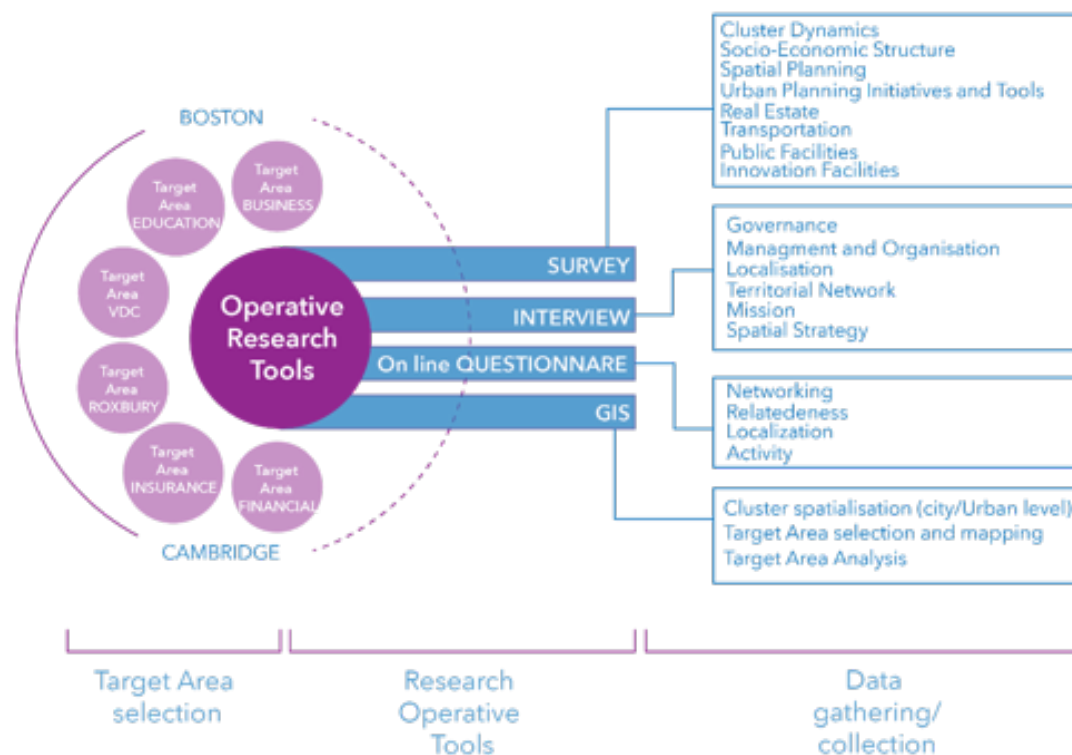
MAPS-LED: the CIC case selection



+
Overlap of Urban
Regeneration
initiatives and cluster
policies oriented
initiatives in the area

→ Cambridge
Kendall Square

→ ***Cambridge
Innovation
Center (CIC)***



- The selection of the CIC as a case study came out *from the spatialization of the Education and Knowledge Creation and the Business Services clusters in Cambridge*, the presence of *cluster-oriented policy initiatives* and the *urban regeneration initiatives in the area*.
- The CIC is a facility located in Cambridge that offers offices and *co-working spaces* for entrepreneurs and start-ups, as well as *education programs, training and networking opportunity* to increase workers' skills and *connect innovators, venture capitalists, mentors, and big companies*.
- The *members* of the CIC are start-ups, entrepreneurs and companies that pay a membership fee to use the office spaces and the services that the center provides, while *visitors* are non-members who join the programs and events hosted in the Innovation Space, such as researchers, investors, entrepreneurs, etc..



*CIC was founded in Cambridge, Massachusetts in **1999 in Kendall Square**, and has since become an established critical mass of thriving **innovative companies**.*

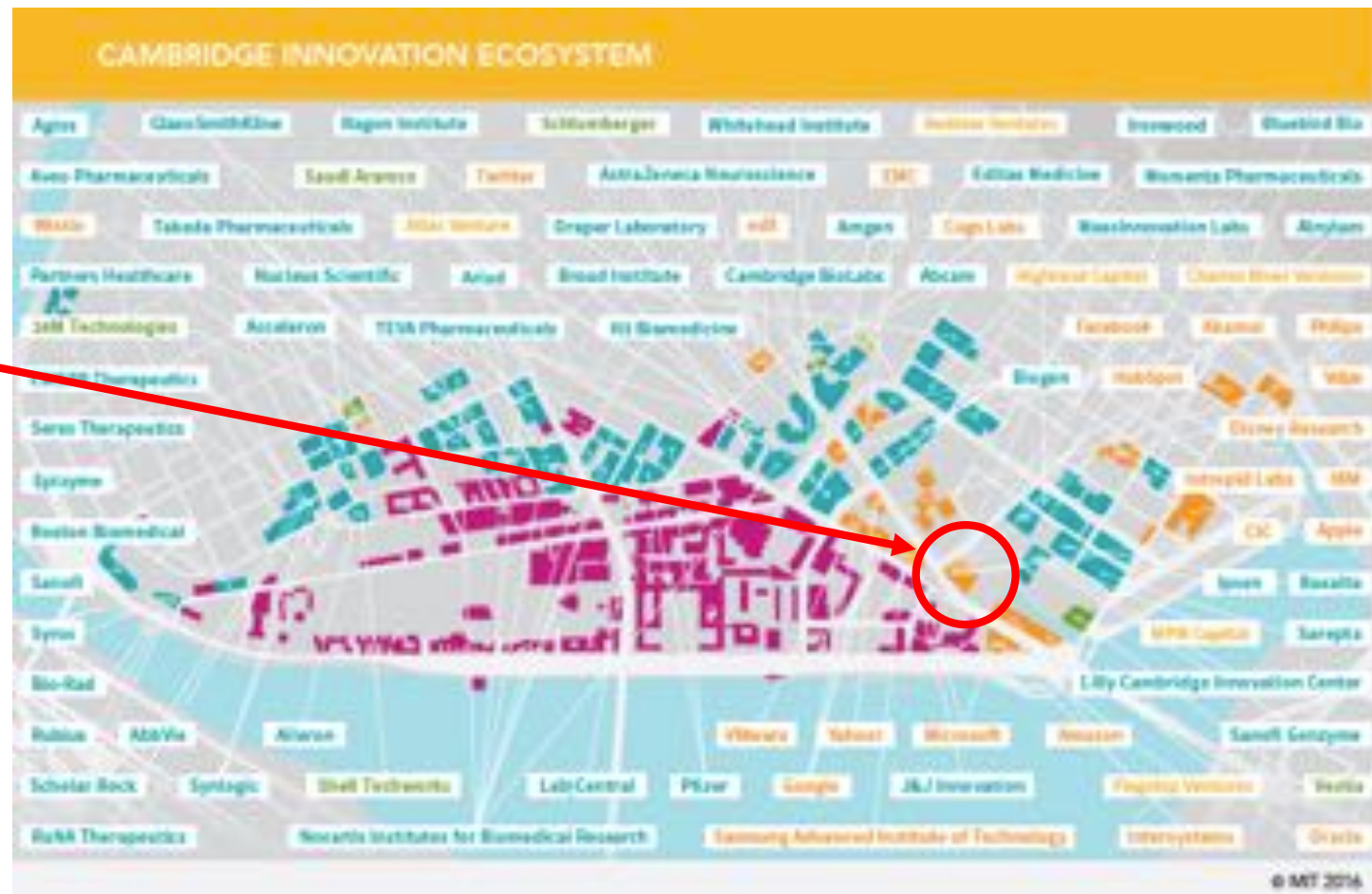
*Dozens of successful companies have grown to prominence while housed at CIC, including **Hubspot, MassChallenge, GreatPoint Energy and Android**.*

*CIC Cambridge's One Broadway location is **home to more than \$7 billion of venture capital**, putting this single CIC location ahead of many nations in terms of total venture capital.*

CIC Cambridge operates in the heart of Kendall Square, a few steps from the red line and easily accessible from Somerville, Arlington, Charlestown, or downtown Boston

The Cambridge Innovation Center

cic



CIC QUICK FACTS

- CIC is home to over **1800 client companies spread out across 5 different locations in Boston, Cambridge, Miami, St. Louis and Rotterdam, NL.**
- CIC was started in 1999 to **support entrepreneurs building fast-growing companies.**
- CIC has been home to **over 3500 companies over the years**, many of whom have started here.
- The average time a company spends at CIC is **between 2 and 3 years.**
- Companies originally headquartered at CIC **have raised \$2.7B in venture capital and strategic investment since 2001** (while at CIC and after moving out).
- Companies originally headquartered at CIC **have created over \$3.9B in publicly disclosed exit value since 2001.**

SOURCE: <https://cic.com/press-kit/>



Cambridge



Rotterdam



Miami



Boston

What happens inside the CIC?

people...

Cluster
interact
connect

generating...

Knowledge
sharing

Knowledge
transfer

INCLUSIVE, FLEXIBLE SPACES

At CIC, you focus on growing your business while we take care of the rest. We provide high-quality, flexible office and coworking spaces, as well as stocked community kitchens, unmetered access to conference rooms, enterprise-grade internet services, printing and copying, phones, high-end furniture, operational and technical support, concierge services, perks and wellness offerings, and much more. Clients have access to hundreds of diverse entrepreneurs, service providers, investors, and mentors, while CIC-supported events draw thousands of innovators from across the global startup community to CIC.



WORKSPACE

Whether you are a single-person company, a growing startup, or an innovative arm of a larger corporation, we will work with you throughout your time at CIC to ensure that your dedicated workspace fits your ever-changing needs. We have space options in a wide array of sizes, which makes moving within CIC easy.



COWORKING

For smaller teams of entrepreneurs looking for fluid, open workspace, our coworking spaces provide an accessible option to tap into CIC's broader networks while working within a vibrant, welcoming community of fellow innovators.



WET LAB SPACE

Currently offered at CIC Miami and CIC St. Louis, our wet and prep chemical and biological laboratory space includes access to core lab equipment, shared office workspace, conference rooms, event spaces, and kitchens. Labs range from 500–2,000 sq. ft. and can accommodate teams of two to ten people or more.

First Driver: Place

Here (see Figure 1), are reported the answers of the members of the CIC about the attractiveness of the Kendal Square area (where the CIC is located) in terms of urban services. The participants rated the presence of public transit services as the most important feature for the attractiveness of Kendall Square, together with the proximity of the Charles River (natural environment) and public facilities (community facilities, parks and open spaces). The second important aspect relates to the proximity of the CIC to anchor institutions such the MIT as well as to public transportation facilities (subway station).

What are the 3 main reasons for which your company decided to locate in the CIC Cambridge? unique environmental factors, proximity to:

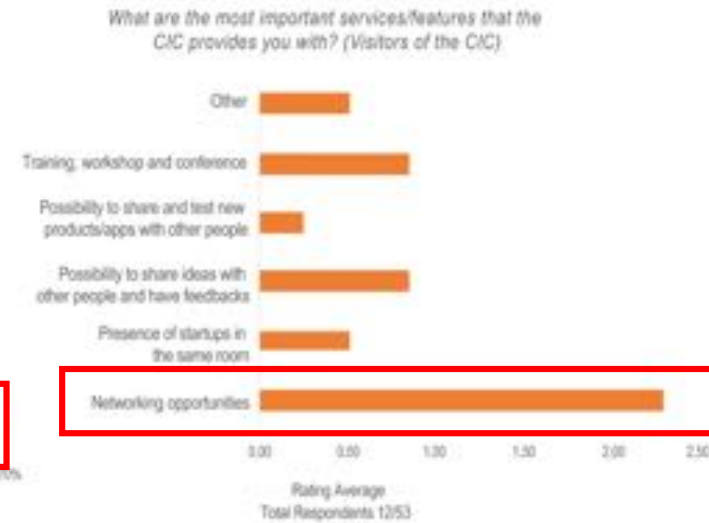
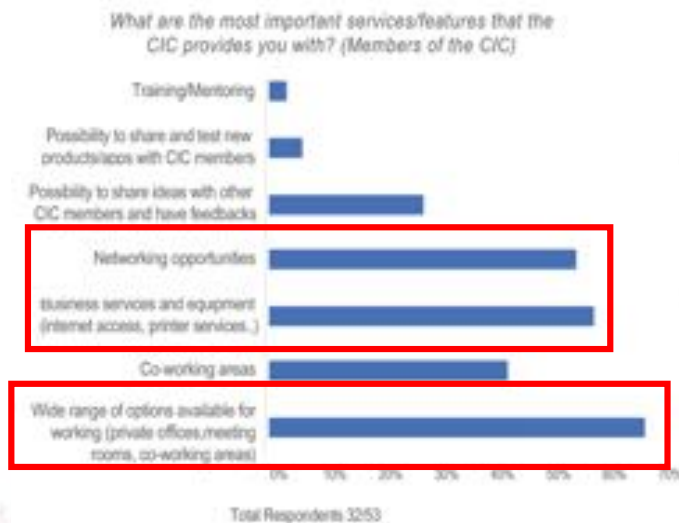


What urban services make Kendall Square area attractive?



Second Driver: Knowledge

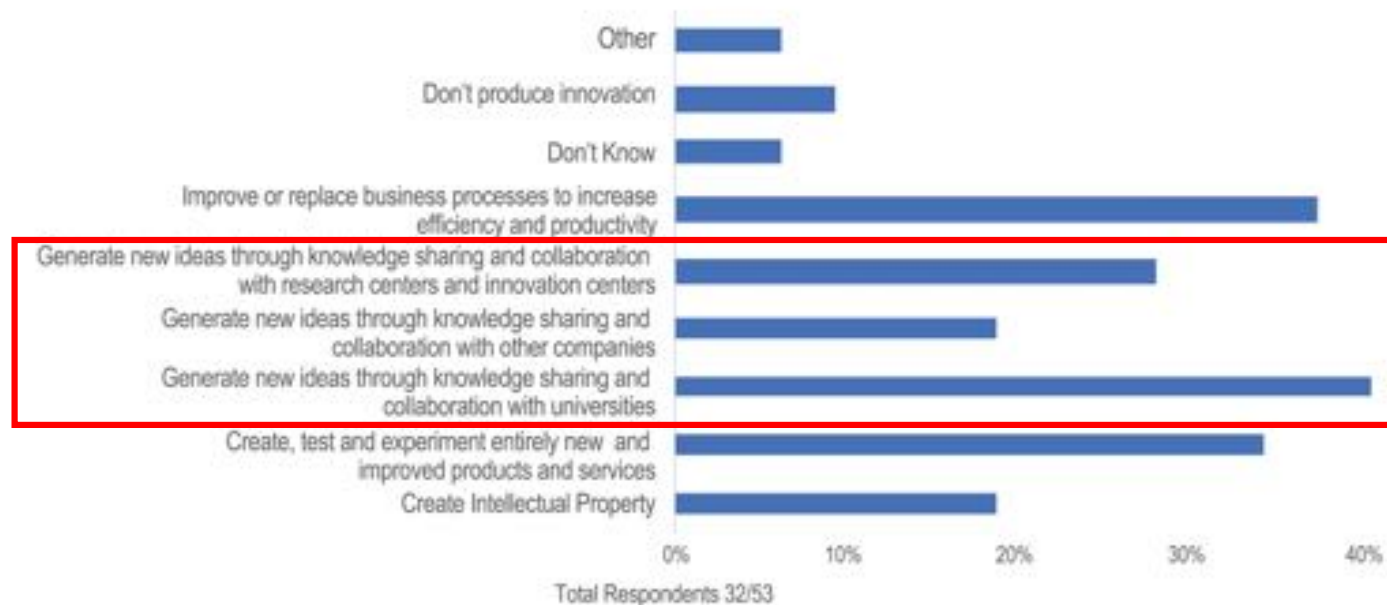
- This group of questions refers to activities taking place at the CIC and the typology of advanced and specialized services that the center provides.
- Both the members and the visitors of the CIC indicated that the networking opportunity that the center offers, and the possibility to share ideas with other people and have feedbacks are some of the most important features of the CIC (see Figure 2).
- The members of the CIC indicated that the wide range of options available for working, and the provision of business services and equipment are other important services that the center provides them, while the visitors highlighted that the training programs, workshops and conference that the CIC hosts are relevant services for the community.
- The members of the CIC highlighted the importance to interact with other companies (40,6%), research centers or innovation space (28,1%) and universities (18,8%) for the generation of new ideas through knowledge sharing and collaboration.



The need for interaction is also highlighted by the way companies intend to have access to the Key Enabling Technologies (KET). The 56,4% of the companies surveyed at the CIC intends to have access to KETs through the empowerment of contacts with universities (25%), public/private research centers and innovation centers (34,4%).

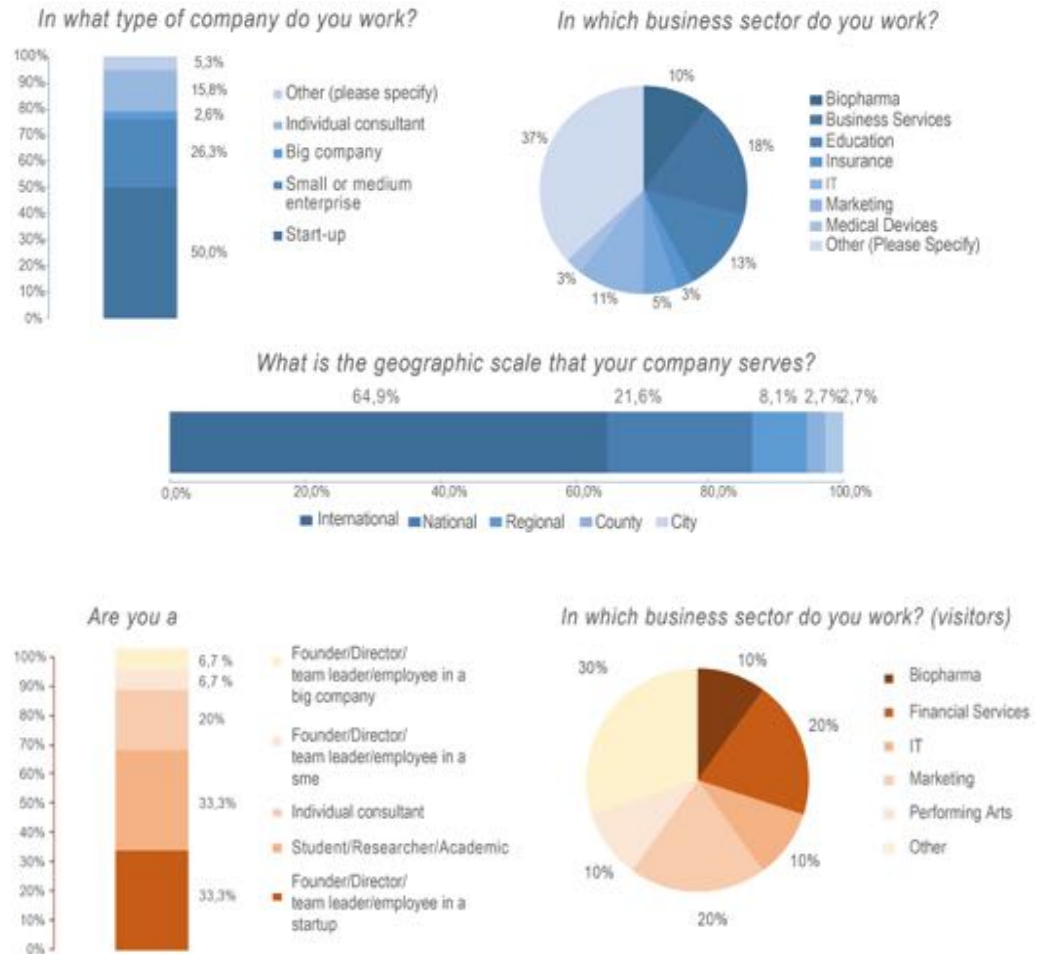
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How does your company intend to be innovative and more competitive?



Third Driver: Innovation

- The third group of questions relates to the “innovation” driver, investigating how innovation spaces contribute to the use/production of innovation.
- The 50% of the companies located in the CIC are start-ups. This confirms the general trend of the area, considered as the densest start-up area in the country.
- The start-ups which decided to locate at the CIC increased constantly in the last ten years, with a peak in 2015 of the 29,7% (The non-members, or visitors, of the innovation space, are mainly people working for a star-up (33%) students/researchers/academics (33%) and individual professional (one-person company, 20%).
- The variety of business at the CIC was rated as one of the most important factors in pushing companies to locate at the CIC. The majority of members (93,5%) interact regularly with at least 1-5 companies (54,8%) and networking events are considered among the most important activities in favoring interaction at the CIC (56%).



- The results of the on-line survey show how innovation spaces are dynamic places where entrepreneurs interact with public, private sectors and communities in generating and spurring innovation.
- In the case of the CIC, the complexity of knowledge dynamics as well the complexity of relationships among actors came out.
- The case of the CIC shows how innovation spaces act as a catalyst for knowledge dynamics, stimulating a new wave of knowledge-based urban development. Such mechanisms can help in triggering entrepreneurial discovery process and expand innovation in deprived areas through public-private partnerships.
- The quantitative approach to spatialize innovation joint with the qualitative approach through interviews led to connect Place, Knowledge and Innovation as main categories of output indicators to set the EDP as evidence-based and horizontal policy.
- In those areas where clusters and innovation spaces occur, urban regeneration mechanisms empower the entrepreneurial convergence in specific places, featuring them as emerging factor in the current demand for innovation-oriented physical transformation.
- The presence of innovation spaces expands the opportunities for the knowledge economy facilitating knowledge sharing and transfer processes, the interaction among local communities, the promotion of more livable areas.

Limitations:

- With respect the huge set of experiences of innovation districts and innovation spaces in US the empirical base of the study should be widened and enlarged also to other stakeholders (public: governments, agencies etc, and private: big companies, universities, research centers etc.) also because the identification of innovation districts varies in terms of physical boundaries, actors involved and their different role and different perspectives
- uniqueness of the case study in terms of context conditions (2 top world leading universities, plus several anchors institutions, big companies, venture capitalist etc.)
- The urban development experienced in Kendall Square is generating gentrification phenomena characterized by housing and office spaces' unaffordability. Respondents have highlighted the following negative aspects: unaffordability of housing, unaffordability of space for businesses, increase of living costs

Future Work

- the links between knowledge, place, creativity embodied within the 'Innovation Districts' phenomenon are increasingly relevant for opening new horizons in shaping virtuous policies for contemporary urban ecosystems starting from innovation spaces as catalyst for innovation and possible engine of inclusiveness in European cities ..
- A more complete and detailed quali-quantitative analysis and comparison of innovation spaces between EU and US could be interesting in order to have the complete picture of this phenomenon and understand what key factors can be useful in the European context to formulate policy recommendations for the post 2020 period.

Thank you

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