



Innovation districts: Advancing innovation imperatives and growing local prosperity

The Norfolk Innovation Corridor

Julie Wagner, President, The Global Institute on Innovation Districts

June 2024



THE GLOBAL INSTITUTE
ON INNOVATION
DISTRICTS

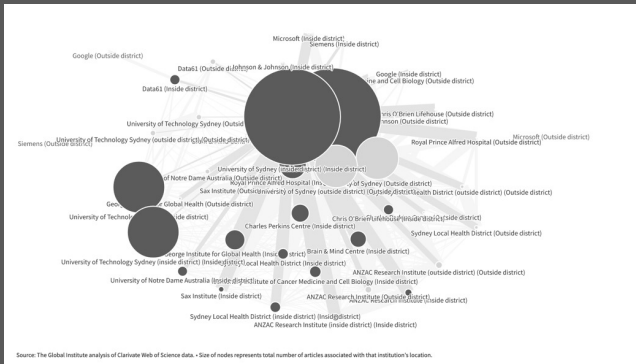
What drew me to Norfolk



My talk today

1

What are districts and their role in **advancing cities and regions**



2

How innovation imperatives are growing in importance, strengthening the role of **place-based innovation**



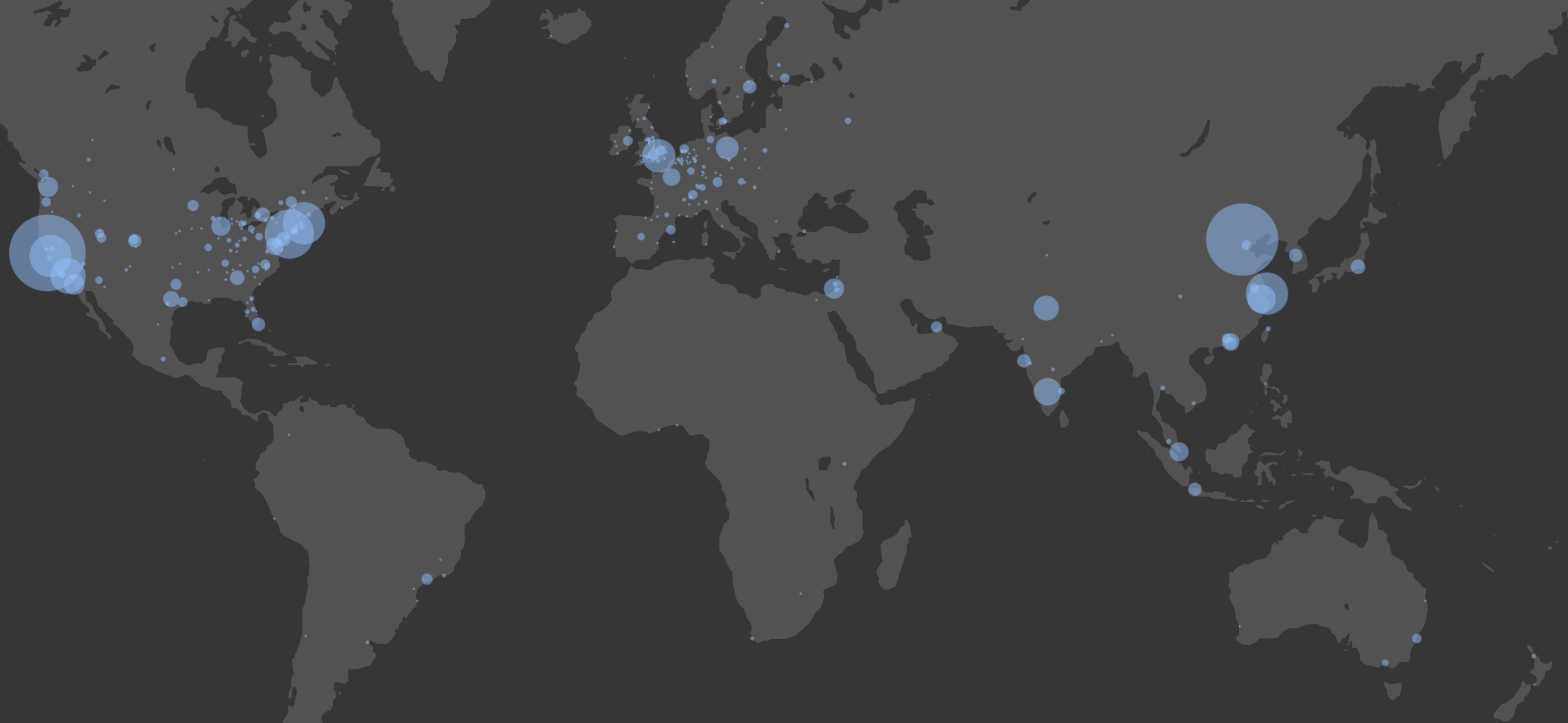
3

Insights and implications for the **Norfolk Innovation Corridor**



The spatial geography of innovation is imbalanced: VC investment

Old data but still relevant





Innovation District

Geographic area where institutions and companies cluster and connect with intermediaries, small firms, start-ups, and others

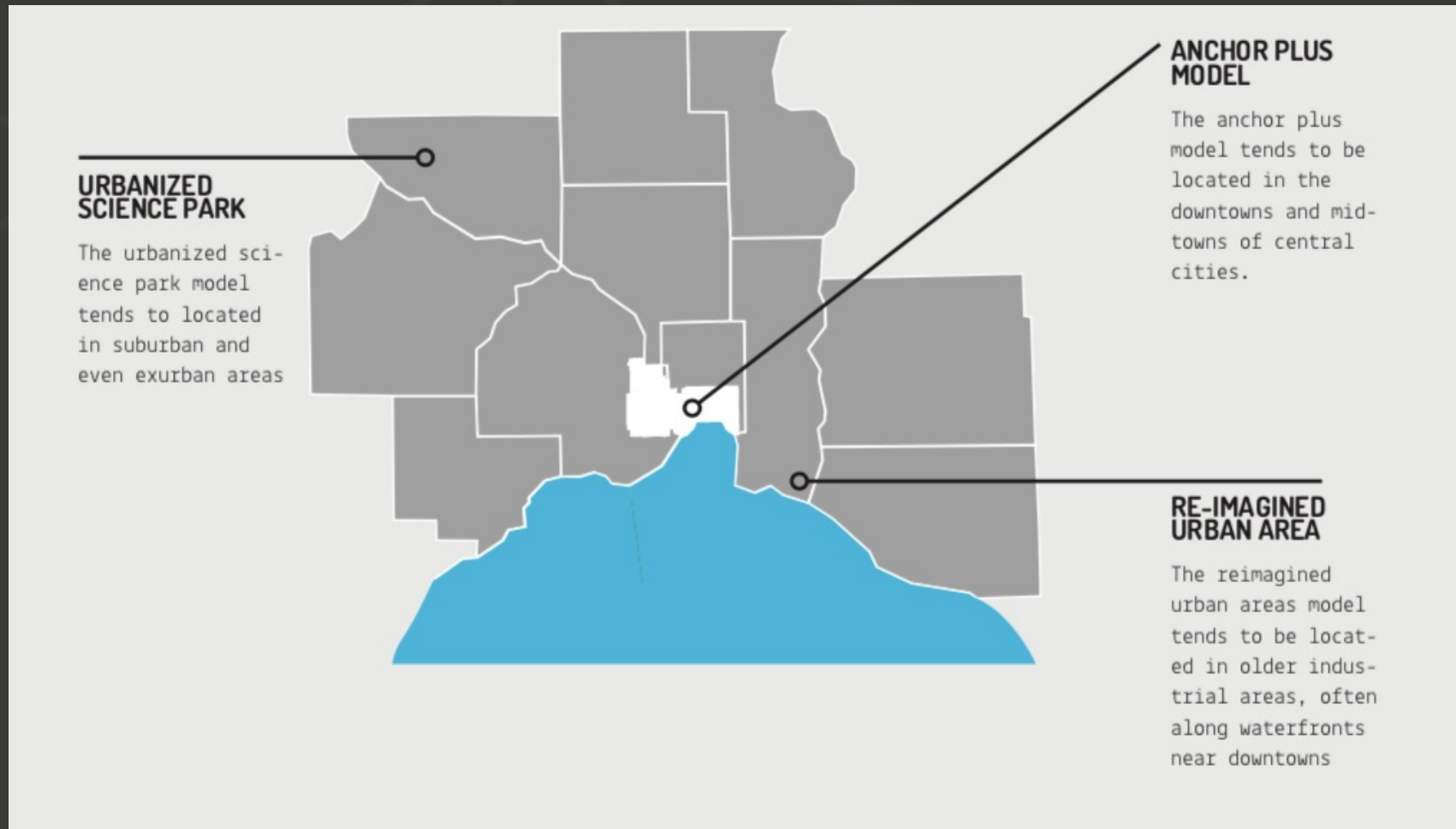
Physically compact, transit- and broadband-accessible, they offer mixed-use housing, office and retail



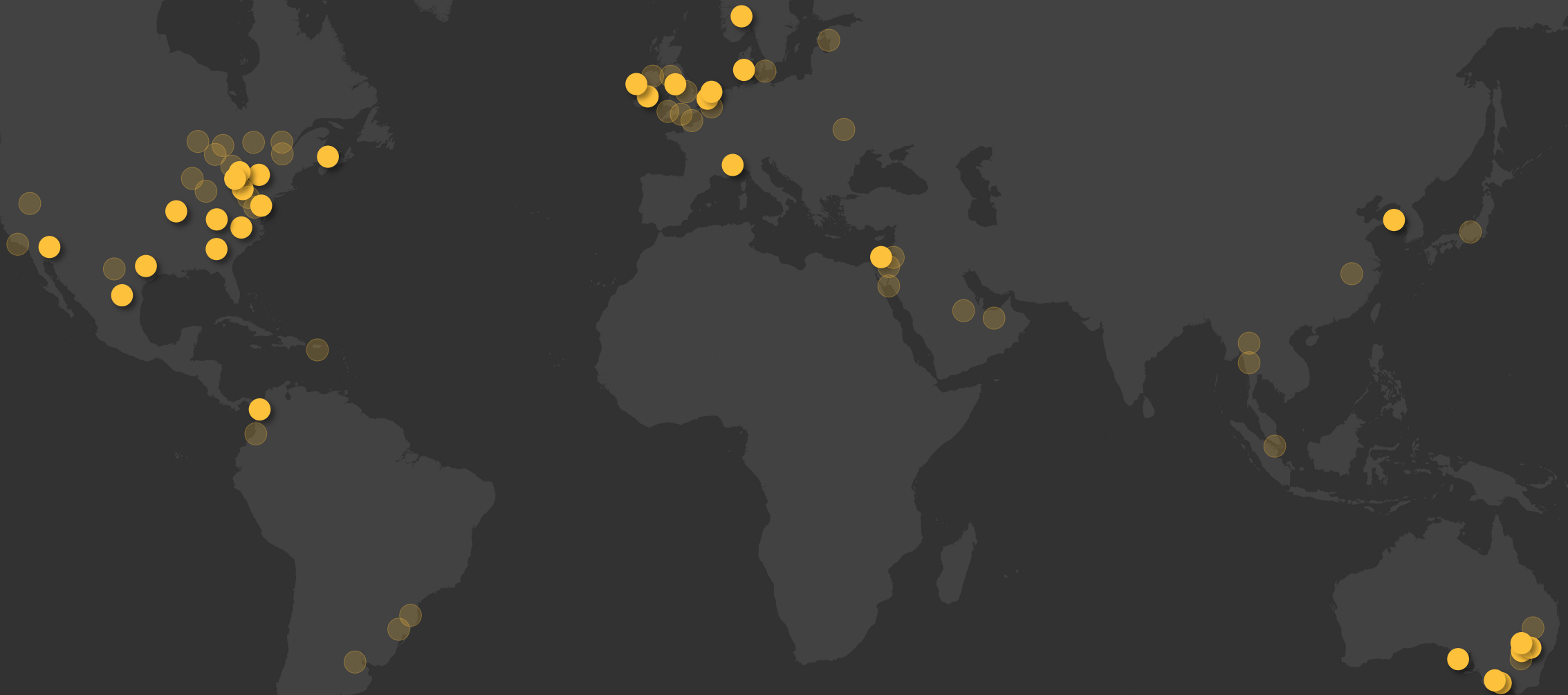
We read districts through numerous lenses to identify their value proposition, their power and promise as **regional engines**



Lens 1: A typologies of innovation districts



Over 150 innovation districts have emerged worldwide



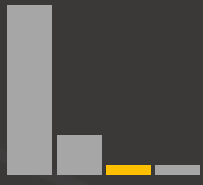
GIID works with more than 1/3

● Innovation districts deeply engaged with The Global Institute

● Innovation districts lightly engaged with The Global Institute

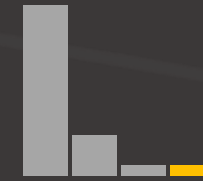


Typologies of innovation districts: analysis of 23 global districts



Urbanized Science or Office Park
Outside of the city core where suburban parks are urbanizing.

- AMID



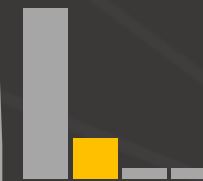
Located in different areas of city-regions.

- ORCID



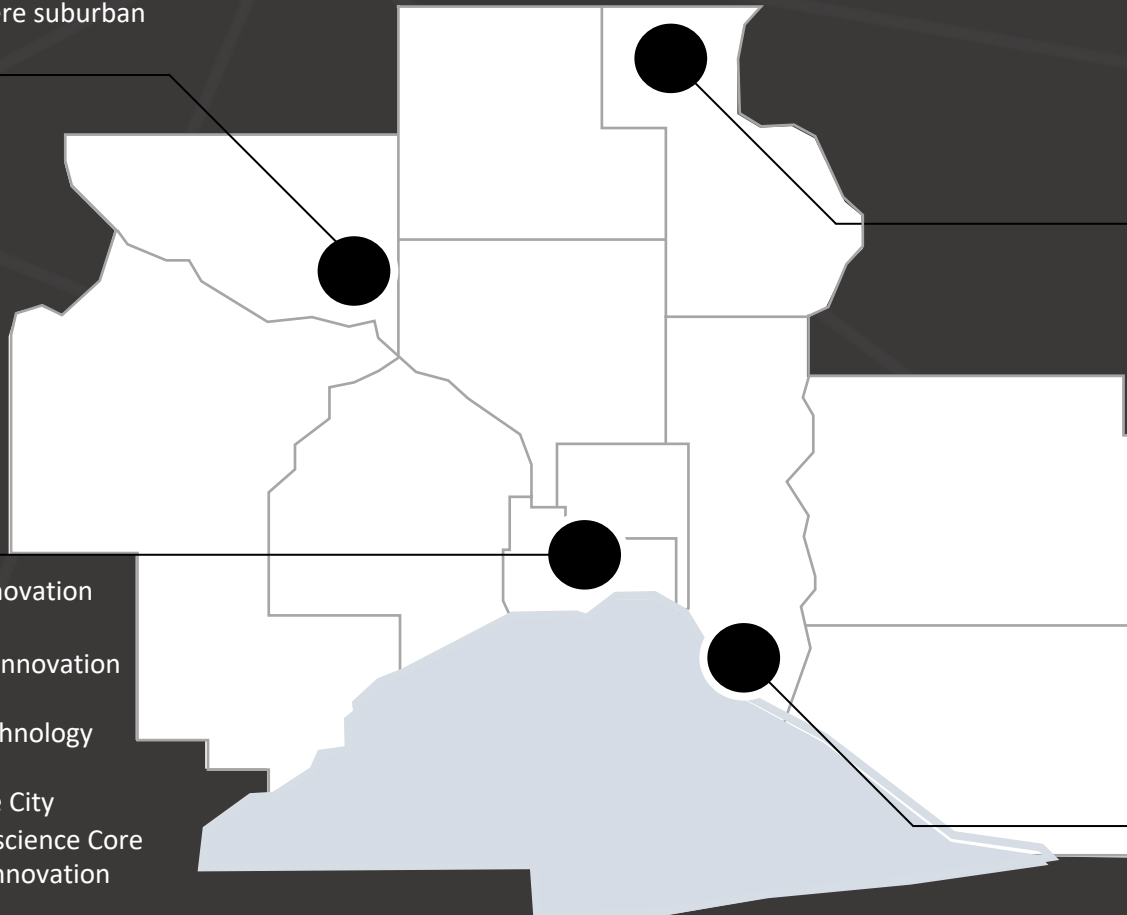
Anchor-Plus
Primarily found in midtown and downtown areas.

- Be'er Sheva Innovation District
- Buffalo Innovation District
- Central Innovation District
- Cleveland Health-Tech Corridor
- Cortex Innovation Community
- DistritoTec
- Halifax Innovation District
- Knowledge District Zuidas
- Liverpool Innovation Precinct
- Medellín Innovation District
- Melbourne Innovation Districts
- Monash Technology Precinct
- Oslo Science City
- Phoenix Bioscience Core
- Pittsburgh Innovation District
- Tech Central
- Westmead Health and Innovation District



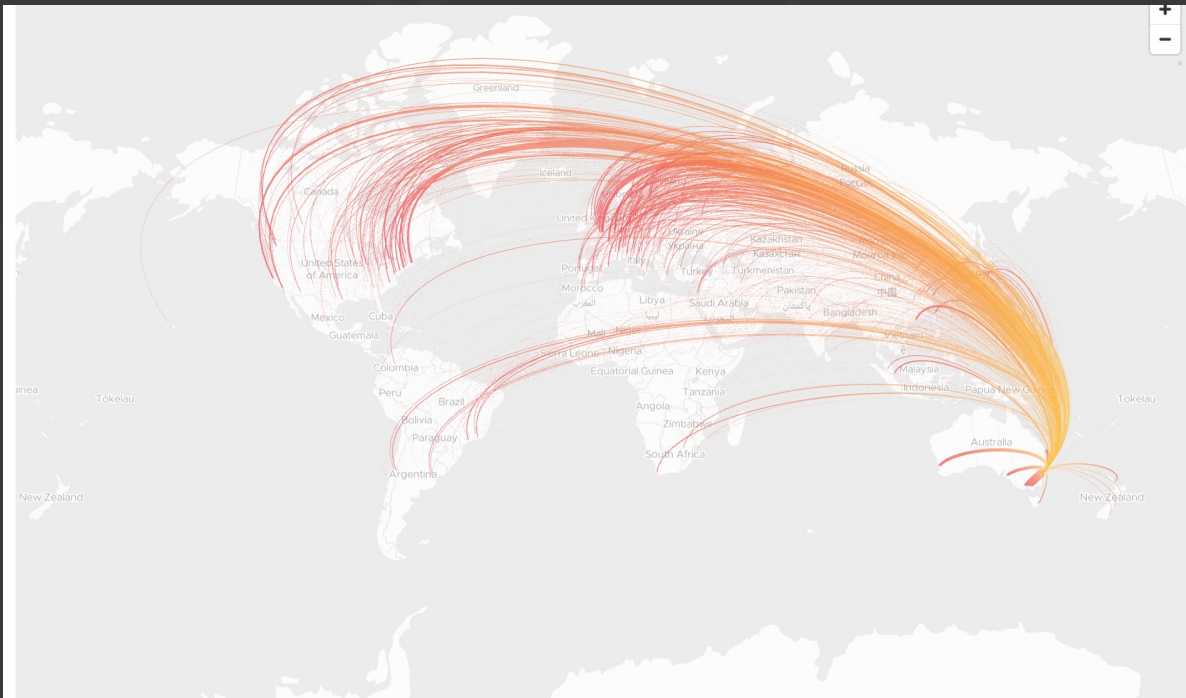
Within or near waterfronts or old industrial areas.

- Innovation Quarter
- Ion District
- PMC Innovation District
- Tonsley Innovation District



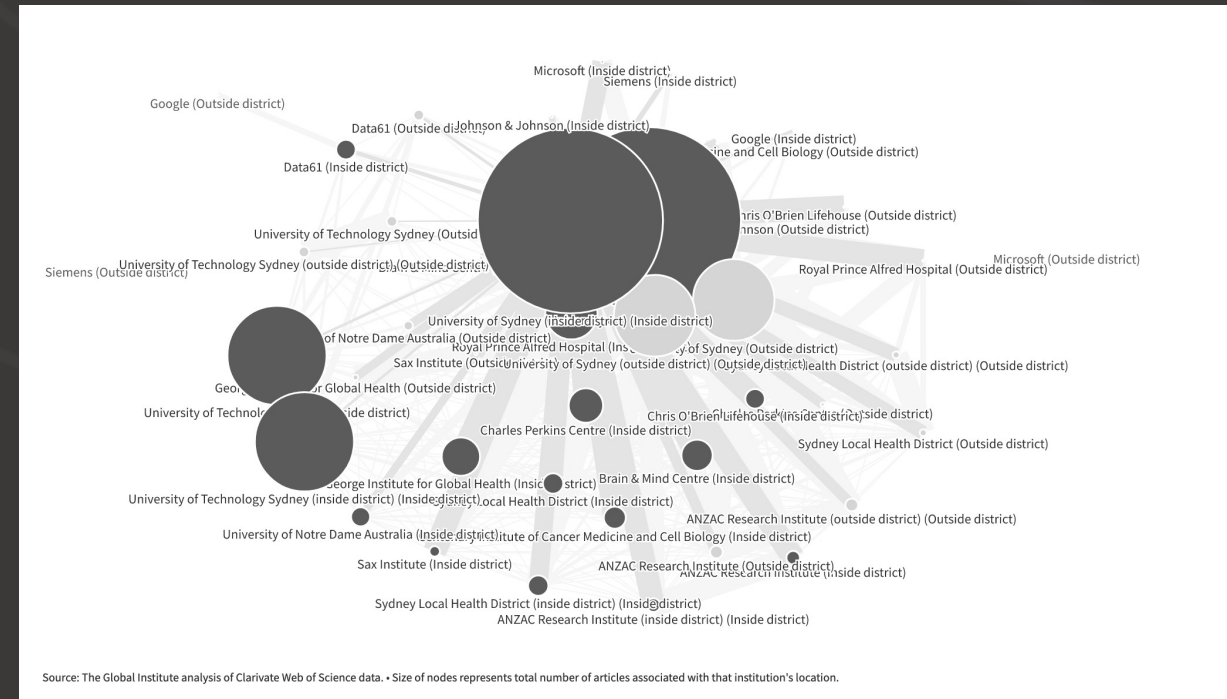
Lens 2: Globally wired, locally-networked

Number of peer-reviewed articles by location of co-authors, 2012-2021



Source: The Global Institute analysis of Clarivate Web of Science data

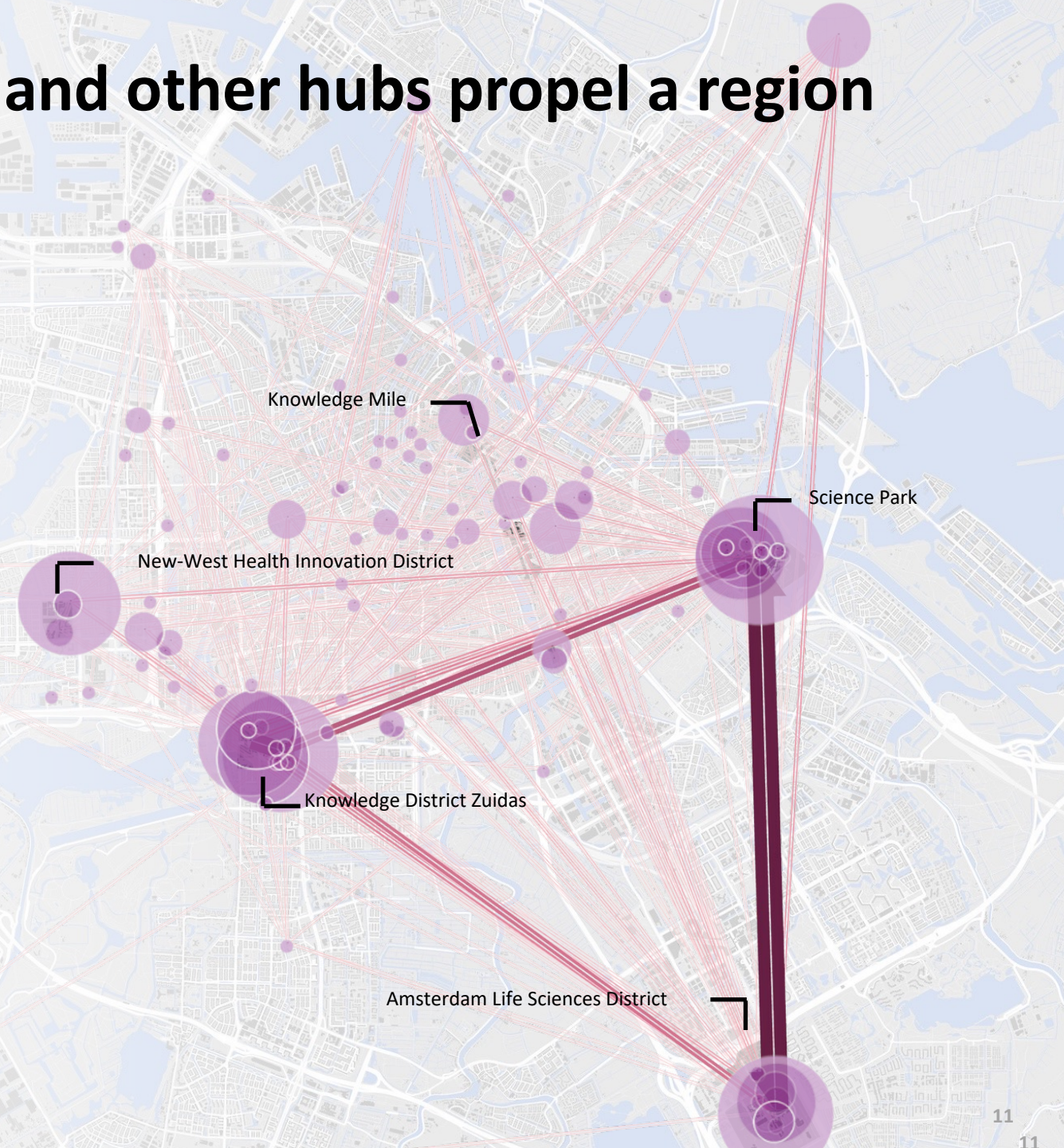
Research collaboration network: district-affiliated, 2012-2021



Source: The Global Institute analysis of Clarivate Web of Science data. • Size of nodes represents total number of articles associated with that institution's location.

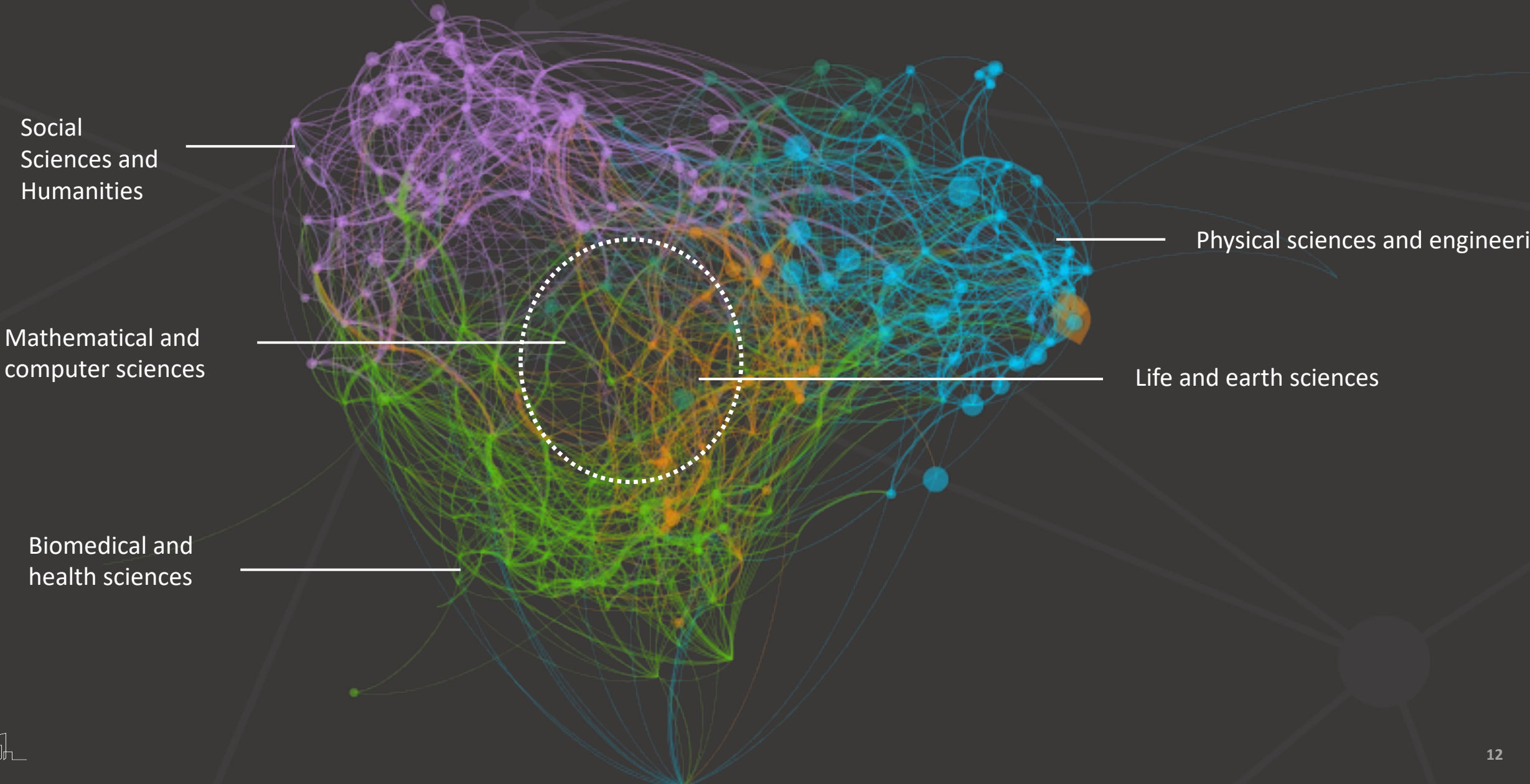
Lens 3: Constellations of districts and other hubs propel a region

Some regions have a powerful constellation of hubs in formation—a phenomenon to be leveraged



Source: The Global Institute analysis of Clarivate Web of Science data

Lens 4: Highly differentiated R&D capabilities fueled by convergence



Highly differentiated R&D capabilities underpinned by technology

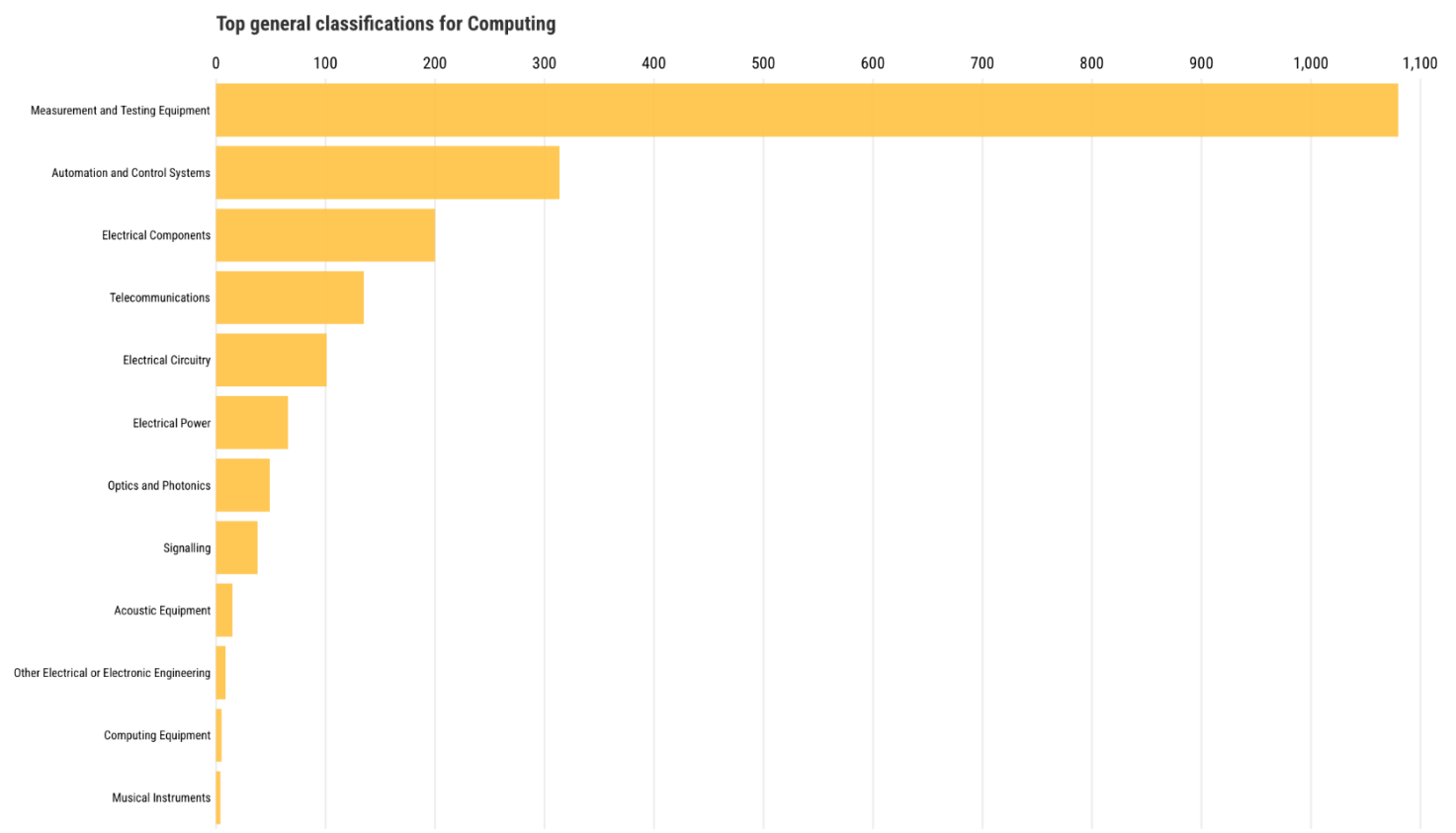
CRITICAL MASS OF PATENT ACTIVITY BY TECHNOLOGY CATEGORY

The overall size of the region's patent activity

Technology Category: ■ Agriculture and Food ■ Biomedical and Health Tech. ■ Chemistry and Materials ■ Cleantech ■ Engineering ■ Computing ■ Other Human Necessities

Select tech. category:

Select invention type:

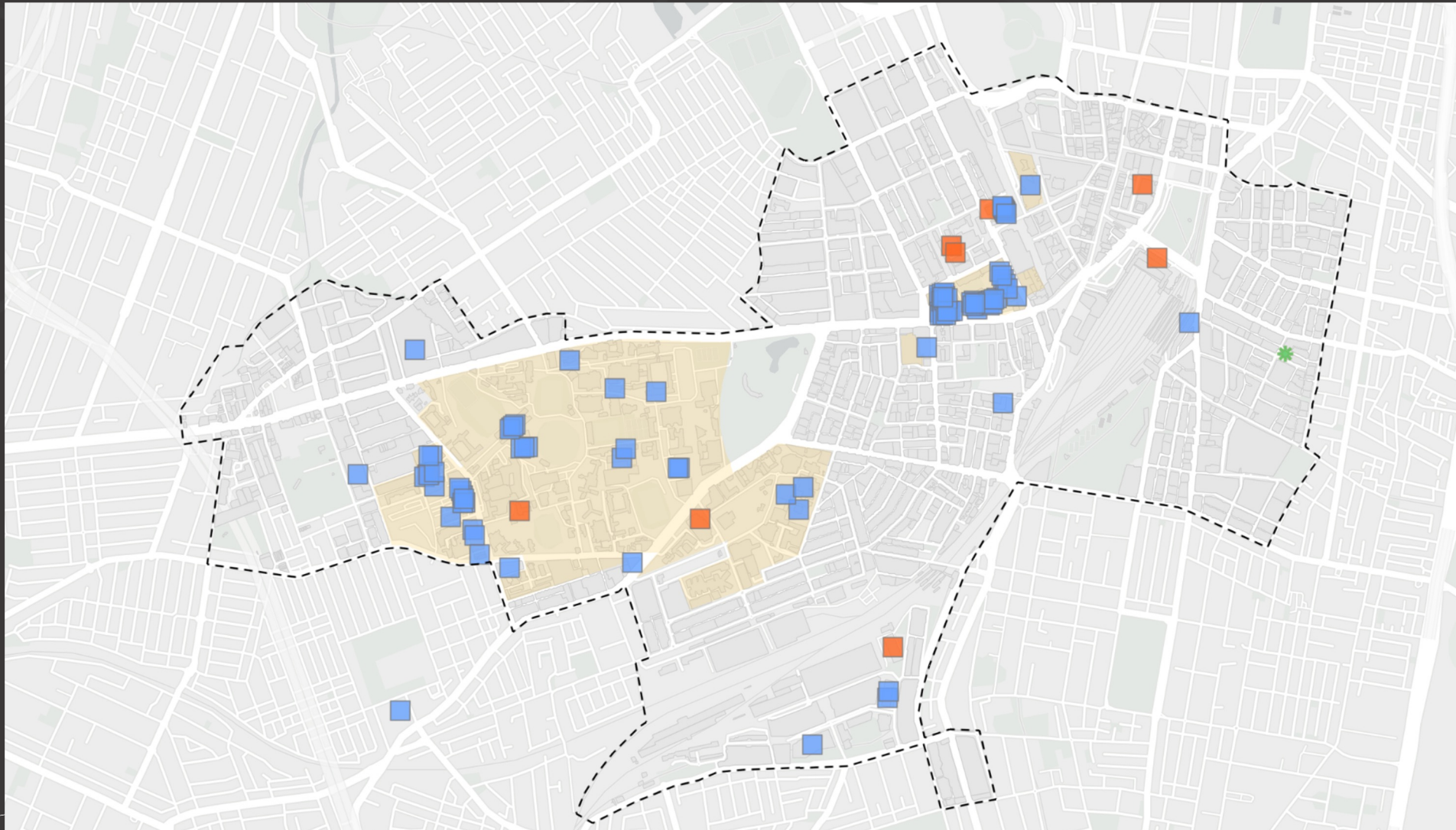


Source: CID analysis of OECD and Cambridge's The Lens data



Lens 5: The physical transformation of land to advance ambitions

Tech Central in Sydney

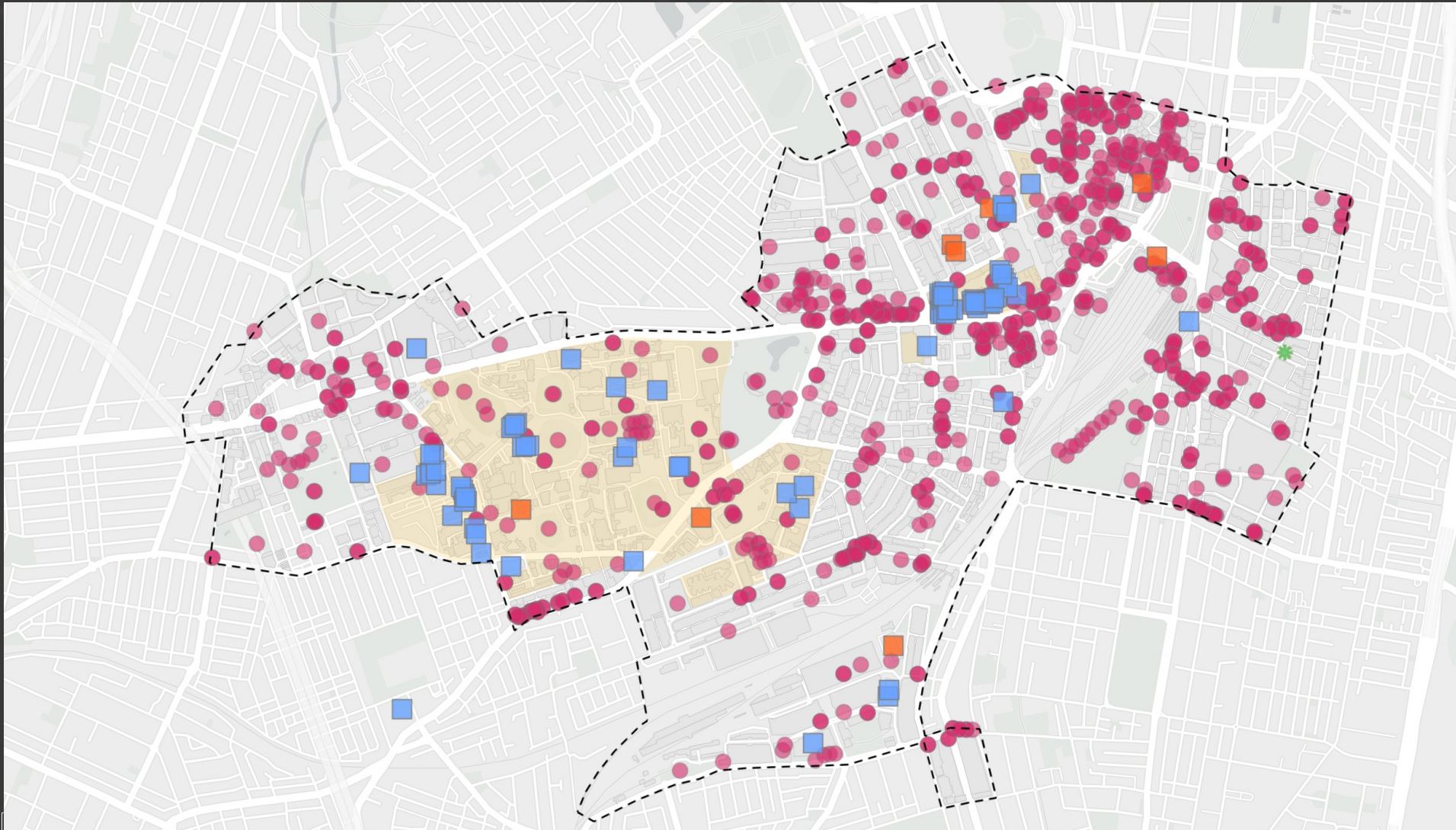


District actors

- Anchor institutions
- R&D Magnets
- Intermediaries
- Corporate Validators
- Amenities

Lens 5: The physical transformation of land to advance ambitions

Tech Central in Sydney



District actors and activities

- Anchor institutions
- R&D Magnets
- Intermediaries
- Corporate Validators
- Amenities



GREEN CLEANING STATION
(PLEASE RETURN AFTER USE)

WFL 1100
MULTI





MC @ THE COMMONS

STRAUB'S

MISSION TACO JOINT

IN FISH

LORESSO'S

MARY'S SEAFOOD & BIRDS

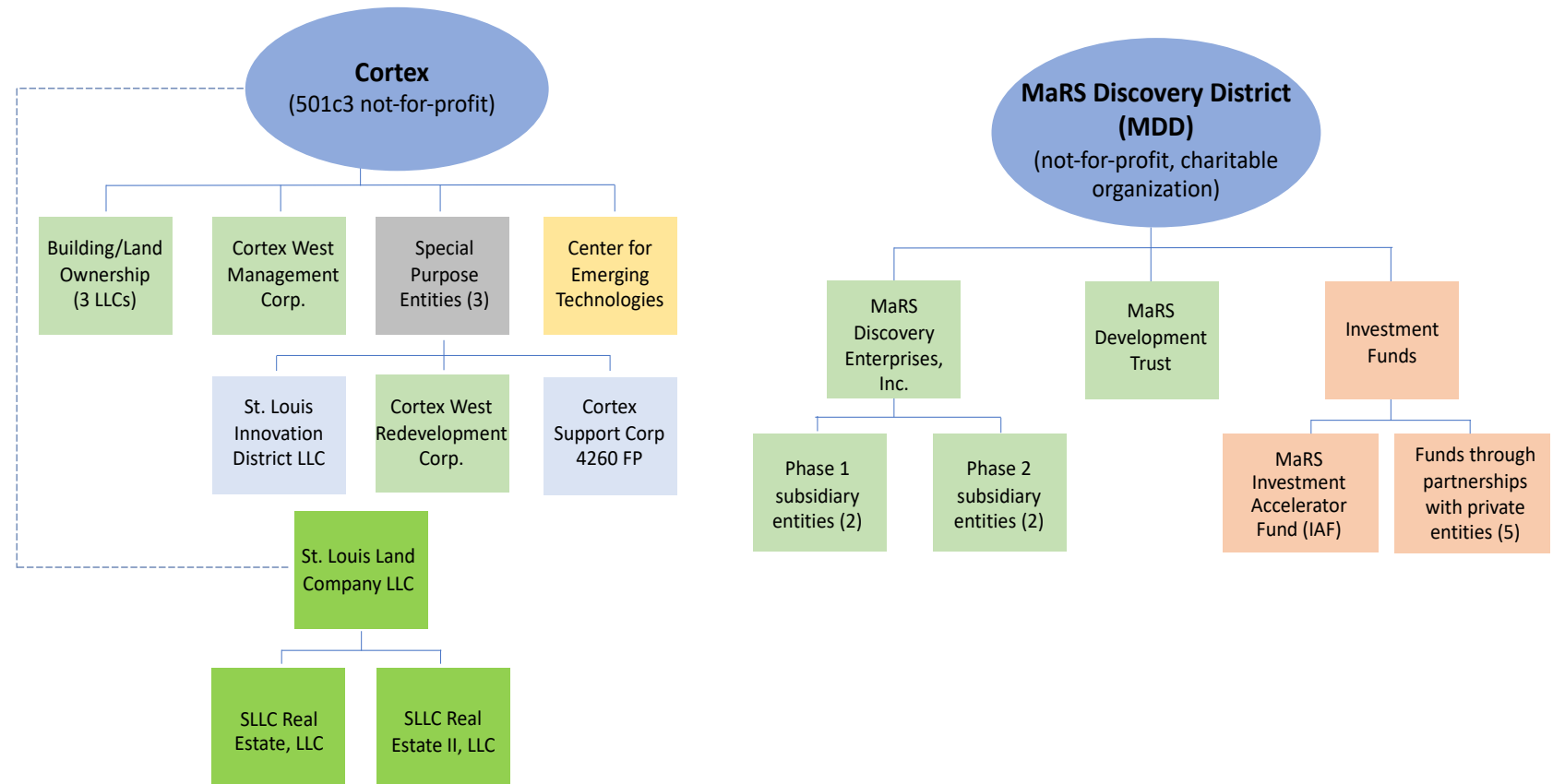
BRIDGE



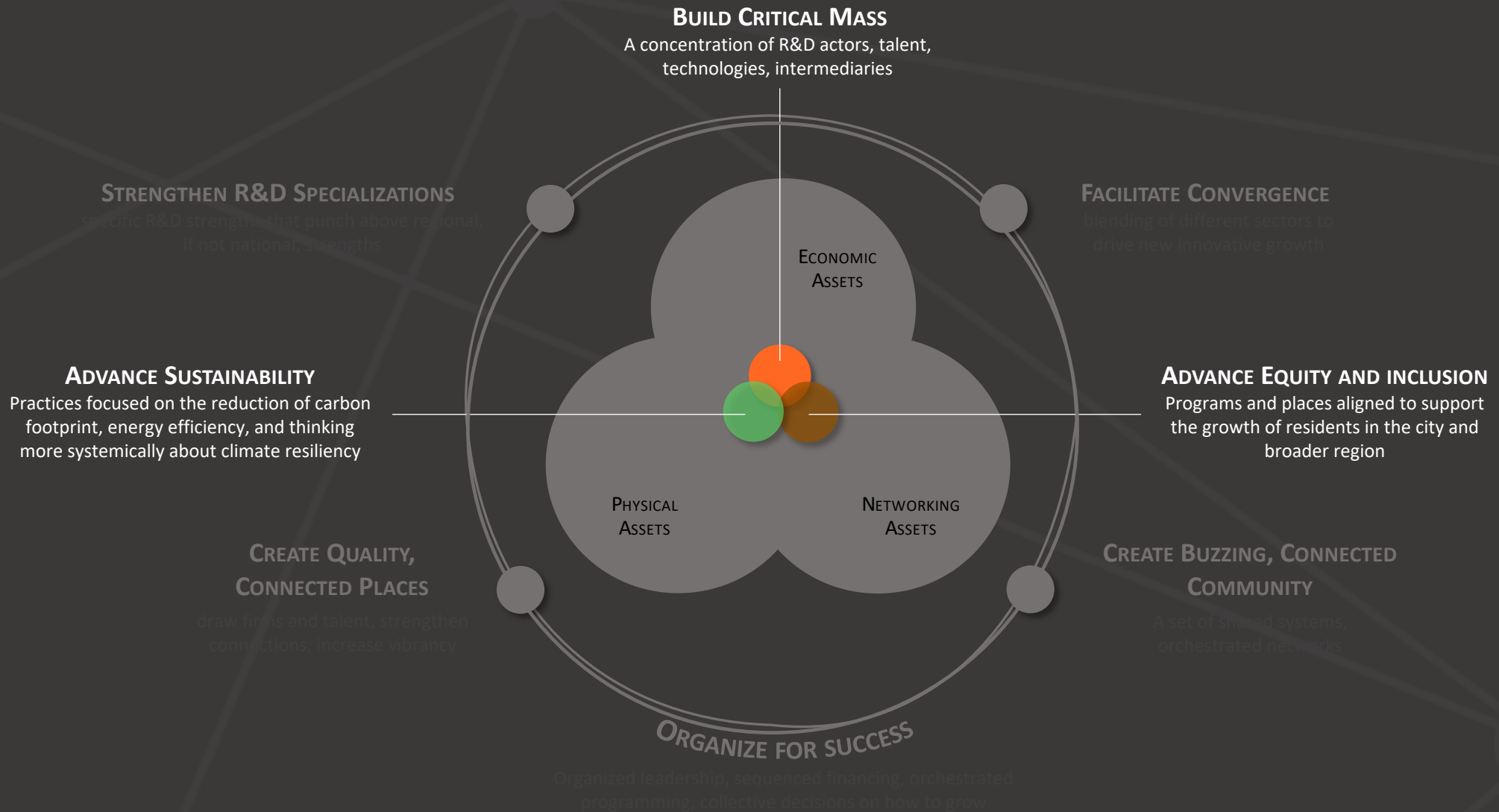
Lens 6: Organizational and governance structures

In the early stages, district champions—often anchor institutions and core champions—help finance a district’s organization to help co-design a long-term future

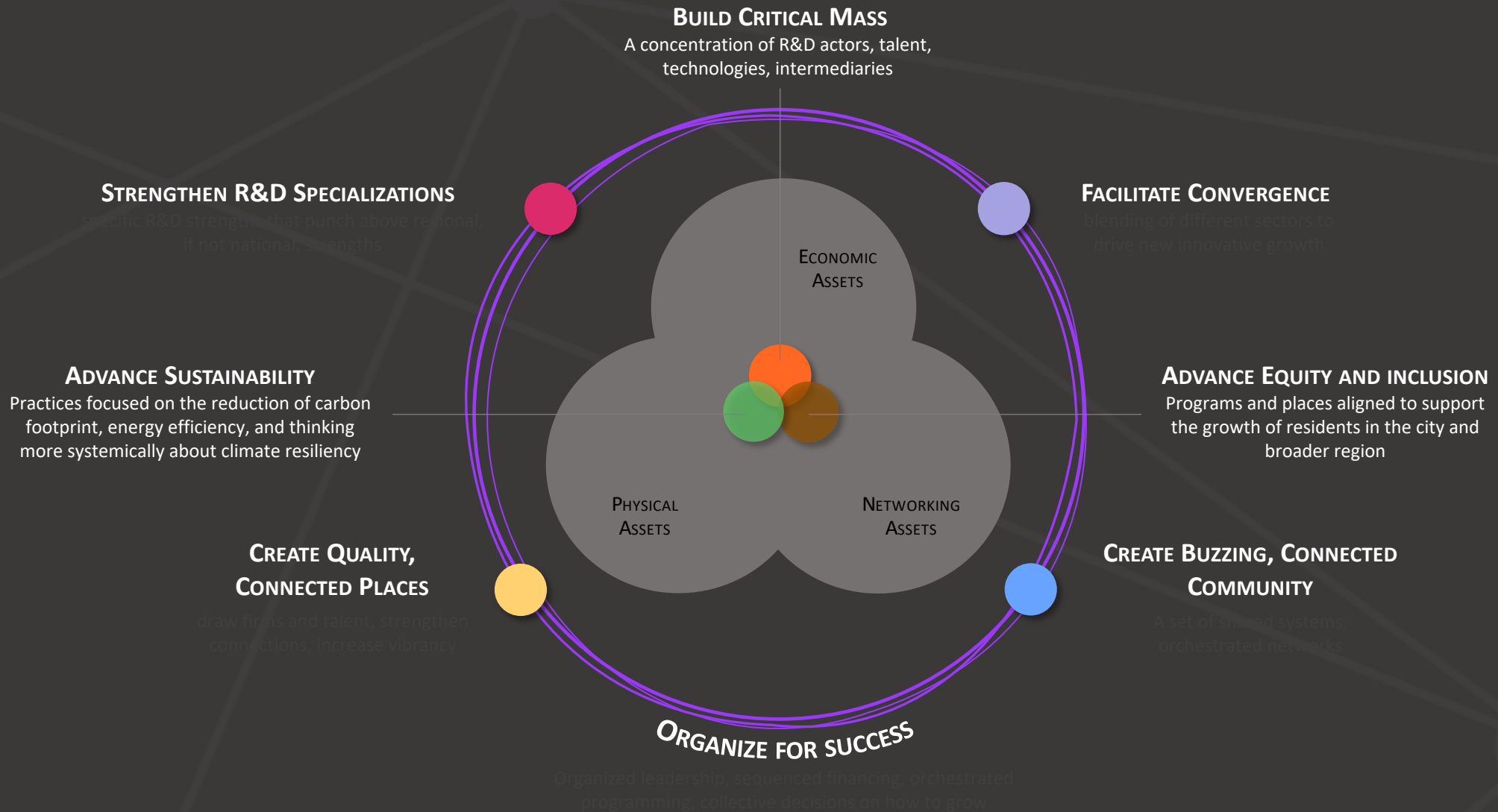
Examples of what the entire machinery of district governance can look like: *Not for Profit Structured*



Our Framework for helping districts be holistic and strategic



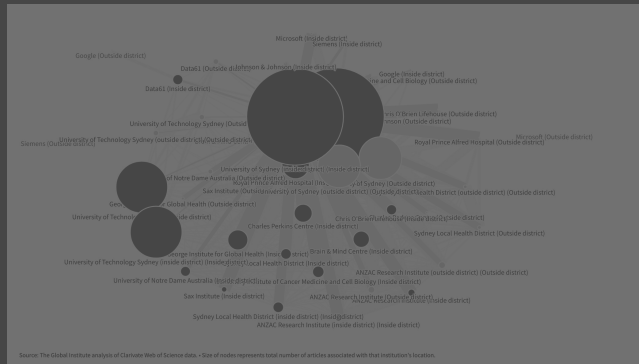
Our Framework for helping districts be holistic and strategic



My talk today

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What are districts and their role in **advancing cities and regions**



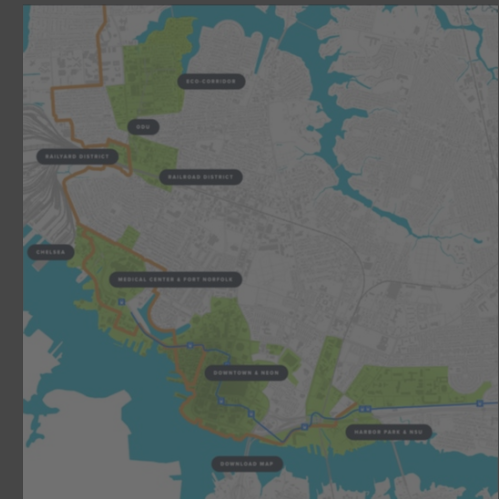
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How innovation imperatives are growing in importance, strengthening the role of **place-based innovation**



3

Insights and implications for the **Norfolk Innovation Corridor**



**Our analysis of 23 districts
across 15 countries identify
that more than 70% specialize
in fields such as advanced
medicine and human health ...**

**... our analysis also showed
growing strengths in
disciplines crucial for
decarbonization and new ways
of de-risking the economy**

Shifting, intensifying innovation imperatives



diversify talent

Cities and regions seek new ways to grow local talent through new kinds of education and training to become our future workforce



decarbonize

Government, institutional and corporate leaders—albeit unevenly—are increasing investments in solutions and systems that reduce impacts on the environment



de-risk

How regions are trying to reshore, nearshore, and smartshore in response to highly volatile markets and geo-political tensions

Examples of how innovation districts are responding

Diversify Talent

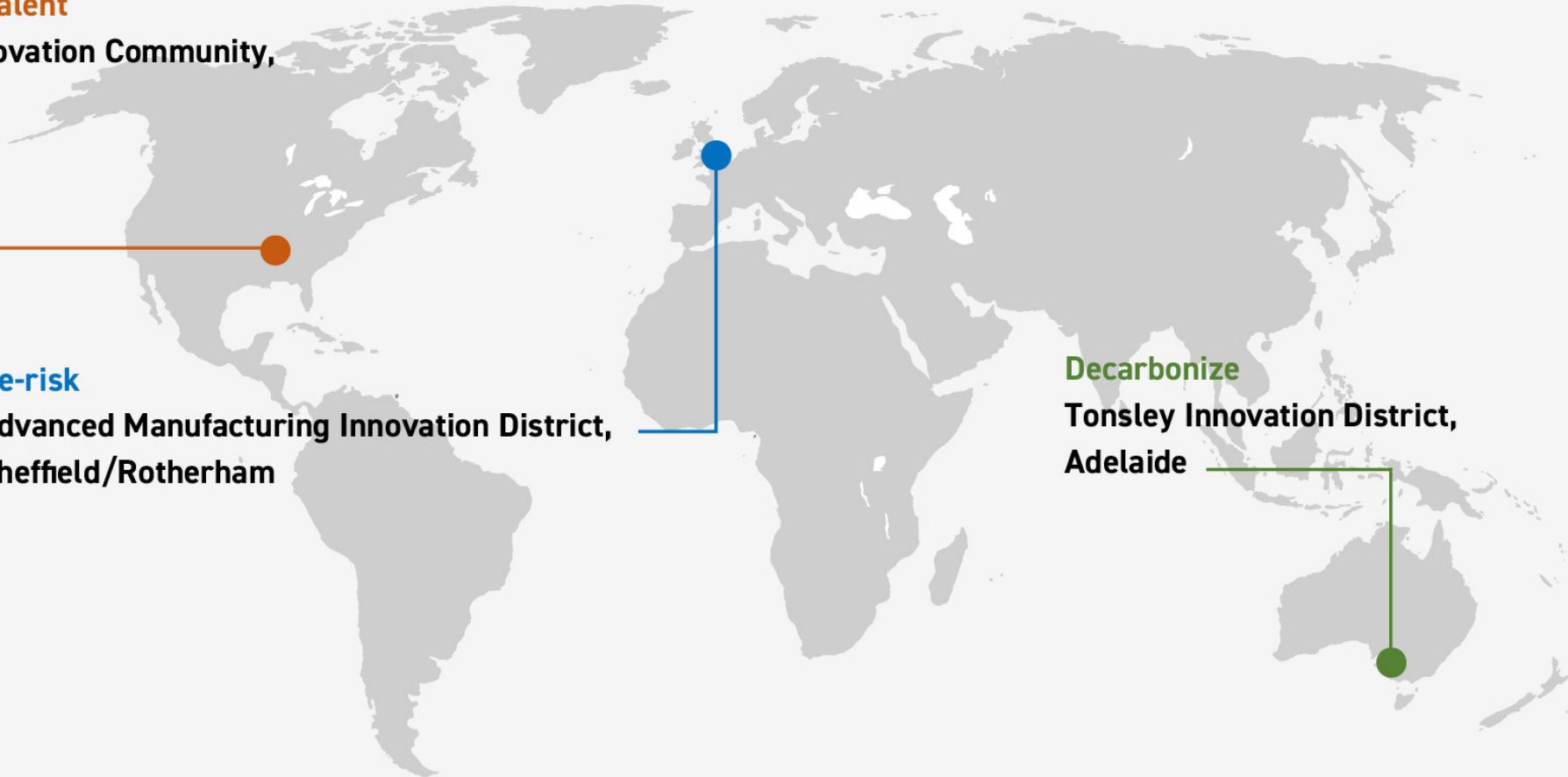
Cortex Innovation Community,
St. Louis

De-risk

Advanced Manufacturing Innovation District,
Sheffield/Rotherham

Decarbonize

Tonsley Innovation District,
Adelaide



Diversify Talent: More districts are designing programs a core strategy

United States

BNMC in Buffalo
Cleveland Tech Corridor
Cortex Innovation
Community
Pittsburgh Innovation District
Ucity in Philadelphia

Europe

AMID in Sheffield
Knowledge Quarter in
London
White City in London
MIND in Milan

Australia

Randwick in Sydney
Tec Central in Sydney
Tonsley in South Australia
Melbourne Innovation
District

Diversify Talent: More districts are designing programs a core strategy

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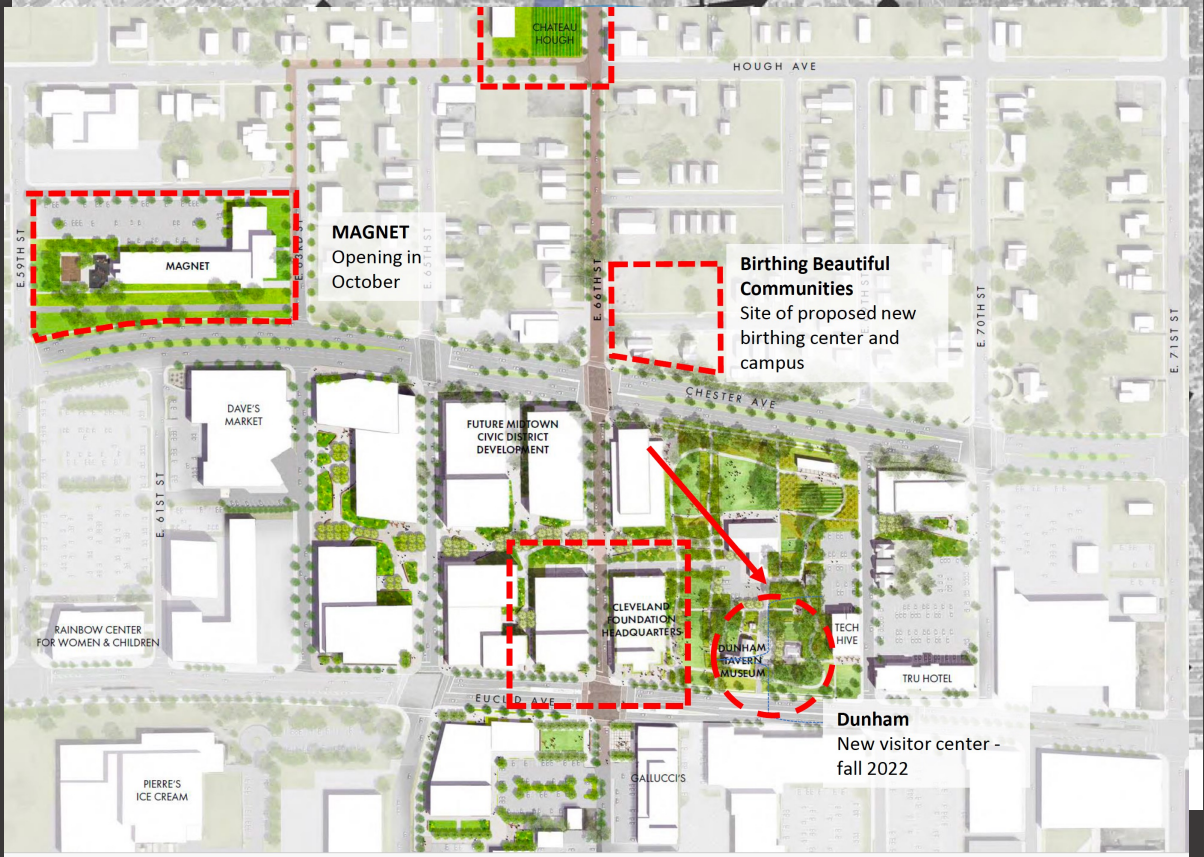
Randwick in Sydney
Tec Central in Sydney
Tonsley in South Australia
Melbourne Innovation District

Diversity and Equity: Cleveland gained traction when the community foundation leaned in



Images of the MAGNET center in Hough, installed in the renovated former Margaret Ireland Elementary School of the Cleveland Metropolitan School District. Roger Mastroianni, Courtesy MAGNET

MAGNET: Firm & human growth in advanced manufacturing



Cleveland Foundation: A "new kind of anchor"

Background on MAGNET's mission: It helps small- to mid-sized firms thrive by taking better advantage of robotics, computer-driven cutting machines, 3-D printers, and other advanced technologies. It also creates pathways to careers in high-tech manufacturing by training a rising generation of workers who need those jobs.

Decarbonization: Districts are also feeling the effects of climate



Districts are advancing projects specific to climate—but not enough

	Renewables (Rooftop solar PV)	Energy efficient lighting	Waste management	Wastewater recycling	Rainwater harvesting	Building insulation	Centralised HVAC; Geothermal	Electrified heating	Behavioral interventions	Flood mitigation	Passive design	Clean/active mobility	Landscaping	Sustainable materials
Knowledge District Zuidas, Amsterdam						✓	✓	✓	✓					
Buffalo Niagara Medical Campus												✓		
Central Innovation District, The Hague												✓	✓	
Cleveland Health-Tech Corridor														
Cortex Innovation Community, St. Louis	✓	✓				✓						✓	✓	
Distritotec, Monterrey		✓	✓	✓										
Innovation Quarter, Winston-Salem		✓				✓								
Liverpool Innovation Precinct										✓				
Medellín Innovation District	✓	✓	✓	✓										✓
Oslo Science City					✓							✓		
Phoenix Bioscience Core		✓	✓	✓										
Pittsburgh Innovation District					✓					✓		✓	✓	
PMC Innovation District, Paju											✓		✓	
Tonsley Innovation District	✓	✓	✓	✓	✓		✓					✓		
Westmead Health and Innovation District	✓	✓												

De-risking: Your region and economy are building on this imperative

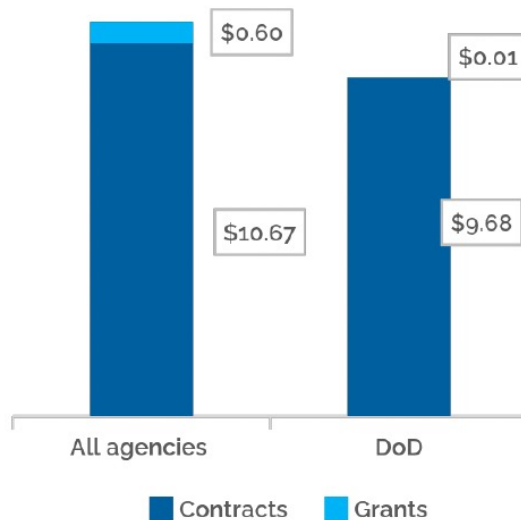
Your region is #3 in DOD spending in the country



Opportunity Size

In FY 2023, **\$11.2 billion** in contracts and grants were allocated for the Hampton Roads region. Of this amount, 94% were contracts, with 85% awarded by the DoD.

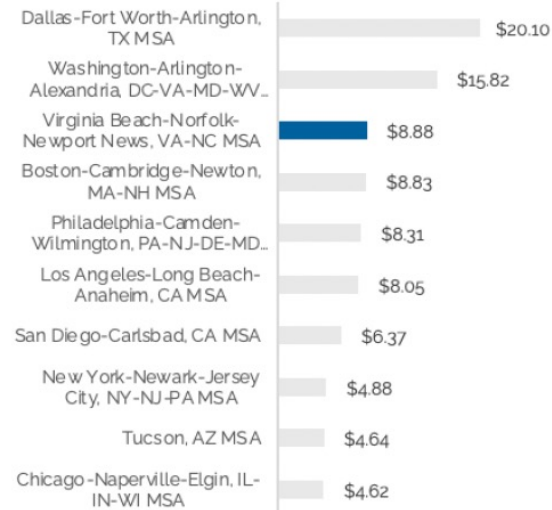
Hampton Roads Federal Spending by Agency and Type (4-Year Avg, \$B)



National Positioning*

The \$8.8 billion in FY 2023 DoD contracts makes this region the **third highest U.S. metro for DoD spending**. Note: We are developing the first-ever U.S. metro ranking by DoD spending. This is an early draft for 2023.

Top 10 US Metros with Highest DoD Contract Spending (FY23 \$Billions)*



Geographic Distribution

The bulk of DoD expenditure in Hampton Roads is concentrated within three counties: Virginia Beach, Norfolk City and Newport News City

Hampton Roads DoD Spending by Top Counties (4-Year Avg, \$B)

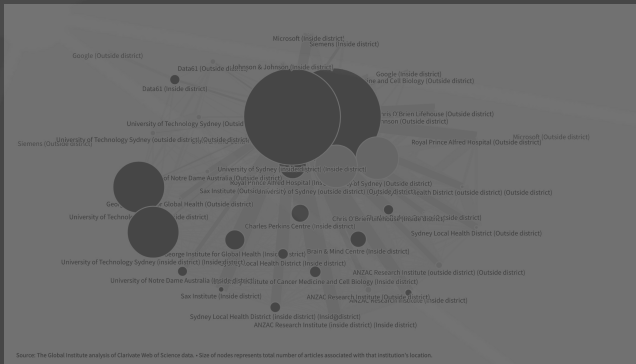
- Virginia Beach City: **\$ 4.3 B (40%)**
- Norfolk City: **\$ 2.7 B (25%)**
- Newport News: **\$ 1.5 B (14%)**
- Portsmouth: **\$736 M (7%)**
- Hampton City: **\$652 M (6%)**
- Chesapeake City **\$316M (3%)**

[See methodological notes in Appendix D](#)

My talk today

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What are districts and their role in **advancing cities and regions**



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Innovation imperatives are growing in importance, making **place-based innovation more central**



3

Insights and implications for the **Norfolk Innovation Corridor**

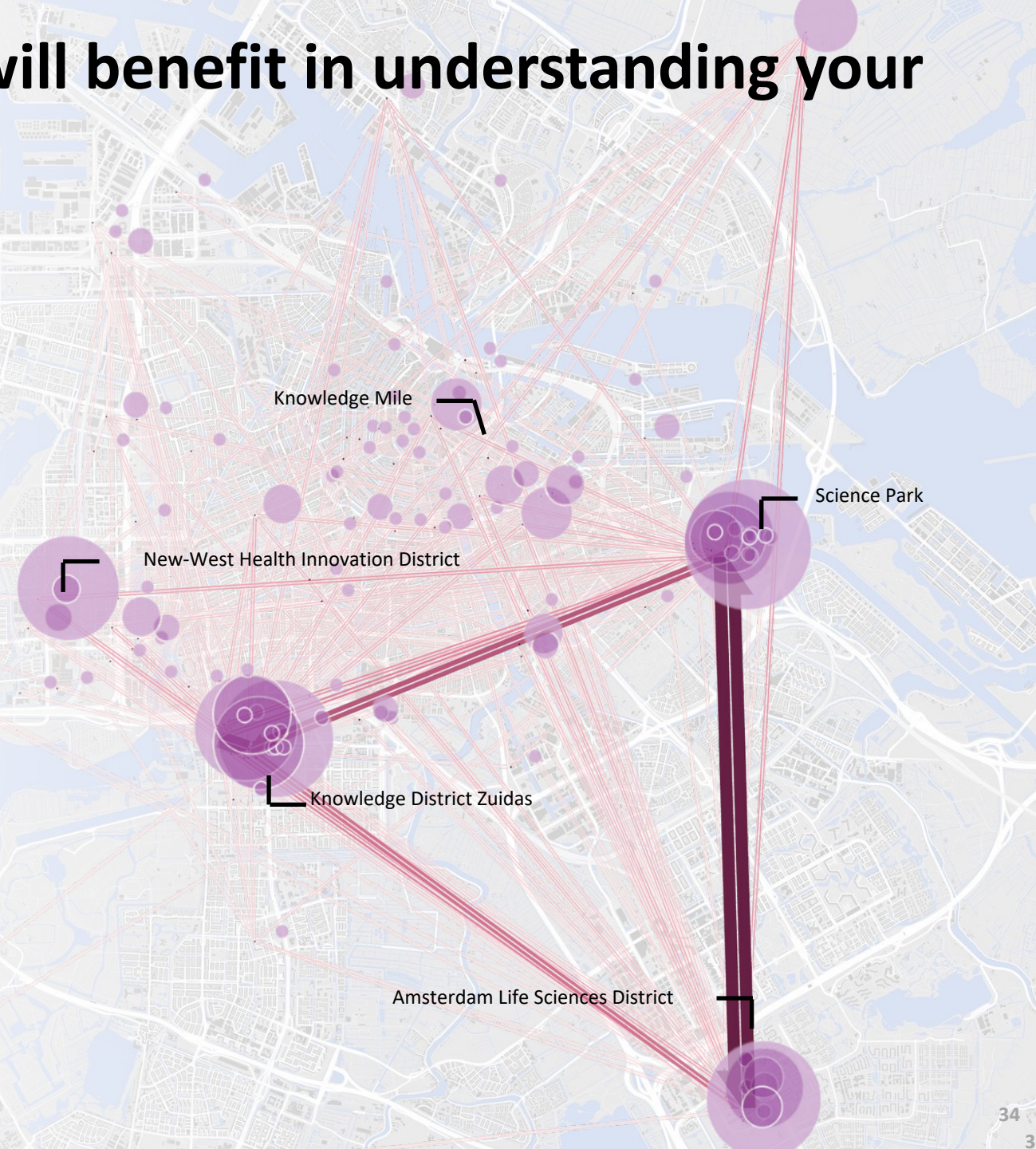


A new mental map: Your region will benefit in understanding your constellation narrative

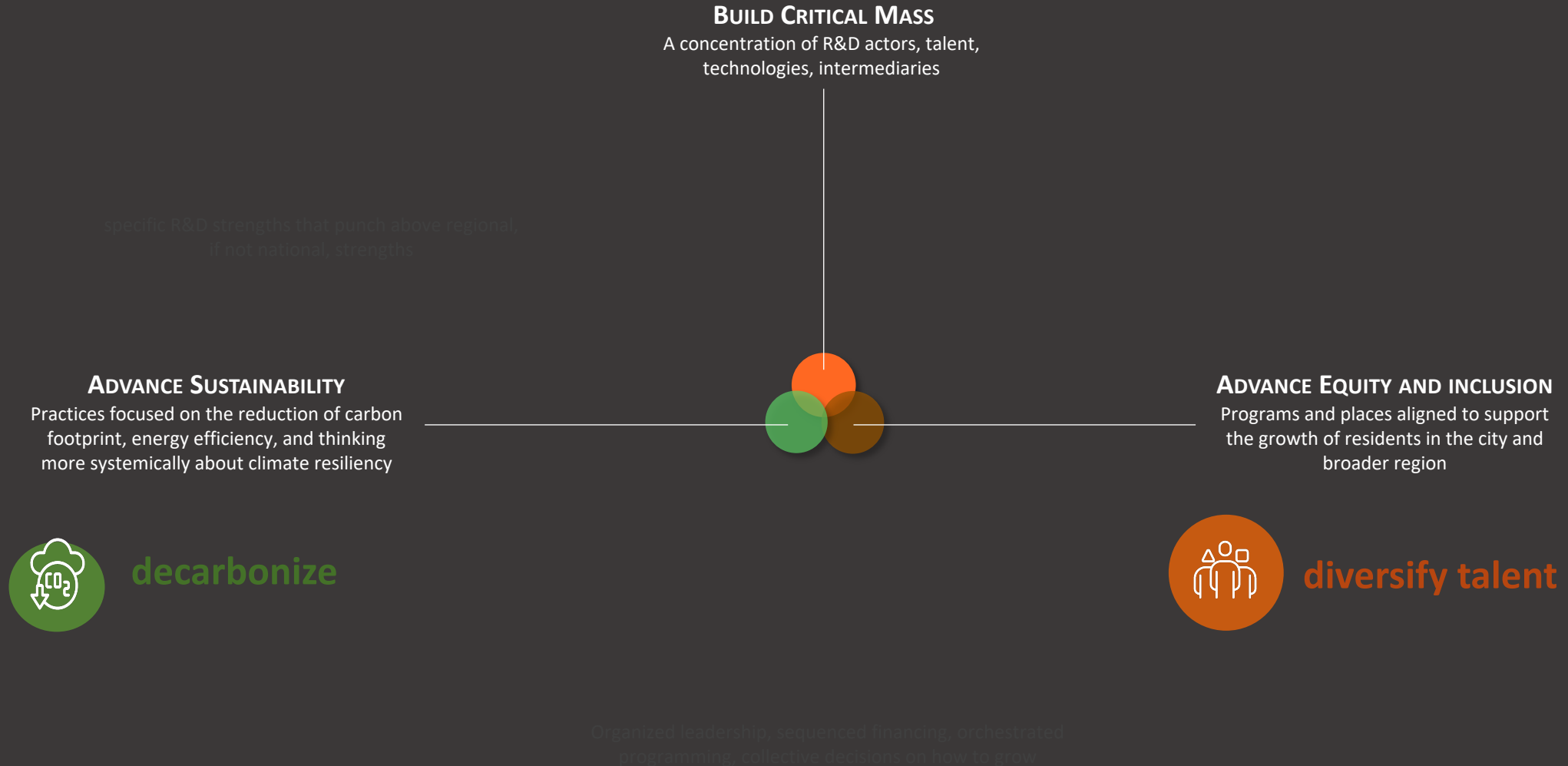
The value proposition of each hub including the NIC will become stronger, clearer

Sharpening:

- Where there are unique specializations and enabling technologies
- Differences in investments and types of industry
- Levels of collaboration and where the region could “leverage up” even more



Insights from this trip: What NIC leaders want to accomplish align with innovation imperatives



Insights from this trip: Where NIC leaders are exploring



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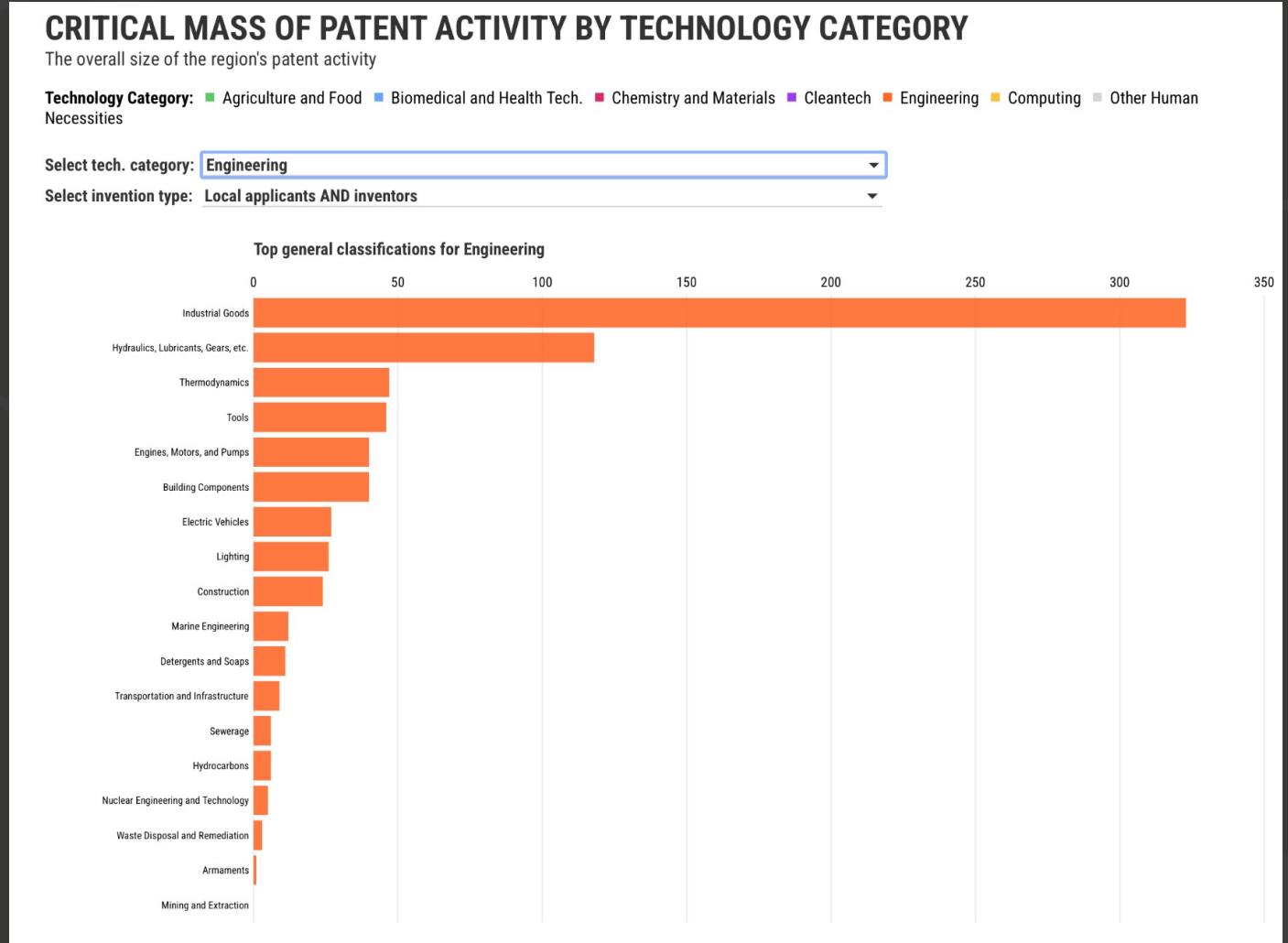
How to harness the de-risking imperative across the NIC, filling regional gaps

Organized leadership, sequenced financing, orchestrated programming, collective decisions on how to grow



Insights from this trip: Where NIC leaders are exploring

Which enabling and integrated technologies could drive industry attraction and ecosystem formation?



When it comes to climate, Norfolk is ground zero

A "project" of regional scale and global significance:

Transformation of the floodwall into a learning lab for climate tech solutions

WCVE News
Fresh Air

NEXT UP: 4:00 PM

Norfolk signs \$2.6B floodwall agreement with Army Corps of Engineers

VPM | By Katherine Hafner
Published June 15, 2023 at 5:09 PM EDT

[f](#) [t](#) [in](#) [✉](#)



The image shows a group of men in suits and a military officer in a green uniform signing a document at an outdoor event. A banner in the background reads "RESILIENT NORFOLK".



Insights from this trip

More data and spatial mapping at the district scale is needed:

- What are the enabling technologies driving and differentiating companies?
- Who are the new companies and their partners given extensive DOD funding—what is manifesting here?
- What are the early clusters forming based on localized invention and patenting data?



Insights from this trip: Powerful additions to connect the NIC to this incredible regional story

Regional leadership:
Help the NIC identify **GAPS**

Local philanthropy:
Invest in the NIC to
accelerate impact

NIC anchor institutions:
leverage integrated AI,
cybersecurity and other strengths
to build critical mass

Technologically-advanced
companies:
Value walkable, amenity locales,
who are they? (data)

Actors focused on talent
diversification:
Identify regional gaps to sharpen
the NIC proposition

Influential leaders:
Floodwall transformed into a
learning lab for climate-tec and
resiliency activities



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