

# The Rise of INNOVATION DISTRICTS

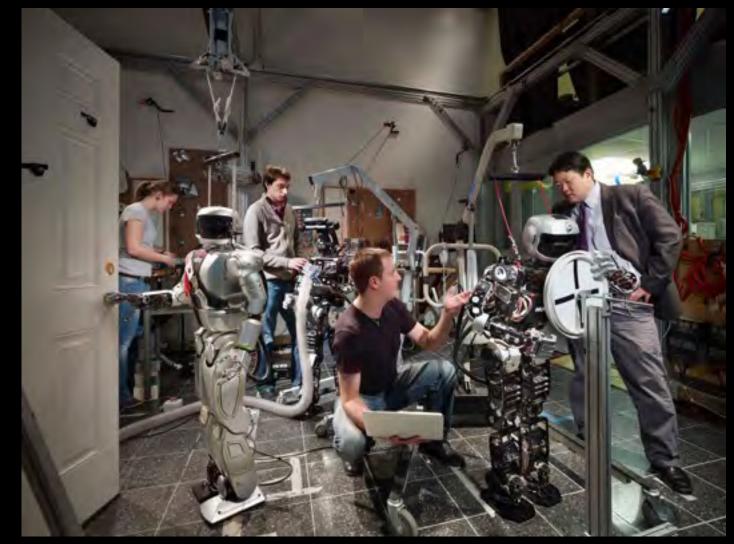
Politecnico di Milano Innovation as an Engine for Urban Growth January 25th, 2017





# The global economy is rapidly changing and increasingly powered by innovation.





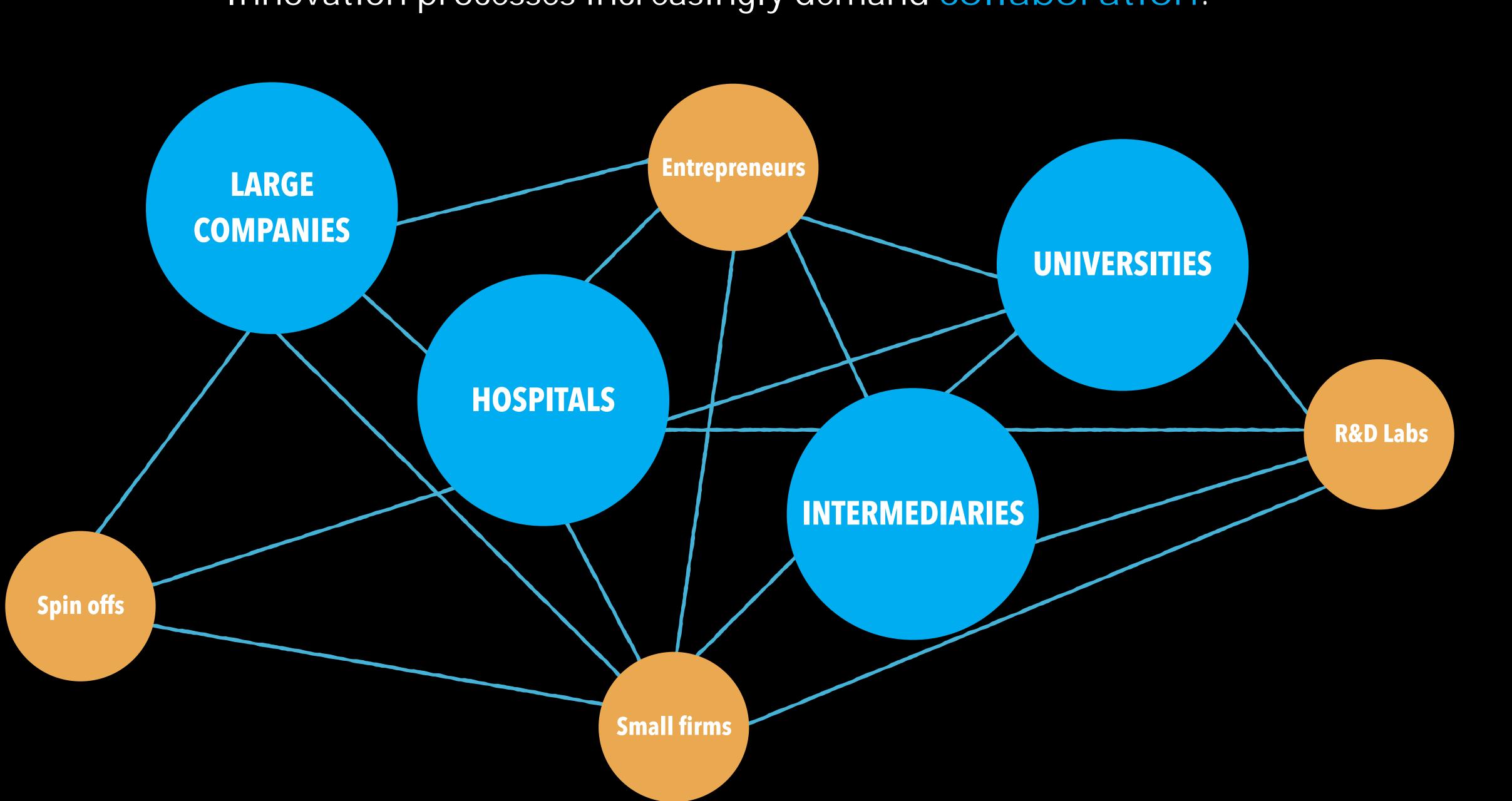
Unprecedented global competition.

Increased technological complexity within and across industries.



Blurring distinction between manufacturing and services.

## Innovation processes increasingly demand collaboration.





#### Companies are moving to be near other firms and talented people.



Fairfield Connecticut

**Boston Seaport** 

source: Bob Child/Associated Press and Sotheby's International Reality





And people are demanding great places to live, work, and play.

#### This is changing the scale of how we think about place and the economy.

Knowledge Sharing Neighborhood/Hyper-local (>1 Mile) Labor Pooling Metropolitan Area (<40 Miles) Supplier Network Regional Area (<100 Miles)



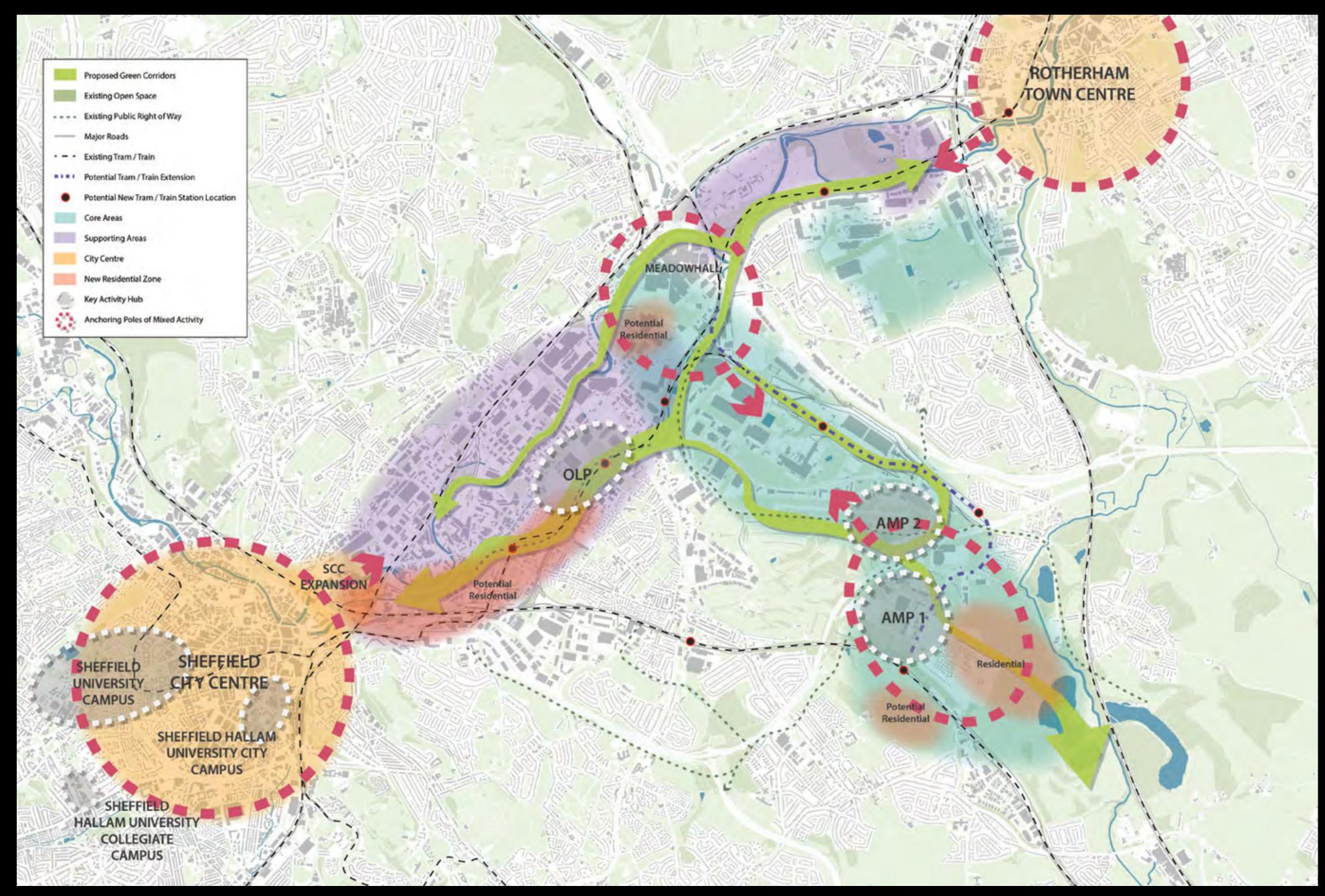
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#### Ad Agencies & R&D Labs Five-Minute Walk (>1/4 Mile)

Software Industry Ten-Minute Walk (>1/2 Mile) Knowledge Sharing Neighborhood (>1 Mile)



#### Sheffield at the metropolitan scale.



### Sheffield at the hyper-local scale.

#### AMRC Training Center

#### AMRC Design Center

AMRC Knowledge Transfer Center

#### The Welding Institute

Nuclear AMRC

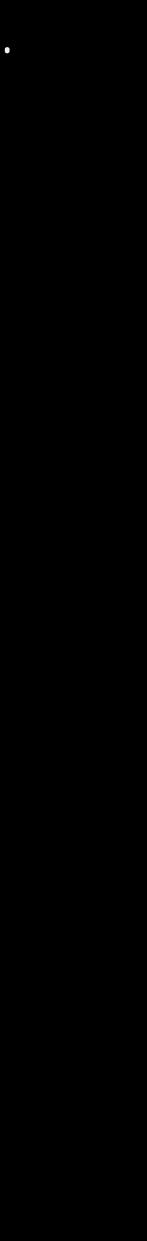
AMP Technology Center

Rolls Royce Turbine Blades

> Castings Technology International

# Sheffield's ambition: to leverage broader trends and become an innovation district.





#### Philadelphia at the metropolitan scale.



# 2.7 million jobs

- Bio/pharmaceuticals, medical devices, and hardware
- Financial services
- Postsecondary education
- Chemical processing

## Philadelphia at the hyper-local scale.

Drexel University Vanguard **University City Science Center** 

Penn Presbyterian University of Pennsylvania

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University of the Sciences

12m

Comcast  $(\bigcirc)$ 

Independence Blue Cross

• PECO

FMC O

Hospital of the University of Pennsylvania

CHOP Wistar Institute

VA Medical Center

Gray Buildings © 2008 Sanborn

Google earth

## Philly's ambition: to leverage broader trends and become an innovation district.



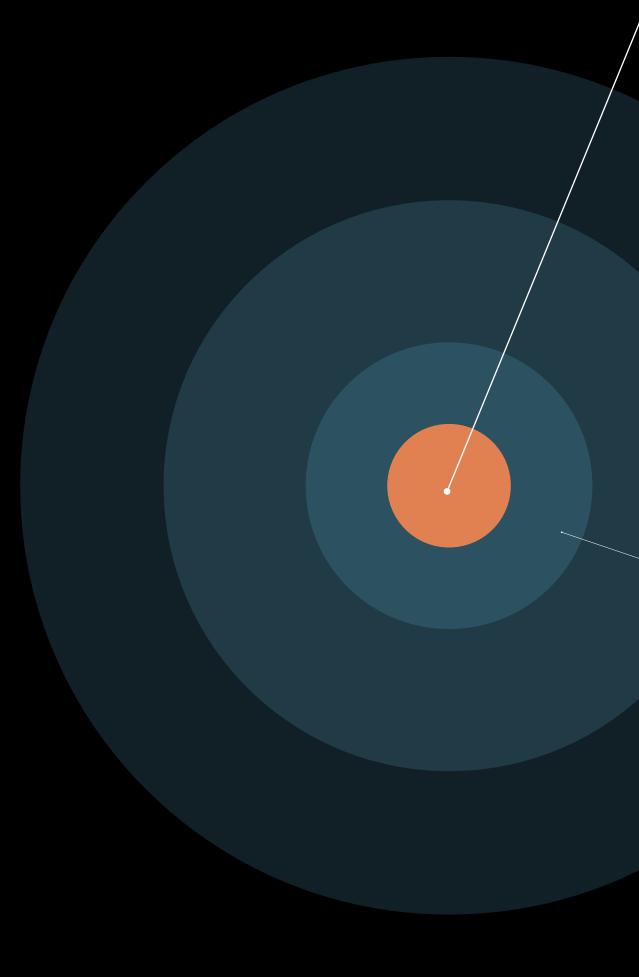
# nnovation District

In•no•va•tion Dis•trict

Geographic area where anchor institutions and companies cluster and connect with small firms, start-ups, business incubators and accelerators.

Physically compact, transit-and broadband-accessible, they offer mixed-use housing, office and retail.





Innovation districts can be impactful at the global, regional, city, and/or neighborhood scale

#### **Innovation Districts**



#### Attract global firms and investment



Drive productivity and job growth in other regional Industries

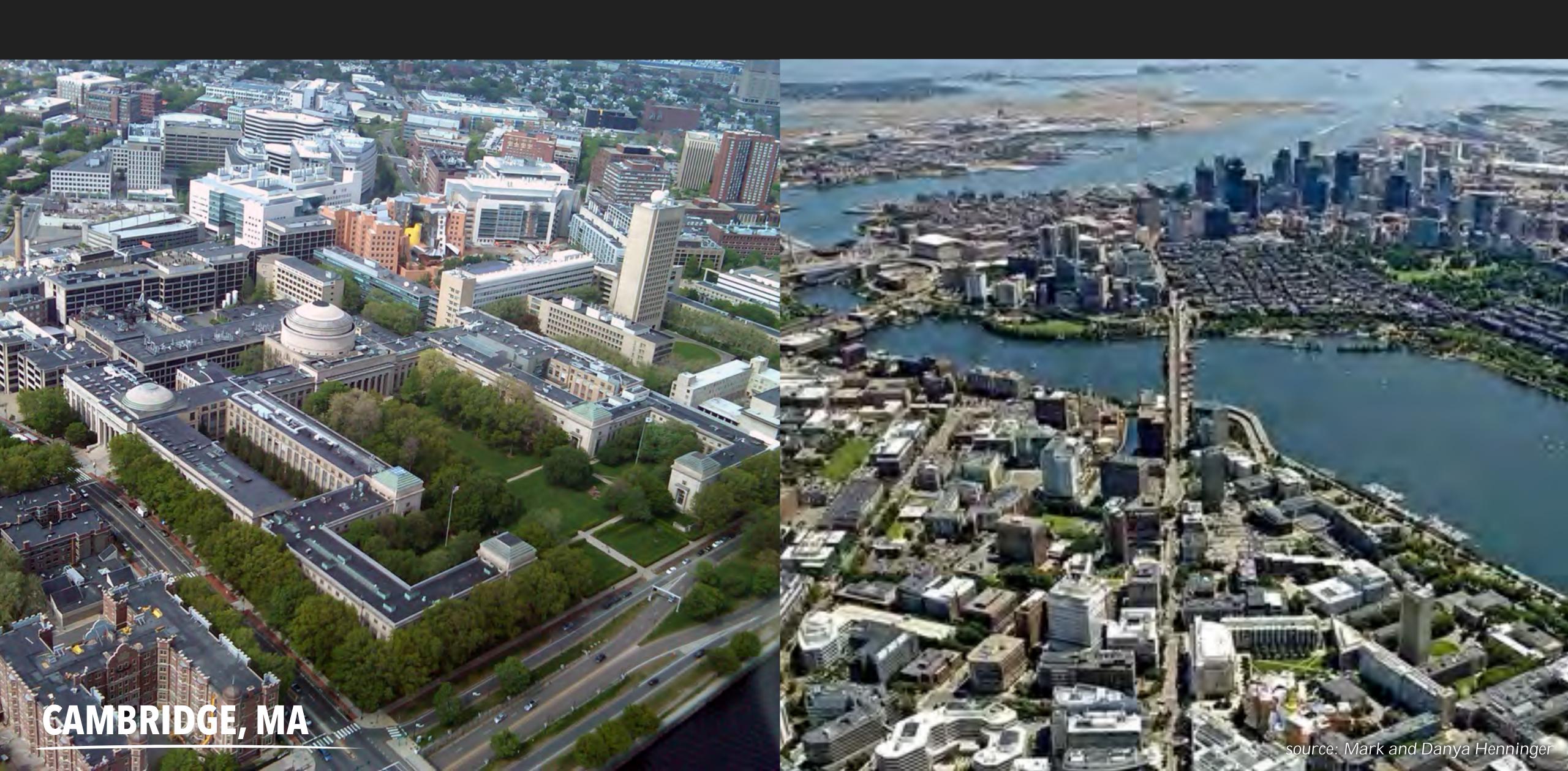
Stimulate local economies and connect residents to opportunity



# This is manifesting in numerous ways... corporate research centers relocating near a top engineering school,



### a dense concentration of anchor assets located very close to downtown,



### an entrepreneurial district spearheaded by a public utility,



#### Physical Assets

#### Economic Assets

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# Innovation Ecosystem

Networking Assets

Economic Assets



Economic Assets

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High-value, research-oriented firms

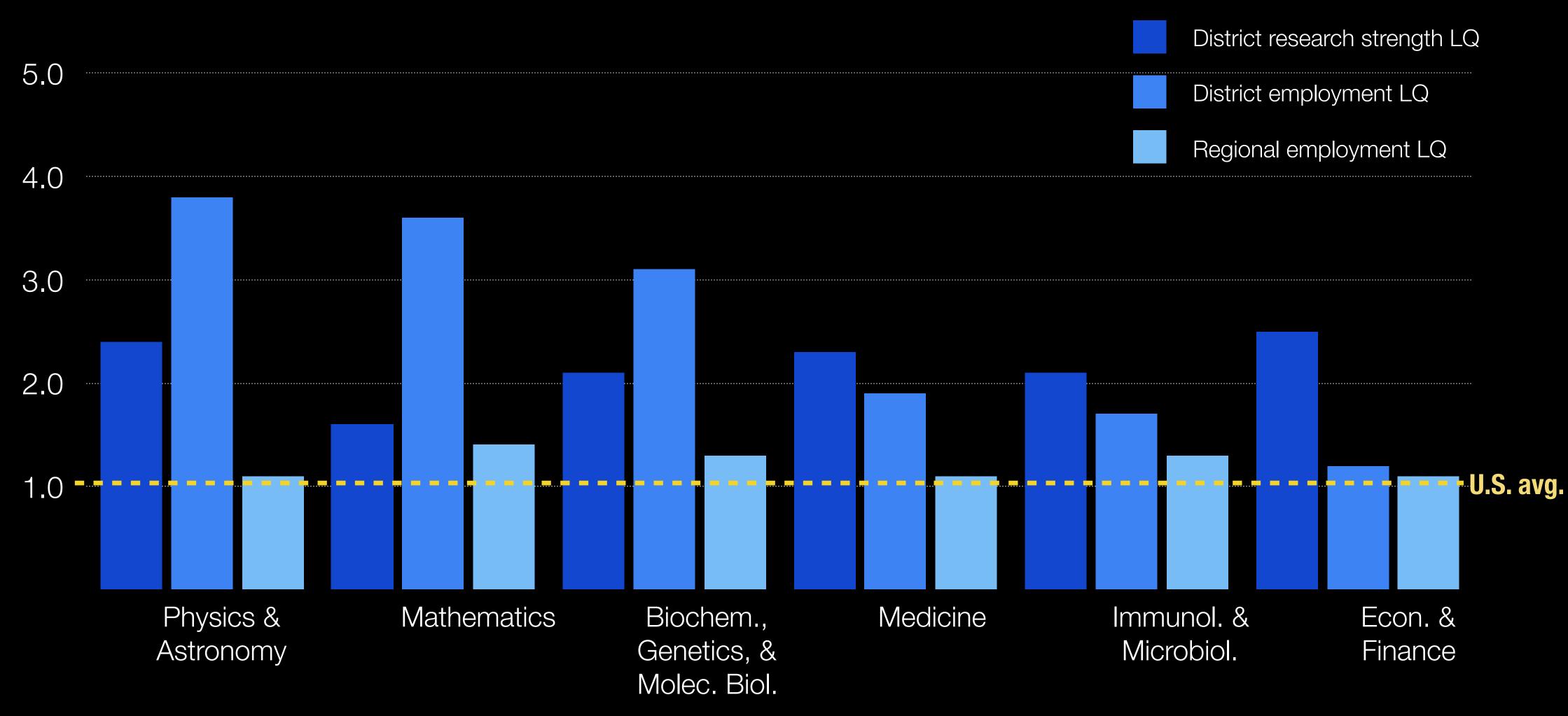
#### Highly creative fields

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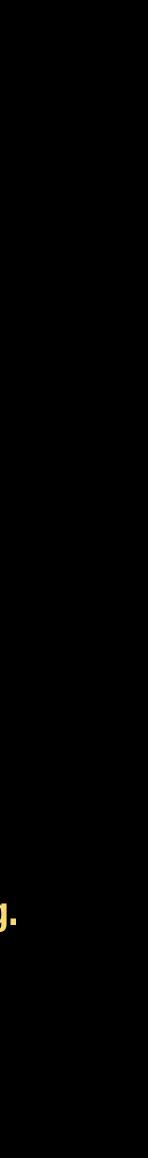
#### Small-batch manufacturing



# Philly's district research strengths and their relationship to the region.



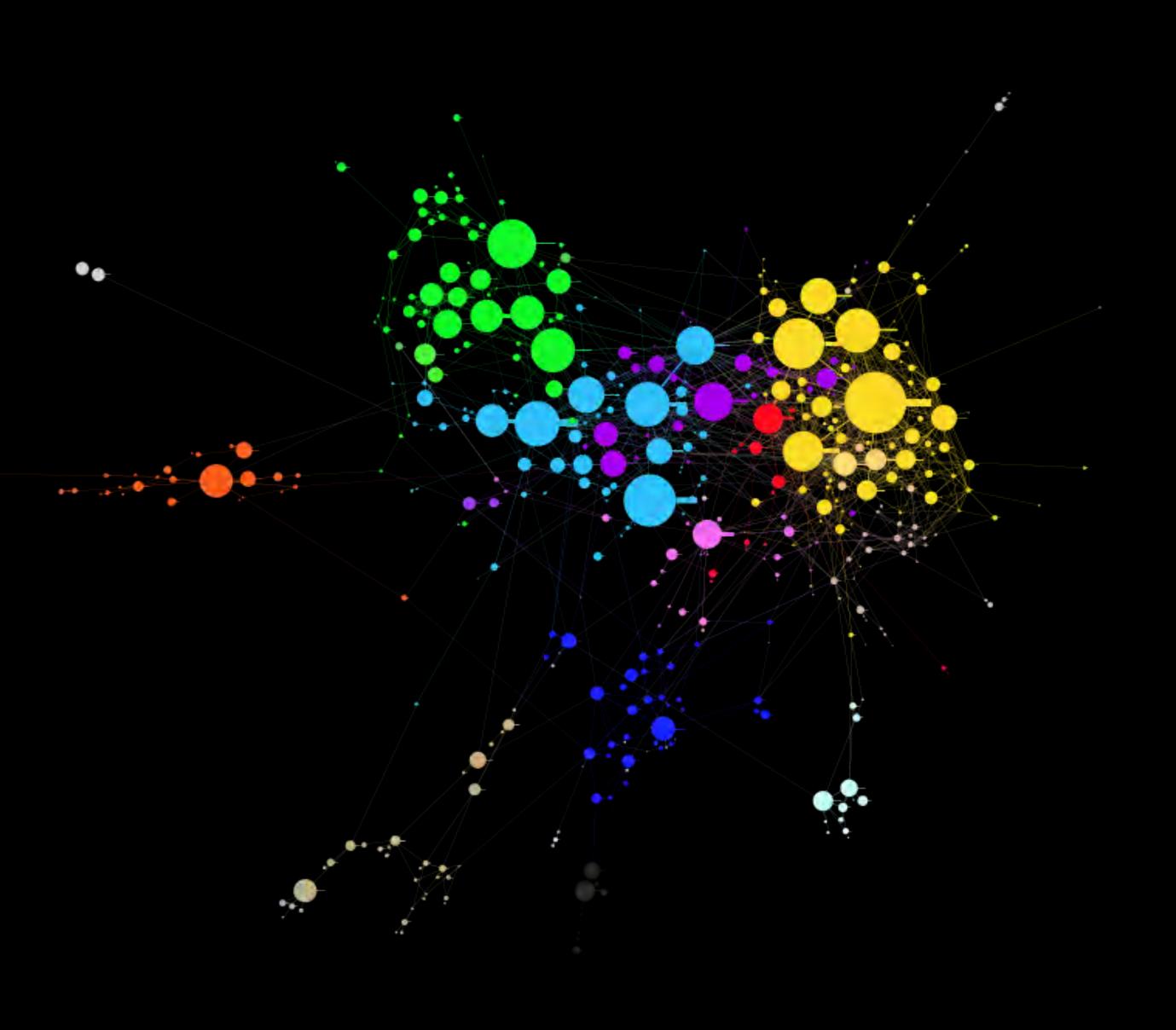
source: Mass Economics analysis, QWI (2004-2014), BLS ZCBP (2004, 2013), NETS (2004, 2013), IPEDS



## Pittsburgh and their growing convergence in joint publications and citations

Source: Pittsburgh Innovation District Evaluation conducted by Techtonic, 2016

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Physical Assets

#### Economic Assets

#### Networking Assets





Source: Gustav Hoiland

# Stockholm Life 2010

Physical Assets

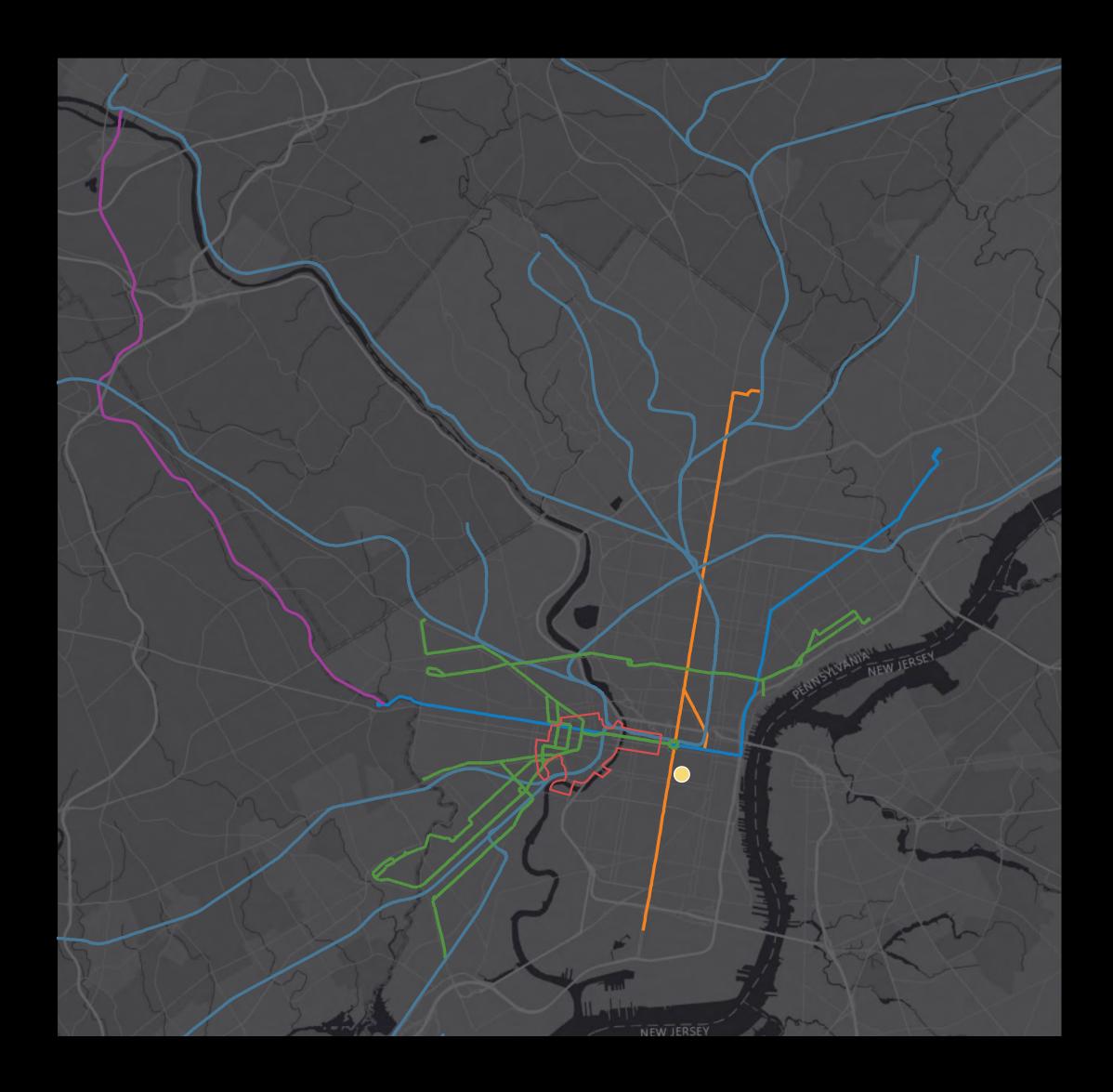
Source: mot öste

# Stockholm Life 2025

Source: WSP



## Philadelphia's district is connected with local-serving transit and regional trains...



AMTRAK ACELA TRAVEL TIMES: Baltimore: 1 hour & 1 minute NYC: 1 hour & 8 minutes DC: 1 hour & 27 minutes Boston: 5 hours & 7 minutes

### ... is mostly walkable



source: Walk Score (2016), SEPTA (2016)



# ...and offers a diversity of spaces

#### Physical Assets

### Economic Assets

#### Networking Assets

Networking Assets

Strong ties: Tech Regulars at Eindhoven



Networking Assets

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Weak ties: Networking breakfasts at 22@Barcelona



#### This is changing the scale of how we think about place and the economy.

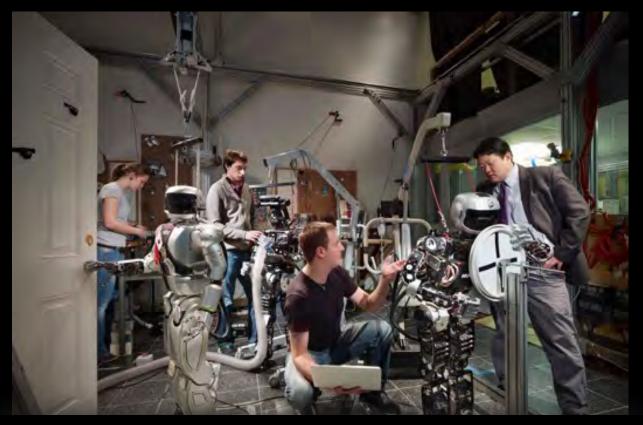


Knowledge Sharing Neighborhood/Hyper-local (>1 Mile)

Labor Pooling Metropolitan Area (<40 Miles)

Supplier Network **Regional Area** (<100 Miles)





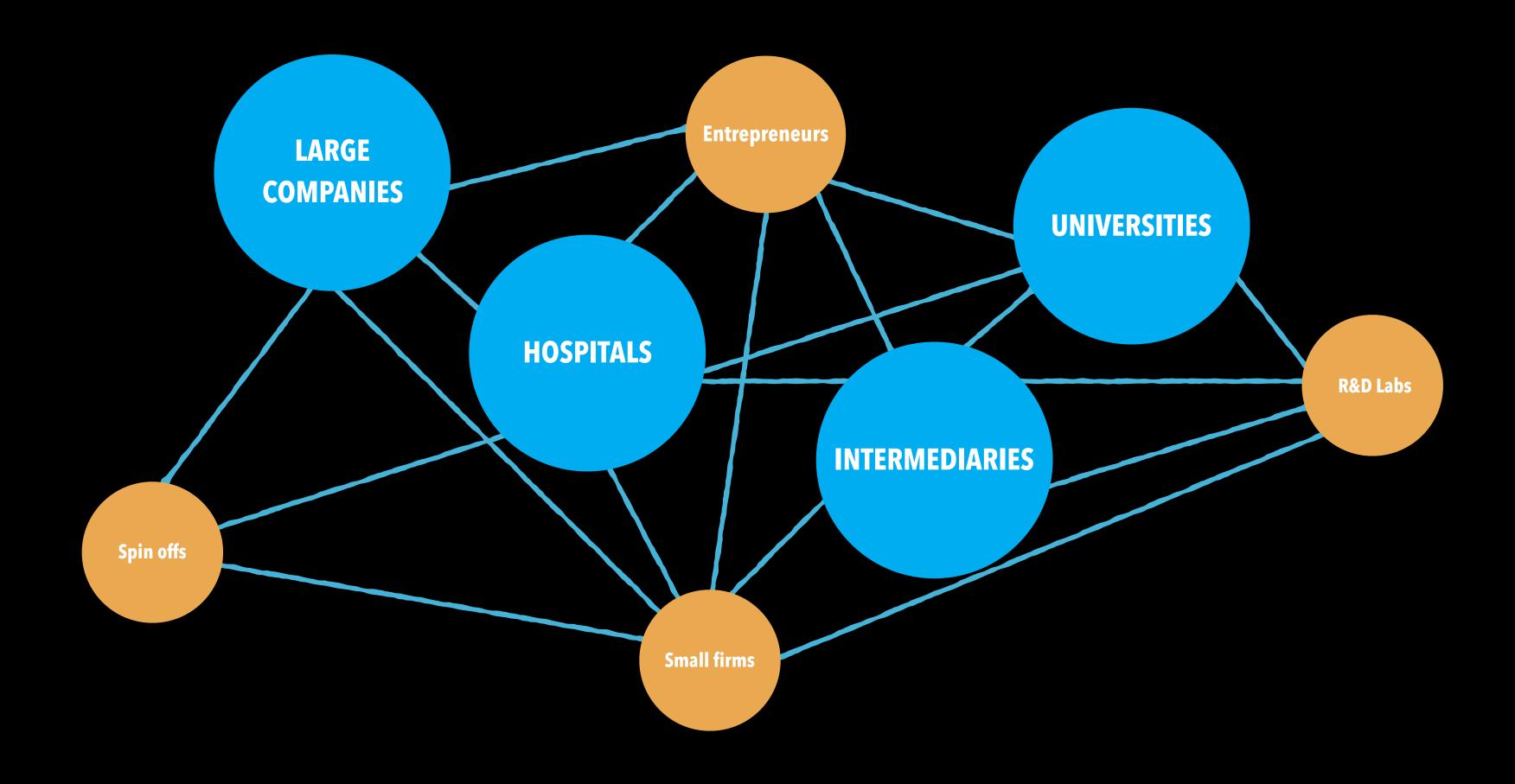
#### Technological complexity



#### Blurring of sectors

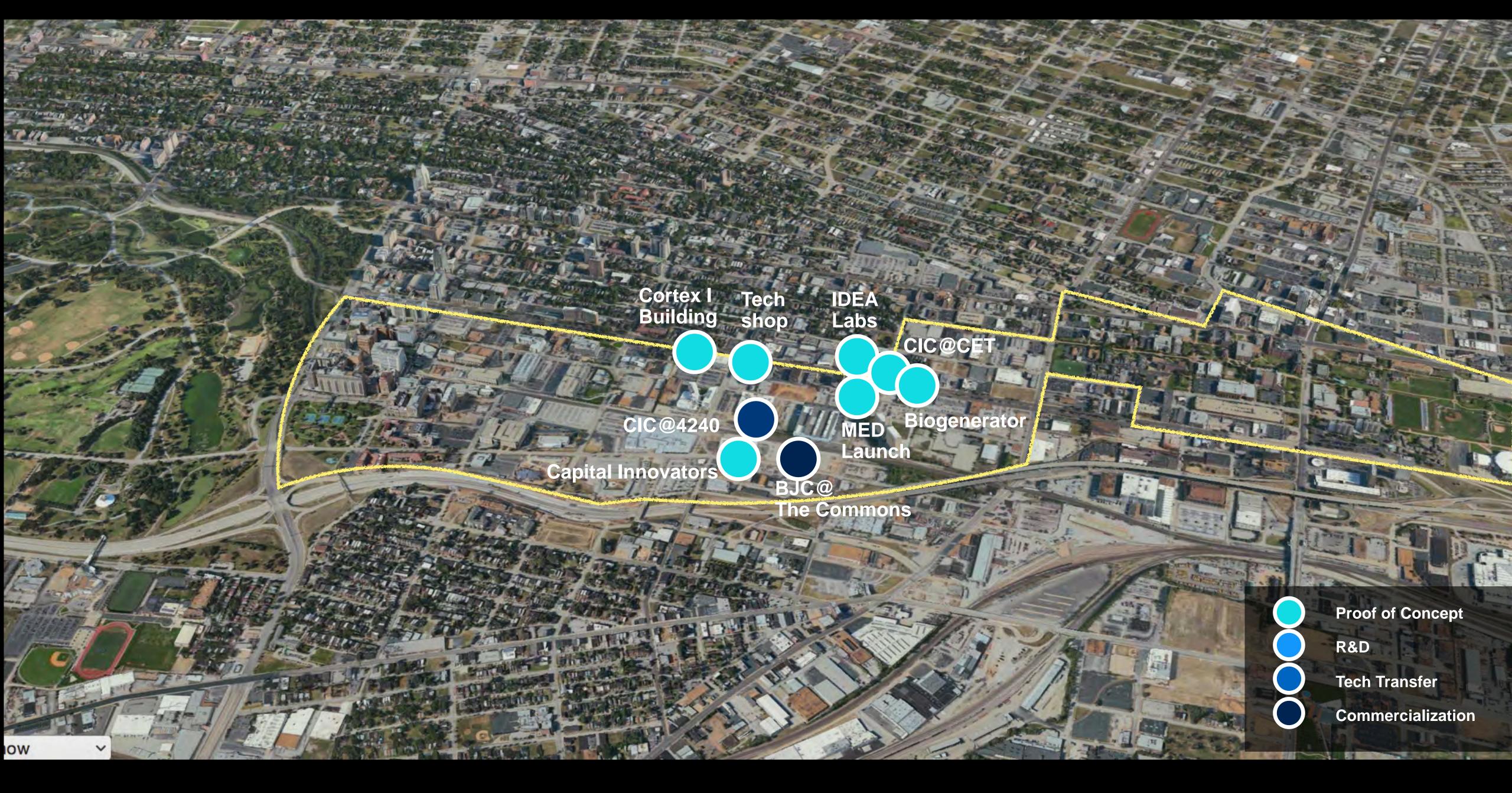


Work, live, play preferences



#### Innovation processes increasingly demand collaboration

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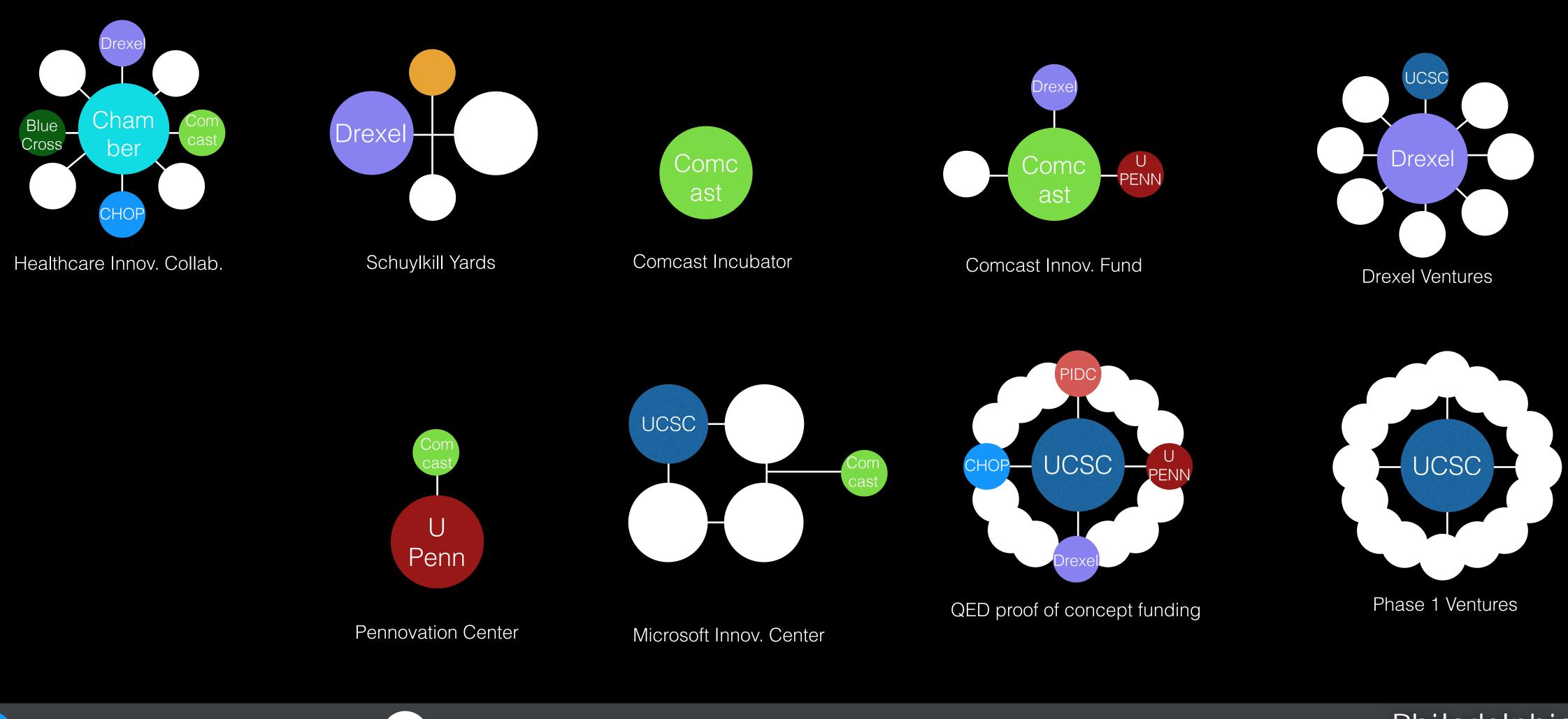


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actor not surveyed or actor outside the district

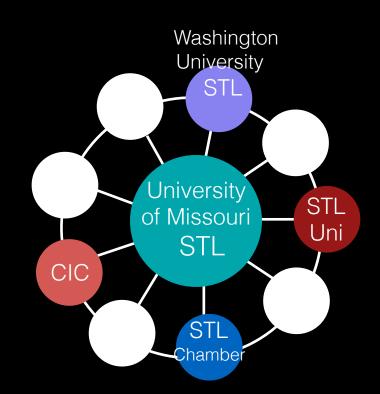
Supercharging Innovation. Processes under this category include idea generation, R&D activities, prototyping and testing, tech transfer efforts, and commercialization efforts.

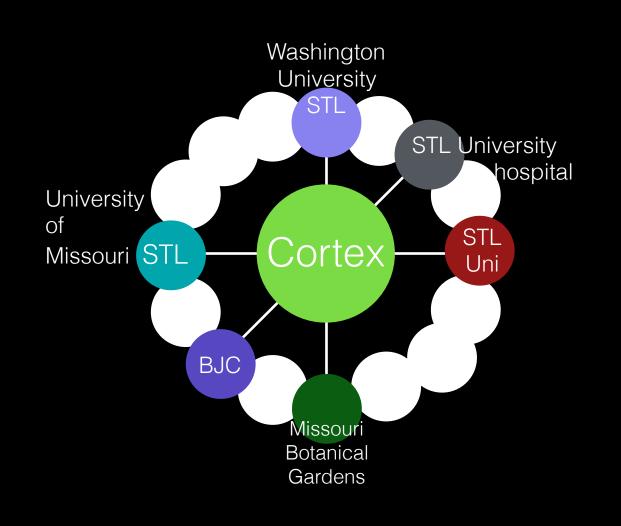
> relationship on advancing the initiative.

Philadelphia Innovation District



# Supercharging Innovation. Processes under this category include idea generation, R&D activities, prototyping and testing, tech transfer efforts, and commercialization efforts.





#### **CET Center for Emerging Technology**

- SQ1
- CIC@CET
- Core Labs Program

• Core Labs Program (Cortex lead, partnered with St Louis University, University of Missouri St Louis and Washington University St Louis - access to 18 Laboratories) • @4240 (Cortex lead, partnered with Wexford, CIC and Venture

- Cafe)
- **BJC@The Commons** (Cortex lead with BJC)
- Labs)
- and TechShop
- **CET** (2010 Cortex is a major driver)

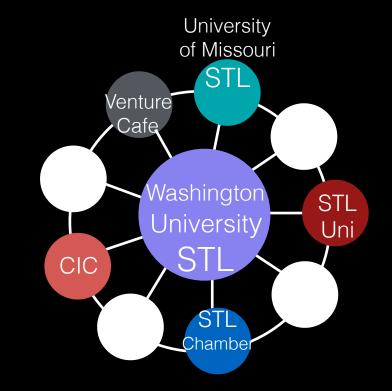


other actor / outside the district

#### Cortex

• **Cortex 1 Building** (Cortex lead, partnered with Washington University St Louis and BJC - housing BAL Biogenerator Accelerator

• **Cortex Commons** (Cortex lead collaborating with Venture Cafe) • **TechShop** (Cortex lead, working closely with Washington University



#### **BioGenerator**

relationship on advancing the initiative.

#### Cortex, St Louis Innovation District



