

DAY ONE PROJECT

Place-Based Public-Private
Partnerships for Innovation (P4I)

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December 2020

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Summary

The next administration should launch national Place-Based Public-Private Partnerships for Innovation (P4I) to supercharge American innovation by leveraging the power of proximity and partnerships, and in so doing, lay the foundation for a new and more inclusive era of American prosperity.

The P4I initiative will catalyze the formation and growth of vibrant Innovation Zones (IZs), creating powerful points of convergence that weave together place-based investments with educational, research, entrepreneurship, and economic supports to advance inclusive economic development from the American heartland to the coasts. IZs will catalyze the public-private development of mixed-use innovation hubs that house and support: training programs to prepare diverse and resilient labor forces; advanced research and development (R&D) activities undertaken by partnerships between universities and industry; and, incubators, accelerators, and investor groups to incubate, grow, and retain high-tech businesses.

P4I should be implemented by an interagency committee convened by the White House Office of Science and Technology Policy (OSTP) under the auspices of the President's Council of Advisors on Science and Technology (PCAST). An interagency initiative will be critical for success, mobilizing federal agencies that share responsibility for all aspects of innovation and economic development policy, including STEM R&D, formation and growth of U.S. innovation industries (small to large), and innovation-based economic and workforce development.

Challenge and Opportunity

The United States is currently facing a set of compounding crises: a global pandemic, an economic recession, a reckoning with systemic racism, and natural disasters exacerbated by human-induced climate change. To address these challenges, the country must adopt a new growth model that promotes equitable economic outcomes, while also advancing innovation initiatives to address our most pressing societal needs.

To date, the Federal Government has let the market overwhelmingly shape the country's economic geography, leading to both enormous job growth and investment in innovation hotspots like New York, Boston, and San Francisco, and persistent disinvestment and decline in much of the nation's heartland. Federal investments in place-based innovation ecosystems – also known as innovation districts – create opportunities to catalyze innovation-focused partnerships among private and public sector entities to enhance economic competitiveness and address inequality and polarization, aiding economic recovery and providing economic opportunities where they are most needed. Innovation districts are compact, mixed-use neighborhoods that co-locate academic, entrepreneurial, corporate, and business support entities with the goals of

1) sparking new ideas, products, and services; 2) creating, attracting, and growing thriving businesses; and 3) generating inclusive economic opportunities for all.

Place-based innovation initiatives sit at the confluence of two distinct policy domains—innovation policy and economic development policy. On one hand, federal innovation policies channel funds to individual companies or research institutions to enhance national competitiveness **but insufficiently leverage the advantages of physical proximity to supercharge innovation activity**. On the other, federal economic development policies – including most notably the Opportunity Zones program, which was introduced in the Tax Cuts and Jobs Act of 2017 – direct private capital into disinvested communities **but insufficiently leverage proximate innovation ecosystems to drive sustainable growth**. As a result, federal approaches to innovation and economic development have been siloed, and occasionally work at cross-purposes.¹ This has limited the growth of place-based innovation ecosystems and has left their future entirely in the hands of local actors.

Plan of Action

The P4I initiative will leverage the power of proximity and public-private partnerships to form and grow a network of vibrant IZs designed to supercharge American innovation and usher in a more inclusive era of American prosperity.

Inspired by the National Nanotechnology Initiative and the Advanced Manufacturing Partnership implemented by previous administrations, P4I should be implemented as an administration initiative led by OSTP under the auspices of PCAST. To optimize its success, P4I must catalyze the engagement of local and regional civic and industry leaders, as well as leverage the policy interests of multiple federal agencies, including: 1) the R&D grantmaking activities of the National Science Foundation, National Institutes of Health, National Aeronautics and Space Administration, and the Departments of Agriculture, Commerce, Defense, Energy, and Homeland Security, among others; 2) the Small Business Administration’s commitment to support geographically-proximate networks of small and large businesses, suppliers, academic institutions, and business support organizations in related industries; and, 3) the Economic Development Administration’s support for intermediary organizations like universities, accelerators, and venture capital funds focused on growing regional advantages in specific sectors.

OSTP should convene an interagency committee with senior leaders representing each of the federal agencies identified above. Through national and regional workshops, the interagency committee should work closely with organizations representing major stakeholder groups, including the National Governor’s Association, the Association for Public Land Grant Universities,

¹ National League of Cities, “Place-Based Policies for America’s Innovation Economy,” 2019. https://www.nlc.org/wp-content/uploads/2019/11/Place-Based-Paper_1.pdf.

the Association of University Technology Managers, state and local economic development organizations, the Association of University Research Parks, and trade organizations. These events should solicit stakeholder input on the initiative design while also spurring the formation of regional partnerships focused on the creation and support of IZs. Informed by stakeholder input and OSTP guidance, the interagency committee should prepare a call for IZ proposals that require 1:1 cost-share commitments from the proposing partnerships. Over a ten-year period, the Federal Government should invest \$1 billion annually to be matched by private, non-profit, and state and local government sources.

The P4I solicitation should call for proposals to:

1) Create a network of place-based IZs throughout the country.² Federal grants and loans should support development of advanced fabrication or laboratory facilities as well as installation of district-wide digital infrastructure; provide gap funding for step-up spaces and shared labs within privately developed, non-class A buildings; incentivize banks to provide debt capital to mixed-use assets that face challenges raising financing on the private market; amend Opportunity Zones, Brownfield Tax Credits, Historic Tax Credits, New Markets Tax Credits, and Low-Income Housing Tax Credits to provide a basis boost for IZ developments; and fund non-profit entrepreneurial support organizations, including accelerators, incubators, and tech transfer offices. IZs will attract, create, and retain high-growth companies, creating new jobs and attracting capital essential to seed economic opportunity.

2) Prepare a diverse and resilient labor force to create sustainable innovation capacity. IZ-specific investments should support recruitment of research talent; co-location of educational and vocational institutions to facilitate apprenticeships, job placement, and access to the entrepreneurial ecosystem; matchmaking services to connect underemployed community members with employment opportunities; and industry incentives to provide K-12 teacher mentorship and experiential learning through tax credits and other mechanisms. These programs create economic opportunity at all levels, providing pathways to innovation economy jobs designed to nurture and grow regional innovation ecosystems.

3) Expand R&D programs to build innovation capacity. IZ-specific investments should provide R&D tax credit for startups and companies; catalyze industry-university partnerships; promote collaborative multi-institution grant opportunities; create satellite hubs linked to federal research facilities to speed commercialization of federal technologies; more effectively commercialize university and federal technologies; restructure university technology transfer offices as loss-leading, third-party entities operated at the IZ level; provide legal support to standardize industry-university

² No more than twenty percent of IZs should be located within the twenty metropolitan areas with the largest volume of jobs in innovation industries. See, Mark Muro et al, "America's Advanced Industries: What They Are, Where They Are, and Why They Matter," Brookings Institution, 2015.

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commercialization agreements; create innovation voucher programs to enable small businesses to obtain low-cost consulting services from universities;³ and provide venture capital funds to increase access to capital for startups and scale-ups as well as enable the Federal Government to share in the commercial upside of innovations patented within IZs.

Conclusion

P4I will unleash new waves of American innovation, leveraging the power of proximity and partnerships to lay the foundation for a new and more inclusive era of American prosperity. By catalyzing the formation and growth of vibrant innovation zones, P4I will create powerful points of convergence that weave together place-based investments with educational, research, entrepreneurship, and economic supports to enhance economic competitiveness and address inequality and polarization, aiding economic recovery and providing powerful economic opportunities in regions where they are needed most.

³ National League of Cities, "Place-Based Policies for America's Innovation Economy," 2019. https://www.nlc.org/wp-content/uploads/2019/11/Place-Based-Paper_1.pdf.

Frequently Asked Questions

How does this idea support the existing actions you surfaced in exploring the policy landscape?

In the last six months, two bills were introduced in the U.S. Senate seeking to enhance the innovation economy in parts of the country that have yet to experience significant growth in innovation jobs: the Endless Frontier Act and the Innovation Centers Acceleration Act. The initiative proposed here incorporates elements of both bills, and adds four key elements:

1. It places greater emphasis on fostering a diverse and collaborative innovation ecosystem, composed of public, private, and nonprofit partners working together in integrated consortia. Without a robust ecosystem of entrepreneurs, funders, and business support organizations, universities may be unable to catalyze significant spin-off growth.
2. It focuses on compact, contiguous innovation zones. Research has underscored the extent to which proximity, ideally in walkable districts, is critical for driving the “knowledge spillovers” that lead to the creation of new ideas. Investing in higher density development also promotes more environmentally sustainable outcomes, leveraging existing infrastructure investments, promoting alternate mobility modes, and reducing urban sprawl.
3. It channels education and workforce programs, equitable development investments, and R&D funds into designated zones, as opposed to simply increasing funding writ large. Concentrating talent, research, and business development policies in specific districts in coordination with equity commitments will maximize the social impact of federal investments.
4. It calls for IZs to organize around both economic sectors and social impact challenges, such as pandemics or climate change. Structuring investments around impact goals as opposed to solely economic niches encourages collaboration across sectors and disciplines and places the emphasis on “big wins” with societal impact as opposed to incremental technological advancements.

Are there other voices advocating for initiatives like this one?

In its recent report “Place-Based Policies for America’s Innovation Economy”, the National League of Cities makes a case for substantial federal investments in American communities and outlines a strategy to improve local economic outcomes. Observing the multi-decade decline in the global competitiveness of many cities, towns, and villages, the report asserts that every local community can compete and thrive in the innovation economy and calls upon the Federal Government to make place-based investments that ensure American prosperity is shared not just among coastal technology hubs but everywhere in between. Atkinson, Muro, and Whiton from the Brookings Institution make a similar case in their paper, “The Case for Growth Centers: How to Spread Tech Innovation Across America”, published in December 2019.

Why should it be the Federal Government taking action on this issue vs. a state or local government? Or why not incentivize the private sector to address it directly?

To date, the creation of these knowledge-intensive neighborhoods has been driven by cross-sectoral coalitions of local leaders, including city governments, universities, and major employers, who have often leveraged philanthropic support. With limited federal involvement, the market has overwhelmingly determined the allocation of economic resources. Cities with strong market fundamentals and well-resourced institutions, such as Boston, Seattle, and San Francisco, have captured the lion's share of job growth and investments, while those unable to meaningfully participate in the innovation economy have significantly fallen behind.

Why do you propose a White House-led, multi-agency initiative?

The initiative envisioned will be most successful if it catalyzes the engagement of local and regional civic and industry leaders, and leverages the policy interests of multiple federal agencies, including:

- the R&D grantmaking activities of the National Science Foundation, National Institutes of Health, National Aeronautics and Space Administration, and the Departments of Defense, Energy (DoE), Homeland Security, and others;
- the Small Business Administration's commitment to support geographically-proximate networks of small and large businesses, suppliers, academic institutions, and business support organizations in related industries; and
- the Economic Development Administration's support for intermediary organizations, like universities, accelerators, and venture capital funds focused on growing regional advantage in specific sectors.

Harnessing these scattered initiatives into one strategic initiative led by the White House and adding these new elements has the potential to create significant, sustainable impact on regions of the country that have been left out of or left behind in the 21st century innovation economy.

About the Authors



Deborah Crawford is the Vice Chancellor for Research at the University of Tennessee Knoxville (UT). Deborah previously served as vice president for research, innovation and economic impact at George Mason University, president and executive director of the International Computer Science Institute, a not-for-profit research institution in Berkeley, California, and senior vice provost for research at Drexel University in Philadelphia. She worked at the National Science Foundation (NSF) for 17 years, where she held a number of executive leadership positions and where she served as the agency's liaison to the National Science and Technology Council, the Office of Science and Technology Policy and the National Institutes of Health. Her leadership contributions at NSF were recognized twice with Presidential Rank Awards.



Jim Kurose is Distinguished University Professor of Computer Science and Associate Chancellor for Partnerships and Innovation at the University of Massachusetts Amherst. From 2015 to 2019, Jim served as an Assistant Director at the National Science Foundation (NSF), where he led the Directorate of Computer and Information Science and Engineering. While at NSF, Jim also served as co-chair of the National Science and Technology Council subcommittees on Networking and Information Technology Research and Development, Machine Learning and AI, and Open Science. In 2018, he also served as Assistant Director for Artificial Intelligence at the White House Office of Science and Technology Policy. He is a member of the National Academy of Engineering and a Fellow of the Association for Computing Machinery and the Institute of Electrical and Electronics Engineers.



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traveled to Sweden and Saudi Arabia and studied the global evolution of innovation districts and the impacts of place-based design and public-private convergence on their success. Mason is the former President and a current Board Member of the Association of University Research Parks.



Bob Geolas is Partner at HR&A Advisors. Prior to joining HR&A, Bob served as President of the Research Triangle Park (RTP) in North Carolina. Previously, Bob led one of the country's most successful public-private research and development campuses as Executive Director of the Clemson University International Center for Automotive Research. Bob has received several awards for his work, including the Vision Award from the Association of University Research Parks, Alumni of the Year Award from North Carolina State University College of Humanities and Social Science, and the Triangle Top 20 CEO of the Year Award.



About the Day One Project

The Day One Project is dedicated to democratizing the policymaking process by working with new and expert voices across the science and technology community, helping to develop actionable policies that can improve the lives of all Americans, and readying them for Day One of the next presidential term. For more about the Day One Project, visit dayoneproject.org.