PLANNING & ZONING COMMISSION

TO: City of Peoria Planning & Zoning Commission

FROM: Development Review Board (Prepared by Josh Naven)

DATE: May 6, 2021

CASE NO: PZ 283-2021

REQUEST: Hold a Public Hearing and forward a recommendation to City Council on the request of City of Peoria to amend Appendix A, the Unified Development Code relating to Innovation Uses.

SUMMARY

The proposed text amendment codifies the allowance of Innovation Uses within the Unified Development Code and provides performance standards. This proposed text amendment is being forwarded due to the adoption of the Peoria Downtown Innovation District through Resolution #19-308.

DEVELOPMENT REVIEW BOARD RECOMMENDATION

The Development Review Board recommends approval of the proposed text amendment.

ATTACHMENTS

1. Proposed Ordinance
2. Peoria Downtown Innovation District Resolution #19-308
3. RTI International Research Paper on Innovation Districts

AN ORDINANCE AMENDING APPENDIX A THE UNIFIED DEVELOPMENT CODE OF THE CITY OF PEORIA RELATING TO INNOVATION USES

WHEREAS, the City of Peoria is a home rule municipality pursuant to Article VII, Section 6, of the Illinois Constitution of 1970; and

WHEREAS, as a home rule municipality, the City may exercise any power and perform any function pertaining to its government and affairs including zoning regulations and uses; and

WHEREAS, the City of Peoria desires to amend Appendix A, the Unified Development Code;

NOW, AND THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PEORIA, ILLINOIS AS FOLLOWS:

Section 1: Appendix A of the Peoria City Code, being Ordinance No. 17,403 as adopted on October 11, 2016, is hereby amended by deleting the following stricken words and adding the following underlined words:

5.2 PERMITTED USE TABLE

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5.2.2. Permitted Use Table

***

	KEY:	Blank cell = Not Permitted										■ = Permitted							□ = Special Use					
USE CATEGORY	SPECIFIC USE																							Use Performance Standard
INDUSTRIAL		A1	P1	RE	R1	R2	R3	R4	R5	R6	R7	R8	O1	O2	N1	CN	C1	CG	C2	B1	I1	I2	I3	
Light Industrial (see 5.6.5.B.)	Innovation												□	■	■	■	■	■	■	■	■	■	■	5.3.4A

***

5.3 USE AND PERFORMANCE STANDARDS

***

5.3.4 Industrial Use Performance Standards

A. Innovation Uses

1. Outdoor activity shall be prohibited for any business, servicing or processing, outside of an enclosed building, except for off-street parking and loading.
2. All industrial performance standards shall be applicable pursuant to Section 4.5.7.
3. Work space within an innovation use may be used as an office, studio, gallery, or for artisanal production involving the use of small-scale equipment such as hand tools; 3D printers; laser cutters; milling devices, and light mechanical equipment.

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5.6 USE CATEGORIES

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5.6.5 Industrial Use Categories

***

B. Light Industrial

Principal Uses	Accessory Uses	Uses Not Included
Armory, brewery, microbrewery/craft distillery, winery, bottling plant, bulk mailing service, catering establishment, large-scale, movie production facility Cannabis cultivation center, craft grower, infuser or processor Clothing, textile or apparel manufacturing, boot and shoe manufacturing, garment factory Contractors storage (indoor/outdoor) including janitorial and building maintenance service, exterminator, or other maintenance yard or facility, building, heating, plumbing, landscaping or electrical contractor and others who perform services off-site, but store equipment and materials or perform fabrication or similar work on-site, lawn, tree or garden service Crematorium, detention center, jail, prison Laundry, dry-cleaning, and carpet cleaning plants, cleaning establishment, large-scale, diaper service, linen supply Leather and leather products except tanning and finishing, felt and fiber articles Light manufacturing or assembly of equipment, instruments, or goods including musical instruments, appliances, bedding, coated-ware, medical/dental goods, orthopedic, medical appliances, precision items, optical goods, surgical products, sporting goods, office and art supplies, pottery, ceramics, electrical equipment/items, glass products, paper products (except pulp mills) printing, publishing, and lithography, production of artwork and toys,	Accessory medical clinic Associated office Food preparation or dining area On-site day care where children are cared for while parents or guardians are occupied on the premises Employee recreational facility On-site repair facility Residential unit for security purposes (single unit) Retail or wholesale sales of goods manufactured on-site	Dredging, earth extraction, clearing or grading (timber cutting), extraction of phosphate or minerals, extraction of sand or gravel, borrow pit, metal, sand stone, gravel clay, mining and other related processing, stockpiling of sand, gravel, or other aggregate materials (see Resource Extraction) Recycling facility including recyclable material storage, including construction material (see Waste-Related Service) Outdoor storage yard (see Warehousing and Distribution) Sale or rental of machinery, equipment, heavy trucks, building materials, special trade tools, welding supplies, machine parts, electrical supplies, janitorial supplies, restaurant equipment, and store fixtures (see Wholesale Trade) Small-scale catering establishments (see Retail Sales and Service)

sign-making, metal products, rope, cord, twine manufacture Repair of scientific or professional instruments, electric motors, electrical and refrigeration equipment, research, testing, and development laboratory Stone, clay, concrete products Storage area used for manufacturing Trade school, heavy equipment, truck operators Welding, machine, tool repair shop, sheet metal shop, tool, die, and gauge manufacturing, metal stamping Woodworking, including cabinet makers and furniture manufacturing, lumberyard and wood products <u>Innovation Uses</u>		

***

10.0 DEFINITIONS

***

10.3. DEFINED TERMS

***

<u>Innovation Use: Activities conducted in an office, educational, research or laboratory setting and generally focusing on incubation of start-up businesses within a broad range of fields. Innovation Uses shall include but not be limited to: Makerspaces, Communal Collaboration Spaces</u>

***

<u>Section 2.</u> This Ordinance shall be in full force immediately and upon passage and approval according to law.

PASSED BY THE CITY COUNCIL OF THE CITY OF PEORIA, ILLINOIS, THIS _____ DAY OF _____, 2021

APPROVED:

_____
Mayor

ATTEST:

_____
City Clerk

EXAMINED AND APPROVED:

_____
Corporation Counsel

RESOLUTION NO. 19-308

CITY OF PEORIA

Peoria, Illinois OCTOBER 8 20 19

RESOLUTION establishing the DOWNTOWN PEORIA INNOVATION DISTRICT

WHEREAS the Brookings Institute defines an innovation district as a place-based urban development strategy that aims to regenerate a downtown neighborhood into a desirable location for innovative and creative companies and workers;

WHEREAS innovation districts facilitate the creation and commercialization of new ideas and support metropolitan economies by growing jobs in ways that leverage their distinct economic attributes;

WHEREAS these districts also build on and revalue the intrinsic qualities of cities and communities: proximity, density, authenticity, and vibrant places;

WHEREAS given the proximity of many districts to low-income neighborhoods and the large number of sub-baccalaureate jobs many provide, the intentional development of innovation districts can be a tool to help connect disadvantaged populations to employment and educational opportunities;

WHEREAS the Peoria Innovation Alliance is a 501c3 organization fostering a collaborative movement to reposition the region and change our narrative to one of positivity and progress through the support and celebration of innovation, entrepreneurship, and startup activity;

WHEREAS the mission of the Peoria Innovation Alliance is to share our region's innovation history, promote our progress and vision for the future, and enable and empower the next round of innovators, entrepreneurs, and startups that call Greater Peoria home;

WHEREAS the establishment of an innovation district is being led by the Peoria Innovation Alliance with support from the City of Peoria, Peoria Downtown Advisory Commission, Greater Peoria Economic Development Council, Tri-County Regional Planning Commission, OSF Healthcare, First Mid Bank & Trust, Wells Fargo, Verizon, and the Peoria Riverfront Museum;

WHEREAS the proposed initial boundaries of the Innovation District are Main Street (Northeast), Water Street (Southeast), Harrison Street (Southwest), Jefferson Street (Northwest);

WHEREAS property owners, companies, entrepreneurs, universities, municipalities, disadvantaged populations, and regional citizens will see benefit from the designation of an innovation district;

WHEREAS the above audiences will experience benefits such as: increased economic activity, relocation or expansion of scalable businesses, creation of new job opportunities, expanded tax base, rising property values, increased demand for goods and services, increased pedestrian foot traffic, etc.;

WHEREAS the prospect of expanding employment and educational opportunities within an innovation district, the subsequent creation and expansion of firms and jobs will co-invent and co-produce new discoveries and benefits for the entire regional economy;

WHEREAS, outside of the potential creation and installation of signage to identify the area, the designation of an innovation district is purely a place-making activity that requires no initial expense to any party involved;

NOW, THEREFORE, BE IT RESOLVED that the CITY OF PEORIA establishes and endorses the Downtown Peoria Innovation District, bounded by Water Street, Main Street, Harrison Street, and Jefferson Street.

PASSED BY THE CITY COUNCIL OF THE CITY OF PEORIA, ILLINOIS, THIS 8TH DAY OF OCTOBER, 2019.

APPROVED:

Mayor

ATTEST:

City Clerk

EXAMINED AND APPROVED:

Corporation Counsel

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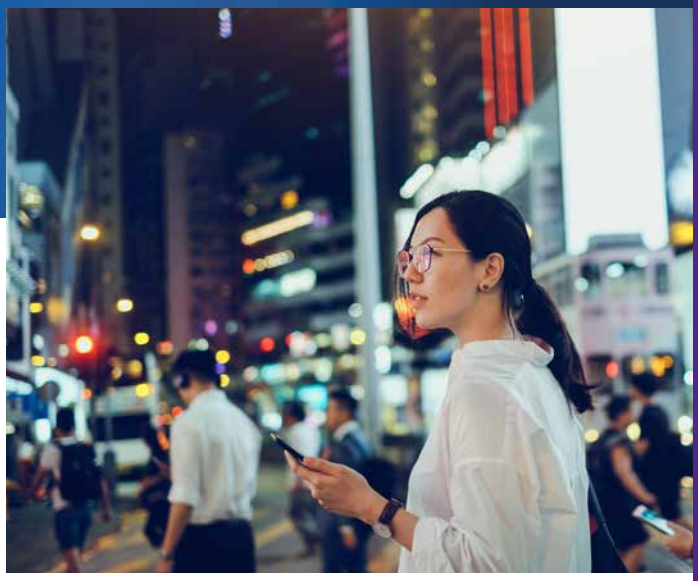

Planning for an Innovation District: Questions for Practitioners to Consider

Sara Lawrence, Michael Hogan, and Elizabeth Brown

RTI INTERNATIONAL

RTI Press publication OP-0059-1902

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RTI Press Associate Editor

Eric M. Johnson

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Abstract

Innovation districts are physical spaces that serve to strengthen the foundations and institutions of an innovation ecosystem. The design, implementation, and management of formalized innovation districts is a new practice area. Research draws upon the experience of concentrated areas of innovation that occurred organically, such as Boston's Route 128, as well as intentional projects to bring together innovators in large science and technology parks, such as North Carolina's Research Triangle Park. Existing research focuses on how to define and design innovation districts and evaluate their impact, as well as general policy considerations. In this paper, we review the definitions and benefits of an innovation district, reviewing the existing empirical research on their impacts. We then propose a series of questions to guide practitioners in addressing the economic, physical, social, and governance elements of an innovation district. Finally, we outline some of the challenges in creating an innovation district and ways to measure progress, to allow practitioners to get ahead of potential issues in the future. This paper is intended to help policymakers and practitioners working in innovation and economic development translate the concepts of innovation ecosystems into actionable next steps for planning innovation districts in their communities.

Introduction

Background and Purpose

Cities and their geography are vital to economic development, making them a hot topic for policymakers seeking to transform their economies through innovation. Similarly, economists and urban planners have studied for decades why and how similar firms locate near one another. In 1920, economist Alfred Marshall identified benefits of these "economies of agglomeration," including labor market pooling (people with similar skills tend to go to the same places), input sharing (lower costs from all firms being able to share inputs), and technological and knowledge spillovers (sharing ideas with the firm across the street) (Marshall, 1920). Since then, researchers have built on these theories by focusing on co-location models, including industrial districts, industrial parks, exurban science parks, special economic zones, technology clusters, and innovation ecosystems. The latest iteration of this field of study is the innovation district.

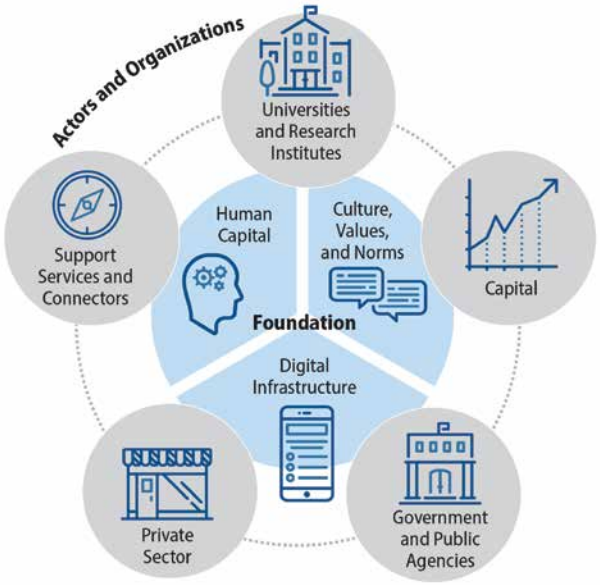
The design, implementation, and management of formalized innovation districts is a relatively new practice area. Much of the existing research to support this practice draws upon the experience of concentrated areas of innovation that occurred organically, such as Boston's Route 128, as well as intentional projects to bring together innovators in large science and technology parks such as North Carolina's Research Triangle Park. Existing literature provides a mix of insights and empirical justifications for investing in an innovation district, drawing upon prior examples of innovation stemming from economies of agglomeration in a range of geographic settings (Marshall, 1920; Krugman, 1991; Porter, 1998; Florida, 2017a, b; Moretti, 2013). Our goal is not to recreate this body of knowledge, but to orient the latest research toward the local officials, policymakers, planners, and developers making decisions on if and how to build an innovation district. In doing so, we look to translate theories and descriptions of innovation districts into advice that planners and policymakers can build upon to create an innovation district.

In this paper, we begin our discussion by explaining the concept of innovation ecosystems, providing a definition of innovation districts, and listing some of their common characteristics. Next, we review empirical evidence to explore what innovation districts can accomplish for a city in economic, physical, and social terms. Then we dive into promising practices on innovation districts, summarizing the extant literature and posing a series of key questions for planners and policymakers to consider as they plan their innovation district. Finally, we discuss common challenges that policymakers face in trying to build an innovation district and how to best approach them.

Innovation Ecosystems

An innovation ecosystem is the foundation of an innovation district, and understanding the former is essential to understand the value of the latter. Innovation ecosystems are networks of organizations and people that interact to cultivate ideas into successful enterprises. Like natural, biological ecosystems, they consist of many different moving parts—universities and research institutes, human capital, information technology infrastructure, financial capital, private sector, and government (see Figure 1). They include companies and institutions of all sizes, ranging from small startups to large

Figure 1. Our concept of an Innovation ecosystem



Source: RTI International

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multinationals and research universities. The actors in the ecosystem interact to drive new products, technologies, services, and policies forward. Every one of these components matters.

A healthy innovation ecosystem connects people who have good ideas to the training, funding, spaces, support services, and employees they need to make those ideas a reality. An innovation ecosystem is more than just the individual components of a system: it is based on a strong foundation of human capital, culture, information technology infrastructure, and the relationships between all these pieces.

No two ecosystems are exactly alike, and there is no one innovation district model to copy—an innovation district must reflect the local culture and norms.

What Are Innovation Districts?

An innovation district is a localized hub of an innovation ecosystem. It is a geographic area within a town or city that is intended to attract and support creative and entrepreneurial people, institutions, and businesses. Researchers have produced multiple definitions that highlight various features of innovation districts. The Brookings Institution, in its report "The Rise of Innovation Districts," defines them as "geographic areas where leading-edge anchor institutions and companies cluster and connect with start-ups, business incubators and accelerators" (Katz & Wagner, 2014, p. 1). Oklahoma City's innovation district describes itself as a "targeted area that [has] potential for innovation and entrepreneurship to flourish given the right catalysts" (OKCid, n.d.).

Definitions

Innovation ecosystems are the networks of organizations and people that interact to cultivate ideas into successful enterprises.

Innovation districts are localized hubs of innovation ecosystems.

An innovation district has impacts beyond the boundaries of the district through knowledge spillovers in the labor market and the value chain. Localized ecosystems depend on regional labor markets that often extend far beyond the boundaries of the district. Those workers are likely to interact and share ideas, which often lead to new innovations (Carlino & Kerr, 2014). Firms and individuals create knowledge and share it regionally and globally (Bathelt, Malmberg, & Maskell, 2004). Finally, innovations within the district impact the regional value chain for manufacturing and distribution: for example, bioscience research in the major urban areas of North Carolina has spillover effects in creating increased output in pharmaceutical manufacturing in distressed rural parts of the state (TEConomy Partners, LLC, 2016).

We build on these definitions to describe innovation districts as follows:

> Dense, mixed-use (including retail, housing and business) spaces within cities that connect universities and established institutions with entrepreneurial entities such as startups and business accelerators. Innovation districts are well connected with transit and internet and are located in a physical environment where creative people and organizations can collide in unpredictable ways that nurture new ideas and new ways of working together.

Characteristics

Innovation districts tend to have similar characteristics. Wagner and colleagues at Brookings describe 12 guiding principles for innovation districts that focus on clustering, convergence, density, diversity, and connectivity and are shaped by long-term thinking. They require a mix of programming and organic social interactions and bring innovation to the public (Wagner, Andes, Daviews, Storring, & Vey, 2017; Joroff, Frenchman, & Rojas, 2009). Their characteristics include the following:

- **Dense mixed-use spaces:** Districts use mixed-use zoning to connect housing with work spaces and retail, instead of single use buildings. They are contained within a specified area but are connected to neighborhoods on the periphery.
- **Flexible and decentralized:** They are not controlled by one company, person, or government branch, instead tending to split authority and power more widely across stakeholders than other real estate projects. In terms of planning, they allow for flexibility, continuous improvement, and design iteration instead of sticking to a rigid master plan.

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- **Open and public:** They contain ample public space and areas where people can interact informally. Organizations in innovation districts make use of shared working spaces and tend to include first floor retail and open spaces for both work and recreation.
- **Incorporating digital with physical elements:** They use technologies such as Wi-Fi networks, radio-frequency identification (RFID) tags, digital kiosks, and personal handheld devices to blend the digital world into the physical one. Additionally, they are well connected to the world via high-speed broadband internet.
- **A public place to test new technologies:** Districts can serve as excellent places to pilot new technologies and practices in the public realm such as environmental sustainability, energy, health, mobility, water management, shared space, and other public goods such as public green space or gardens.
- **Strong in their sense of place**: Good innovation districts express a strong narrative of their place and community. Unlike suburban office parks, which can feel the same from state to state or even country to country, innovation districts have features that make them distinctly local.
- **Community oriented**: They bring economic growth, strong public spaces, vibrant street life, and arts to their surrounding communities. They can bring the surrounding community into growth and development plans, mitigating potential negative impacts from gentrification.

What Can Innovation Districts Accomplish?

Research on innovation districts describes their benefits and accomplishments in a variety of ways: they can increase productivity and growth, combat social and economic inequalities, and serve as connectors among investors, entrepreneurs, researchers, and institutions across sectors. There are multidimensional aspects to building an innovation district, and although they may overlap, we group the potential benefits of innovation districts into economic, physical, and social categories. We summarize these benefits below to briefly describe the kinds of goals innovation districts strive to realize.

Economic dynamism

Innovation districts can help cities and countries diversify and grow their economies, fostering startup communities and helping economies weather economic downturns. For example, Barcelona's innovation district retained jobs and continued to contribute to the region's economic vibrancy throughout the 2008 financial crisis and ensuing recession in Spain (22@Barcelona, 2010). Small and growing organizations can thrive with access to an innovation district's amenities, which can include shared laboratory equipment, flexible work spaces, high-speed internet, and a community of other startups and service providers to network with. Innovation districts also help established companies and economies diversify. Companies that are integrated into an innovative network can adapt their business model to shift with economic changes, and a diverse mix of companies can lessen the impact of a downturn in one industry or sector. For example, the Barcelona innovation district's diversity of job sectors was a crucial factor that pulled it through the global recession.

Physical dynamism

Innovation districts can bring new life into old spaces and beauty to urban streets. Cities often provide incentives to developers to invest in and revitalize historic properties, forming a public-private partnership that can accelerate development. Revitalization improves the attractiveness of urban space for private investment, thus increasing local tax revenue and economic vibrancy in what in many cases had been a blighted area of the city. In addition to aesthetic beauty, effective spaces give people a sense of welcoming, comfort, safety, and connectedness.

Private real estate investment research from firms such as JLL and Cushman & Wakefield highlights that, compared with suburban office space, central business district–style office space has lower vacancy and is more attractive to investors (JLL, 2018). These kinds of revitalized or infill developments typically also reduce the need for new transportation and utility infrastructure investments. This dense style of development can also reduce the sprawl of

exurban office parks and, if connected to adequate public transit, reduce reliance on cars, which lead to congestion.

Social dynamism

Innovation districts have the potential to improve the social life and networks of a city. They can repopulate urban cores, create vibrant public spaces, and bring income, jobs, education, and safety into distressed neighborhoods that often lack economic and educational opportunity. Innovation districts incorporate events including both structured (e.g., workshops, lectures) and unstructured (e.g., happy hours) activities to engage diverse populations. These events build and foster dynamic networks that can both deepen strong ties between people and organizations familiar with each other and generate new connections between people who have never met.

What Does the Empirical Evidence Tell Us?

Now that we have described the kinds of benefits that innovation districts can bring to cities and towns, we summarize what the research, both peer-reviewed and gray literature, tells us about the innovation district's role in economic development. Given that these are relatively new economic development tools, there is a dearth of literature describing outcomes and impacts of innovation districts on local economies. Thus, we draw upon preliminary studies of innovation districts, as well as on literature and reports that focus on the role of networks and geographically concentrated research activity in economic development. The following themes emerged from the empirical evidence.

Networks Matter in Fostering Innovation

Laursen, Masciarelli, and Prencipe (2012) argue that geographically localized networks of social capital improve firms' abilities to innovate, an observation dating back to Marshall (1920). Through regional data on social capital and innovation activities among a representative sample of 2,413 Italian firms across 21 regions, controlling for a large set of firm and regional characteristics, they find that "being located in a region characterized by a high level of social capital leads to a higher propensity to innovate" (Laursen et al., 2012, p. 177). Additionally, location in one of these regions not only gets firms to invest more in R&D but makes their externally acquired R&D even more effective at increasing their innovations.

Networks Can Be More Impactful When They Are Co-located in Close Proximity …

Owen-Smith and Powell (2004) found that membership in formal contractual networks had positive effects on innovation, but only when those networks were collocated in the same region. Membership in similar networks that were dispersed across regions did not affect innovation.

… Especially for Those in Very Close Proximity

Rosenthal and Strange (2003) tested for increasing returns from "economies of agglomeration," or benefits that firms get from existing near each other. They found that geographically concentrated economic regions like Silicon Valley, or western North Carolina's furniture industry, provide benefits in three major forms: labor market pooling, input sharing, and technological and knowledge spillovers. But they find that these benefits drop off rapidly with distance, especially sharply within the first mile, where these effects can be 10 to 1,000 times larger than the effects between 2 and 5 miles away. They write that information spillovers, which "require frequent contact between workers, may dissipate over a short distance as walking to a meeting place becomes difficult or as random encounters become rare" (pp. 387–389), although the benefits of labor market pooling and share inputs could extend over a greater distance.

The Most Unconventional Innovations Come from Dense Urban Areas

Research by Berkes and Gaetani (2017) found that, while the majority of patents come from suburban areas, cities produce far more unique, atypical patents. These patents are "outliers in the way they combine technology categories that are seldom seen together" and often lead to revolutionary new technologies. Rather than being created in spatially dispersed settings such as large suburban office parks, these unconventional innovations are usually filed by

startups, university laboratories, or other independent organizations such as those found in innovation districts. The authors argue that these unconventional ideas are generated by the informal interactions that happen in dense urban spaces, which facilitate the spread of knowledge between unrelated fields. As urbanist Richard Florida interprets it, "large dense cities make it easier for people with good ideas to find each other" (Florida, 2017a).

Research Goes Farther and Has a Bigger Impact When Fellow Researchers Are Close By

Lee, Brownstein, Mills, and Kohane (2010) found that physical proximity is a strong predictor of the impact of biomedical research. Looking at all biomedical science articles published by Harvard investigators between 1993 and 2003 with at least two coauthors, they found that articles written by authors who were in closer physical proximity to each other were cited by other authors more frequently than were articles written by coauthors who were further away from each other.

Innovation Districts Can Help Create Jobs and Spur Economic Growth

Jobs at 22@Barcelona increased by 10 percent more than the city average in 2009, even during the global recession that caused high unemployment in Spain. Between 2000 and 2009, the 22@Barcelona innovation district attracted 1,500 companies and created 44,600 new jobs (22@Barcelona, 2010). Other innovation districts have seen similar results in job growth. Founded in 2002, Cortex Innovation Community in St. Louis has attracted 250 companies and created 4,200 tech jobs, anticipating 15,000 jobs by the time the community is fully implemented. Innovation districts also produce a high concentration of research and intellectual property. For example, High Tech Campus Eindhoven in the Netherlands produces 40 percent of all Dutch patent applications (High Tech Campus Eindhoven, 2018). Further research is needed to prove whether the innovation district had a direct role in these statistics, but these pockets of concentrated economic development show innovation district development to be a promising economic practice.

Small startup companies that tend to thrive in innovation districts can also be drivers for new kinds of job creation. Viable economies depend on a mix of young firms and more mature firms. Young firms, defined as those 5 years old or younger, tend to be a great source of net new job creation. For example, young firms have been the largest source of job creation since the great recession. Research by the Kauffman Foundation (Wiens, 2015) notes that new businesses (up to 5 years old) account for the majority of net new job creation and they generated net job growth even during the recession in 2009. Given that innovation districts tend to house many small companies, the districts play a role in fostering this kind of small company growth.

Large, mature firms also play a role in job creation for innovation districts. Due to their size and scale, these firms provide a level of presence, resources, and expertise that innovation districts can leverage for desired job creation and economic growth goals. These mature firms have also typically built out an infrastructure supportive of business such as financial, legal, and accounting services, which are important for all companies. For innovation districts, it is important to engage a mix of young firms and more mature companies as part of the larger ecosystem to create new jobs and regional growth.

Similarly, the types of jobs that innovation districts attract can bring significant impact on a region's greater economy. Economist Enrico Moretti in *The New Geography of Jobs* estimates, based on an analysis of 11 million workers in 320 metropolitan areas, that every new high-tech job in an urban area generates five more local non-tech jobs, including both professional, high-skill sectors—like legal, medical, and financial—and service sector jobs (Moretti, 2013).

More research is needed to ascertain whether and how innovation districts can help developers diversify and grow their economic base, but current literature shows the heightened importance of density, startups, and high-tech industries in thriving innovation ecosystems. If innovation districts are hyper-localized innovation ecosystems, it appears they hold promise as an effective economic development tool in current practice.

Key Questions: How Do You Build an Innovation District?

Having defined and described innovation districts, we now shift to discussing practical considerations. This section includes tangible, accessible advice for practitioners on how to create an innovation district. However, one of the key features of innovation districts is their unique local characteristics; there is no one-size-fits-all solution. With that in mind, the questions we lay out are intended to serve as a jumping-off point for a practitioner's design decisions. These questions are intended to help guide planners and practitioners to the solutions that fit your community best.

Overall Questions

Above all, before creating an innovation district, planners should consider the demand for such a space. How will it meet the needs of small businesses and large businesses? Will current residents and skilled workers be interested in the same amenities? These fundamental questions are important to avoid the lure of building a flashy new district that ends up unpopulated and underutilized because it was not properly designed with the end user in mind. The best way to avoid that is to anticipate the needs and demands of the tenants the district hopes to attract.

Recognizing that demand for the innovation district must drive the design and programming, planners must also consider the vision for the district: what demand do you want to create for the future? Planners must strike a balance between satisfying near-term tenants and constructing a new kind of place for economic activity that people and organizations may not yet know that they want. Innovation districts do not tend to grow from a detailed master plan, but from a shared idea of what they might look like and what they can create.

We now lay out more specific questions for the economic, physical, and social considerations to planning an innovation district.

Key Economic Questions

We propose four questions to help kickstart discussions and problem solving as practitioners design their innovation district.

What innovation assets will you leverage?

Innovation districts are built around core assets like research universities, laboratories, medical centers, large firms, and entrepreneurial support organizations. Each district will be unique and needs to plot its course based on the core innovation assets in the locality. One of the first steps for the planning team is to understand the existing innovation assets and build around them.

Is there an industry focus, or is it industry-neutral?

Some districts plan for a specific industry, while others aim to serve diverse sectors. For example, MediaCityUK in Salford, UK, as its name would suggest, focuses on digital arts, publishing, and other media, playing up its preexisting strengths. On the other hand, 22@Barcelona targeted four different sectors that previously had no strong presence in the city, based on their potential for growth: media, medical technology, energy, and information and communications technology (ICT). Some districts aim to support the startup community more generally. Regardless of a focus on sector strategies, supporting institutions of the innovation district (government, business, administrators, board, etc.) must have a long-term and collaborative view of the district's strategy (Wagner et al., 2017).

What kinds of intermediary organizations will be important to help bring innovations to market (e.g., incubators, accelerators, shared workspaces, work training centers)?

The Brookings Institution reports that intermediary organizations are a vital part of the innovation ecosystem (Katz, Vey, & Wagner, 2015). The district requires resources to fund good ideas, experiment on design, and move new technologies to the public. Neutral intermediary organizations such as chambers of commerce, entrepreneurial support organizations, and nonprofits serve as network connectors that help entrepreneurs and innovators access the resources and information they need. Intermediaries help to

broker information making it easier for entrepreneurs and others to readily access people and resources needed to advance a concept.

What amenities will attract a skilled workforce?

It is key for planners to create places where people want to spend time. Restaurants, bars, coffee shops, retail, and aesthetically pleasing spaces will make the organizations in an innovation district more attractive to the skilled talent that will contribute to the economic vibrancy of the district. At the same time, planners need to be aware of the risk of alienating residents or promoting gentrification through the district's allotment of space for amenities. This is an important consideration—innovation districts are not job creators in isolation. They embody the kinds of places that workers want to come to turn their ideas into reality.

Key Physical Questions

Placemaking is critical to the success of an innovation district. We offer five questions to spur thinking on how to incorporate place to the advantage of the community and the local economy.

What physical assets do you want to leverage? Do those align with the demand for an innovation district?

Just as economic developers map economic assets, planners of an innovation district should map physical assets. Does your district have old warehouses, empty lots, or underutilized parking decks? Is there a bike path or public transit route that could be extended through the district? Would startups in your area be looking to use open coworking spaces, or a laboratory with shared equipment?

What spaces will create and nurture connections within the district?

The Project for Public Spaces observes that "comfortable, accessible places with lots of things to do help build both kinds [strong and weak ties] of sociability" that make innovation districts thrive (Storring & Walker, 2016). Attractive spaces have assets like narrower streets with wider sidewalks and bike lanes, plenty of parks and green spaces, and tables, chairs, and benches where people can sit and talk. Districts also need spaces where formal programming can happen, such as auditoriums and workshops, along with casual spots where people can bump into each other unexpectedly as part of their daily routines.

The Brookings Institution observes that relationships are one of the cornerstones of successful innovation districts, and those relationships need physical spaces that support them. Building an enjoyable sense of place has the added benefit of "entic[ing] residents and workers to remain in the area off hours, extending the opportunities for collaboration" (Katz et al., 2015).

Are there underused or distressed buildings, neighborhoods, and corridors that can be revitalized? Does the style lend itself to the district's sense of place?

Instead of building a new district from scratch, reimagine and improve on what's already there; continuity is crucial for creating a sense of place. The Project for Public Spaces draws on the ideas of Jane Jacobs:

> The existing urban fabric has just as much to contribute to innovation districts. As Jane Jacobs once said, 'new ideas need old buildings.' Rather than clearing rundown buildings in a district for new construction, or even polishing up these hidden gems, Jacobs suggested that such buildings are important economic assets as is. They add to the diversity of a neighborhood by giving low- and no-profit uses a place they can afford without subsidy. What's more, the vernacular or historical style of existing buildings can help bolster a district's identity, much as Automobile Alley has in Oklahoma City's innovation district. Some pioneering developers have even found ways to conserve the affordability of such spaces while gradually improving them. (Storring & Walker, 2016)

This concept rings true in Durham, North Carolina, where much of an informal innovation district was built in the middle of run-down tobacco warehouses that today serve as office spaces, restaurants, and open areas for movies and other events. The tie to the city's economic history in tobacco brings an authenticity

to placemaking that is often attractive to the workers and investors that innovation districts seek to attract.

What physical infrastructure will ensure the district is connected locally and globally?

Innovation districts require more substantial change than simply relocating closed-off offices to a denser section of the city. To truly connect to all the benefits the city has to offer, innovation districts have to be open to all the people, ideas and resources passing through—and be designed to encourage that passing through.

For example, the Brookings report suggests changes to existing campuses and research institutes such as "remov[ing] fences, walls, and other barriers and replac[ing] them with connecting elements, such as bike paths, sidewalks, pedestrian-oriented streets and activated public spaces" (Katz et al., 2015). Public transit is also important, since few densely-packed urban areas can support lots of car traffic, and orienting a district around cars comes at the detriment of orienting it around pedestrians.

What is currently being done privately that could be done publicly?

Creating an atmosphere of openness in an innovation district sometimes involves making significant physical changes to the existing city. This can be daunting and challenging to the "business as usual" of local government operations and management. To begin to wrestle with the unanticipated hurdles of a new kind of development, the Project for Public Spaces suggests that "this process begins with one simple question: what are we currently doing privately that we could be doing publicly?" (Storring & Walker, 2016).

One possibility is for big companies, laboratories or university buildings to open their ground floor lobbies to the public. 401 Richmond St. West, a coworking space in Toronto, uses its ground floor to host a public art gallery, which acts as a space for visitors to meet and interact with each other and learn (Storring, 2015). Other organizations can dedicate their ground floors to coffee shops, cafes, or other public meeting spaces to encourage foot traffic and the interactions, bonding, and social capital formation that are so important to innovation.

Finally, exclusive perks for the employees of large firms, such as cafeterias, gyms, or lounges, may draw employees in the short term but are an underutilized use of resources in the long term. "Such facilities require big subsidies—not because these uses must inherently lose money, but because they're so inefficient, sitting idle most of the time" (Storring & Walker, 2016). Startups and small companies, which are crucial to the innovation ecosystem, are at a disadvantage if they cannot afford to spend on these luxuries. Innovation districts offer the opportunity to provide these amenities publicly and make it easier for smaller organizations to actively engage with larger, more established tenants.

Key Social Questions

Given the importance of networks to building healthy innovation ecosystems, socially dynamic elements to innovation district design and programming. Following are six questions for practitioners to spark ideas to create a diverse network of people and organizations to underpin the vibrancy of a hyper-localized innovation ecosystem.

What ties exist within the ecosystem?

The Brookings report discusses two kinds of linkages that glue innovation ecosystems together: strong ties and weak ties. Strong ties exist between people and organizations with high levels of trust, maybe from a history of collaborating or strong personal relationships. Weak ties form as a result of briefer interactions across more diverse sectors. Practitioners and planners may find it helpful to consider the ties that already exist between the established players in their city, and which ones could be newly cultivated in a district.

What kinds of events (workshops, training, conferences, other events) will strengthen links?

It is insufficient to create open spaces and position organizations near each other. To cultivate interaction, planners should develop activities and programs that will bring different people together. Events can be career-related, such as workshops

and lectures series, or they can be more social, like free yoga classes, happy hours, concerts, and movie screenings. Events that are more focused on specific industries will nurture strong ties, as people in the same field will tend to interact with each other more frequently at different events, while more general events will encourage weak ties to develop across disparate industries because attendees will more likely have diverse interests and focus areas in their work.

How will your district interact with the broader community? What opportunities will it bring disadvantaged residents? Will your development displace renters?

Well-planned and well-executed innovation districts can bring broad economic prosperity. Benefits can accrue to more than the tech companies, research institutes, and startups that form its backbone; they can extend to all the residents of the district and its surrounding area. Nate Storring and Meg Walker of the Project for Public Spaces observe that "innovation districts are often built near (or overtop of) low-income communities, and their relationships with those communities are often tenuous, if not hostile" (Storring & Walker, 2016). Adding value to spaces is good for developers, but driving up rent can mean driving out existing residents and destabilizing communities. To avoid conflict, tension, and further marginalizing the already marginalized, practitioners can intentionally build a district with the well-being of current residents in mind. They describe the benefits of catering the district toward the community: "Long after most employees have gone home, residents are the people who can support local businesses and keep the streets lively and safe; they're the people who attend community meetings, and band together in times of crisis; with access to educational and training opportunities, they can also provide the future talent that innovation districts need in order to remain competitive" (Storring & Walker, 2016).

In a follow-up to the original report, Brookings Institution describes some concrete examples of ways innovation districts have better embraced the existing community (Katz et al., 2015). These can include building "urban extension centers," like Drexel University in Philadelphia has done, to offer free services to low-income residents such as career-building workshops and legal clinics, or like Barcelona's 22@ district, ensuring that the jobs your district creates offer on-the-job training and opportunities for entry-level, unskilled laborers to advance into innovation-oriented high-tech sectors.

How do you build and integrate networks between people and firms in different contexts?

Strong social networks serve to build a culture of trust, which is at the base of the economic resiliency of the district. However, as Safford (2009) points out, the social networks between people and institutions provide this economic resiliency when they connect different groups and people in different economic contexts, not just when they reinforce already existing strong ties. He provides the examples of Youngstown, Ohio, and Allentown, Pennsylvania, two towns that had similar levels of economic output in the 1970s but followed diverging economic trajectories. Allentown, with broad-reaching civic networks across different economic and social areas, had a high level of resiliency and growth. Youngstown, with more closed civic organizations and exclusive, tight networks, was unable to adapt to changing economic realities.

This example shows the importance of integrating various networks and individuals across economic sectors in the planning of an innovation district. An organization with a homogeneous, internally facing culture faces a higher risk being unable to adapt to outside changes. The types of relationships in an innovation district can facilitate collaboration across different economic and social sectors.

What independent network connectors and intermediaries are involved in the process (e.g., incubators, accelerators)?

When a person has a great idea, they need help to make that idea a reality. Whether they have a revolutionary breakthrough in their research, a market-disrupting startup idea, a patent that makes incremental improvements over existing products, or a vision of an impactful nonprofit, they will need help to carry their idea to existence. Intermediary organizations can help connect people to funding, find them mentors, scout out qualified employees,

and offer them material support in the form of office space or supplies. That makes these intermediary organizations, such as accelerators and incubators, essential for innovation districts. They will likely be a significant driver that attracts startups and entrepreneurs to the district.

Planners can consider the kind of intermediary organizations that may make the best fit for the entrepreneurs and innovators they want to attract to the district. If there is an industry focus to the district, this may refine the parameters of the kind of intermediary that will be important to locate within the district. Also, what kinds of network connectors make sense for the local innovation community? Ideas can range from a dedicated innovation center, like Santiago's Centro de Innovación UC, to an independent management organization that plans regular events.

Do the organizations in your district have a culture of flexibility? What can you do to encourage it?

Rosenthal and Strange (2003) draw from AnnaLee Saxenian to argue that regional culture plays an important part in encouraging innovation. Saxenian compares the divergent developments of Silicon Valley and Route 128 outside Boston through the 1980s and 1990s, observing that Route 128 operated with each company separated into its own silo and working under rigid, hierarchical structures. Saxenian quotes entrepreneur Jeffrey Kalb, a Silicon Valley entrepreneur, who says that "there's a fundamental difference in the nature of the industry between Route 128 and [Silicon Valley]" (Rosenthal & Strange, 2003, pp. 377–378). Route 128 had large companies that moved slowly and didn't cooperate with each other, making it difficult for small companies to survive in their shadows. But in Silicon Valley, "the whole culture . . . is one of change. . . . There's a culture associated with that which says that moving is okay, that rapid change is the norm, that it's not considered negative on your resume" (Rosenthal & Strange, 2003, pp. 377–378). The authors conclude that this culture of flexibility was key in Silicon Valley's success.

In a larger example, authors Senor and Singer (2011) state in their book *Start-Up Nation: The Story of Israel's Economic Miracle* that Israel has been able to produce so many startups in part due to its culture of flexibility and willingness to bounce back from failure. They quote Laurent Haug, who studies the nexus between technology and culture and says that "Israelis . . . don't care about the social price of failure, and they develop their projects regardless of the economic or political situation" (interview with L. Haug, 2009, quoted in Senor & Singer, 2011, p. 88). That, they say, combined with cultural values of avoiding routine in favor of experimentation, and challenging authority over silent obedience, is a feature that has led to innovative success throughout the country. Other researchers, including Turbiner, Schwartz, and Bar-El (2016), attribute the success of Israel as an innovation economy to its culture that encourages risk-taking and challenging authority.

Encouraging this environment of flexibility can be a crucial way to support startups in an innovation district. Innovation district planners must consider the culture norms at work around news ideas, risk-taking, and failure. How can one seed or cultivate an accepting cultural environment for innovation in the local community context?

Governance and Operations

Work from the Project for Public Spaces points out that governing and managing innovation districts may require a major shift in the way local planners, policymakers, and officials approach governance and operations, for several reasons. First, innovation districts require breaking down silos between disciplines. Typically, government is organized into service-specific departments such as health, public safety, transit, waste management, etc.—but creating good multi-use places like innovation districts requires a multidisciplinary governance approach. The Project for Public Spaces argues that each office of government should organize itself around creating successful public spaces, rather than every office having its own distinct and separate mission that doesn't concern itself with place.

Similarly, planners must integrate strategies for place-based development with distinct policies and programs that help innovation ecosystems flourish.

This approach is often new to public and private sectors, and strategists must be willing to embrace each other's way of designing programs and building out physical space. A third element important to governance and operations is the steadfast dedication to focusing on the end users (e.g., workers, students, and residents), not just local leaders and experts. To ensure this commitment to the end user is sustained, innovation district managers can consider ways to hold themselves accountable to the innovation district community, such as by conducting regular surveys or listening sessions that foster honest feedback on the design and programming of the district.

Next, it is challenging to strike a balance between fostering a common vision for the district's future while also leaving room for people to make many little plans. Developing a rigid master plan can kill an innovation ecosystem—and yet, without a common vision, it is difficult to rally support for the overall design and experience that the district seeks to achieve. Districts cannot be overplanned or overmanaged.

Finally, districts generally require redirecting power, responsibility, and funding to the district level itself. This too, is often a very new way of managing and operating shared spaces. A variety of structures exist that can be implemented to manage places, and whether those are formal or informal, public spaces must be managed to function. In their research and experience, the Project for Public Spaces estimates that "management, including maintenance, programming [and] outreach, accounts for 80-90% of the success of a space" (Kent, 2013). They argue for flattening the governance of places, putting management in the hands of communities, with professionals and other people in power transitioning from ultimate leaders to "facilitators, resources, and inspirations to change." Instead of a top-down approach, where governance of places is delivered to the community, this shift allows places to foster a common sense of vision for themselves, while leaving room for smaller and more flexible plans to come and go.

It is important to remember that innovation districts cannot stand on their own. Their vibrancy draws on their ability to connect. To foster more frequent and organic interactions, a broad range of stakeholders and officials in all levels of government, industry, and community need to support effective public transit, strong broadband internet, affordable housing, and well-planned programs and activities. Despite some of these noted governing and operations challenges, the Project for Public Places argues that this kind of approach will deliver spaces that are "inherently more open, authentic, and culturally vibrant" (Kent, 2013). This is key to creating not just an innovation district, but a quality place to live and work.

As stakeholders work on setting out the governance aspects of the innovation district, it is also important to consider more immediate and tactical aspects of innovation district planning. Practitioners have to consider several questions: Who are the actual stakeholders? How do they collaborate and make decisions? What are the trade-offs and negotiations that must occur between stakeholders with different priorities and visions? Where is the financing and investment coming from? Who has the power to implement the plans and policies? And who is going to actually do the implementing?

These are tough questions, but important ones to help all stakeholders understand the intent and direction of the innovation district. It can also help those involved know what questions and considerations are likely being addressed, and which ones may be under-emphasized in the design and planning.

What Are Common Challenges?

Common challenges to innovation districts are threefold: Are you sparking innovation-led economic development? Is your designated place conducive to chance interactions and community engagement? And how inclusive is your district, really? We walk through each of these challenges in turn and offer solutions from the studies completed.

Innovation Challenges

Some places may have all the building blocks for an innovation district but struggle to put them together into an effectively planned space. Even when buildings are dense, with shops, homes, and offices coexisting, the challenges of gaining

critical mass and sparking interaction are difficult to overcome. Oklahoma City, for example, has a wealth of healthcare and energy firms located close to one other, yet "few organizing structures exist to strategically connect these industries—to one another and to other regional assets in Norman and elsewhere—around common technology platforms" (Andes et al., 2017, p. 7).

To avoid problems like these, practitioners need to build a connective infrastructure between disparate firms—not just by building a place, but by encouraging incubators, accelerators, tech transfer offices, and other "innovation cultivators," as Katz, Vey, and Wagner of the Brookings Institution term them. These authors found that "more than ever, intermediaries are increasingly the catalyst to growing innovation and entrepreneurial energy within local districts and across startups, small and medium-sized enterprises, and, even to some extent, large companies and research institutions" (Katz et al., 2015).

Place-Related Challenges

With so many developments in the last century revolving around cars, it can be difficult to rebuild walkable spaces that encourage interaction by chance. Oftentimes a district can be built near an area with plenty of retail, parks, bars, and restaurants but be unfortunately bisected by a busy road that makes it difficult or impossible to get back and forth easily. Some districts suffer from limited walkability, which, as a Brookings report notes, "makes the more amenity-rich areas nearby feel further away than they actually are" (Andes et al., 2017, p. 7). Many districts suffer from an overabundance of parking lots, buildings too far away from the street, and other factors that hurt their walkability.

To combat these issues, practitioners need to keep the pedestrian in mind when planning. There are a wide variety of policy prescriptions to minimize car traffic and protect non-motorized travelers—such as pedestrian bridges over busy roads, car-free "superblocks" in Barcelona, and regulations restricting car traffic to only certain days and times—and the correct policy will be specific to each district.

Inclusion Challenges

While much of the literature on innovation districts acknowledges the need for planners to go out of their way to make districts accessible to low-income urban residents, some critics argue that these kinds of efforts have not materialized and in fact innovation districts have become a buzzword to cover for gentrification.

Independent voices call into question who benefits from innovation districts. John Summers, a Cambridge, Massachusetts, resident, argues that the Kendall Square and Central Square developments are not truly publicly accessible and do little to improve the space for the public, stating that the district only allows the same laboratories and large technology companies to develop new real estate under the guise of improving the area. He says that after the state's 1995 repeal of affordable housing laws in Boston, Cambridge, and Brookline, "the market has been driving the poor and the working class out . . . and the Innovation Economy is finishing them off" (Summers, 2014). According to his commentary, the rhetoric of innovation benefits only those who already have jobs in the tech sector, at the expense of the arts, civic culture, diversity, social progress, and the lives of people in poverty (Summers, 2014). Freelance writer Kyle Chayka makes a similar argument, arguing that "the process [of building an innovation district] only benefits a thin spectrum of the population that already has access to the kinds of capital—education, real estate, connections—that the innovation economy thrives on" (Chayka, 2014).

These criticisms highlight that inclusivity must be a forthright goal and intention, not an afterthought. As Chayka writes, "Any city looking at developing an innovation district as a way to seek economic growth must ensure that it is sustainable, organic, and woven into the preexisting fabric rather than simply plopped onto an empty-looking post-industrial neighborhood" (Chayka, 2014). Summers, too, concludes that "actual progress would make community benefit the objective of urban policy, rather than the unreliable byproduct of commercial competition" (Summers, 2014).

Chayka suggests giving guaranteed space at fixed, lower rents in innovation districts to educational

institutions and subsidizing their tuition and fees for local residents. Innovation districts can also build inclusivity by guaranteeing cheaper space to affordable housing developments and institutes that serve the community, such as nonprofits or free legal and medical clinics. Bringing new service sector jobs to the district will only be helpful to the residents in the medium to long term if they pay living wages. Whatever policy an innovation district leverages to grow inclusively, it is crucial to remember that inclusion will likely not happen if you do not make it happen.

Measuring Progress

As innovation districts as a concept and a field of study are rapidly evolving, the field is not yet settled on the best ways to measure their success. Districts use a wide variety of metrics to measure success, such as dollars of investment attracted and firms and jobs created. Some districts are comparing their outcomes from the rest of the city to show how districts can create pockets of economic and social progress.

But there are other metrics specific to innovation districts that may help planners demonstrate the impact of the district. Consider finding such figures as the number of people who spend time in your public spaces or pass through on foot to measure the quality of the place created. To show your impact on the community, consider figures about the number of jobs created filled by people who live within a certain distance of the district. Some places find it best to incorporate a wide variety of metrics, like American Underground in Durham, North Carolina, which reports on not just jobs created and funding raised, but cups of coffee brewed, pounds of waste composted, and numbers of times organizations headquartered there were featured in national news (American Underground, 2016). This helps them show the degree of dynamism inherent to the district in a location that only 10 years prior had very little foot traffic. The metrics you choose will also be specific to your district and may or may not compare easily to outcomes from other innovation districts; an innovation district in a developing country may have very different figures than a city like Cambridge that already has world-leading innovative institutions.

Available Tools for Assessing Your Innovation District

Some tools exist that have been created to help practitioners plan and track the progress of their innovation districts. One currently available tool, developed through collaboration with RTI International, is the InnovateNC Community Innovation Asset Map.* This tool, described as "a community's first step for developing a concrete roadmap to grow their innovation economy meaningfully" (InnovateNC, 2017), includes several detailed worksheets to help policymakers map out their innovation assets. It is a framework for an asset mapping exercise, which provides a concrete series of steps for local leaders to form collaborative committees and begin a course of action by understanding which assets it should leverage. RTI, together with local and statewide partners, developed the tool through a multi-city collaborative to lead innovation-led economic growth (InnovateNC, 2017).

The Brookings Institution, in collaboration with the Project for Public Spaces and Mass Economics, has developed an auditing tool for assessing innovation districts. They measure district data against city and regional data, compare it to other similar districts, and supplement it with qualitative research to assess cultural aspects, measuring things like density of people and institutions, economic growth, and diversity and inclusion. It includes an assessment of critical mass, innovation capacity, diversity and inclusion, quality of place, and leadership (Vey, Hachadorian, Wagner, Andes, & Storring, 2018).

Conclusion

As the world rapidly urbanizes and cities grapple with economic instability and inequality, well-planned innovation districts may offer a way to help cities diversify their economic base, socially engage networks, and create vibrant public spaces in formerly blighted neighborhoods. Without intentional planning, innovation districts run the risk of fueling the negative impacts of gentrification, creating expensive places that are underused, or becoming yet another real estate project that does not embody the

* Available for free download from https://iei.ncsu.edu/innovatenc/.

 https://doi.org/10.3768/rtipress.2018.op.0059.1902

aspects of an innovation ecosystem. However, with a shared vision and good planning, local leaders have the opportunity to transform their urban structure and build toward greater economic resilience.

In addition to the academic and policy literature on innovation districts, this paper provides a series of questions and considerations that local policymakers can address in the planning phase in order to learn from past experiences of innovation district projects and anticipate potential challenges.

Because innovation districts must incorporate so many aspects of the community—social, economic, cultural, educational, political, and the built environment—addressing these key questions will by no means be easy even in the most cohesive and resource rich areas. But by getting ahead of questions around planning, building, implementing, and sustaining a potential innovation district project, local policymakers are more likely to create the impact they seek.

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