

Innovation Districts: Defining the paradigm Elevating “what matters”

CREI International Forum

March 29, 2024

Laura Biancuzzo, Senior Research Associate
The Global Institute on Innovation Districts

An aerial photograph of a city grid, likely New York City, with a central area highlighted in a semi-transparent blue color. The text is overlaid on this image.

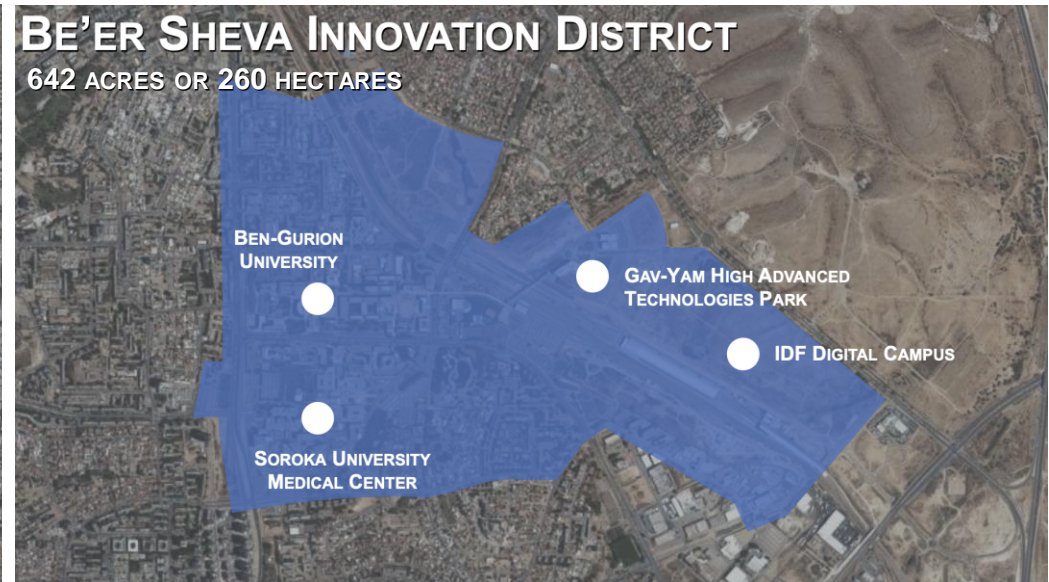
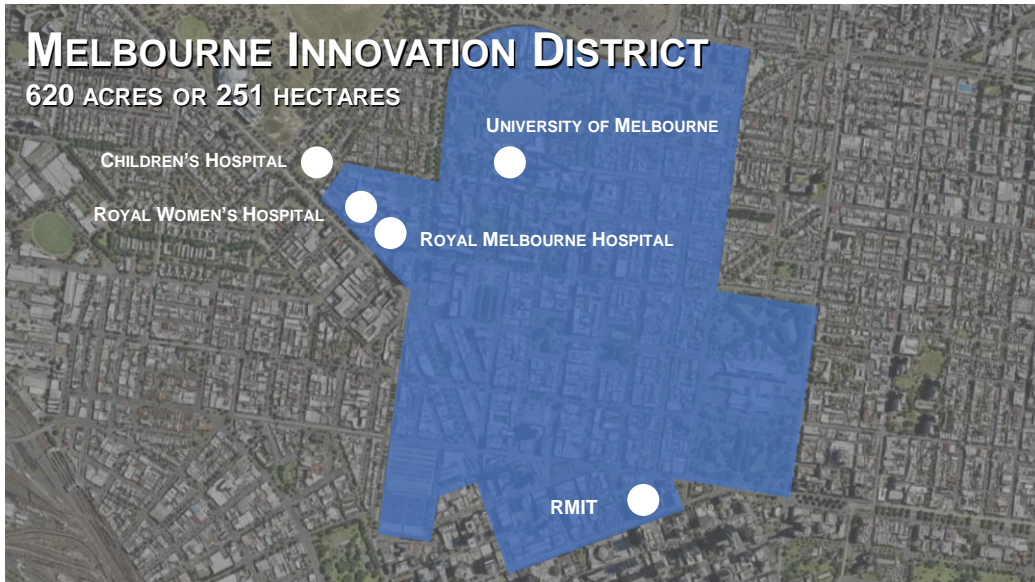
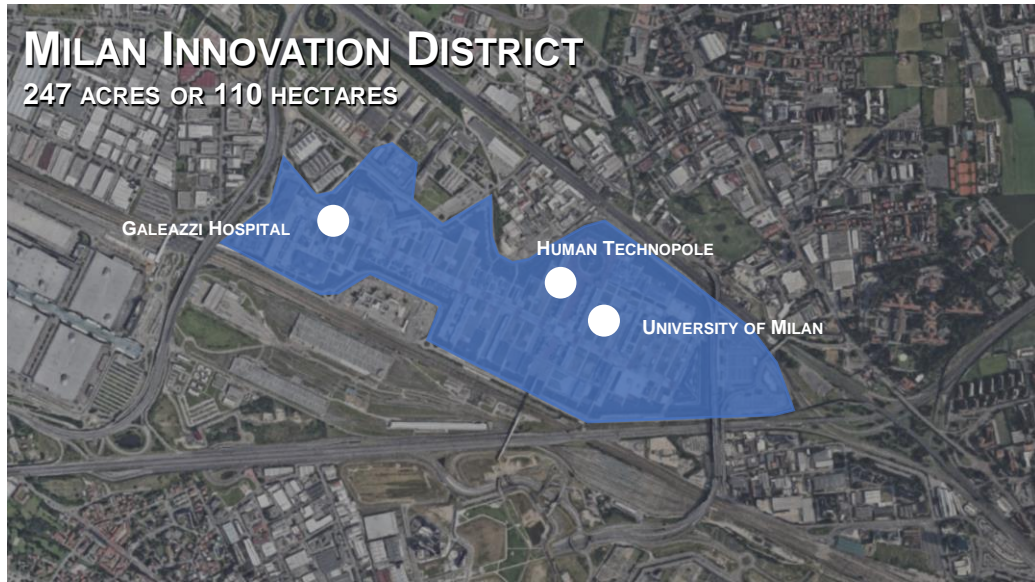
Innovation District

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

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

Bruce Katz and Julie Wagner
"The Rise of Innovation Districts"

Innovation districts are distinctive geographies, highly reflective of their local context and condition



Districts seek to leverage density, proximity and accessibility to carve out new economic and social advantages

Districts provide a unique “basket of goods” including:

Unique combination of R&D strengths and advantages that drive innovation

Concentration of innovation infrastructure and spaces that are highly accessible

Pooling of specialized talent that sparks creativity and collective problem-solving

Walkability that fosters a sense of community, encouraging chance encounters and idea exchange

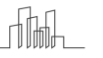
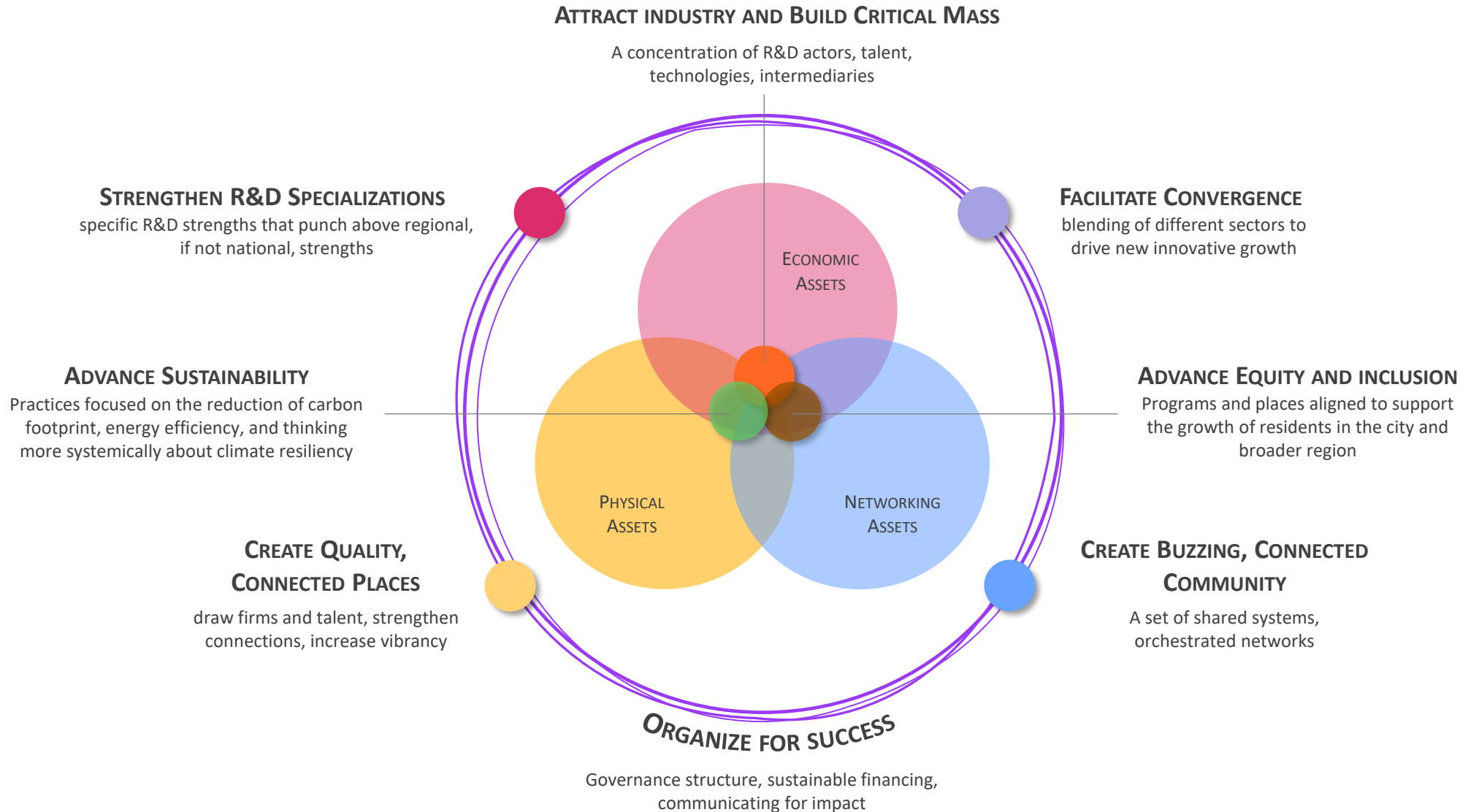
Quality design that enhances the overall environment, promoting creativity and a positive atmosphere conducive to innovation

Well-programmed public spaces that define an inclusive, diverse, and opportunity-rich environment

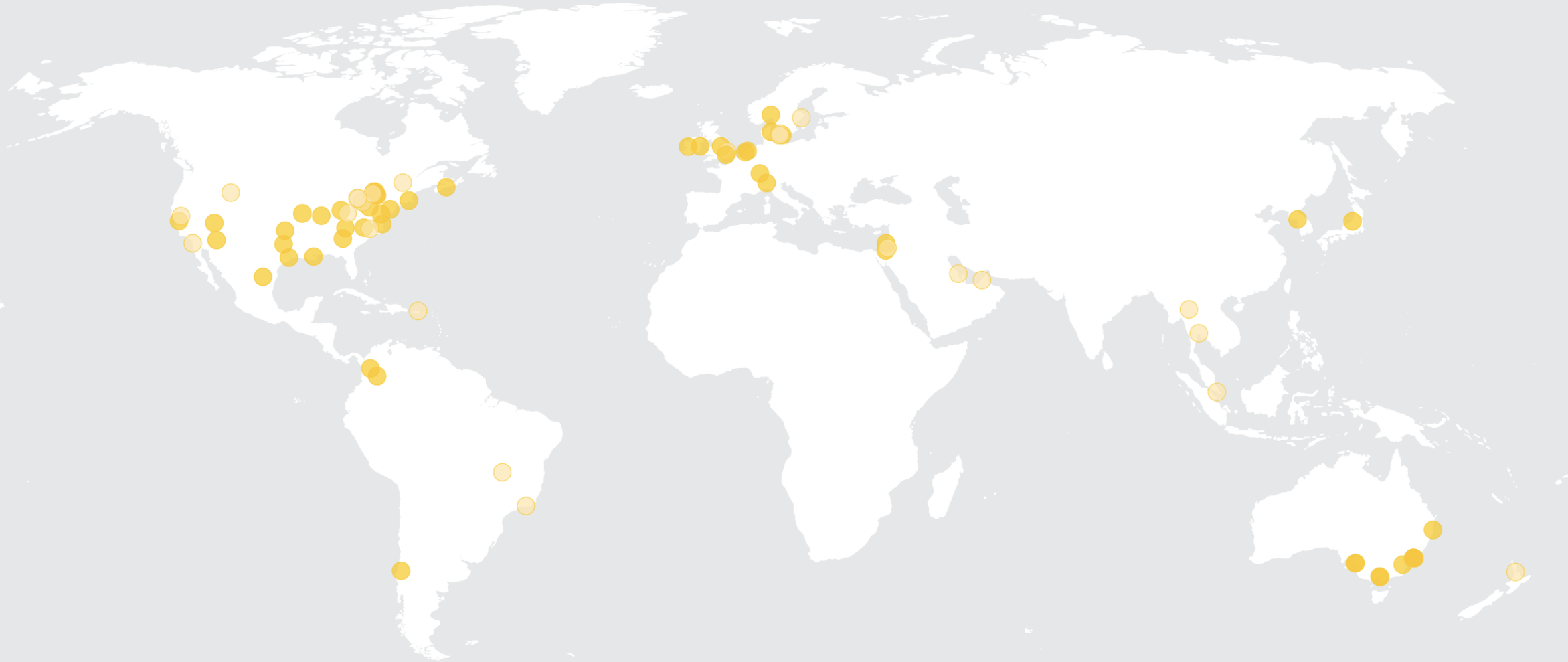
Strategic mixing of uses including amenities and community-centered services that integrate work, live, play, and learn activities





Our methodology to understand the potential of districts including where they are underperforming



Our regular engagement with dozens of innovation districts keeps us grounded in this changing practice



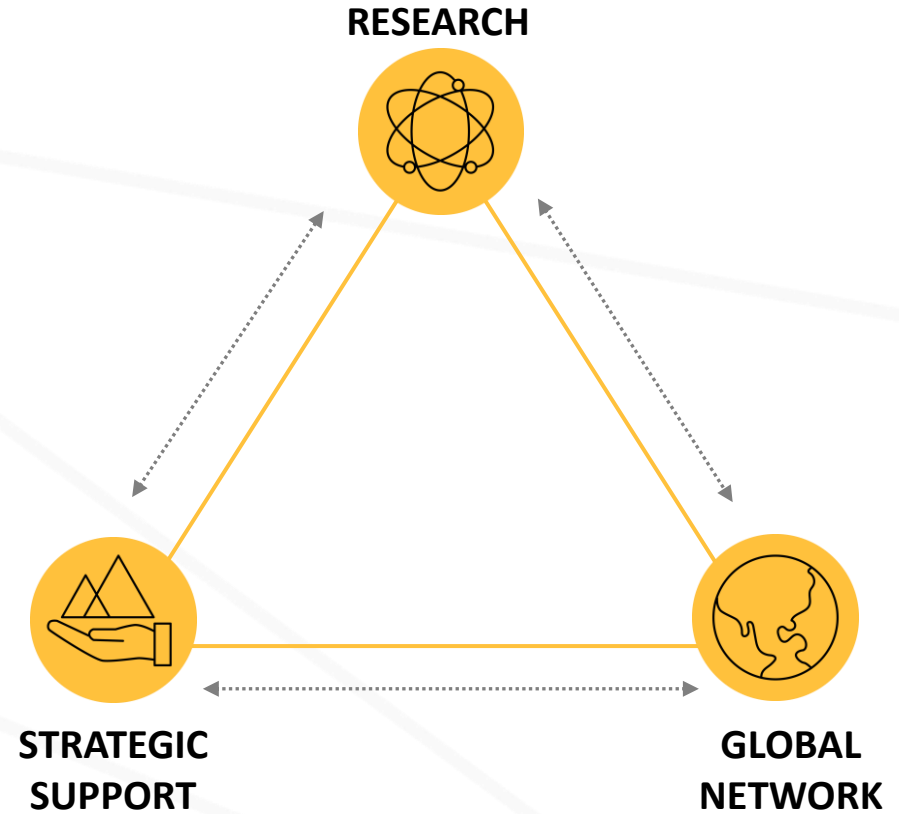
Legend

-  Innovation districts that either have been part of or are participating in the Global Network
-  Innovation districts strategically engaged with The Global Institute



Our approach is impactful

We advance districts through
3 areas of focus



RESEARCH not only surfaces R&D strengths, it moves districts from disciplines to impact

STRATEGIC SUPPORT resolves district bottlenecks and helps leaders test new solutions that redefine the practice globally

GLOBAL NETWORK creates an empirically-grounded and collaborative community where districts work together to strengthen their competitive advantages



**IF YOUR AMBITION IS TO
UNDERTAKE A**

**HIGHLY ITERATIVE
INTENTIONAL
EMPIRICALLY GROUNDED
CONTEXT-SENSITIVE
SYNERGISTIC**

**PROCESS TO REALIZE THE FULL
POTENTIAL OF YOUR
INNOVATION DISTRICT**

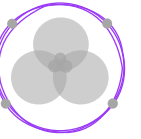




**YOU MUST
FOCUS ON
WHAT MATTERS**

Advancing innovation districts requires moving multiple levers, pressing multiple buttons, focusing on orchestrated outcomes





Governance is the vehicle through which districts become more intentional

Mission-Focused Organizations Dedicated to Lead District Efforts

Dominant Player Model	Multi-stakeholder Model	Multi-stakeholder Model
<p>Winston-Salem</p> <p>North District Owners Association (NDOA) of Innovation Quarter is a declaration of legal covenants and other conditions entered into by Wake Forest Innovation Quarter Management Co., a 501(c)3. The NDOA was established to manage, maintain, secure and program common areas.</p> <p>The anchor institution (WFBMC) dominates land ownership use in the IQ, facilitating a streamlined approach to governance.</p> <p>The Innovation Quarter has 11 employees; six of which are dedicated full time; three contribute in a dual role within Wake Forest Baptist Medical Center. FT personnel are Wake Forest Baptist Medical Center employees.</p>	<p>Buffalo</p> <p>Not for profit, 501(c)3 organization.</p> <p>Multi-stakeholder board, which includes district institutions, two neighborhood reps, and a neutral chair.</p> <p>Four Board Committees: Operations and Coordination, Finance and Personnel, Governance and Audit/Compliance.</p> <p>Nine Work Councils, such as: planning, inclusive procurement, public safety.</p> <p>Revenues generated through a portfolio of structured parking facilities, and owner of five parcels.</p> <p>28 positions including President and CEO. All financed by income generated through the 501(c)3.</p>	<p>St. Louis</p> <p>Not for profit, 501(c)3 organization, The Cortex Innovation Community.</p> <p>22 voting members of this multi-stakeholder board, which includes it's four founding members, additional voting members and ex-officio directors.</p> <p>Diversity of board (women, minorities, companies and start-ups) viewed as fundamental.</p> <p>Supplemented by seven committees, which include audit, executive, finance, governance, inclusion, program, and real estate and planning.</p> <p>14 full-time positions including President and CEO. All financed by income generated through the 501(c)3.</p>

Alliance or Partnership where District is Part of a Broader Portfolio

Government-Led Alliance	Public-Private Partnership
<p>Medellín</p> <p>The district is led by an alliance among three local agencies that focus on district planning and implementation:</p> <ol style="list-style-type: none"> Urban development company: Manages the land & infrastructure. Ruta N: The Innovation Agency of Medellín, focuses on strengthening the district's innovation ecosystem. The district is a Ruta N project. Mayor's Office: Developing public policies to guide the district. <p>Rely on Strategic Steering Committee structure and includes members of alliance universities, business, and social-focused organizations.</p> <p>10 part-time positions as they have other projects.</p>	<p>Pittsburgh</p> <p>Not for profit, 501(c)3 organization, InnovatePGH.</p> <p>Orchestrates a collaborative partnership between the mayor, university presidents, foundations, and business and community representatives.</p> <p>A working/governance board exists to provide fiscal and operational oversight.</p> <p>5.5 positions including an Executive Director plus one additional staff working full-time on a fiscally-sponsored program separate from InnovatePGH's core mission.</p>

Hybrid: Dedicated Effort Through a Partnership

Secretariat Model
<p>Melbourne</p> <p>MID-partners are now considering a Secretariat model of governance, which creates a light "backbone" organization for a minimum of two years.</p> <p>The organization would report to the MID Board.</p> <p>New secretariat model would include three fixed-term roles: general manager, project manager, and communications/events manager.</p> <p>This governance model is now under consideration.</p>

Source: The Global Institute analysis of nine innovation districts across six countries, 2020



Organize for Success

Diversified financial portfolios are essential to cover districts horizontal and vertical infrastructure

The “secret sauce” is a creative mixture of funding coming from a broad range of investors across most asset classes



Funding was received from this source

Largest amount of funding was received from this source

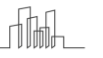
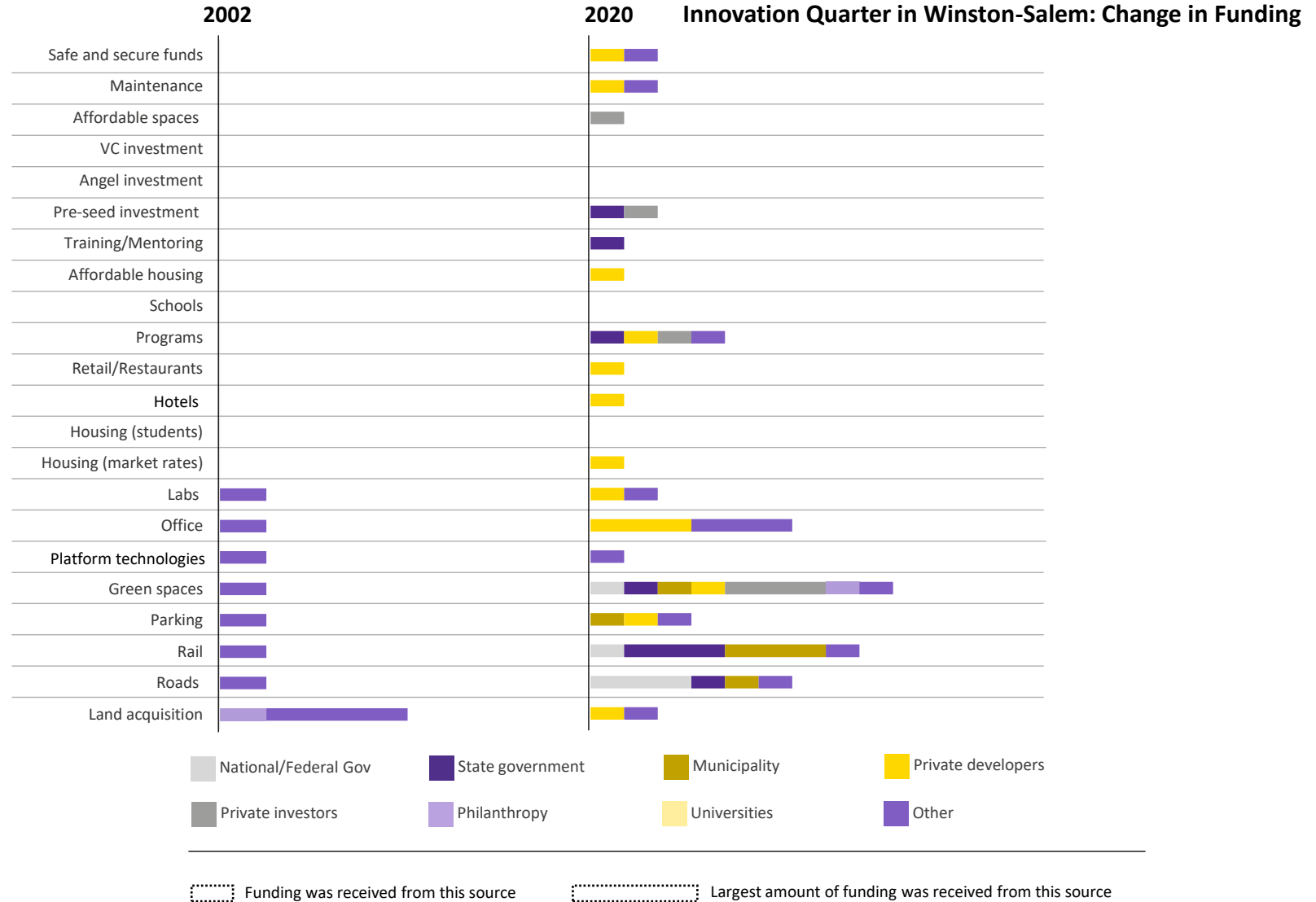


Organize for Success

Diversified financial portfolios are essential to cover districts horizontal and vertical infrastructure

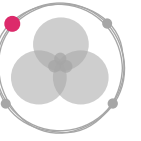
The “secret sauce” is a creative mixture of funding coming from a broad range of investors across most asset classes

Funding mix can change dramatically over time with a turnover of investors covering the growing needs of the district



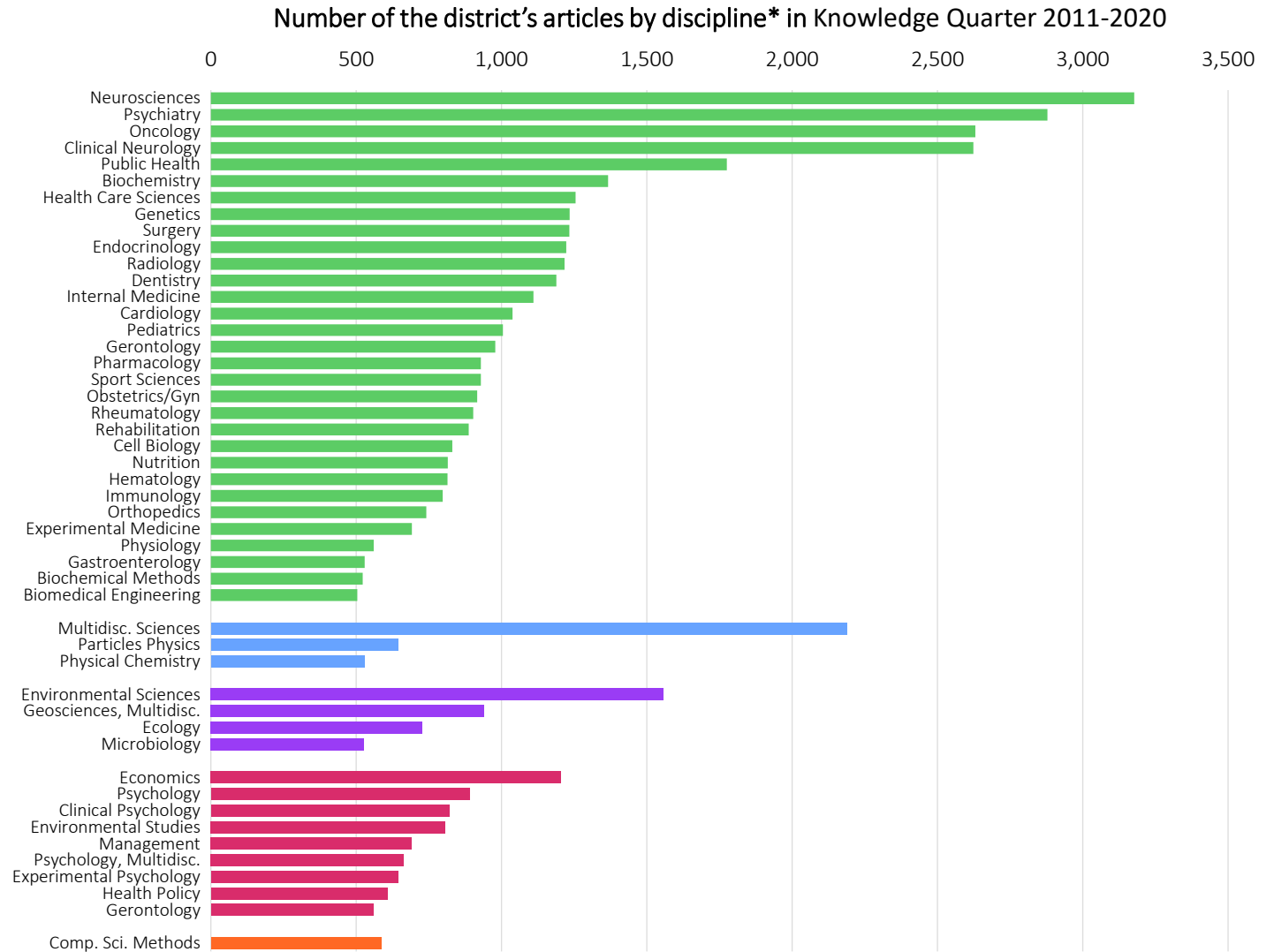
Unique R&D Strengths

Unique specializations identify the *orientation* of districts R&D activity



Specialization measures the amount and concentration of R&D activity in a particular science or type of research

If a district devotes disproportionately large amounts of expertise towards a science, it specializes in it, which may suggest it is a particular strength



Legend

- Life and health sciences disciplines
- Physical sciences and engineering disciplines
- Environmental and earth sciences
- Social sciences and humanities disciplines
- Mathematics and computer science disciplines

Shows only disciplines with more than 500 articles, out of 254 disciplines. Source: The Global Institute analysis of Web of Science and Lens.org data, 2021



Unique R&D Strengths

Specific areas of convergence unveil novel cross-disciplinary R&D activity

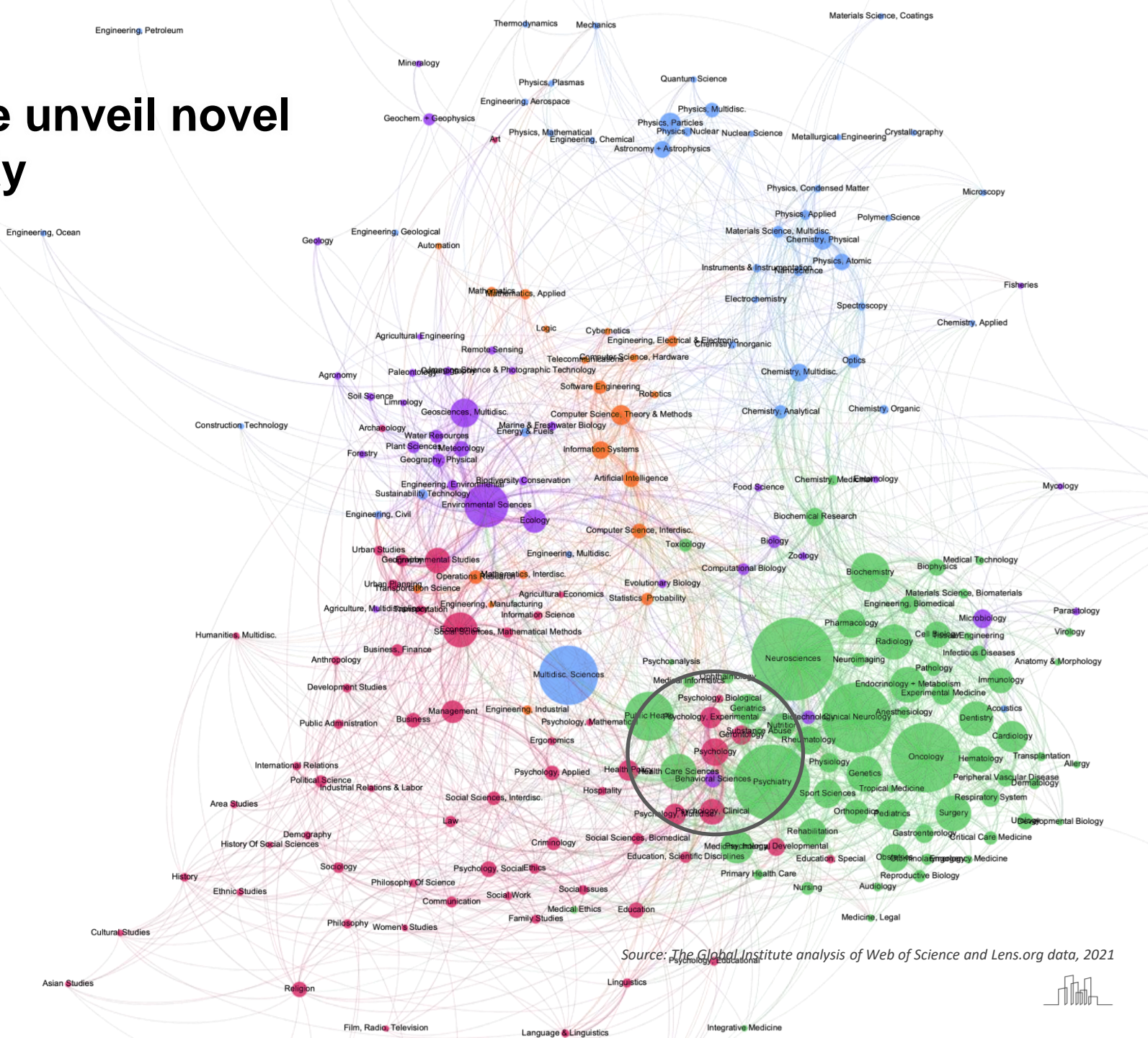
Convergence measures the frequency of collaboration between researchers from different scientific fields or disciplines

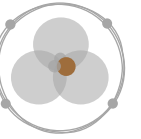
It is important to novel discoveries and problem solving

Such collaboration often requires the close spatial proximity that innovation districts provide

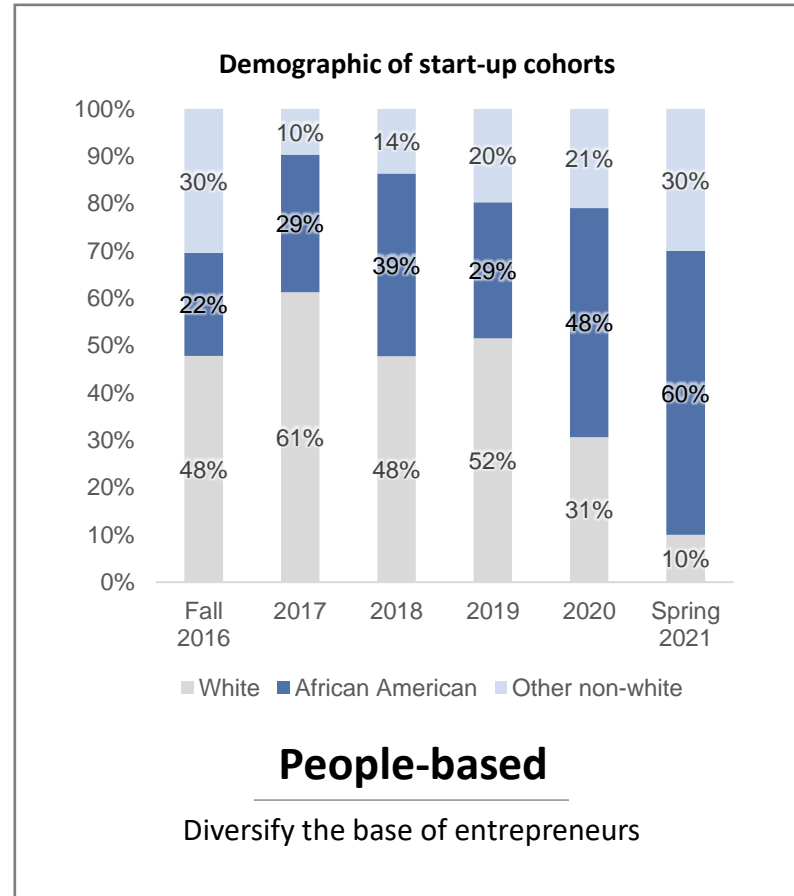
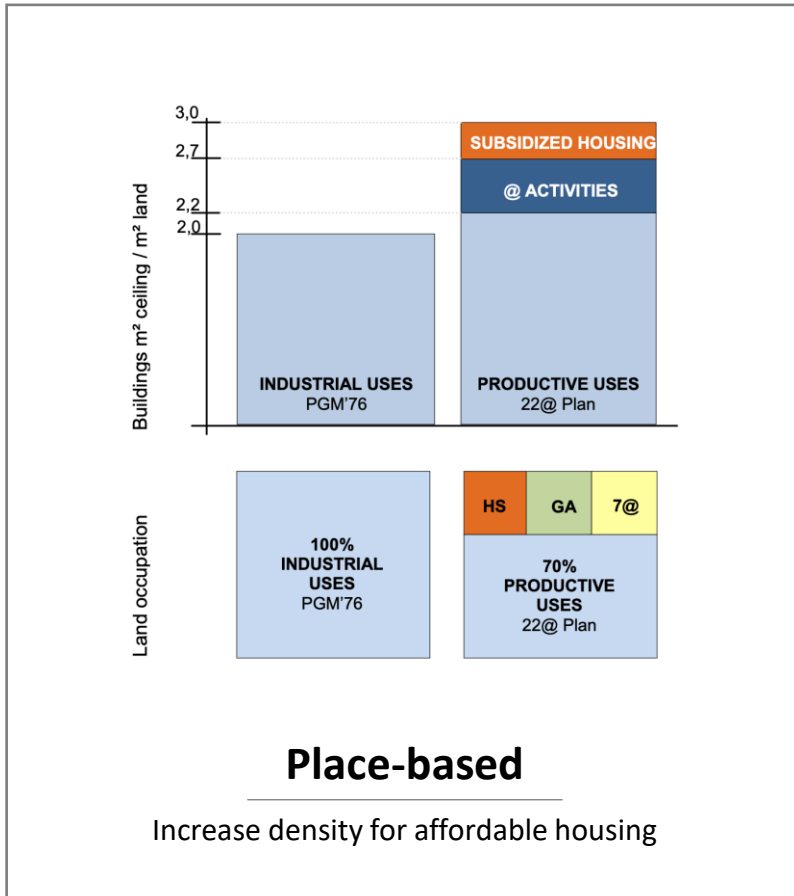
Legend

- Life and health sciences disciplines
- Physical sciences and engineering disciplines
- Environmental and earth sciences
- Social sciences and humanities disciplines
- Mathematics and computer science disciplines



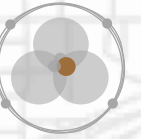


Designing for equity and inclusion turns districts into an avenue for economic opportunity



Equity and Inclusion

Using equitable growth as core value proposition helps districts become magnetic and inclusive for a diversity of people



Quality of Place

Districts aspire to be magnetic, inviting places

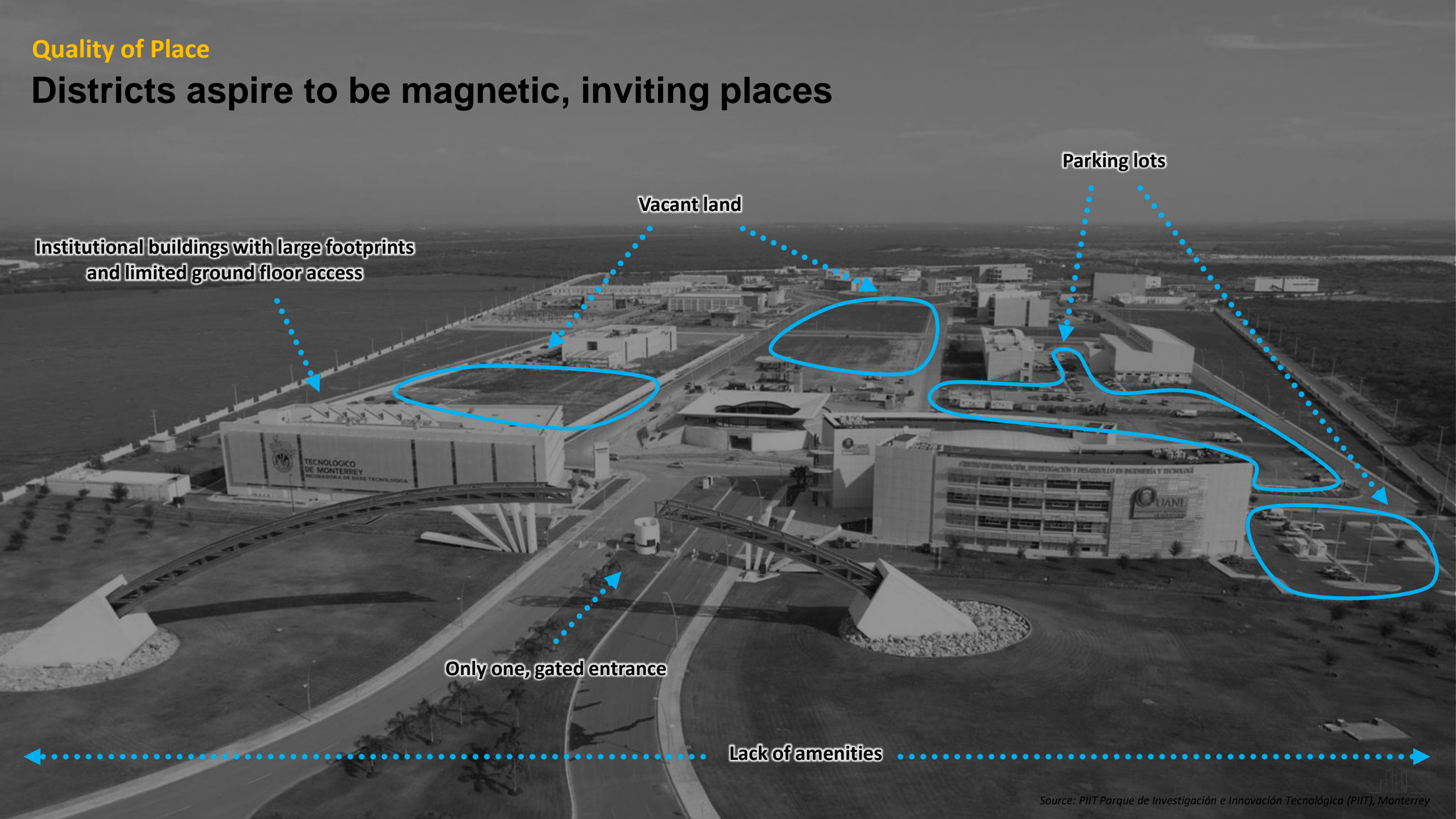
Institutional buildings with large footprints and limited ground floor access

Vacant land

Parking lots

Only one, gated entrance

Lack of amenities



Quality of Place

Designing for people and creating unique experiences matters



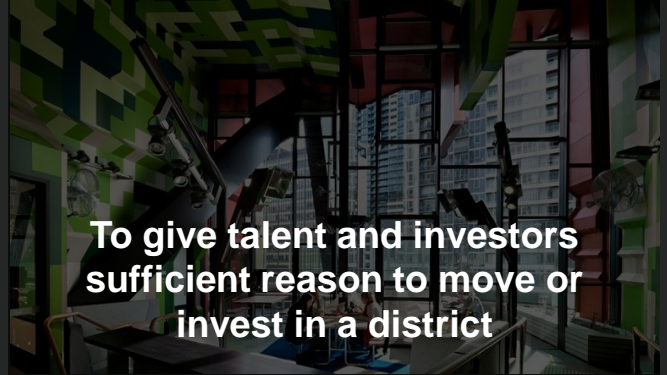
To provide an experience for a diversity of people



To reduce our carbon footprint if not help us become carbon neutral



To create inclusive places that belong to everyone



To give talent and investors sufficient reason to move or invest in a district



To create new possibilities to reach the district



To transform separate areas into shared, collaborative spaces



Districts have considerable work ahead to create quality places

- ✓ **Transportation infrastructure** (like large roads and railways) within and/or adjacent to the district;
- ✓ **Natural barriers** (such as rivers) within and/or adjacent to the district;
- ✓ **Fences and walls** frequently found around government buildings, but also campuses and commercial properties;
- ✓ **Under-developed land** including surface parking lots, within and/or adjacent to the district;
- ✓ **Buildings with large floorplates** that have frayed the human-scaled urban fabric;
- ✓ **High concentrations of institutional uses** that can limit the ability to mix;
- ✓ **Land designed or zoned for single-use activities**
- ✓ **Lack of governance** including place-governance;
- ✓ **Lack of a shared agenda** that helps guide and enable the right physical moves to strengthen the quality of place;
- ✓ **Physical or master plans that counter district goals**

**PHYSICAL
BARRIERS**

**ORGANIZATIONAL
BARRIERS**



Quality of Place

Our research demonstrates districts represent a radical departure from science parks

INNOVATION DISTRICTS



83% are accessible by RAILWAY

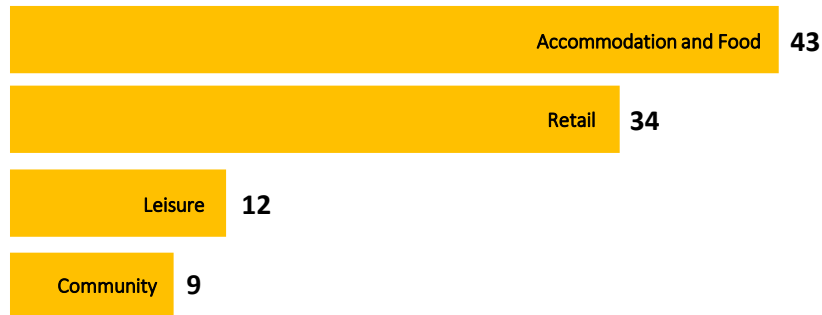
11 out of 23 districts are home to a railway station. People in eight districts can reach the closest railway station in a 10-min walk from the district boundary.

5 means of transport including bus, BRT, light rail/tram, heavy rail, and subway



4,030 housing units per sq km

On average, districts offer almost 100 desirable features per sq km intended to provide comfort, convenience, or enjoyment



SCIENCE PARKS

NONE are accessible by RAILWAY

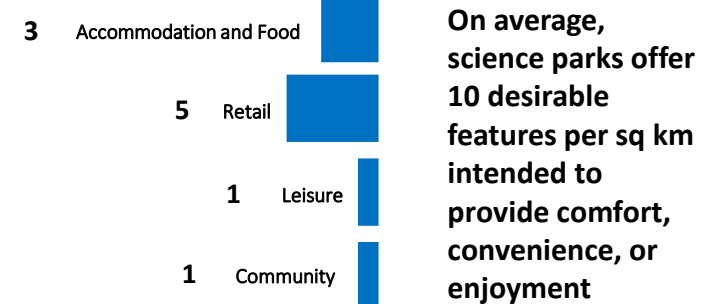
None of the science parks have a railway station within or adjacent to their boundary—within a 0.5-mile or 800-meter radius.



NO housing units



means of transport bus only **1**



GIID's Top Five Observations

1

To strengthen and ease connections for regional and other actors ...

**LOCATIONAL ADVANTAGE
MATTERS**

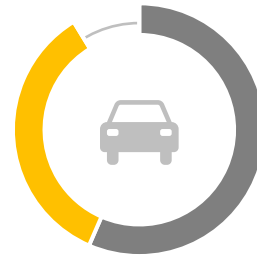
Quality of Place

Districts can prosper or suffer given how physically connected they are within their city-regions

Innovation districts are creatures of the local and regional economy

To grow and thrive, institutions, firms, and other organizations need easy access to other actors in the regional innovation ecosystem, and to connect with domestic/global actors and markets efficiently

Location ● In the district ● Adjacent to district

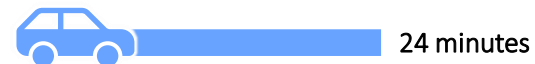


91% are connected to **HIGHWAY NETWORK**



83% are connected to **RAILWAY NETWORK**

An assets, but also a barrier at local scale



Source: The Global Institute analysis of interviews, reports, and OpenStreetMap data, 2023



GIID's Top Five Observations

2

In a quest to create critical mass and a buzzing, thriving district ...

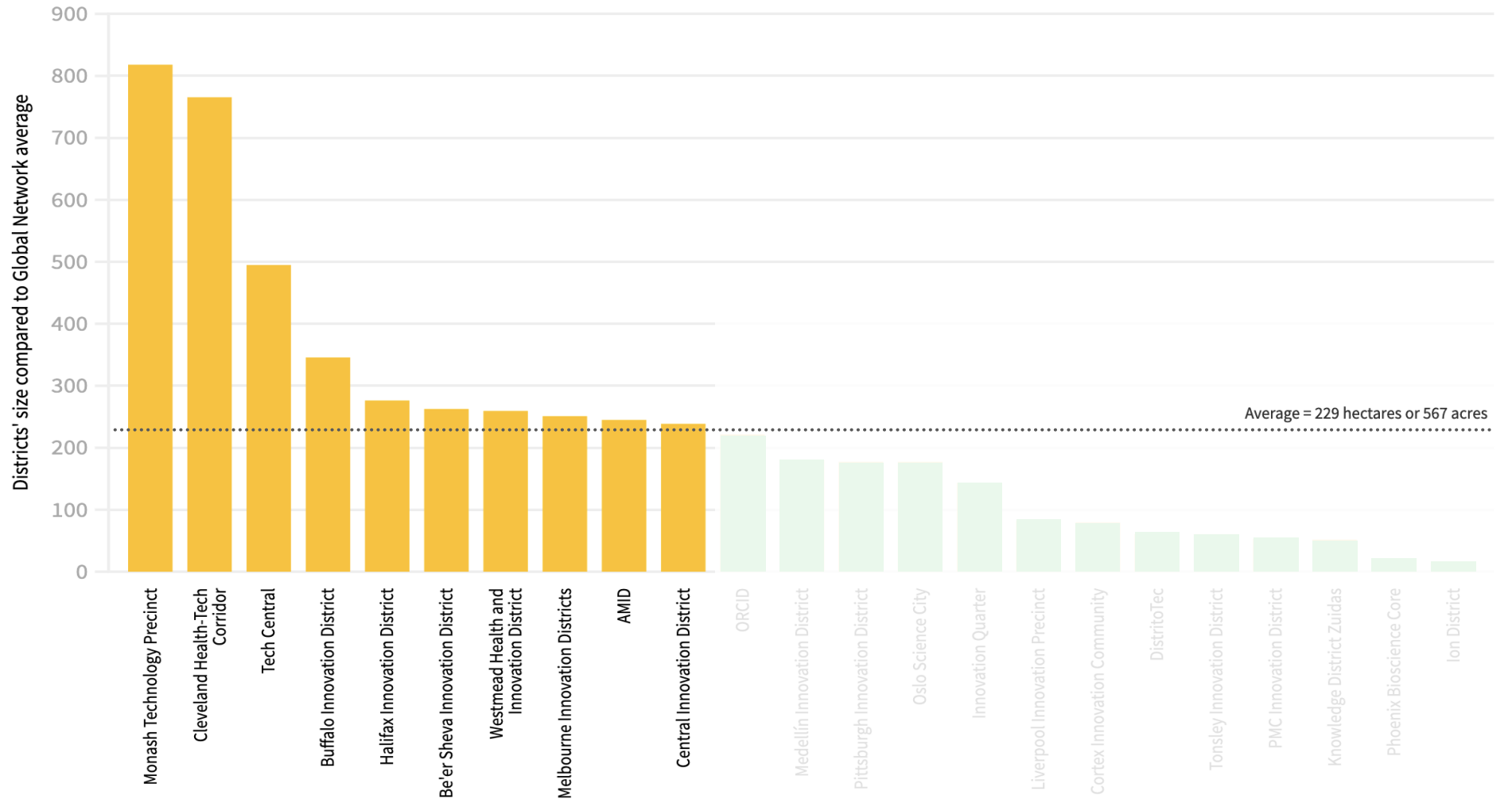
**SIZE
MATTERS**



Quality of Place

Size affects districts' ability to create hyper-concentrated centers of activities that work in synergistic ways

Geographies of this size will take considerable time to create critical mass



Source: The Global Institute analysis of interviews, reports, and OpenStreetMap data, 2023

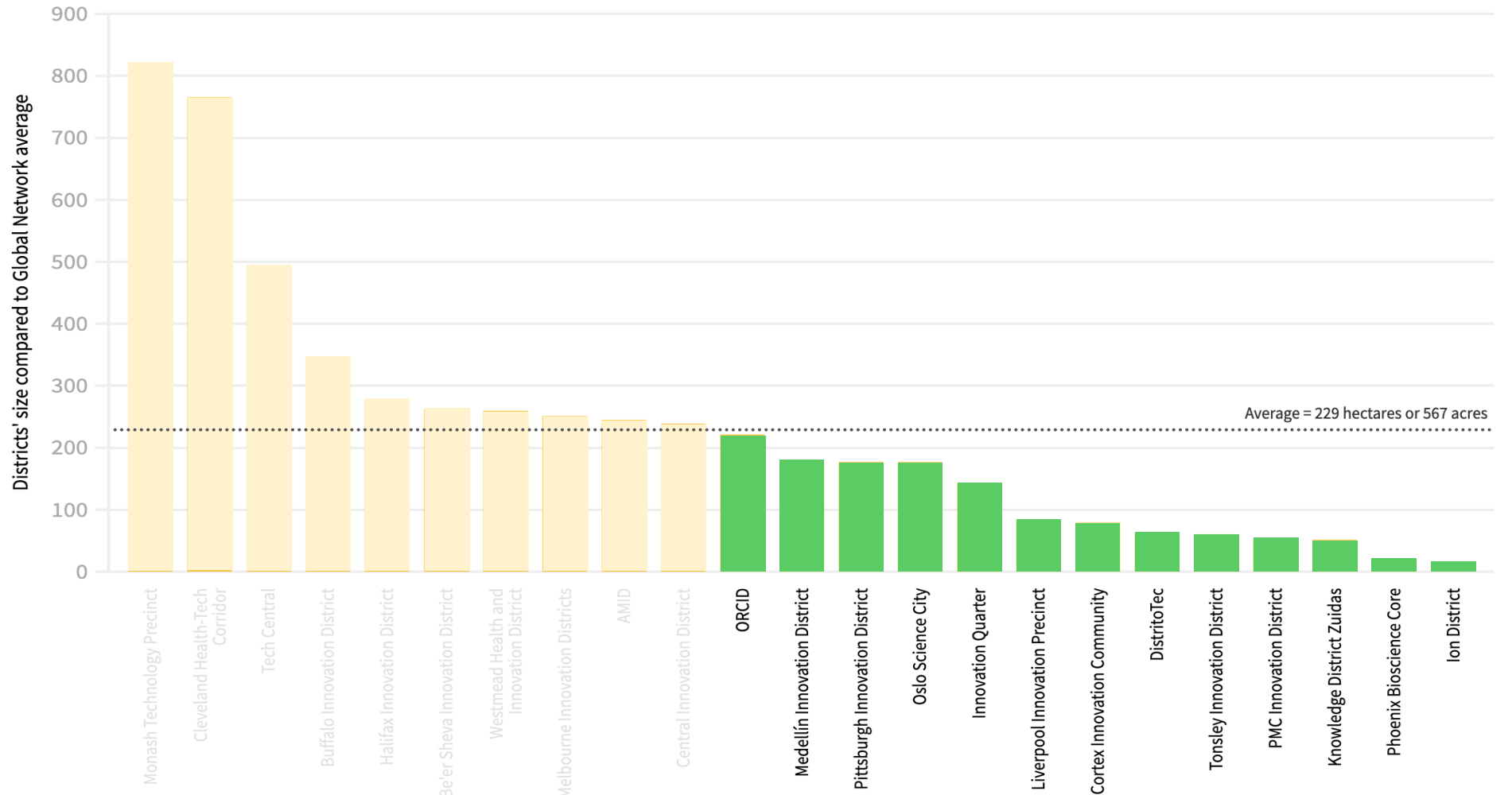


Quality of Place

Size affects districts' ability to create hyper-concentrated centers of activities that work in synergistic ways

Geographies of this size will take considerable time to create critical mass

Geographies of this size will still develop strategies to concentrate and agglomerate but it will be easier to create a hyper-concentrated geography, and growing critical mass



Source: The Global Institute analysis of interviews, reports, and OpenStreetMap data, 2023



GIID's Top Five Observations

3

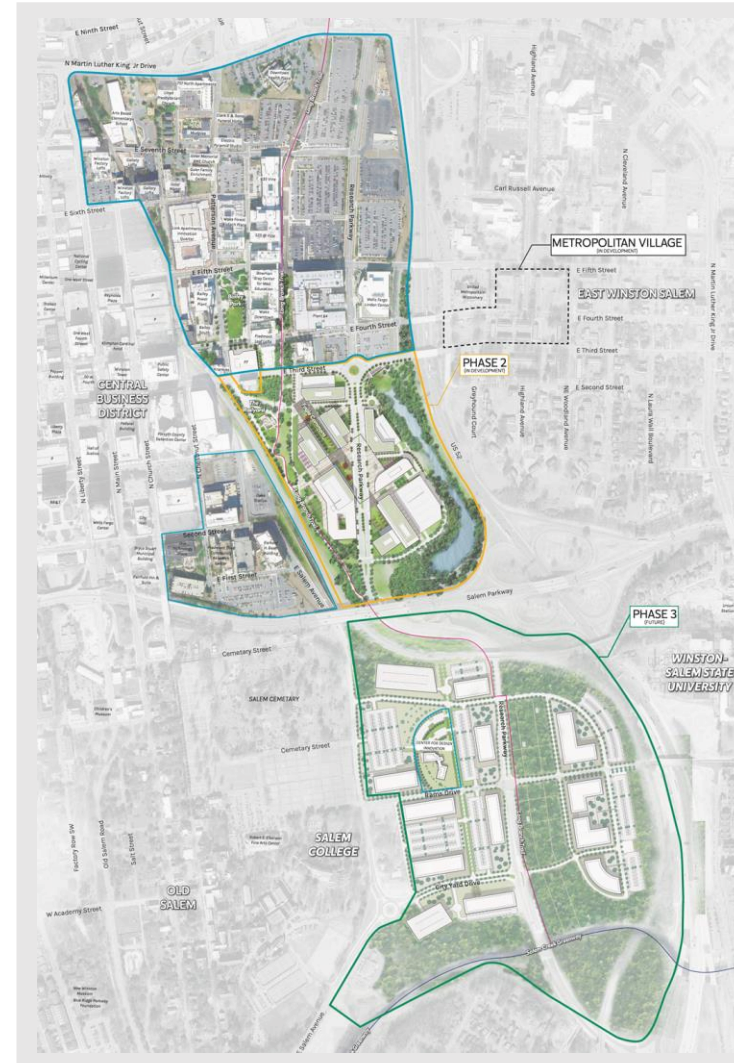
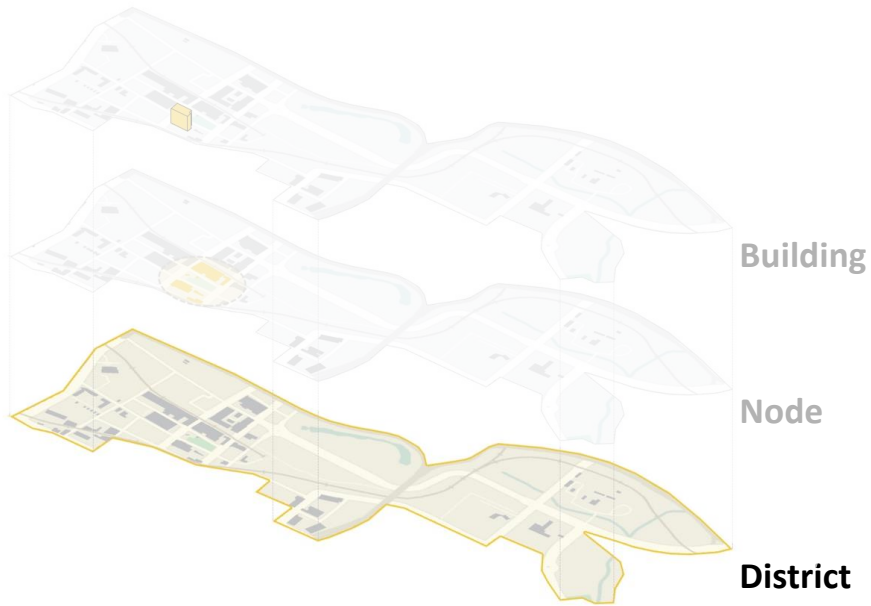
To leverage the benefits of physical proximity ...

MOVING FROM SINGLE TO MIXED USE MATTERS



Quality of Place

Mixing different uses creates integrated places for a diversity of people



In Winston-Salem, a *masterplan* helped orchestrate a well-curated distribution of spaces for industry, research institutions, startups, and the broader community

From the outset, our approach was one of mixed-use development, based on a simple principle: Proximity through shared spaces and diverse business clusters breeds collaboration.

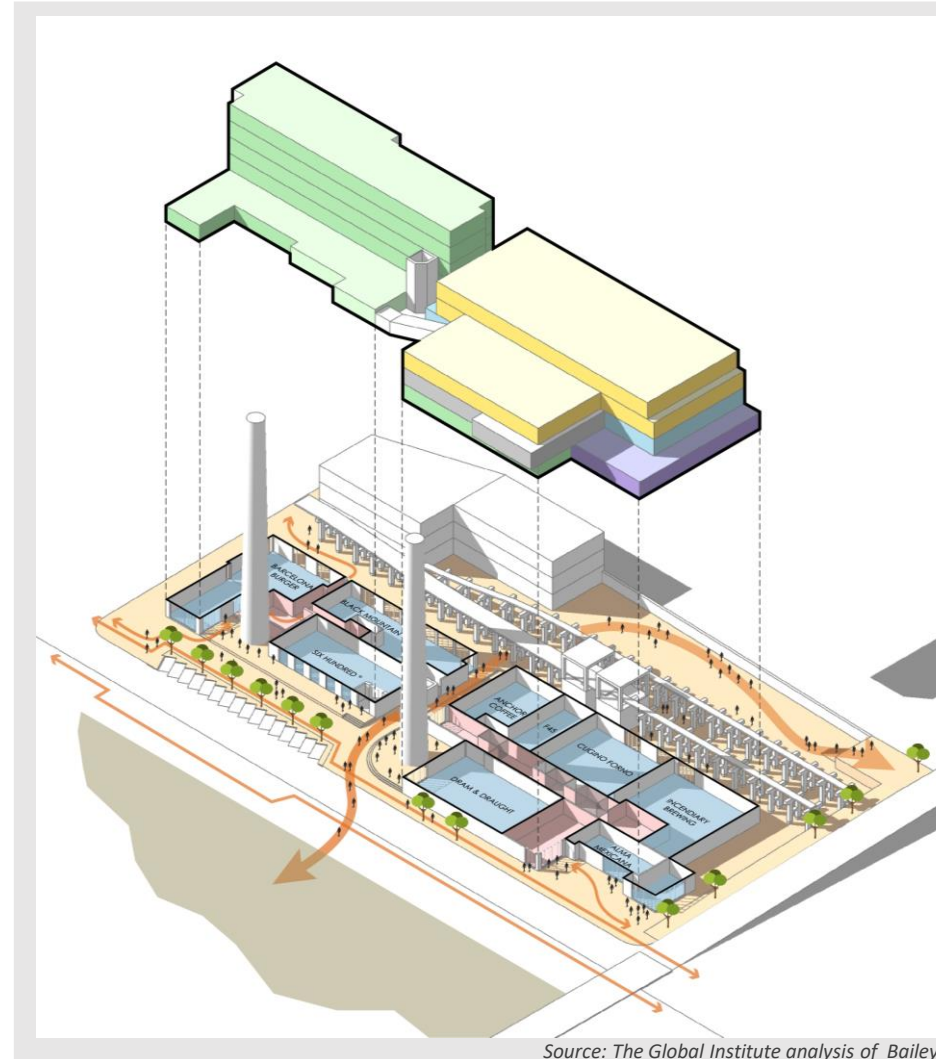
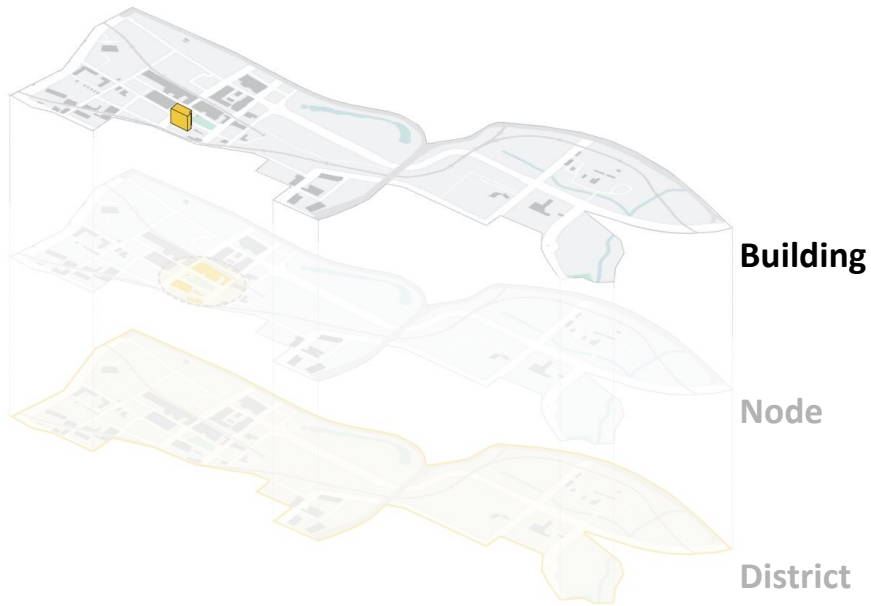
— District leader

Source: *Innovation Quarter in Winston-Salem*



Quality of Place

Mixing different uses creates integrated places for a diversity of people



Bailey Power Plant and Bailey South—two *multi-tenant buildings*—create a mixing of uses and activities, allowing a diversity of people, including the community, to access important areas such as the ground floor and roof terraces

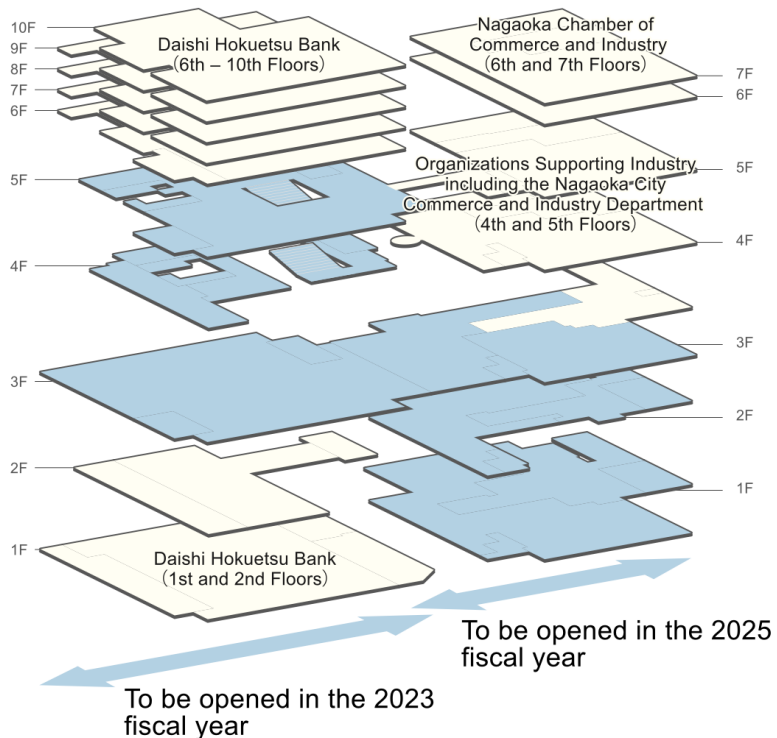
Source: The Global Institute analysis of Bailey Power Plant and Bailey South in Innovation Quarter, 2023



Quality of Place

Mixing different uses creates integrated places for a diversity of people

The Three Roles of MIRAIE NAGAOKA



01

A Place of Learning and Nurturing Human Resources

The Goson Bunko Library will move here as a newly renovated library, which serves as a base for learning and nurturing human resources to support the future of Nagaoka.

Functional Facilities and Services

Downtown Library, Children's Lab, Youth Lab, and Displays of Historical Figures



MIRAIE NAGAOKA is a place with a variety of functions blended together.

02

A Place of Industrial Development and Interactions

MIRAIE NAGAOKA will promote the nurturing of human resources through interactions and collaborations between academia and industrial sectors as well as the development of products and services. We aim to create new businesses by providing an entrepreneurial environment where students and young people can easily start their own enterprises.

Functional Facilities and Services

Innovation Salon, Coworking Space, Business Management Consultations, Entrepreneurship Support, Open Innovation Area, Fabrication Lab, and Gallery Lab

03

A Thriving Community

This is a place where multiple generations can come together and feel free to interact with each other in a relaxed atmosphere. We will bring about new prosperity here in the downtown area as well as throughout the city by providing various programs and events related to human resource development and industrial promotion.

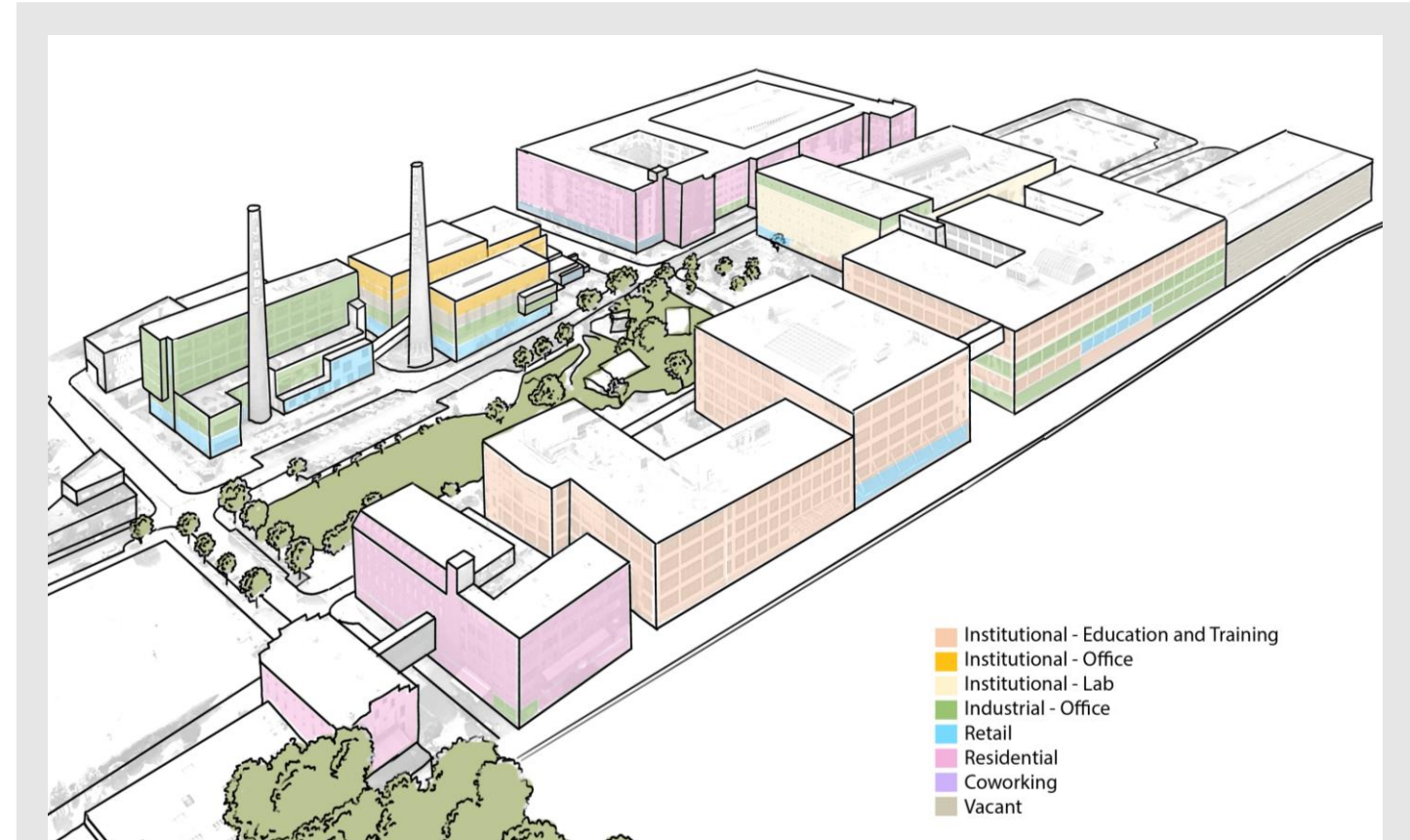
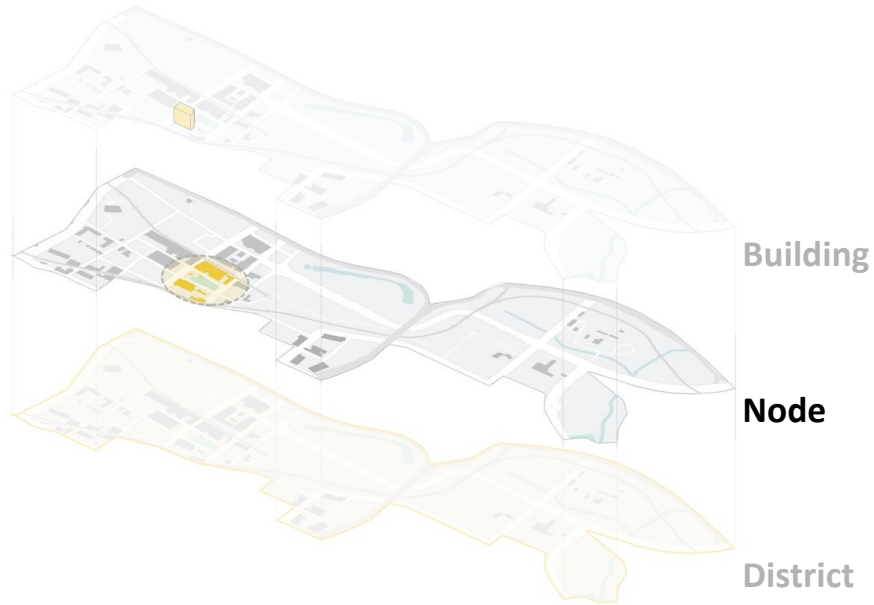
Functional Facilities and Services

Tōriniwa Garden Path, Grand Passage, Rooftop Garden, Bank Hall, and a Café Restaurant



Quality of Place

Mixing different uses creates integrated places for a diversity of people



Bailey Park—a *center of gravity*—serves as both a central gathering point for recreation—pulling a diversity of people together—and a center for people to travel between buildings

Source: The Global Institute analysis of Innovation Quarter in Winston-Salem, 2023



GIID's Top Five Observations

4

To physically integrate districts into their surroundings and make them accessible to more people than just workers...

**OPTIONS
MATTER**

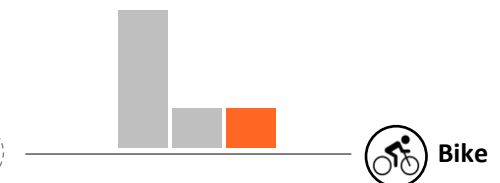
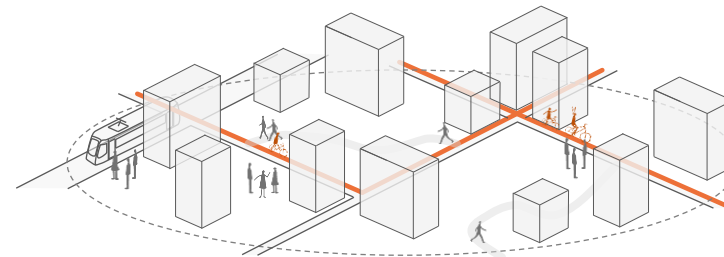
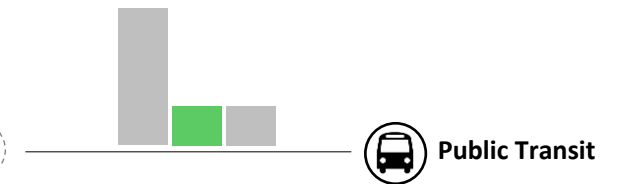
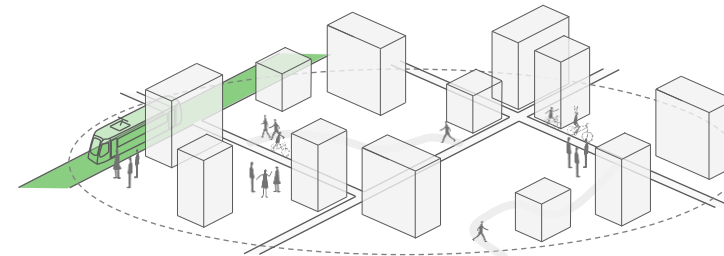
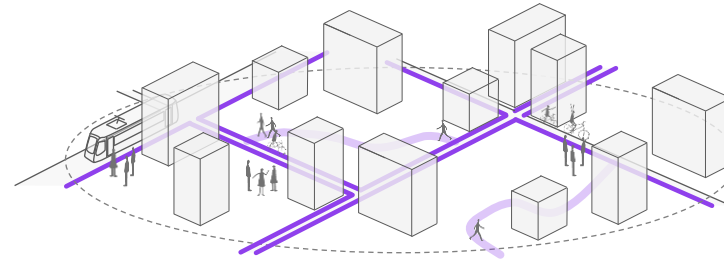


Quality of Place

How to *enter* districts reflects the physical integration with local landscape and adjacent community

Porosity sits at the core of a district's DNA

Porosity refers to spaces that are permeable, accessible, and where a diversity of people feel welcome



Source: The Global Institute analysis of interviews, reports, and OpenStreetMap data, 2023



Quality of Place

How to *navigate* districts profoundly shapes people overall experience of these places

Weighting of each input (totals equal 100)

Units: 30
Slope (topography): 17
Traffic: 13
Green Buffer: 15
Pedestrian density: 8
Betweenness: 8
Trees: 7
Benches: 2

Walkability Rating

— Good
— Fair
— Poor
— No sidewalk

5th Avenue is one of the primary corridors of the district and includes a number of amenities including restaurants. The level of pedestrian activity, number of units, and complete sidewalks, makes this corridor rate quite high.

This area rated lower due to the low number of units (buildings). This is a common challenge with single-use institutional buildings with a large footprint

Steep (12%) slopes reduce walkability in this part of the district

Presence of a green buffer and the number of units (buildings) contributed to higher walkability scores here

S Craig St. has a high walkability score due to the density of amenities (restaurants)

Presence of a protective green buffer and the number of units (buildings) in these residential areas, helped raise their walkability scores

Density of pedestrians at lunch — May 2019 to May 2020

Source: GIID and Tekja rating modeling, 2020



Quality of Place

How to *enter* buildings reflects the intentional effort to foster openness and inclusivity for a diversity of people

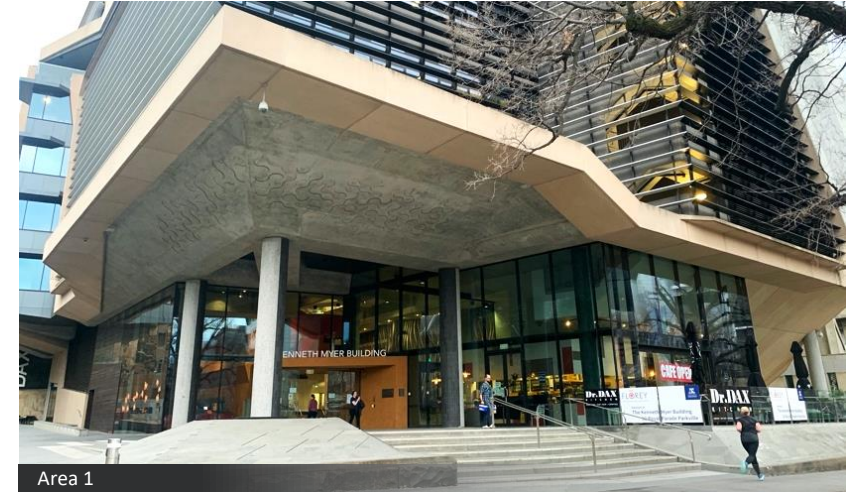
Visual transparency helps connect people outside with the uses and activities inside.

Permeability means creating spaces that people are willing to enter and own.



Legend

- Porous Ground Floors (Office, Community, and Institution buildings)
- Non-Porous Ground Floors
- To be confirmed



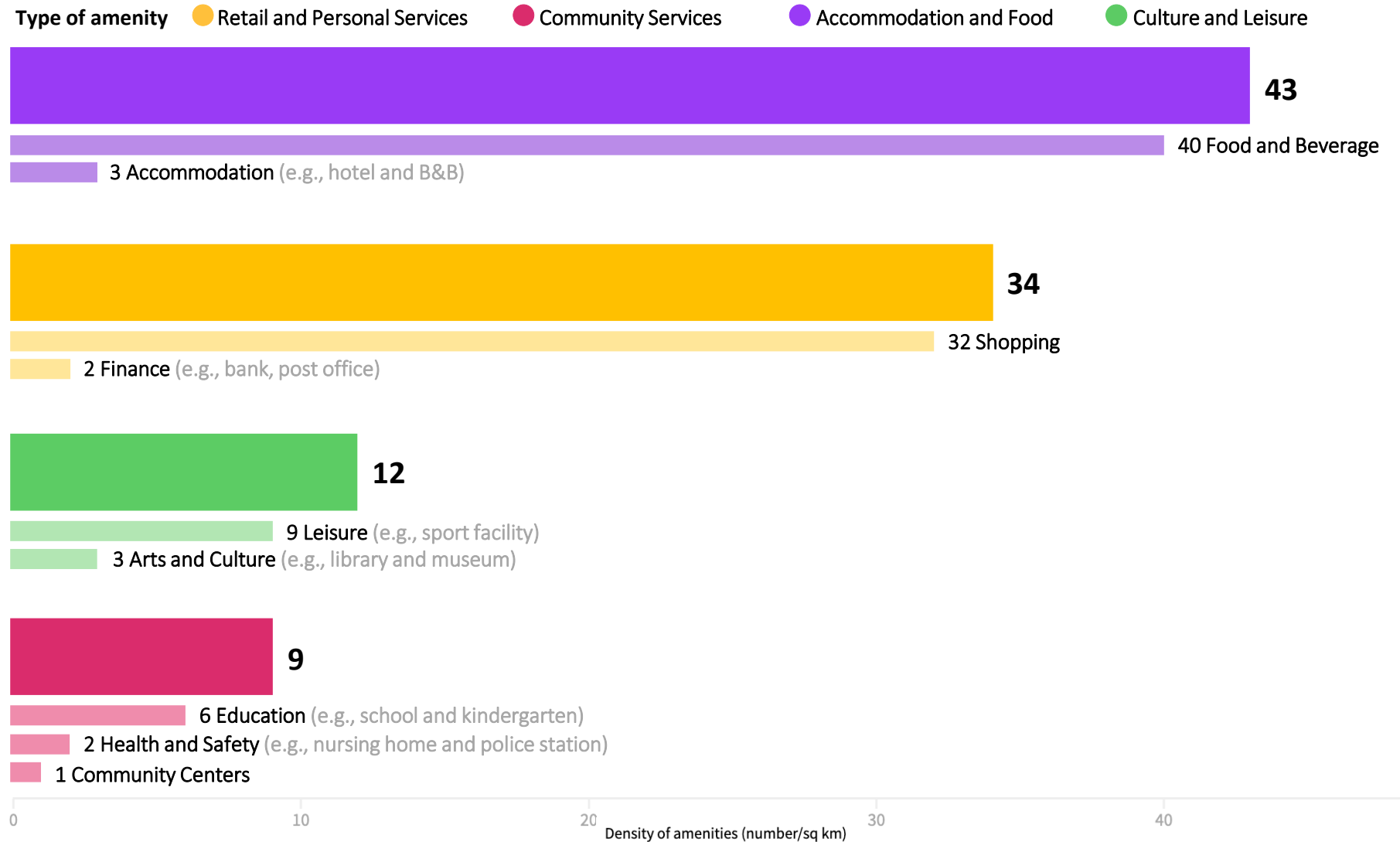
Source: GIID analysis of MID using QGIS in addition to on-the-ground analysis, 2020 | Photos by Daniel A'Vard



Quality of Place

What to eat, shop, learn and play help make districts desirable and people-centered

Mixing different uses in amenities-rich places contributes to the creation of a vibrant, open, and connective environment that attracts talent, firms, and the diversity of people who live in the region



GIID's Top Five Observations

5

In the attempt to overcome common place-based challenges or barriers and realize the full potential of districts ...

**STRATEGIC PHYSICAL TRANSFORMATION
MATTERS**



Quality of Place

Strategic physical transformation leads districts to what they aspire to achieve

“ We are defined more by what we will become than what we are ”
— District leader

Strategic physical transformation is crucial, especially in light of the place-based challenges that districts encounter and the piecemeal investments they contend with

100%
Increase the level of density

75%
Improve connectivity

70%
Provide a range of housing options



GIID's Top 10 Place-based Principles

GUIDING
INNOVATION
DISTRICTS AND
THEIR PURSUIT TO
CREATE QUALITY,
EQUITABLE PLACES

01 Strengthen district connectivity

02 “Blur” the distinctions between districts and adjacent areas

03 Value density and physical proximity

04 Create a “mash-up” of spaces, uses, and people

05 Elevate a district’s distinct R&D offer

06 Plan for diversity

07 Design to decarbonize and strengthen sustainability

08 Catalyze place through programs and events

09 Increase district visibility and brand

10 Value community voice and engagement



Innovation Districts: Defining the paradigm Elevating “what matters”

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Laura Biancuzzo, Senior Research Associate
The Global Institute on Innovation Districts