

# A place-based approach to innovation ecosystems: why context matters

# **Boston-Cambridge Innovation Districts**(USA)

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#### **OUTLINE OF THE PRESENTATION**

- The context (the MAPS LED H2020 RISE Project)
- The case study: Boston, USA
  - Entrepreneurship and innovation in public governance: MONUM
  - · Supporting entrepreneurship, regenerating places and communities.
    - PPP initiatives: District Hall, Roxbury Innovation Center
    - Private -led initiatives : Cambridge Innovation Center, Masschallenge
    - Public- driven regeneration initiatives : Kendall Square , Seaport District, Dudley Square









## The MAPS – LED project

- Marie Skłodowska-Curie Actions
- Research and Innovation Staff Exchange (RISE) Call: Horizon 2020-MSCA-RISE-2014
- Beneficiaries: Università Mediterranea di Reggio Calabria- DSAT PAU Italy; University of Salford – School of Built Environment SOBE UK; Aalto University AALTO Finland; Università La Sapienza - FOCUS Italy
- Partner Organisations: Northeastern University of Boston (MA); San Diego State University (CA)
- Time frame: 2015 2019





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## MAPS LED aims and objectives

- MAPS LED aims at understanding the **spatial** implications and drivers for a successful implementation of the European Smart Specialisation Strategy.
- This would allow identifying and developing S3 with a higher potential to empower the **local innovation** process.
- Elements gained from the preceding CLUDs project such as tacit knowledge, embedded social networks, and innovative milieu have contribute to the creation of the conceptual framework for MAPSLED.



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## **Smart Specializazion Strategies**

- Smart specialization Strategy (S3) is an innovative policy concept which emphasizes the principle of prioritisation in a *vertical* logic to favour some technologies, fields, population of firms *non neutral*.
- 5 principles:
  - Granularity (the level: not too high)
  - Enterpreneurial discovery (enterpreneurs in the broadest sense discover and produce information about new activities)
  - Priorities will not be supported forever
  - S3 is an inclusive strategy
  - Experimental nature (risk taking needed)



EC (2013) The goals of Smart Specialisation, Joint Research Centre, Dominique Foray and Xabier Goenaga



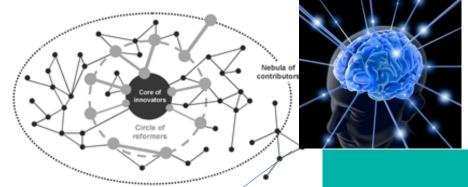
#### **Innovation Districts**

- Our open, innovative economy increasingly craves proximity and extols integration, which allow knowledge to be transferred easily between, within, and across clusters, firms, workers, and supporting institutions.
- The avanguard of these megatrends is largerly found not at the city of metropolitan scale (...) but in smaller enclaves, what are increasingly being called innovation districts.



Katz, B., Bradley, J. (2013) The Metropolitan Revolution: How Cities and Metros Are Fixing Our Broken Politics and Fragile Economy. Washington, D.C.: Brookings Institution



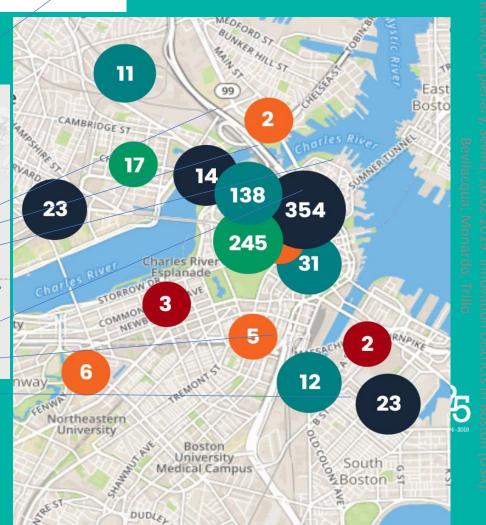


## **Innovation Districts**

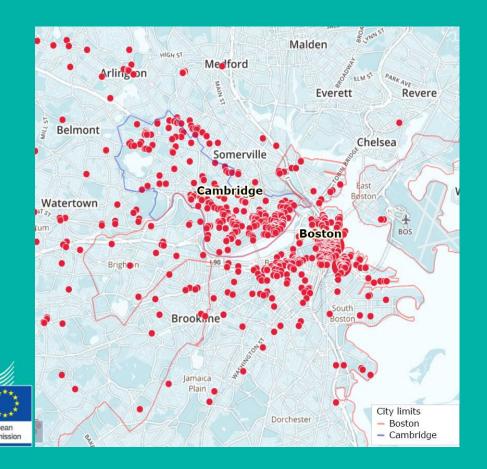








## **Innovation Districts in Boston**







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- Office formed in 2010 as the Mayor's civic research and design team.
- Aimed at exploring and tackling experiments and prototypes that cover a range of topics. This includes everything from the future of mobility to City infrastructure to collective well-being.
- "Do you have an innovative idea to improve the City? <u>Let us know through email</u>, or schedule an in-person brainstorm during an upcoming office hours. We host 30-minute blocks every Tuesday, from 2 - 5 p.m."



MONUM.

<u>https://www.boston.gov/departments/n</u> ew-urban-mechanics

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Some examples (1)

#### HOUSING FOR ALL

- INTERGENERATIONAL HOMESHARE. With the Elderly Commission and Nesterly, we are offering affordable housing to graduate students while helping older adults stay in their homes by pairing them as roommates.
- URBAN HOUSING UNIT.
- HOUSING INNOVATION COMPETITION
- ADDITIONAL DWELLING UNITS



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Some examples (2)

#### FUTURE STREETS + MOBILITY

- BOSTON'S SAFEST DRIVER. Working with the Boston Society of Architects (BSA) and What's In, we In partnership with the Boston Transportation Department (BTD), Cambridge Mobile Telematics, and Arbella Insurance, we launched a smartphone app competition that encouraged safer driving by nudging drivers towards better driving habits.
- PERFORMANCE PARKING
- AUTONOMOUS VEHICLES



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#### Some examples (3)

#### **EDUCATION + YOUTH EMPOWERMENT**

- BOSTON SAVES Working with the Office of Workforce Development (OWD), Boston Public Schools (BPS), the Boston Educational Development Fund (BEDF), Metro Credit Union, Commonwealth, and fintech developer InvestCloud we launched a 3-year pilot that provides all public school kindergarten (K2) students in the City with a multigenerational tool to promote saving for college and career.
- LUNCH ON THE LAWN
- SAFEBOARD
- PARTICIPATORY POKEMON GO





Some examples (4)

#### WELCOMING + RESILIENT PLACES

• THIRD SPACES In partnership with the Streets Cabinet and the MORRE team, we launched a new lab that focuses on how the City can better support the places between home and work where people go to connect with others and feel recharged. Our team explored everything from civic healing spaces (Social Emergency Response Centers) to connections between main streets (the Main Streets Explorer). We launched Community Made, a crowdfunding partnership with ioby.org for residents to create their own third spaces; Beta Blocks, an initiative aimed at making it easier for neighborhoods to experiment with new civic technology; and City University, a collaboration with Boston's academic community to strengthen our research- and evidence based policies, services, and innovation.



- A WARMER CITY HALL
- STREET PROTOTYPES

#### Some examples (5)

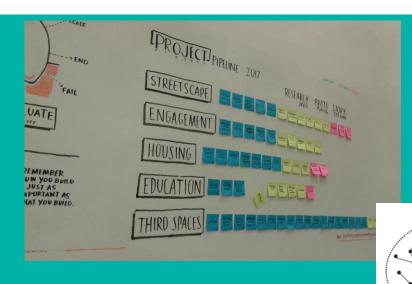
#### STORYTELLING + ENGAGEMENT

- STORY LAB We partnered with a number of citywide events to explore new storytelling modalities for engaging stakeholders and gathering feedback - including video, VR, writing, and drawing.
- AV CLUB
- VIDEO STORYTELLING
- ROBOT BLOCK PARTY + AUTONOMOUS VEHICLE PETTING ZOO





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- Probably we are the most sophisticated team at least in North America...
- The idea is equating innovation with social...

Nigel Jacobs 30th March 2017

- Issues are tackled with a holistic approach.
- Civic entrepreneurship is a relevant skill.
- The name is idiomatic name, Thomas Menino was called himself Mechanic, because he was down in a sort of dirt, working on ground.
- People centered approach, help to gear our democracy.

Stephen Walter 4<sup>th</sup> April 2017



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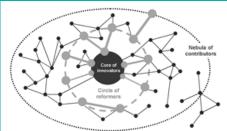
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## **NETWORK OF INNOVATION HUBS**









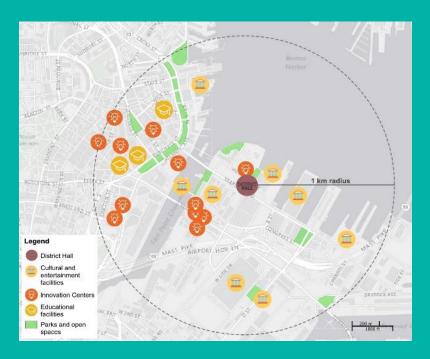
## **SEAPORT DISTRICT & DISTRICT HALL**







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#### **SEAPORT DISTRICT**

- In 2004, the Boston Planning Development Agency (BPDA), then known as the Boston Redevelopment Authority (BRA), launched the 'LifeTech Boston' policy initiative, which is a significant incubatory step towards the eventual creation of a new redevelopment model, the first Innovation District in Boston.
- The most significant strand of the original strategy was later identified in the 'Boston Innovation District' (BID), a planning initiative launched in 2010 by the Menino administration and still in progress; the project aims to create a complex neighbourhood able to attract financers, resources, and talent, that mimics the success of 22@Barcelona.
- The BID project was conceived to redevelop the South Boston Waterfront, an underutilized area of 1,000 acres that previously hosted industrial activities and parking and transform it into a thriving hub of innovation and entrepreneurship together with new residential, commercial and retail spaces Labout 7.7 million sq. ft.) with a mixed-use configuration.

## **SEAPORT DISTRICT**













## **DISTRICT HALL HISTORY**

District Hall was founded through a unique public-private partnership in response to the City's call.

First project in their 23-acre master plan for Seaport Square.

The City invited the Cambridge Innovation Center (CIC) to create an active innovation hub concept. CIC then developed the initial concept and design, as well as provided construction management and financial support for the project. CIC has ongoing responsibility and holds the lease for the property.

The <u>Venture Café Foundation</u> was involved in the initial planning process and continues to manage operations and programming since District Hall's opening in 2013.

https://districthallboston.org/our-history/

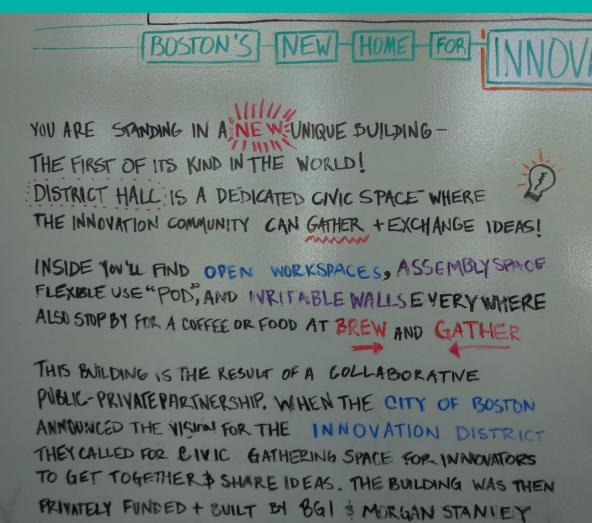




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#### **DISTRICT HALL 2018 IMPACT REPORT**

"2018 was one of our busiest years yet – our team hosted almost one thousand events here at District Hall.

As part of our nonprofit mission to create accessible and affordable event and meeting space, we discount and donate space regularly.

This year, we gave back over \$1.1 million dollars in event space to the community, sponsoring over 600 events."

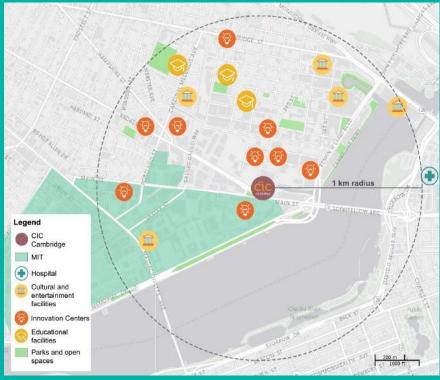
http://districthallboston.org/wp-content/uploads/2019/01/DH-2018-Impact-Report-9.pdf

Examples: Small pod: 50\$ / hour; Medium pod: 100\$ hour; Large

meeting space: 300\$ hour



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#### FOSTERING INNOVATION DISTRICTS

We weave together a variety of elements to help build and strengthen the local innovation ecosystem. Weekly informal networking, state of the art shared wet lab space, a community of entrepreneurs focused on positive impact, and civic innovation space are some of the important elements that we help unite.

https://cic.com/about-us



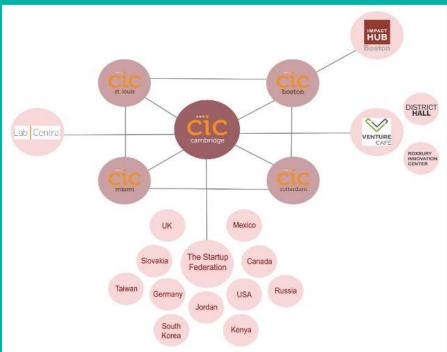




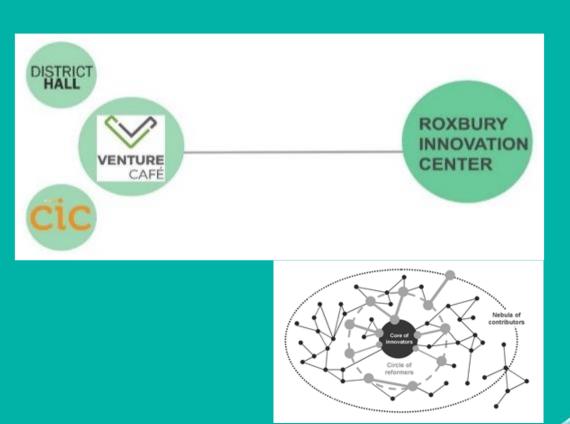
- Cambridge Innovation Centre (CIC) and of the Venture Café Foundation were both founded by Tim Rowe, the former in 1999 as incubator, the latter in 2010 as social experiment.
- CIC is a private entrepreneurial activity based on renting shared and flexible office spaces with an innovative style. It currently hosts over 700 companies across two buildings, located in Kendall Square and in downtown Boston, about 500 of which are start-ups.
- In the CIC, flexible and high-quality spaces are offered for a reasonable cost, since prices range from \$425 to \$1,500/person/month all included (stocked kitchens, conference rooms, Internet, printing & copying, phones, high-end furniture, operational & technical support and concierge).



## CIC AND VENTURE CAFÉ'







## **VENTURE CAFÉ'**









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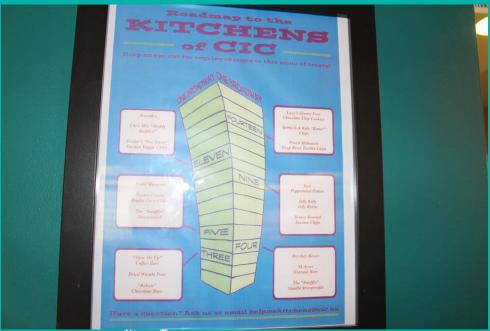
















#### **CAMBRIDGE INNOVATION CENTER**



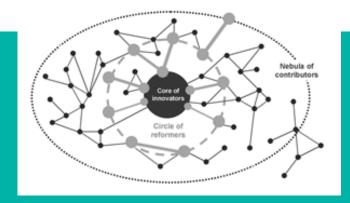






#### **CAMBRIDGE INNOVATION CENTER**







# **KENDALL SQUARE & CIC**

- Kendall Square is a former brownfield located in Cambridge (MA), opposite side of Charles River.
- It started in 1868 as an industrial district and consolidated this function with the opening of the first underground line nearby. The presence of the Massachusetts Institute of Technology dates to 1916.
- Following the Second World War, the area entered an era of decline, which
  the Cambridge Redevelopment Authority (CRA), established in 1955,
  sought to reverse also through the clearance of 29 acres of land for the
  accommodation of NASA.



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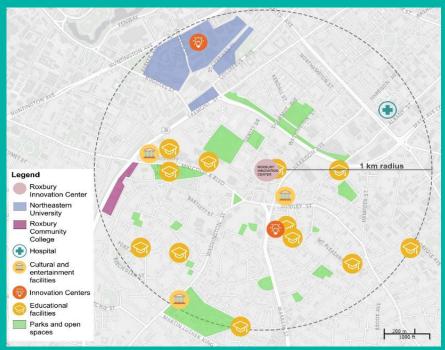


















# DUDLEY SQUARE & ROXBURY INNOVATION CENTER

- The 'Neighbourhood Innovation District' (NID) is an on-going public strategy launched in 2014 by the government of Boston City Council. The main goal of this initiative is to encourage and spread innovation and technology within low-income neighbourhoods to improve small business growth and local economic development.
- Following specific criteria mentioned in the innovation district literature (transit access, affordable office space, arts and cultural amenities, involvement of non-profit organizations) and considering the particular features of the area (e.g. the presence of higher-education institutions, vacant lots, transportation nodes) the location for the first experiment was chosen to be the 'Dudley Square-Upham's Corner Corridor', a vibrant zone within the Roxbury neighbourhood.

**DUDLEY SQUARE & ROXBURY INNOVATION** 

**CENTER** 





#### Mayor Thomas M. Menino

and the Dudley Vision Advisory Task Force cordially invite you to a topping off ceremony for

#### Dudley Municipal Center



Monday, June 24, 2013 at 11:00am Come by and sign the final beam from 10:30–11:00am Corner of Warren & Taber Streets Refreshments will be served



For more information, please call Alwyn McLeod, Mayor's Office of Neighborhood Services at 617.635.3485









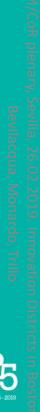












- Roxbury Innovation Center (RIC) was created through a public-private partnership with the City of Boston and The Venture Café Foundation.
- Mission: to support local economic development, in Roxbury, Dorchester and Mattapan by empowering and guiding innovation and entrepreneurship, as viable career options. S
- Since opening in late 2015, RIC has provided a diverse variety of resources for small business owners of all stages and industries, through instructional workshops and courses, networking events, and office hour mentorship.



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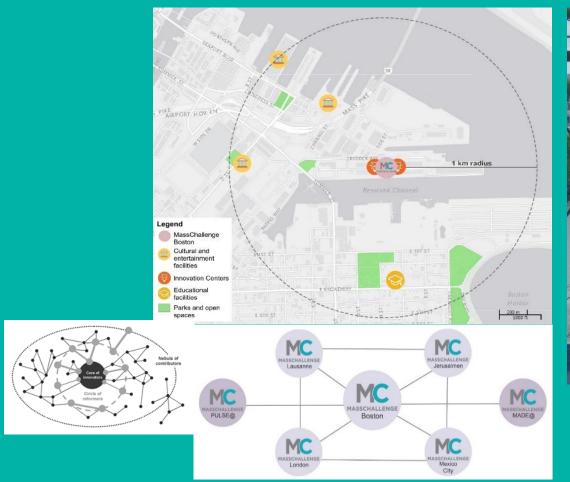
















- Headquartered in the United States with locations in Boston, Israel, Mexico, Rhode Island, Switzerland, and Texas, MassChallenge strengthens the global innovation ecosystem by accelerating high-potential startups across all industries, from anywhere in the world for zero-equity taken.
- As MassChallenge's flagship location, MassChallenge Boston has brought together corporates, policy makers, and innovation leaders to support and inspire the next generation of innovators. Over the past eight years, it accelerated more than 1,000 startups from across the world – startups that have made patients healthier, our communities more connected, and our communities safer.



European Committee of the Regio<u>ns</u>









- Program Benefits
- Access to expert mentors, top corporate innovation teams, tailored curriculum, world-class resources, and more - all at zero cost and for zero equity
- 26,000 square feet of collaborative office space and 5,000 square feet of R&D space located in the heart of Boston's Innovation District
- Up to \$1.5 million in cash prizes and up to \$50,000 in scholarships
- Proven results: MassChallenge Boston startups raise an average of \$75,000 during the program

















#### **ENABLING FACTORS**

• The inter-scalarity of innovation

Economic-financial, technologic, social, institutional and even spatial innovation is activated by networking at multiple scales. The networking works both horizontally and vertically, creating local-local and local-international linkages that activate the circulation of knowledge and generate spillovers far beyond the border of the Boston metropolitan area.

The location of innovators

The presence and diffusion of innovative subjects are spread across different categories of stakeholders. Sophisticated governance allows for a blended public private approach, encompassing civic organisations, second tier NGOs, collaborating through structured frameworks thus allowing space for risk taking even in those sectors which are usually risk-adverse.

• The spatial ecosystem for innovation hotspots

Innovation hotspots work better in walkable environments and in socially and physically dense neighbourhoods. Local plans are supportive of an urban environment enabling knowledge-sharing and innovation.



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#### **SUCCESS FACTORS**

- 1) the quadruple helix model (i.e. Government, University, Enterprise and Society) works effectively. Anchor Higher Education (HE) institutions continuously nurture the Entrepreneurial Environment
- 2) an entrepreneurial approach emerging from the local governments, eliciting risk taking and bottom up civic participation in tackling key issues in the city;
- 3) a fully operational networking structure of some intermediary actors supporting entrepreneurial collaboration, cross-fertilization and co-creation, which collaborate at multiple-scales;
- 4) local authorities supporting urban regeneration initiatives complementing economic development initiatives and making available civic-led spaces enabling grassroot collaboration and cooperation





### **Conclusions (1)**

- The analysed innovation ecosystems are of high complexity, with strong individual system properties. Each system is representing a particular type of innovation ecosystem [Volvo: business-led; Boston IDs: municipality-led].
- There are different levels of implementation of the Quadruple Helix Model (4H), from a rudimentary application to a transforming stage from Triple Helix to 4H and up to fully adapted.
- Smart Specialisation Strategies (RIS3) and, in particular, the Entrepreneurial Discovery Process (EDP), have different levels of interrelation with the questioned ecosystems, from a very low influence on the ecosystem up to fully related to the relevant processes and dynamics.







# Conclusions (2)

- The orchestrators or main key-players play an essential role in the innovation ecosystems, influencing directly and indirectly their development.
- Local, regional, national and international innovation-related policy agendas have a relevant impact on the strategic directions of innovation ecosystems, for example the UN 2030 Agenda for Sustainable Development.
- Innovation ecosystems are significantly dependent on talent attraction and retaining, on an entrepreneurial and risk-taking culture, as well as on the presence of R&I infrastructure and on compatible and complementary system stakeholders.
- Internationalisation is a core element for competitive, sustainable and successful strategies of local and regional innovation ecosystems.



