



THE GLOBAL INSTITUTE IN 2021: HARNESSING INNOVATION DISTRICTS TO “BUILD BACK BETTER”

By Julie Wagner, President, The Global Institute on Innovation Districts

More than a year into the economic crisis caused by the global pandemic, many countries and stakeholders are developing strategies to [“build back better.”](#) Rather than charting a course back to the restoration of the previous status quo, these strategies are rightly aimed toward building a more innovative, inclusive, and sustainable future.

In response to the pandemic, The Global Institute on Innovation Districts has launched its 2021 agenda to help “build back better.” We are actively advancing strategies that support geographies uniquely positioned to drive new waves of innovative, inclusive, and sustainable growth: Innovation districts. Innovation districts are geographies where academic and medical institutions, companies, start-ups, and innovation intermediaries cluster and connect in mixed-use, walkable communities.

Governments, philanthropic organizations, and financial institutions increasingly view 2021 as a policy pivot. It marks a shift away from short-term crisis responses to now addressing long-term structural challenges that have only worsened during the pandemic. Waning competitiveness, underinvestment in education and skills, and the hyper-concentrated growth of tech hubs in just a few global cities are examples of the challenges that must be faced head on.

In the United States, for example, the federal government is considering significant funding for research in, and the industrial applications of, technologies such as quantum computing, robotics, and biotechnology. Other proposals under consideration include \$80 billion worth of investment in “innovation centers”—locales of innovation found

in regions that have historically been hampered by underinvestment but that nonetheless remain powerful centers for R&D.

Place-based investments in R&D and upskilling would significantly boost the growth of innovation ecosystems that have emerged around specific R&D universities and medical institutions. These geographies—also known as [innovation districts](#)—are home to rapidly growing tech- and knowledge-intensive companies and start-ups.

Given the number of outdated industrial and innovation policies in many countries, it could be argued that innovation districts have emerged almost in spite of their nation-states.

The ambitious legislation under consideration in the United States exemplifies the kind of bold course correction needed to drive new waves of innovation and inclusive growth. Innovation districts, because of their concentration of assets, have a powerful role to play in this correction.

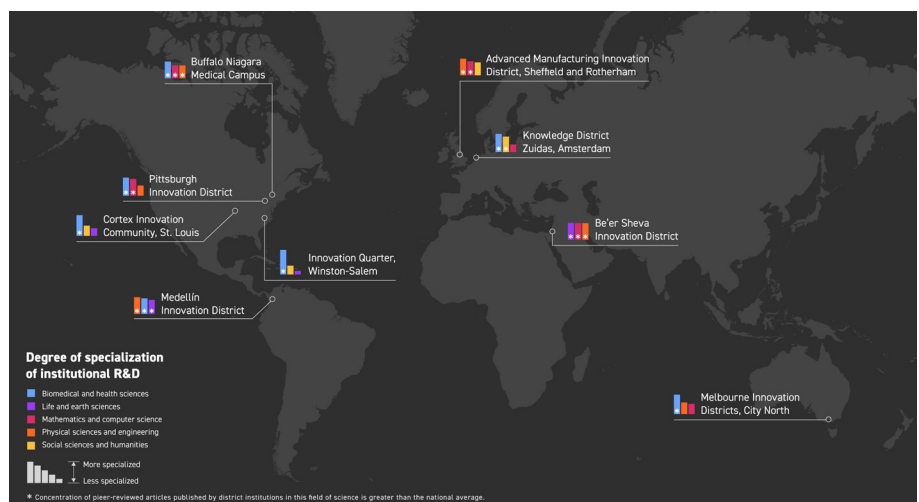
Empirical analysis validates the power of districts to jump-start growth

In 2020, as the pandemic spread from Asia and Europe to the Americas, The Global Institute began analyzing nine innovation districts in six countries and across five continents. Our analysis set out to better understand the advantages of districts as vehicles for heightened growth and prosperity.

Our research found that many districts possess the R&D capacities, processes, talent, and technologies necessary to tackle some of the most daunting challenges of our time.

These very challenges—from infectious diseases to climate change and cancer—require scientific rigor, the nimbleness to draw together surprisingly distinctive fields (such as astrophysicists helping medical researchers address vascular disease), and physical proximity to smooth over the frictions of travel and time.

Further, unlike traditional science and business parks, innovation districts tend to be disproportionately located in the cores of cities and are often adjacent to neighborhoods challenged by economic disenfranchisement, high unemployment, low income and opportunity. This adjacency drives a new level of urgency that compels district leaders to pursue both innovation and inclusion strategies.



Innovation districts boast distinct R&D specializations. Source: The Global Institute's analysis of Clarivate data, accessed in 2020

▲ The Medellín ID's anchor institutions are deeply specialized in "hard sciences," including biomedical and health sciences and physical sciences and engineering. The district contains over 500 knowledge-intensive companies that drive private-sector R&D and is home to many cultural institutions and consumer amenities.

▲ Institutions in the Innovation Quarter have outsized productivity and impact in nearly every subfield of biomedical and health sciences. In particular, the district publishes the largest number of articles in the subfield of clinical medicine, where publications on allergy and peripheral vascular disease have the highest impact.

▲ The Buffalo Niagara Medical Campus boasts a constellation of specializations in biomedical and health sciences. Their work also includes transformation of the physical landscape, development of cutting-edge clean energy sources, and forging new links to adjacent communities.

▲ In Knowledge District Zuidas, the R&D institutions that anchor the district represent an outsized portion of the Netherlands's research in biomedical and health sciences, especially translational research related to testing new drug treatments and medical imaging technology.

▲ The Advanced Manufacturing Innovation District successfully aligns Sheffield's institutional R&D strengths with the R&D ambitions of almost 250 private-sector companies, most of which are knowledge- and research-intensive industries related to advanced manufacturing.

▲ The Be'er Sheva innovation district is especially competitive in computer science, engineering, and environmental sciences. The district accounts for as much as a third of Israel's publications in thermodynamics, metallurgy, and chemical engineering disciplines. The Israel Defense Force Digital Campus in the district will further expand the district's R&D strengths.

▲ The Melbourne Innovation District is a powerhouse of research and innovation. The district's institutions claimed 1/6th of Australia's competitive R&D grant funding from 2009 to 2018, most of it for research in biomedical and health sciences.

▲ The Cortex Innovation Community has amassed nearly 400 tech-led companies and start-ups. This growing cluster of firms is reinforced by the district's anchor institutions, which collectively spent over \$7.5 billion on R&D from 2009 to 2018.

▲ The research institutions in the Pittsburgh ID likely make this district one of the top 10 densest areas of R&D spending in the country. It is also home to over 1,500 companies, creating a job density that is more than four times higher than the metro area average.

A role for The Global Institute in 2021

For 2021 and beyond, The Global Institute is actively implementing an agenda that positions innovation districts as an important vehicle for building back better. This entails advising national and state governments on their pursuit to catalyze innovation districts; designing a cohort of global districts to conceive and implement new solutions for growing their local and regional economies; and working with select districts best positioned to take on climate change.

There are now over 100 innovation districts around the world, each with distinctive R&D strengths, place-based assets, and unique networks. They are increasingly led by collaborative organizational structures that seek out new synergies and cross-actor strategies.

The Global Institute is providing strategic advice to national governments as they seek to catalyze innovation districts outside their country's predominant technology and innovation hubs.

National and state governments are fundamental actors in financing the R&D capacities of their nation-states. Aligning a national government's "top-down" rules and resources with an innovation district's "bottom-up" assets and capabilities lead to new growth trajectories. Our work aims to strengthen this alignment, which will help inform similar work in other countries around the world.

- In Israel, The Global Institute is working with the Prime Minister Office's [National Economic Council](#) to accelerate innovation in the Be'er Sheva Innovation District and the Haifa Innovation District around technologies including blue tech, desert tech, cybersecurity, medical devices, artificial intelligence, and robotics. The Global Institute and the [Nowak Metro Finance Lab](#) at Drexel University are also helping Israeli innovation districts forge new partnerships with innovation districts in other parts of the world.
- In the United States, The Global Institute is working with the Department of Energy's [Oak Ridge National Laboratory](#), the country's largest national science laboratory, to identify opportunities for catalyzing new waves of innovation and entrepreneurial growth. Oak Ridge conducts foundational research and breakthrough applications that address unmitigated pollution and worsening climate change while accelerating clean energy innovation and fueling competitiveness in emerging fields. Oak Ridge, in addition to other national labs, can be even further positioned to strengthen regional growth and competitiveness through the development of an innovation district.

The Global Institute has partnered with the Cleveland Foundation to design a cohort of innovation districts that will concentrate on advancing inclusive, equitable growth.

COVID-19 and its [cascading economic and health impacts](#) are exposing the true costs of long-standing and systemic racism. In almost every corner of the world, disparities along racial, ethnic, and often religious lines can be found in every aspect of regional economies—including education, workforce training, access to quality jobs and career advancement, pay, leadership opportu-

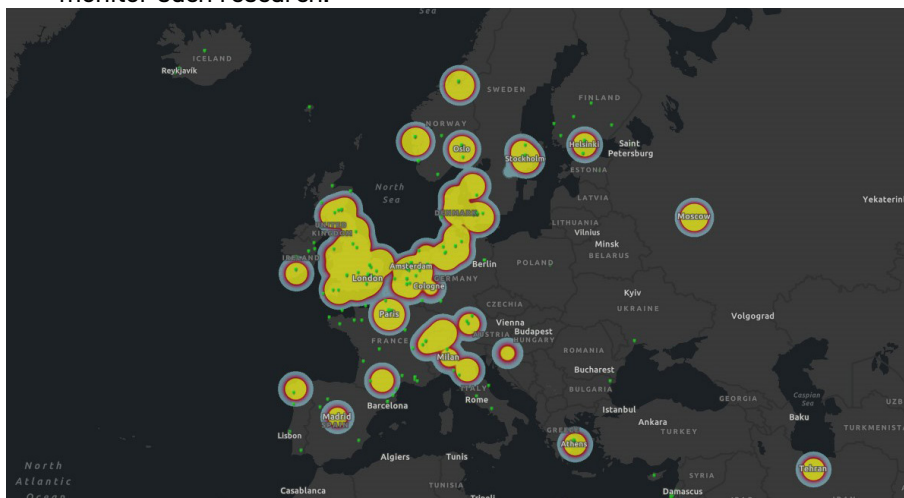
nities, start-up activity, and access to capital. Districts are engines of regional growth, so inclusive and equitable growth strategies that link to broader city and regional systems are more important than ever.

- These collective insights have compelled The Global Institute to initiate a new alliance whereby a global cohort of districts, in various stages of development, actively design, test, and implement strategies as a collective. Importantly, we believe that supporting districts in their efforts to advance inclusive growth requires a systems approach. This means tackling entrenched barriers to both innovation and inclusion to drive new practices for innovation districts worldwide.

The Global Institute will organize a cohort of districts best positioned to take on climate change with the mandate to develop tailored approaches to open innovation, to share risk, and to strengthen the application and scalability of blue tech solutions.

Climate change is a challenge that continues to be dismissed by too many policymakers and one where investments in solutions—on the part of government, financial institutions, and the private sector—are inadequate. As a consequence, R&D actors have had limited capacity to effectively develop, finance, and scale new solutions.

- The Global Institute aims to drive a new model of global collaboration among districts specialized in blue tech to seek out new efficiencies within each district and across the cohort as a collective. [Blue tech](#) is the advanced technology sector of the maritime industry. It consists of technologies that ensure the safe and sustainable cultivation of food, medicinal ingredients, and energy products in marine environments. It also involves products and activities related to shipping, construction, and civil defense. The research and commercialization challenges facing this sector are significant, especially given the risks involved in deep, unforgiving water and the significant costs to equip, undertake, and monitor such research.



Analysis underway by The Global Institute: A global scan of local ecosystems advancing blue tech. Source: Treebute.io on behalf of The Global Institute

These and other challenges position innovation districts to work together in an effort to strengthen place-based strategies that better leverage their wet and dry landscapes, the co-location of public and private actors, and their unique clustering of innovation intermediaries. With research already under way, we intend to apply our independent and rigorous analysis, combined with highly strategic collaborative sessions, to surface and co-create innovative practice.

Finally, The Global Institute will reinforce the work outlined above by expanding its global network of districts and by disseminating new insights acquired through practice-oriented research. Supporting a rapidly evolving practice requires cross-district deliberation and a tight connection between research and practice.

- To that end, The Global Institute plans to engage with up to 50 innovation districts to join an evolving [global network](#). Our aim is to conduct empirical analysis across dozens of districts around the world in an effort to strengthen their individual and collective competitive proposition as global problem solvers.
- Our work must also reach a broader audience, considering that governments, financial institutions, R&D institutions, philanthropies, and communities play a powerful role in the growth of districts. For this reason, we are also disseminating a series of short, practice-oriented research articles to spread new insights and powerful lessons. The first in this series will be the top insights gleaned from our deep analysis of nine innovation districts in 2020. You can stay up to date on this by [signing up here](#).

Innovation districts and their leaders are well positioned to drive new waves of growth at a time of economic contraction and inequality. Their R&D assets, decades of investment, leadership capacity, and the ambition to “do more” place innovation districts at the forefront of catalytic change. The Global Institute—its team, its leadership, and its growing network—is working to spur economic recovery in the wake of the COVID-19 pandemic and the growing imperative to build back better.

Generous support to advance independent research by The Global Institute is provided by our Founding Partners: **Lendlease**, a global property and infrastructure group; and **Ventas**, a U.S. real estate investment trust. The Global Institute would also like to acknowledge the innovation districts serving on our **Steering Committee**: *The Advanced Manufacturing Innovation District* in Sheffield and Rotherham; *Be'er Sheva Innovation District*; *Buffalo Niagara Medical Campus* in New York; *Cortex Innovation Community* in St. Louis; *Distrito de Innovación de Medellín*; *Knowledge District Zuidas* in Amsterdam; *Melbourne Innovation Districts, City North*; *Pittsburgh Innovation District*; and the *Innovation Quarter* in Winston-Salem.