

Positioning Innovation Districts as a Road to Recovery

Five Insights for National and State Governments

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Could the COVID-19 crisis spark a new wave of innovation to help drive the economic recovery of our cities and nation states? Only if governments act with alacrity and invest in areas of innovation with demonstrated leadership and the hard assets necessary to drive transformative and inclusive growth. Many of these locales are innovation districts—**hyper-dense locales where innovation disproportionately occurs.**

To date, national and state governments around the world have focused on what they know best: implementing short-term stimulus, or maintenance, packages in an effort to offset the economic impacts of the pandemic. The primary thrust of these packages has been to address the imminent needs of workers, students, institutions, small businesses, and larger companies. Such aid has primarily taken the form of unemployment benefits, forgivable loans, and even outright grants.

A natural strategy for governments seeking to drive longer-term stimulus or maintenance projects is to invest in infrastructure—new roads, bridges, and public transportation—pumping new capital into the construction and development sectors. The aim of such investments is to generate new demand in the real estate, durable goods, and service sectors.

Unfortunately, these strategies are episodic interventions that cannot sustain the level of economic activity required to pull us out of this COVID-generated recession. Even unconventional approaches such as negative interest rates and quantitative easing, which were successful to some degree during the 2008 recession, are unlikely to have any sustainable impact today and may only exacerbate existing negative conditions such as wealth inequality.

A new approach and a new set of tools are needed.



A Targeted Approach to Growth

Early intel suggests that a small number of governments are developing multifaceted recovery packages aimed at creating a *multiplier effect on the economy*. These recovery packages include investments that are best aligned to jump-start the economy, create a longer trajectory of job growth, construct pathways for economic mobility, including traditionally underserved communities, and expand the city's or region's competitiveness.

Frankly, achieving such a multiplier effect sounds like a tall order. But some government officials have already identified viable avenues to get there by thinking through short-, medium- and long-term goals for driving recovery.

This explains why in some parts of the world, innovation geographies—such as innovation districts and innovation precincts—are informally being asked to develop detailed projects needed to drive inclusive, long-term growth in economic development. *Innovation districts are compact geographies of innovation found primarily in cities. They are anchored by R&D-intensive institutions, such as universities and academic medical centers; companies; clusters of start-ups; community spaces; and urban amenities, such as housing, retail shops, dining, and entertainment.* These districts activate a magnetic, interconnected environment that is the creative, productive, and economic engine of the municipal, if not regional, economy.

Even though job growth and economic recovery are a top priority, governments cannot focus solely on these goals. They must also make significant investments in research, development, and manufacturing—areas that will be more crucial than ever in solving some of our most vexing human and environmental challenges. Arguably, COVID-19 has exposed the fragility of our economic systems and the vulnerability of our global society. It is illuminating, in real time, the painful losses we are bearing as a consequence of being ill-prepared and under-resourced:

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- COVID-19 has reinforced the **imperative of scientific research and its application to improving the human condition**—an area of vital government investment that has been in steady decline over the last 50 years.
- The global pandemic has helped highlight how most **complex innovation processes no longer occur in isolation but, rather, are built on the ability to share knowledge and data locally and globally**. Look no further than your own communities to see how networks and relationships have proliferated between hospitals and start-ups, life science researchers and established manufacturers, and health care investigators and data scientists.
- Further, COVID-19 has underscored the necessity of a broadly distributed base of **advanced innovation technologies**—ranging from biomanufacturing facilities and laboratories with specific biosafety standards, to platform technologies such as quantum computing, artificial intelligence, and machine learning systems.



- We have also learned what can happen when **we rely on single supply sources and fail to invest in fundamental capabilities like manufacturing**. Although moving manufacturing closer to home will likely mean higher unit prices, our current vulnerabilities—as many scholars and policy analysts have argued—underscore a renewed imperative for multiple supply sources. Furthermore, if designed well, regional manufacturing could breathe new life into our shrinking manufacturing clusters.
- Finally, this pandemic has illustrated the imperative for, and power of, **challenge-based research** to forge new alliances and a new wave of innovation charged to solve world-impacting challenges. Finding ways to eradicate this pandemic is only one example. Climate change and a myriad of intractable cancers and other diseases could become the platforms for funding teams that span organizations, institutions, and nations.

Five Insights for Governments

It is natural for these early government leaders to look to innovation districts as a driver of amplified activity. Innovation capability remains a key differentiator of urban economic potential. The work of ideation, proof of concept, prototyping, and testing of the new technologies that create economic growth are most efficiently and productively executed in talent-laden, resource-rich geographies such as innovation districts. At the same time, many innovation districts have already made considerable outlays on infrastructure and processes critical to driving new waves of growth. They also commonly possess extensive collaborative networks of actors, which are an additional asset to leverage.

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At the same time, governments should be selective as they identify districts to drive recovery. Such a process cannot be *dictated by political aspirations*. It must instead be evaluated on hard empirical evidence alone. In short: Innovation is a global competition and tough choices must be made. To support our “first mover” governments and others likely to follow, here are five insights for governments to consider as they plan their individual approaches:

- 1 Recognize that not all innovation districts are equal.** As the authors of [“The Rise of Innovation Districts”](#) in 2014 and [“The Evolution of Innovation Districts”](#) in 2019, we have heard from hundreds of local actors who argue they are a leading district—or will be in just a few short years. *But as a starting point, targeted recovery packages should be earmarked for innovation districts that meet minimum thresholds for certain assets.* These assets include research anchors strong in applied sciences and proficient in the commercialization of resulting discoveries. Any district that receives a recovery package should include a spectrum of actors in the private sector—from growth companies and mature companies to start-ups and small and medium-size enterprises—that complement research disciplines with agility and speed-to-market capabilities. These districts will also feature sufficient private and foreign investment, which reinforces their ability to secure other types of capital essential to business formation, growth, and attraction.



Most importantly, these districts must be magnets for the talent that powers ideas and innovation that are connected and supported through programming, training, and orchestrated events to accelerate a district's "collaborate to compete" approach.

Simply stated, if governments are turning to innovation districts as an avenue of growth, those districts must have in place the leadership and hard assets necessary to drive transformative and inclusive growth, immediately and sustainably. We have learned, for example, that one state government has identified nearly 50 innovation districts to drive recovery. Our examination identified no more than four of these geographies as viable candidates to lead the hefty recovery efforts required in the state.

2 Look beyond the infrastructure and buildings for empirical evidence on innovation outputs, job growth, and the scaling of talent. When asked to measure foundational strengths or demonstrate return on investment, some geographies churn out laundry lists of their innovation infrastructure or the number of companies located nearby. It is true that

more infrastructure and more firms are usually preferable to fewer. But merely listing assets fails to signal a district's aptitude in research translation that has been proven to drive commercial activity and the development of new jobs. *Governments should push districts to demonstrate their ability to drive and organize research, corporate engagement, and entrepreneurial activity around specific problem-solving clusters that could include, for example, cell and gene therapy, immunotherapy, or data modeling and visualization.* The bottom line: Governments should be asking districts to demonstrate outputs and outcomes that warrant outsized investments.

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3 Evaluate the degree of internal and external collaboration by actors within the district.

Innovation districts are built on a "collaborate to compete" mindset and are designed to be porous—encouraging external collaborations as well. Not surprisingly, most districts have some actors that are more insular and less willing to collaborate. Such actors may be strong employers, but their inward-looking mindset reduces the number of connections within the ecosystem.

We have conducted interviews with over 25 global innovation districts since the onset of the pandemic. They are reporting that previously inward-focused actors are now actively seeking to collaborate across their districts as well as outside of their regions. Whether the impetus is self-preservation in these challenging economic times or the recognition that complex problems, such as COVID-19, can be addressed only as a shared experience, the early indications are that this open mindset will continue. *Government stimulus proposals need to elevate the importance of any response being a shared endeavor, requiring districts to demonstrate sophisticated collaboration between district actors, as well as among local actors and with the regional innovation ecosystem.*



Attention should be paid to sustaining revised processes and behaviors that have increased the level of collaboration—such as through revamped technology transfer offices or early-stage processes that engage industry and more. Some governments may seek to leverage a mission- or challenge-oriented approach to organize districts; others may seek to push on stronger processes.

- 4 Push all districts to seek ways to create integrated value chains—moving from R&D to production and manufacturing.** The vulnerability that results from a handful of countries providing an outsized share of critical manufacturing *argues for a substantial re-think about linking research-intensive districts with manufacturing facilities located within their regions.* Several leaders across many nation-states have recently advanced this argument on national security grounds alone. Many districts and other geographies of innovation have been affected by transportation and delivery interruptions. We are aware of several districts that, in response, are exploring how to move manufacturing capabilities (cGMP, pilot, scaled bioprocessing) closer to, if not within, their own boundaries. Doing so will demand a highly deliberate and detailed approach. “Only by mapping and truly understanding the whole supply chain—and the supply chain’s supply chain—can manufacturers fully quantify risk,” recently argued professor Rab Scott, operational chair of the Digital Strategy Team for the High Value Manufacturing Catapult in the UK. COVID-19 is now making it imperative for innovation districts to understand the whole supply chain.

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The integration of manufacturing into districts also requires a highly tailored approach, building on the district's local and regional conditions and assets. Using examples across Europe, districts found in such cities as Dublin or Copenhagen—with high land costs and limited supply—would be wise to position themselves by creating manufacturing-based innovation labs. This allows manufacturing processes and capabilities to be accelerated in close proximity to R&D talent. Importantly, these insights must transfer back to regional manufacturing to be tested and ultimately scaled. In districts in northern Italy, where there are greater land resources and a sea of strong pharmaceutical and medical device manufacturers, locating smaller advanced manufacturing facilities on-site is a viable approach. For districts in the northern UK, where the entire region is a strong manufacturing base, it argues for manufacturing to be enabled by deeper R&D capabilities to drive local models of manufacturing-led innovation.

- 5 Demand that districts demonstrate a cohesive commitment to inclusive growth, creating new pathways to new jobs for residents.** While COVID-19 has refocused our attention on scientific research and commercialization, it has also rolled back the progress of millions of workers and families. The Great Recession of 2008 showed us the unevenness of recovery, driving the wedge of even greater wealth inequities into our societies. Early evidence shows



that communities will no longer tolerate investments that continue to drive such inequities. This means that government recovery packages must prioritize long-term equity over short-term returns.

A steadfast commitment to inclusive growth will require a great many changes in policy and investment. It will also demand an ever-increasing number of people to move into STEM-oriented careers, which is a feasible goal when considering that nearly 40 percent of jobs in many innovation districts do not require a four-year degree. *It therefore means that governments must have a heavy hand, shifting their focus from short-term construction jobs to bolder goals related to education linkages, training, and inclusive programs on-site for women and racial and ethnic minorities.* In other words, districts must create new and expanded pathways to meaningful employment that enable inclusive innovation, with recovery packages providing a powerful incentive.

An important and necessary conclusion to this article is our ability to answer the COVID-19 challenge, requires the inclusion of governments themselves.

They must recognize their responsibility in fixing policies that have hampered the growth of local and regional clusters. It means governments must drive top-down reforms to strengthen investments in necessary R&D, advanced manufacturing, or other innovation infrastructure. It means they must develop creative tax incentives for scaling companies and firms on the cusp of leaping ahead or leaving their geographies. And finally, it means they must align their economic imperatives with goals related to training, teaching, and including historically disadvantaged communities in this growth. Governments must also innovate and retain the agile and rapid decision-making—what many are demonstrating throughout this crisis.

In the end, we know we can respond to the challenge. We now challenge government to do the same.

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The Global Institute on Innovation Districts is a global-reaching not for profit organization dedicated to conducting practice-oriented research on innovation districts—new geographies of innovation emerging primarily in cities. Drawing on deep analytics and proven impact, The Global Institute seeks to identify how districts transform into new engines of city and regional economic growth. During a time of uneven growth, research and work with a global network of districts aims to identify new systems for advancing inclusive innovation. Its partners include The Brookings Institution, Drexel University's Nowak Metro Finance Lab, and PlusValue Advisory.

