

ECONOMIC DEVELOPMENT STRATEGIC ACTION PLAN FOR PRINCE GEORGE'S COUNTY



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION Prince George's County Planning Department



ABSTRACT

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Abstract:		
	This Economic Development Strategic Action Plan for Prince George's County was guided by a Project Steering Committee comprised of senior-level representatives from the County Executive's Office, the County Council, the Prince George's County Economic Development Corporation, Employ Prince George's, the County Department of Housing and Community Development, and the Prince George's County Planning Department. It was also informed though multiple meetings, interviews, and engagement sessions with key economic and workforce development stakeholders. The strategy focuses on three Strategic Priority Areas:	
	1. Growth Opportunities: Support innovation and entrepreneurship across and within targeted industry clusters.	
	2. Human Capital: Cultivating Talent and Connecting Prince George's County Residents with Economic Opportunity.	
	3. Strong Places: Strengthening Places Across Prince George's County and Improving the Core Business Environment.	





Economic Development Strategic Action Plan For Prince George's County

The Maryland-National Capital Park and Planning Commission Prince George's County Planning Department 14741 Governor Oden Bowie Drive Upper Marlboro, MD 20772 www.pgplanning.org

Prepared on behalf of The Maryland-National Capital Park and Planning Commission, Prince George's County Planning Department by the JFI – TEConomy Team. The JFI--TEConomy Team is led by the Jacob France Institute (JFI), a leading Maryland research group at the University of Baltimore's Merrick School of Business and national leader in advancing industry cluster driven strategies with an established track record in developing and advising many of the most successful modern development programs in the U.S., together with TEConomy Partners, LLC (TEConomy), a global leader in research, analysis, and strategy for innovation-based economic development, helping nations, states, regions, universities, institutions, and industries blueprint their future and translate knowledge into prosperity.

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The Maryland-National Capital Park and Planning Commission (M-NCPPC) is a bicounty agency, created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties: the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two counties.

The Commission has three major functions:

- The preparation, adoption, and, from time to time, amendment or extension of the General Plan for the physical development of the Maryland-Washington Regional District.
- The acquisition, development, operation, and maintenance of a public park system.
- In Prince George's County only, the operation of the entire County public recreation program.

The Commission operates in each county through a Planning Board appointed by and responsible to the County government. All local plans, recommendations on zoning amendments, administration of subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

The Prince George's County Planning Department:

Our mission is to help preserve, protect and manage the County's resources by providing the highest quality planning services and growth management guidance and by facilitating effective intergovernmental and citizen involvement through education and technical assistance.

Our vision is to be a model planning department of responsive and respected staff who provide superior planning and technical services and work cooperatively with decision makers, citizens, and other agencies to continuously improve development quality and the environment and act as a catalyst for positive change.

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A NEW TRAJECTORY FOR ECONOMIC DEVELOPMENT IN PRINCE GEORGE'S COUNTY, MARYLAND

As the culmination of a year-long effort, this report seeks to generate new, high-quality jobs in Prince George's County, diversify and grow the County's tax base, and help support improved quality of life in the County and for its people. The strategy assists Prince George's County through a focus on:

- Leveraging existing economic assets and key industry clusters that have the greatest potential to contribute to economic growth and development in the County.
- Addressing the gaps, challenges, and opportunities related to the competitiveness of economic, workforce, and real estate development in the County.
- Setting forth a series of targeted strategies and actions that help to maximize broadbased economic development.

Instrumental to the development of this strategy was a Project Steering Committee, comprised of senior-level representatives from the County Executive's Office, the County Council, the Prince George's County Economic Development Corporation, Employ Prince George's (EPG), the County Department of Housing and Community Development, and the Prince George's County Planning Department. A broad range of other economic development stakeholders from startups, private industry, economic and workforce development, Prince George's County public schools, labor unions, higher education, real estate development, and community and government leadership were also engaged in this strategic planning process. Through separate presentations and discussions with a range of organizations, feedback was solicited on the analyses conducted, and input was provided throughout the development of strategies and actions.

To assist in the analysis and strategy development, a consulting team led by the University of Baltimore's Jacob France Institute (JFI) was retained, featuring support from TEConomy Partners, LLC (TEConomy)—referred to collectively as JFI-TEConomy Team. JFI is a leading Maryland research group at the University of Baltimore's Merrick School of Business, focusing on industry, business climate, workforce development research, planning, and evaluation. TEConomy is a global leader in research, analysis, and strategy for innovation-based economic development, helping nations, states, regions, universities, institutions, and industries blueprint their future and translate knowledge into prosperity.

Beginning in early 2020, the Project Steering Committee and the JFI-TEConomy Team began the process of updating the 2013 Economic Drivers and Catalysts: A Targeted Economic Development Strategy for Prince George's County, Maryland, a comprehensive economic development strategy. This 2013 strategy has been highly successful in addressing a weak economic recovery from the Great Recession of 2008, which found the County lagging behind regional and national growth trends. The Prince George's County Economic Corporation implemented the 2013 strategic plan's key recommendations and, in doing so, has charted a new, more effective path for the County's economic development.

This updated comprehensive economic development strategic action plan does not exist in a vacuum. Instead, it builds on the multitude of reports and other tactical documents generated in the County in recent years. Examples of notable documents that helped inform this strategic action plan include:

- Alsobrooks Administration
 Transition Team Report (April 2019)
- Prince George's Forward: Economic Recovery Subcommittee COVID-19 Actions (2021)

- Prince George's County: Business Improvement District Toolkit (March 2020)
- Greater Washington Partnership: Unlocking the potential for inclusive transit-oriented development in Prince George's County (December 2020)
- Prince George's County Planning Department: Small-Scale, Local Production in Prince George's County, MD (Spring 2020)
- Prince George's Rising: Strategies for Equitable Development and Prosperity (December 2018)
- Prince George's County: Competitive Retail Market Strategic Action Plan (2017)

Although this analysis began prior to the pandemic and is focused on long-term trends and alignment, it is important to note that the COVID-19 Pandemic has caused unprecedented upheaval in the realms of public health, education, transportation, and the community, workforce, and economic development sectors. For Prince George's County, the pandemic resulted in three pronounced immediate economic concerns:

- The structure of Prince George's County's economy made it especially vulnerable to impacts stemming from COVID-19. Compared to its peers, the share of establishments and employment in industries heavily impacted by COVID-19 were greater in Prince George's County than in other areas.¹ Vulnerable sectors include retail, arts/entertainment, accommodations, food services, and professional services.
- Prince George's County was faced with widespread unemployment and continues to recoup job losses. As of December 2020, the County had the state's

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highest rate of unemployed workers as a share of job openings (2.43), a rate that cuts across educational, occupational, and skill levels.²

There is great uncertainty in the Prince George's
County's real estate market. While the County has
benefited during the pandemic from growing interest in
warehouse and distribution space, as well as data centers,
the future of its commercial spaces is unclear. For office
space, despite the rise of teleworking, the County may be
in a stronger position than other regional jurisdictions
because its locations have a lower cost per square
foot and are generally convenient for auto-oriented
commuters. Still, the overall prospects for commercial
office space may not be bright. The County's large supply
of retail space may see a rise in other uses.

Today, Prince George's County is hard at work dealing with the immediate aftermath of the COVID-19 Pandemic, and these distinct challenges underscore the importance of having a longer-term strategy for creating new, quality jobs in the County and continuing efforts to orient the County's economy around resilient sectors and broadbased, inclusive development.

BUILDING ON ECONOMIC DEVELOPMENT MOMENTUM IN PRINCE GEORGE'S COUNTY

In the years leading up to the COVID-19 Pandemic, Prince George's County was making significant strides related to innovation-oriented economic development, workforce development, and placemaking. The implementation of Prince George's County's May 2013 Targeted Economic Development Strategy by the Prince Georges' County Economic Development Corporation (PGCEDC) has boosted the County's economic trajectory, helping to bring new jobs, investment, and energy to the County. From the 2013–2019

period, County economic growth outpaced the nation, the State of Maryland, the Washington metropolitan statistical area, and Montgomery County (Figure 1). This expansion was buoyed by strong growth in targeted industry clusters, which are projected to outpace total County employment in the coming decade (Figure 2).

While recovery from the COVID-19 Pandemic continues to pose challenges, Prince George's County is, undoubtedly, a more competitive place for economic development than its positioning at the end of the Great Recession. Today, Prince George's County boasts multiple strengths that offer optimism for the next cycle of growth and development:

Prince George's County is a core part of one of America's most dynamic regional economies with strong transportation and placemaking assets. The County offers substantial multimodal transportation assets and close proximity to other areas in the Washington, D.C., Baltimore, and Annapolis metropolitan areas. There is also excitement around developing placemaking in its burgeoning "downtown" areas and other transit-oriented developments (e.g., Discovery District, Largo Town Center, Bowie Innovation District, Prince George's Plaza, and Greenbelt). Accelerating placemaking and clustering economic development around these locations shows promise for increasing the competitiveness of the County's places to live, learn, work, and play.

As a hub for Research and Development, a cornerstone of thriving, 21st century innovation economies, Prince George's County is well positioned to lead in innovation-led economic growth. As one of the largest research universities in the three-state area, UMCP is a major generator of new intellectual property, and a regional leader in technology commercialization. Meanwhile, Bowie State University is Maryland's second largest Historically Black College and University and features a diverse talent and research pool. Prince George's County is also home to the Beltsville Agricultural Research Center, NASA Goddard, the Army Research Labs in Adelphi, Joint Base Andrews, the National Oceanic and Atmospheric Administration

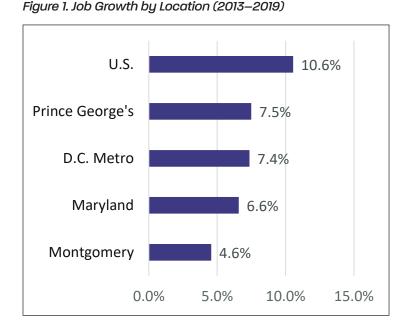
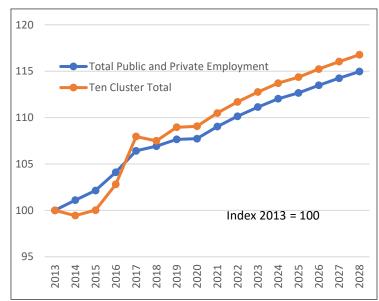


Figure 2. Projected Employment Growth in County



(NOAA), and nearby installations such as The National Security Administration, Fort Meade, and the US Food and Drug Administration offices.

To help capitalize on its technology-oriented growth opportunities, Prince George's County is also advancing support services and other activities to support entrepreneurs and innovators. Notably, technologyoriented industries in Prince George's County show concentrations near the County's designated Innovation Corridor—comprised of the Beltsville Agricultural Research Center (BARC), Berwyn Heights, College Park, Edmonston, Greenbelt, Hyattsville, Riverdale Park, University Park, the Route 1 Corridor, and around the University of Maryland—are showing early success at attracting follow-on development.

The presence of a skilled, diverse talent base is a key competitive advantage of Prince George's County. Not only do Prince George's County residents have a higher level of educational attainment than the nation (as measured as share of population with at least a bachelor's degree), but what distinguishes Prince George's County from both its national and regional peers is the diversity of its skilled talent, as well as the diverse talent emanating from its colleges and universities:

 Prince George's County is the only County in the United States where more than one-fifth of the adult population is Black and has at least a college degree (21.6 percent of residents 25 years and older), ranking nearly 2.5 full percentage points higher than the second highest County.³ Among the broader Black, Indigenous, and People of Color (BIPOC)⁴ community, approximately 25.1 percent of Prince George's County's adult population is non-White and has at least a bachelor's degree, a share which ranks among the highest nationally.

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- Prince George's County ranks first nationally in the number of Black workers in computers, science, and engineering fields, with more than 26,000 workers—an amount that is nearly 10,000 workers greater than second place, Cook County, Illinois. These "Blacks in Tech" make up a higher share of the County's population (5.4 percent) than any county nationally.⁵
- Prince George's County ranks second nationally in the number of engineering and computer sciences bachelor's degrees conferred to Black students, according to an analysis of NCES IPEDS data.⁶ This stems from the County's base of educational institutions and their in-demand and growing programs across a range of computer sciences and engineering fields.
- Prince George's County has a strong base of minorityowned businesses, suggesting a substantial pool of Black, Latinx, and Asian entrepreneurs. Working with culturally relevant support organizations and providing direct counseling through the PGCEDC, there are opportunities for the County to expand its range of services and targeted programs that support these entrepreneurs and their small businesses.
- With Bowie State University, Prince George's County Community College, and the University of Maryland, College Park located in the County, there is a strong talent pipeline in areas like engineering, computer sciences, physical sciences, and biology/life sciences. The presence of the University of Maryland Global Campus and Capitol Technology University play an additional role in supporting strong talent pipelines in these sectors. There are opportunities to leverage strong STEM-oriented higher-education talent development in the County by creating stronger connections between talent and businesses in the County.

Prince George's County has advanced industries including leading industry clusters in IT services, federal government, hospitals and health services, and researchintensive sectors—that are expected to generate a mix of well-paying, quality jobs ranging across high- and middle-skill levels. The diversity of the Prince George's County workforce—with a broader mix across education and skills than compared to the region—suggests an opportunity to align the existing workforce with a mix of skills to the needs of its leading industry drivers.

Taken together, these strengths suggest that Prince George's County is poised for economic growth moving forward, and well positioned to take advantage of America's "moment" for diversity and inclusion.⁷ Companies across the nation are showing a surge of interest in hiring Black employees in what is being described as a watershed moment for diversity and inclusion.⁸ Meanwhile, the Wall Street Journal finds that "more companies are considering new locations to find diverse workers—and retain them," a trend which could benefit a select few places in the United States.⁹ Given its unique position as a hub for Black professionals, this core demographic can play an increased role in business attraction, development, and retention in the County moving forward.

Prince George's County has many opportunities to build on the momentum of the County's successful implementation of the 2013 economic strategic plan, which has translated into positive economic development and placemaking momentum. To take the next steps in encouraging innovation-led economic development and inclusive economic growth, this strategic action plan outlines the measures needed for Prince George's County.

STRATEGIC FRAMEWORK FOR ADVANCING A STRATEGIC ACTION PLAN FOR ECONOMIC DEVELOPMENT

The County's success in enhancing its economic position sets the stage for it to take the next leap forward in creating a high-functioning business environment. To advance this goal, this 2021 strategic action plan includes four guiding principles to steer development:

- A continued focus on evolving economic drivers.
- A strategic effort to address emerging issues related to development catalysts.
- An intentional emphasis on inclusive growth.
- An emphasis on growing public-private partnerships with industry, universities, and nonprofits working together—a hallmark of our nation's most successful county-led economic development efforts.

Prince George's County must continue its strategic focus on evolving Economic Drivers

Prince George's County must target investments and focus outsized efforts on those key industry clusters that are driving the County's economy. The results of JFI-TEConomy's assessment of industry clusters, in conjunction with guidance from the Steering Committee, the Project Advisory Committee, and other key stakeholder groups, led to the identification of **four key industry clusters to target strategies and help advance economic development in Prince George's County.** By targeting these four economic drivers, Prince George's County can build on its assets and encouraging base of activities (Table 1). Additional

Table 1. Strengths and (Opportunities in Dri	ivina Industru Clusters

Industry	Strengths and Opportunity to Build Upon	
Federal Government	 Strong concentration and employment growing faster than regional average Source of high-wage jobs 	
	Continue momentum around transportation-oriented development (TOD) to attract new leases	
	Growth in County jobs is exceeding nation	
Hospitals and Health Services	Investments in medical anchors have catalyzed ancillary development	
	Offers range of low- and middle-skill jobs	
	• Above the national level of industry concentration in the County, but still below that of the region suggesting opportunities for growth	
Information Technology Services	 Key technology niches in areas such as cybersecurity, data sciences (including AI/ ML), and quantum computing 	
	• Frameworks in place to grow data centers and other IT employment	
	• Federal government helping drive IT growth, opportunities to diversify this base	
	• A fast growing sector in Prince George's County representing both established companies and high-growth potential startups	
Research-Intensive Industries ¹⁷	• Provides high-wage STEM-oriented jobs with a mix of both high and middle skilled jobs	
	Positions Prince George's County in exciting growth-oriented technology areas from space and climate sciences to biosciences	

information on these clusters, as well as other industry clusters driving economic development in Prince George's County, can be found in Appendix 1. **The Federal Government** is the largest of Prince George's County's targeted industry clusters, with nearly 27,000 jobs in 2019. It was also one of the four key industry clusters prioritized in the 2013 *Economic Drivers and Catalysts* strategy. The federal government cluster in Prince George's County is highly specialized with a concentration of employment more than four times the national average. Jobs in Prince George's County's federal government cluster pay average wages nearly two times the county average (\$117,994 per year, compared to \$59,939 for all covered workers). Employment in this sector grew faster than the regional average from 2013–2019, as the County was able to attract a major US Homeland Security facility. This \$256.6 million, 15-year deal shifts about 3,700 employees with US Citizenship and Immigration Services from 5 leased locations across the Washington, D.C. area into a new 574,767-squarefoot headquarters in One Town Center on One Capital Gateway Drive in Camp Springs.¹⁰

The federal government cluster is considered a higher priority retention target, which suggests that it is highly specialized and growing nationally, but that the County is underperforming the nation in terms of employment growth rates. Federal government employment is an important driver of the County economy, with major facilities including Joint Base Andrews Naval Air Facility Washington (17,500 employees), US Internal Revenue Service (4,735 Employees), the US Census Bureau (4,605 employees), and NASA-Goddard Space Flight Center (3,000 employees).¹¹ Prince George's County must focus on not only retaining these offices, but also working to identify new opportunities to grow this sector.

As was the case in 2013, an opportunity for the County is to maximize the competitiveness of its sites to win future General Services Administration leases, as existing leases for Federal agencies located in the region get competed. While Prince George's County must direct attention toward retaining its current federal employees, the County has also focused on attracting more federal facilities and was a finalist for attracting the new FBI Headquarters facility. As a result of its significant federal government employment, Prince George's County is a destination for many top federal contractors in technology-oriented sectors. For example, the **Information Technology Services Cluster** is primarily powered by technology-driven federal procurement, which totaled \$2.6 billion in 2018. Annual average wages of \$109,453 in the information technology services cluster are more than twice the County private sector average of \$53,248. With employment of just over 10,000 jobs in the information technology services cluster, Prince George's County is slightly specialized with a 38 percent higher employment concentration than the nation. Still, Prince George's County lags the overall regional level of employment concentration in information technology services, indicating the potential for further growth of this cluster in the County.

With one of the nation's leading computer science universities (see box below) and strengths in key technological niches, such as cybersecurity, data sciences (including artificial intelligence and machine learning), and quantum computing, Prince George's County is poised for specialized growth in IT services. Startup companies in the IT-space are also emerging from Prince George's County, with 17 companies raising a total of \$132 million in venture capital from 2012–2019, and with top technology sectors/verticals including cybersecurity, artificial intelligence, machine learning, and mobile.¹²

Importantly, IT services companies in Prince George's County are spread across a variety of fields and industries, with large employers in healthcare analytics (Avalere), government contracting (CDW and Leidos) and communications (MCI). An additional opportunity to grow the Information Technology and Services Cluster is around data centers, which are at the core of today's knowledge economy and are a rapidly growing technology sector in their own right.

The University of Maryland College Park: An Engine for Information Technology

An analysis of patenting finds that the County has specialization in data processing, cybersecurity, and computer vision and machine learning. Companies in fields such as these benefit from close proximity to the University of Maryland College Park, which boasts top programs in information systems, computer engineering, applied math, and quantum physics. These programs are complemented by industry-facing research centers at UMCP such as the Institute for Advanced Computer Studies, Maryland Cybersecurity Center, and the Quantum Technology Center. The Quantum Startup Foundry brings together resources to support entrepreneurs and startups in accelerating quantum technologies' time to market, working with industry and government customers, investors, technical mentors, leading-edge research and IP, and quantum-specific infrastructure (equipment, tools, and facilities).

Prince George's County should ensure that it is able to stay on the cutting-edge of these technology niches by working to develop targeted strategies for retaining, starting, scaling, and attracting technology-oriented businesses.

Federal installations in Prince George's County are also an important part of driving growth in **Research-Intensive Technology Industries**. Installations helping to drive research and technology development in Prince George's County include BARC, NASA-Goddard, the Army Research Labs in Adelphi, Joint Base Andrews, NOAA, and nearby installations such as The National Security Administration, Fort Meade, and the US Food and Drug Administration offices. A range of both large and small companies are operating in this sector, including innovative startups like NextCure and Medcura, as well as bigger firms like SSAI, Lockheed Martin, and Northrop Grumman.

These research-intensive technology industries represent the smallest of the targeted industry clusters identified for Prince George's County, with just under 7,200 jobs in 2019, but have a high employment concentration in the County of more than

two times the national average. Average wages for researchintensive technology industries in Prince George's County are also quite high at over \$100,000.

Research-intensive technology industries are an amalgamation of three industry clusters in the County featuring high-paying jobs, skilled workforces, and strong growth opportunities. These industries are Nonclinical Biosciences, Instruments and Electronics, Research and Development, and Engineering Services—together they represent an opportunity to grow the County's knowledgebased economy. Similar to IT services companies, firms in this sector are closely tied to the presence of the federal government. The ability for firms in these research-intensive technology industries to grow and scale to new markets and become less reliant on federal contracting poses an opportunity to continue to diversify the Prince George's County economy. Within these industries, there are specific niche opportunities to capitalize on the County's strengths:

- Technology niches visible in the instruments and electronics cluster include electronic design and communications systems, as evidenced by patenting strengths in areas such as transmitter systems, navigational instruments, optics, and wireless communications equipment.
- Engineering solutions for defense and space activities, autonomous systems, and energy innovation are among the areas where the County is showing key technological niches within research, development, and engineering.
 Within patenting, institutions in Prince George's County are specialized in batteries and energy storage, material sciences, and vehicle control systems.
- These technology strengths in both instruments and electronics, as well as in research, development, and engineering, point to Prince George's County as a hub of space-related activity. The County is home to NASA-Goddard, the University of Maryland's leading programs in physics, astronomy, and space science, and major contractors such as SAIC, SSAI, and Ansys. US Rep. Anthony Brown, whose district covers a large portion of the County, is a leading voice behind the Maryland Defense and Aerospace Consortium, intended as a means to spur collaboration among the federal government, industry, career and technical education organizations, and local universities.¹³

Supportive Economic Drivers: Destination Retail and Transportation, Distribution, and Logistics

Two other driving industry clusters were determined by the strategic planning team to be important to fueling the County's economy:

- The Transportation, Distribution, And Logistics cluster is the third largest of Prince George's County's 12 target industries and is classified as a **retention target**, because it is not specialized in the County and lags the nation in growth. The cluster was identified as one of two Contributing Industry Clusters in the 2013 *Economic Drivers and Catalysts* study. As in the last strategy, despite the lower level of specialization and lagging growth, this cluster remains a core target for the County because the availability of affordable land, located near major highway and rail infrastructure, and in close proximity to two regional airports, makes the County attractive for both large-scale and last-mile transportation and distribution activities.
- The Destination Retail cluster in Prince George's County is classified as **current strength**, meaning that it is specialized (LQ=1.35) and outperforming the nation in terms of growth. With this high level of specialization, it is clear that the County serves as a regional center for destination retail activities for the larger Washington DC metropolitan area. Destination retail is also linked to the County's *Travel and Tourism* sector, with outlet shopping linked to visitors to National Harbor.

 Leveraging the biosciences industry is an opportunity to help diversify the County's presence in hospitals and health services. Key technology niches within the Prince George's County biosciences sector include Medtech Devices/Diagnostics, where there is a strong level of patenting, and active collaborations with the Food and Drug Administration.

Beyond the County's growing presence of nonclinical biosciences companies, the Hospitals and Health Services presents an additional emerging opportunity for Prince George's County: employment growth in the County is outpacing the nation and reached more than 15,500 jobs in 2019, but there is a relatively low concentration of employment in the County at 16 percent below the national average. This signifies there is room for growth in this cluster simply to meet the needs of county residents. This cluster was identified as one of the four core target industries in the 2013 Economic Drivers and Catalysts strategy, and has experienced strong, sustained growth from 2001 through 2019. Since 2013, the completion of the University of Maryland Medical System project in Largo and major investments by regional medical systems serving the County has driven continued growth. The Hospitals and Health Services cluster offers a mix of employment opportunities across the low-, middle-, and high-skill levels. However, on average the wages in this cluster (\$53,098) lag the County private sector average of \$53,248. For Prince George's County, there are opportunities to build the skills of residents to meet the growing local demand in this sector. To encourage economic development more broadly, there are also opportunities to connect the growth of hospitals and health services with other clusters of importance, such the emerging biosciences sector, strengths at local anchor institutions, and a strong presence of IT firms.

Prince George's County must address emerging issues related to Development Catalysts by focusing on core strategies and actions

The range of quantitative and qualitative analysis employed by the JFI-TEConomy team identified a number of emerging issues to consider in light of economic development (Table 2). The JFI-TEConomy team compared Prince George's County to a selection of regional peer jurisdictions in terms of eight areas important to economic development and the overall business climate. Additional information on development catalysts can be found in Appendix 2.

Item	Assessment	Opportunities
Technology Generation	 High concentration of Federal and university research, technology and commercialization resources. Key technology drivers in the County, most importantly University of Maryland, College Park and Bowie State University, have made both improvements in improving technology generation and commercialization and investments in supporting economic development. 	 Leverage research and education anchors in the County, especially University of Maryland at College Park and increasingly Bowie State University and Prince George's County Community College. Continue to advance the Discovery District/Innovation Corridor as an important place-based development. Better coordinate and take advantage of the growing entrepreneurship program efforts across higher education in the County.
Federal Procurement	 Federal Procurement is driving the growth and success of driver industry clusters, especially in fields such as Information Technology Services and in Research-Intensive Sectors. Procurement in Prince George's County is driven by civilian agencies, most importantly the Department of Commerce and NASA, both of which have major locations with the County. 	 Ensure local workforce can meet needs of federal government, as well as other employers in the County's other targeted industry sectors. Leverage the presence of the federal government to help encourage the proliferation of federal contractors, especially those in technology-oriented sectors which can encourage innovation and entrepreneurship through their spillover effects. Enhance placemaking and develop amenities at transit-oriented districts to help increase the competitiveness of the County in attracting federal leases.
Transportation Infrastructure	 A well-developed transportation network including access to both highways and mass transit, rail service by CSX and Norfolk Southern Railway, and close proximity to both BWI Airport and Ronald Reagan Washington National Airport. New developments like the Inter-County Connector (ICC) and the Purple Line area adding to this advantage. 	 Build on excitement around developing placemaking around burgeoning live-work-play environments and transit-oriented developments (e.g., Discovery District, Largo Town Center, Bowie Innovation District). Consider approaches to accelerate placemaking and economic development, particularly as an opportunity to stem the outflow of more affluent, educated households.

Table 2. Summary of Emerging Issues to Address Through Strategic Priorities

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Item	Assessment	Opportunities
Financial and Development Resources	 Despite recent growth in venture capital investment, the county remains well behind its regional peers in both dollars and deals. Access to capital represents a significant barrier to Prince George's County's substantial small and minority business base. PGCEDC, along with its sister agency, FSC First, offers access to a variety of Federal, State, and County financing programs, though additional targeted resources may be necessary. 	 Help more companies become "venture-ready" by offering targeted entrepreneurial support services such as Pre-Accelerator, First Customer, and Value-Added Networking events. Overcome constrained resource environment by focusing efforts on public-private-partnerships and targeting investments.
Small and Minority Business Environment	 Among its regional peer jurisdictions, Prince George's County has the third largest number of minority businesses, the fourth largest number of jobs in minority businesses, and the second highest level of overall employment in minority businesses. The County has recognized the importance of supporting small and minority businesses and both offers access to targeted programs and works with key small and minority business organizations. 	 Intentionally support the growth of small businesses, especially those that are Black-, Latinx, and Women-Owned. Fully integrate Prince George's County's diverse population in its innovation economy (e.g., at innovative anchor institutions, technology-oriented startups, or other companies).
Workforce Development	 Although educational attainment (as measured by share of population with at least a bachelor's degree) in the County exceeds the national average, it is lower than in the region and many peer jurisdictions. A significant share of Prince George's County's educated population commutes outside of the County for jobs. 	 Align existing workforce with mix of skill needs Prince George's County's leading industry clusters are expected to have a major ramp- up in needs for bachelor's level and middle-skill level jobs. Leverage strong STEM-oriented higher education talent development in the County by creating stronger connections of talent to businesses in the County.

Item	Assessment	Opportunities
Business Climate	 Scoring in the bottom half of states according to most measures of tax incidence, Maryland ranks similarly to Washington D.C. but well below Virginia in national indices of business climate. While State tax burdens in Maryland are higher than in Virginia and many key competitor states, County taxes are generally competitive (except that Virginia does not have a local income tax). 	 Sustain focused effort on encouraging business attraction, retention, and development across targeted industry clusters. Accelerate aggressive and proactive efforts to market the region internally/externally and offer incentives/other resources for business attraction and retention. Address issues expressed by both innovation-oriented companies and real estate developers about concerns with hurdles in the permitting process.
Quality of Life	 The cost of living in Prince George's County is one of the lowest among key peer jurisdictions. However, the County also has lower levels of median incomes and higher poverty rates. In the area of K–12 education, Prince George's County lags in standardized testing scores, graduation rates and percentage of high school graduates going on to higher education. 	 Ensure that more of the County's residents are connected to jobs and skills needed to pursue economic opportunity. Make systematic improvements with County's K–12 Public Schools, as concerns are expressed that the quality of K–12 schools may influence the persistent outmigration of higher-income households in the county. Create more vibrant places to live, work, learn, and play.

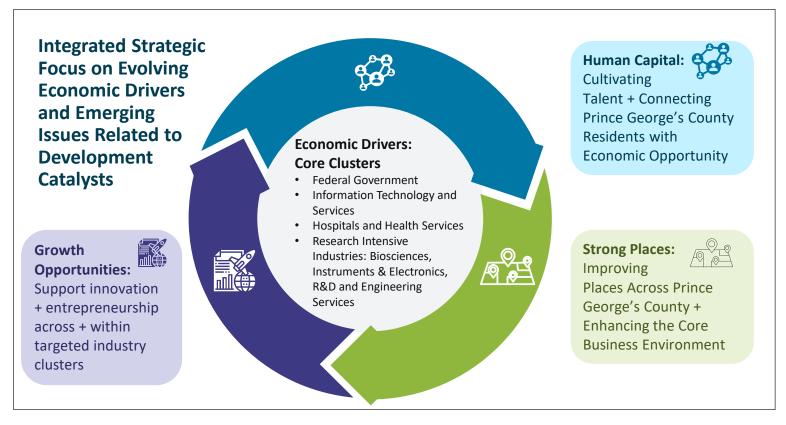
Table 2. Summary of Emerging Issues to Address Through Strategic Priorities

The opportunities to take advantage of these development catalysts are reflected in the strategies and actions laid out in this report. To address these issues, this plan focuses on three priorities:

- **Growth opportunities**—Supporting innovation and entrepreneurship across and within targeted industry drivers.
- **Human capital**—Cultivating talent and connecting Prince George's County residents with economic opportunity.
- **Strong places**—Improving places across Prince George's County and enhancing the business development environment.

As visualized in Figure 3, Prince George's County's approach to focusing on economic drivers and addressing issues related to its development catalysts are inherently connected. This strategic action plan is not simply a cluster strategy, but instead seeks to advance the County's economy by integrating its driving industries alongside and together with other economic development factors. This strategic action plan also seeks to cut across traditional silos and build partnerships across the County's innovation, education, economic development, workforce development, and planning communities—all with a focus on improving livelihoods for current and future County residents.

Figure 3. Visualization of Plan's Interconnected Strategic Focus



Prince George's County must also ensure inclusive, broad-based economic growth:

The unique identity of Prince George's County is intertwined across this strategic action plan. As the nation's leading majority-minority county, Prince George's County is in a prime position to take advantage of America's moment of diversity and inclusion, particularly as it relates to innovation and entrepreneurship. However, one area of particular concern in Prince George's County relates to an emerging "tale of two counties" with respect to education and workforce development. Unfortunately, the COVID-19 Pandemic has shed further light on the disparities between the haves and have-nots in the County.

Prince George's County is home to a wealthy, diverse, and educated professional class that is unique across the country. As a recent article in Greater Greater Washington notes, "Looking at high-income Census tracts makes Prince George's County's uniqueness even more evident. While majority Black, median-income Census tracts are relatively rare, high-income ones are much more so. There are only 49 such tracts in the US, and 36 of them are found in the Washington area (29 in Prince George's County alone)."¹⁴

The County is also home to a substantial base of workers who are less educated and in lower paid occupations, and many are being left behind, including those with a high school diploma (or those who have less than high school proficiency in reading, writing, math, etc.) and New Americans who are currently speaking English as a second language. Perhaps more worryingly, K–12 public schools in Prince George's County continue to experience low student performance, and there is concern that this performance is influencing the outmigration of more-educated, higher-income households. The County's comparatively high dropout rates, low test scores, and low rates of graduation and college attendance are all causes for concern.¹⁵ Across the County, many stakeholders placed an important emphasis on improving the school system and increasing the orientation of K–12 students toward STEM opportunities.

So, while many in Prince George's County are doing well financially, many in the County lack the skills needed to participate in the economy more broadly. Going beyond traditional economic development activities, this strategic action plan offers a means to engage disinvested people and places, particularly communities of color, in employment, ownership and broader community wealth building.¹⁶ Through a range of actions targeting growth opportunities, skills development, and strong places, this strategic action plan broadens the participation of people and places in innovation-led economic growth with a focus on improving economic opportunity and quality of life for all County residents.

The County should place a renewed emphasis on partnership-building in its strategic approach:

As a reflection of the County's enhanced economic position, broader engagement is needed, with industry, universities, and nonprofits working together to create a high-functioning business environment. The County should focus on the four C's:

- Convening partners across areas of shared interest
- **Coordinating** partners to ensure efficiency of programs, activities, and services
- **Catalyzing** new programs and initiatives through targeted investments
- **Communicating** successes and raising visibility of partners

Unlocking partnerships that leverage the collective interests, networks, and capabilities of participants plays a critical role in strengthening economic development. Importantly, these partnerships recognize that local government cannot and should not be the only actor in an ecosystem, but instead a convener, collaborator, and connector.

It is recommended that Prince George's County develop public-private-partnership initiatives across three identified strategic priority areas: growth opportunities, human capital, and strong places. These partnerships are complemented by a series of discrete actions, as described in the narrative within.

Growth Opportunities: Innovation Collaborative for Prince George's County

In recent years, the County has seen a wave of new entrepreneurial and innovation-support activities come online. Notable examples include:

- The Innovation Station from PGCEDC
- A range of programs from the University of Maryland College Park, such as the Maryland Energy Innovation Institute and Accelerator, and the Maryland Technology Enterprise Institute (MTech)
- The Bowie Business Innovation Center (Bowie BIC) and the Bowie State Entrepreneurship Academy
- InnoHUB from Prince
 George's County Community College
- Innovate Prince George's and the Prince George's County Social Innovation Fund

While it is encouraging to see the growth of innovation and entrepreneurial program activities in recent years, Prince George's County is still falling short of realizing its potential to be a thriving hub for innovation and entrepreneurship. Interviews with leaders of innovation-led companies in the County revealed that, despite Prince George County's clear strengths in technology and rising numbers of innovation-led companies, the County still lacks a robust entrepreneurial culture. There is a pent-up demand for more networking and collaborative activities among innovation-led businesses and a need to reshape regional and national perceptions of the County as a place for innovation and entrepreneurship. This weakness in innovation community building limits the ability of Prince George's County firms to retain and attract highly skilled talent and venture financing. A firm commitment to elevating innovation and entrepreneurship through networking, awareness building, and communicating success stories can help accelerate the construction of a strong entrepreneurial culture in Prince George's County.

A concerted public-private partnership effort to scale-up innovation community building within the County is needed. This partnership, referred to as the Innovation Collaborative of Prince George's County (IC Prince George's), will leverage the presence of the many new and enhanced entrepreneurial support activities now found in the County to address innovation community building in the County on a larger scale through collaborative programming, communications, and engagement. Notable activities of IC Prince George's will include countywide efforts for:

- Peer-to-Peer networking
- Meet-up Groups
- Pre-Accelerator Programs targeting BIPOC entrepreneurs
- Scaled up BIPOC emerging ventures
- Social media marketing
- Innovation and entrepreneurial event sponsorship

By increasing the activation and celebration of Prince George's County's innovation community, the IC Prince George's public-private partnership can also redefine the regional and national perception of the County as a hub for innovation and entrepreneurship.

Human Capital: Partnership for Jobs and Skills Initiative While K–12 STEM education and workforce development may be outside of the purview of traditional economic development activities; the need for a pipeline of skilled workers, and pathways for individuals to earn essential skills, is paramount. This is especially true in STEM fields, where exposure to core competencies and skills developed throughout a child's upbringing can lead to significant earnings and economic opportunity later in life. The involvement of innovative businesses and research universities in this can lead to additional success.

In recent years, the County has developed promising programs to position its workforce for future success:

- EPG provides a range of workforce services that target both the labor supply and demand sides of employment.
- The University of Maryland College Park and Bowie State University serve as both an attractor and producer of top talent.
- Prince George's County Public School System (PGCPS) offers promising career and college readiness programs (e.g., 3D Scholars Program, the Middle College Program, and the Pathways to Technology program, among others).
- Prince George's Community College offers a wide range of degree, certificate, and certification programs, and adult basic education programs, to develop a talented and skilled workforce.

The Prince George's County Skills for Jobs Partnership will seek to build partnerships that encourage a strong K–12 STEM talent pipeline, help to retain the County's top talent, and offer pathways toward adult education and skills development. Stakeholder interviews with County residents found a desire to see systematic improvements with County public schools, and there was concern expressed that the quality of K–12 schools may influence the persistent outmigration of higher-income households in the County. Leveraging higher education for K–12 STEM programming and outreach, collaborating with higher education on career connections for students with Prince George's County companies (e.g., internships, design projects, mentoring, and job shadowing) can help increase K–12 student orientation toward STEM careers.

There is also a significant concern that there is a "Tale of Two Counties," and that opportunities for economic mobility must be made available for the underemployed, New Americans, and those without a high school diploma. Beyond a focus on STEM opportunities, this partnership will support an increased nonprofit presence to provide skills development for adult remediation in partnership with industry.

Places: Marketing Alliance on Prince George's Places

The Washington, D.C. region is becoming a region of places. Across the Washington metropolitan region, areas designated for development like Tyson's Corner, Dulles Corridor, National Landing, Bethesda, and Shady Grove have established their own identities as places that can attract a workforce, companies, and residents. As has happened elsewhere, Prince George's County needs to collaborate with key anchor institutions and companies in its place-based, transit-oriented development districts to raise a strong regional, and then national, brand.

Throughout Prince George's County there is excitement about developing placemaking around burgeoning live-work-play environments and transit-oriented development. Prince George's County also identified three "Downtowns" in the 2014 *Plan Prince George's 2035 Approved General Plan* (Plan 2035), areas best positioned to develop into vibrant places and help drive development and activity in the County:

- Prince George's Plaza, in Hyattsville
- New Carrollton Metro
- Largo Town Center

Along with these downtowns, the Innovation Corridor was identified in Plan 2035 as a geographic area with high concentrations of economic synergies that are the most likely to promote future growth in jobs, research, and innovation. Other promising areas with momentum include the Discovery District by the University of Maryland College Park and the potential emergence along the Purple Line.

To strengthen the emerging place-based development in Prince George's County, business improvement districts to fund marketing outreach should be pursued. Furthermore, the County must address zoning and permitting issues across these transit-oriented development districts. By building strong places to market through both of these mechanisms, the alliance can then focus a concerted, coordinated destination marketing campaign. Working alongside key community partners, such an alliance-led activity can elevate the brand of the County as a sum of its collective parts.

Moving Forward: Outlining the Strategic Action Plan for Prince George's County

The unique identity of Prince George's County is intertwined across these three partnerships, and this strategic action plan more broadly. Beyond positioning the County for success in the 21st century's knowledge-based economy, this strategic plan also ensures that all residents have the opportunity to engage in this economy. Furthermore, this lens ensures that the County is well positioned to capitalize on new and long overdue investment in America's predominantly Black communities. Given its unique position as a hub for Black professionals, the diversity of Prince George's County should play an increased role in business attraction, development, and retention moving forward.

Across the three strategic priority areas, this plan has identified a range of actions that allow Price George's County to address core weaknesses and gaps, while also building on strengths and opportunities. As a complement to the partnership initiatives that help coordinate and pilot activities, these supporting actions can help deliver broadbased, inclusive economic growth for Prince George's County. These activities are outlined on Table 3.

Ultimately, Prince George's County must continue its strategic focus on evolving economic drivers, and should target growth opportunities around innovation, entrepreneurship, and key industry clusters. Importantly, the County must also support the development of human capital and connect more residents to opportunity, all the while strengthening placemaking and helping to encourage a stronger business environment.

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Table 3. Outline of Strategic Action Plan

Strategic Priorities	Partnership Initiatives	Supporting Actions
Growth Opportunities: Support innovation and Entrepreneurship Across and Within Targeted Industry Clusters	Innovation Collaborative for Prince George's County	 Sustain County's Focus on Targeted Industry Clusters Incentivize Growing Startups in Targeted Industry Clusters to Stay or Relocate in County Launch Preaccelerator Program Advance a First Customer Program Establish an Economic Gardening Program for BIPOC Businesses Advance Corporate Innovation Centers with UMCP and Bowie
Human Capital: Cultivating Talent and Connecting Prince George's County Residents with Economic Opportunity	Partnership for Jobs and Skills Initiative	 Foster Presence of Nonprofit Skills Development Service Providers Connect Higher Education Students with County Employers Advance Corporate-Higher Education K-12 STEM/STEAM Activities Ensure that Program Alumni are Connected to Higher Education and Career Opportunities Pursue Target Industry Workforce Critical Skills Consortium "Blacks in Tech" Network of Computer Scientists, Engineers and Others
Strong Places: Improving Places Across Prince George's County and Enhancing the Core Business Environment	Alliance for Placemaking Initiative	 Develop Business Improvement Districts at Select Tod/Downtown Area Ensure New Zoning Reforms are Implemented Promote New Uses for County's Underperforming Comm./Retail Developments Advance Lean Permitting Processes Explore Use of By-Right Zoning in Areas Beyond Data Centers (e.g., Biosciences, Advanced Manufacturing) Support Small-Scale Makers



STRATEGIC PRIORITY 1

1 🖻

Welcome



THE UNIVERSITY OF MARYLAND IS PROUD TO BE A SMOKE-FREE CAMPUS

GROWTH OPPORTUNITIES: SUPPORT INNOVATION AND ENTREPRENEURSHIP ACROSS AND WITHIN TARGETED INDUSTRY CLUSTERS

Situational Analysis

Build on Strengths and Opportunities

- Take advantage of the County's research assets, which are among the strongest in the region and nationally recognized in key fields of technology.
- Support the presence of advanced industries found in the County in high-growth-opportunity areas.
- Use the County's strong growth in venture capital.
- Take advantage of a growing network of entrepreneurial service providers.

Address Weaknesses and Gaps

- Accelerate growth around IT services.
- Strengthen connections between firms in target industries and with higher education anchors.
- Focus on concerns related to the development of Black and other minority-owned businesses.

Since the development of Prince George's County's 2013 economic development strategic plan and its ensuing implementation, the County has made many strides in growing its innovation economy. Across a variety of measures, there are clear bright spots in Prince George's County.

Prince George's County is a powerhouse in research and development. The research institutions in Prince George's County are among the strongest in the nation and an essential asset for innovation-based economic development. An analysis of peer-reviewed research publications finds that Prince George's County researchers were responsible for roughly 1 in every 50 (2 percent) publications, compared to just 0.3 percent of the nation's population.¹⁸ With more than 36,000 publications, more than half of these publications (54 percent) stem from the UMCP, the region's largest research university (Figure 4). Research institutions such as UMCP and others in the County are a major generator of new intellectual property and contribute to technology commercialization.

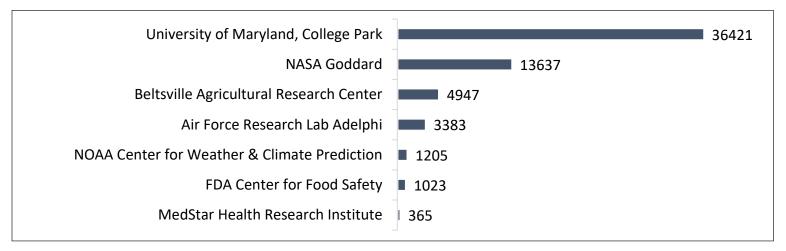


Figure 4. Leading Research Institutions in Prince George's County by Publications (2012–2019)

The County is also home to a growing presence of venture-capital-backed, technology-based businesses.

In technology niches, such as quantum computing, edutech, cybersecurity, and biosciences, Prince George's County is home to innovative companies that are developing new products and services that can transform the way we live, learn, and work. The County can attest to the economic growth engine that high-growth startups can become, as 2U, Inc, a world leader in edu-tech, has gone from startup to publicly traded company with significant employment in the County. Potential high-growth companies are present in the County and offer possibilities for considerable growth in areas such as biosciences, cybersecurity, and quantum computing where IonQ recently announced plans to become the first publicly traded pure-play quantum computing company.¹⁹

Prince George's County is experiencing significant growth in venture capital. Venture capital funding to innovative startups has taken hold in Prince George's County in recent years. From a minimal base of activity in 2012, Prince George's County now has sustained venture capital funding of over \$100 million annually for the past two years.²⁰ Its growth has outpaced that of the nation and the overall Washington, D.C. metro area as the County has stepped up as an active player for innovative entrepreneurial companies in recent years. Still, there is substantial room for continued growth in the years ahead for Prince George's County to be among the regional leaders in attracting venture capital funding.

Federal procurement in Prince George's County is also growing, especially in research-intensive sectors. The County's federal procurement exceeded \$7B in 2019, with a significant and increasing share stemming from nondefense agencies (Figure 5).²¹ Notably, nearly two-thirds of Prince George's County's procurement dollars are in industries like Information Technology Services, Research and Development/Engineering Services, and Instruments and Electronics. Federal procurement ranked second in Maryland and fifth among 18 comparison counties throughout the Washington, D.C. metropolitan area.

Opportunities exist to fully engage Prince George's County's diverse population in its innovation economy (e.g., at innovative anchor institutions, technologyoriented startups, or other companies). Prince George's County ranks first nationally in the number of Black workers in computers, science, and engineering fields, with more than 26,000 workers. These "Blacks in Tech" make up a higher share

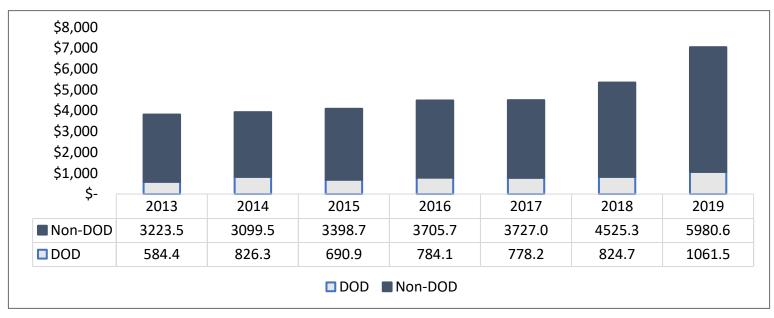


Figure 5. Growth in Federal Procurement in Prince George's County by Agency (\$, thousands)

of Prince George's County population (5.4 percent) than any county nationally.²² Notably, Prince George's County ranks second nationally in the number of engineering and computer sciences bachelor's degrees conferred to Black students.²³ Connecting this talent to employment opportunities in the County and with other top-tier talent stemming from schools such as the University of Maryland College Park and Bowie State is an opportunity to ensure that the County's diverse population is reflected in its innovation-oriented industries.

While Prince George's County has continued to grow its innovation-based economy and has many clear opportunities for continued development, there are also areas of concern that should be addressed.

Across several key indicators, Prince George's County lags regional competitors. Despite its recent growth, the County lags key regional competitors in total venture capital investment and in SBIR awards, critical measures of commercialization and innovation-oriented entrepreneurship. UMCP still lags national peers in tech transfer and in industry-sponsored research, which may stifle broader economic development in the County.

Prince George's County is experiencing slow growth in IT services. JFI-TEConomy analysis finds that information technology services in Prince George's County declined by 14 percent from 2013 to 2019.²⁴ However, a significant portion of the County's federal procurement is in this space, and this sector has grown significantly. There is value in strengthening the County's base of IT companies beyond those affiliated with the federal government.

Perceptions also remain that Prince George's County is not a hub for innovation and entrepreneurship. Interviews with external stakeholders included in the planning process noted that, despite Prince George County's clear strengths in technology and innovation, a perception persists that the County is not the thriving hub for technology and innovation that the data show. This reputation (or lack thereof) limits the ability of Prince George's County's firms to attract highly skilled talent from elsewhere in the region where there is a greater critical mass.

Black-owned businesses and other minority-owned firms in Prince George's County may require additional support. Although Prince George's County has one of the strongest minority business communities in the region, with 4,774 firms employing 38,080, this sector's size is still smaller than Montgomery County, Fairfax County, and Washington, D.C.²⁵ Interviews with economic development stakeholders in Prince George's County found that more can be done to support the growth of small businesses, especially those that are Black-, Latinx-, and Women-Owned. In particular, entrepreneurial- and small-business assistance is needed in the areas of access to capital, value-added services, and procurement assistance.

Prince George's County lags other parts of the County in terms of access to innovation and entrepreneurship support services. However, as the following section shows, activity in Prince George's County around innovation and entrepreneurship has increased dramatically in recent years. The County is well behind in its entrepreneurial support systems and many emerging companies are struggling to attract top talent to the County.

Prince George's County Activities

In order to build on its reputation as a hub for innovation and entrepreneurship, it is recommended that Prince George's County continue to build on and coordinate with the multitude of promising efforts already underway in the County.

PGCEDC has a cluster-specific focus, which helps support and coordinate business attraction and retention in key sectors. As of February 2021, sectors with staff focus include Health and Life Sciences, International Business, Retail/ Restaurants, Federal Government, Logistics and Warehousing, Technology/IT/Cybersecurity, and Manufacturing.²⁶

PGCEDC powers The Innovation Station Business Incubator (ISBI), described as "the elite business accelerator agent and entrepreneurial ecosystem hub of the County."27 Featuring state-of-the-art, turn-key office suites and virtual and collaborative coworking space, ISBI provides entrepreneurs with the environment to grow their small businesses and learn from fellow entrepreneurs, mentors, strategic partners, advisers, and investors. ISBI offers entrepreneurs and small businesses in Prince George's County access to coaching, educational, and networking events (e.g., CEO roundtable, Chat and Chew networking sessions) and assistance with areas such as procurement and preparing pitches for investors. Through its direct connections with PGCEDC, these programs help support job creation, business attraction, business retention, and business expansion in Prince George's County. Furthermore, current tenants of ISBI, as well as successful company graduates, help fuel economic development in the County. Also, PGCEDC hosts and participates in consistent innovation and funder stakeholder meetings to ensure communication and information exchange and to increase collaboration among stakeholders across the County and the region. The University of Maryland at College Park supports a range of efforts to encourage innovation and entrepreneurship in the County's targeted industry clusters.²⁸ Notable examples of programs include the Do Good Accelerator, the Ed Snider Center for Enterprise and Markets, and the Maryland Momentum Fund. Supported by the Division of Research, the university's digital portal, UMCP Innovation Gateway, provides a menu of concierge services for a wide range of stakeholders (e.g., students, alumni, faculty, startups, industry or investors). UMCP also offers traditional types of assistance with technology transfer, including assistance to businesses

with interests in licensing technology or partnering with the university. For example, Mtech Ventures is a UMCP incubator for innovations commercialized at the university, offering affordable space and a range of services (e.g., access to specialized university facilities, hands-on mentoring for earlystage companies, conducting customer discovery, assisting with venture capital raises, etc.). UMCP also has a desire to scale manufacturing spin out companies coming out of the institution. The Maryland Energy Innovation Accelerator supports efforts around solar, wind, batteries, energy efficiency, grid modernization, and carbon capture utilization and storage, offering a range of programs to Maryland-based clean energy and climate technology inventors. The university also helps student and faculty entrepreneurs access angel investment and venture funding, compete in shark-tank style pitch events and other types of hackathons. Through its small business development center, UMCP also supports mainstreet style entrepreneurship in Prince George's County.

The Discovery District and the Innovation Corridor

represent two place-based efforts in Prince George's County to leverage the strength of the University of Maryland College Park to intentionally encourage a desirable livelearn-work-play environment. The Discovery District encompasses more than 150 acres, located between the University of Maryland College Park and the research-rich and metro-accessible M-Square research park along River Road.²⁹ These connections posit the area as an epicenter of academic, research, and economic achievement that can strengthen existing research partnerships, retain a pipeline of talent locally, and offer more experiences for residents, faculty, staff, and students.

Elsewhere in the County, Bowie State University recently opened a new **Entrepreneurship Living Learning Community (ELLC)**, which includes the Bowie Business Innovation Center, an accelerator for local startup businesses in the County, and an Entrepreneurship Innovation Center, which houses the university's Entrepreneurship Academy. The Bowie Business Innovation Center (Bowie BIC) provides training, support, and networking opportunities for entrepreneurs.³⁰ In recognition of its 8(a) Accelerator Program, Bowie BIC won the 2020 Innovative Entrepreneurship Center of the Year Award from the International Business Innovation Association. This award recognizes Bowie BIC's fast track program that helps women-, minority-, and veteran-owned businesses secure government contracts.³¹ A cornerstone of the program is mentoring from other successful CEOs, and in its first year the program assisted 32 8(a) companies and generated \$12 million in new government contract revenues. Bowie State University is in the process of developing a commercialization roadmap, with an emphasis on intellectual property generated from BSU's research and entrepreneurship initiatives and academic courses, including student capstone projects, while determining opportunities for commercialization.

The ELLC is also home to the **Bowie Entrepreneurship Academy**, which launched on the university's campus in 2017 to foster entrepreneurial leaders among BSU students, faculty, and alumni. Since its launch, the program has enrolled 750 students in academy programs and exposed 5,000 students to entrepreneurship. The program has also hosted 25 pitch contest seminars, and, perhaps most notably, helped start 57 student businesses.³²

The Innovation Hub (INNOHUB) at Prince George's Community College serves as an additional physical and virtual space where students, faculty, businesses, and the community can collaborate to solve problems, generate new ideas, and create new, or improve existing, processes, services, and products.³³ Notable features of INNOHUB include a product design studio, a coding lab, a human capital lab, and other programs and services to support innovation and entrepreneurship.

The University of Maryland Global Campus (UMGC) also offers entrepreneurial courses (such as a professional certificate program, "Applied Entrepreneurship: Scaling a Business for Success"), networking events and panels, and clubs to support entrepreneurs. For example, the Entrepreneurship Club (eClub) offers UMGC students an opportunity to learn about the benefits, risks, and challenges of entrepreneurship.³⁴ Members of eClub network with other like-minded entrepreneurs and receive mentorship, guidance, and resources from professionals in various fields. Many UMGC students are older adults with the potential to make an entrepreneurial leap.

Recommended Strategic Approach:

While it is encouraging to see the growth of innovation and entrepreneurial program activities in recent years, Prince George's County is still falling short of realizing its potential to be a thriving hub for innovation and entrepreneurship. Interviews with leaders of innovation-led companies in the County revealed that, despite Prince George County's clear strengths in technology and rising numbers of innovation-led companies, the County still lacks a robust entrepreneurial culture. There is a pent-up demand for more networking and collaborative activities among innovation-led businesses and a need to reshape regional and national perceptions of the County as a place for innovation and entrepreneurship. This weakness in innovation community building limits the ability of Prince George's County firms to retain and attract highly skilled talent and venture financing. A firm commitment to elevating innovation and entrepreneurship through

networking, awareness building, and communicating success stories can help accelerate the construction of a strong entrepreneurial culture in Prince George's County.

A concerted public-private partnership effort to scaleup innovation community building within the County is needed. This partnership, referred to as the Innovation Collaborative of Prince George's County (IC Prince George's), will leverage the presence of the many new and enhanced entrepreneurial support activities now found in the County to address innovation community building in the County on a larger scale through collaborative programming, communications, and engagement. One platform for convening is the Prince George's County Technology Council, a chapter of the Maryland Tech Council, which held its inaugural meeting in March 2022. With attendance by more than 130 individuals, this group is targeted at creating opportunities for connectivity, education, and networking for the County's technologists, particularly minorities in tech-fields. Notable activities of IC Prince George's will include countywide efforts for:

- Peer-to-Peer networking
- Meet-up Groups
- Pre-Accelerator Programs targeting BIPOC entrepreneurs
- Scaled up BIPOC emerging ventures
- Social media marketing
- Innovation and entrepreneurial event sponsorship

Complementing the launch of IC Prince George's County are several strategic actions that address better leveraging the County's innovation anchors and scaling up startup activities and growth of startups by BIPOC entrepreneurs. These actions include:

- Sustaining the County's Strategic Focus on Targeted Industry Clusters
- Creating a Countywide Pre-Accelerator Program
- Incentivize Growing Startups Nearby Anchor Innovation Institutions
- Establishing an Economic Gardening
 Program for BIPOC Businesses
- Advancing Corporate Innovation Centers with Anchor Innovation Institutions
- Advancing a First-Customer Program

Launch the Innovation Collaborative of Prince George's County (IC Prince George's)

Why It Matters

To elevate its promising initiatives related to innovation and entrepreneurship, Prince George's County needs a strong "backbone" organization to scale up innovation-communitybuilding activities and establish an entrepreneurial culture that enables the County to realize its potential as a hub for innovation and entrepreneurship.

Without a strong public-private partnership effort to activate and celebrate Prince George's innovation community that reaches across innovation-led companies, entrepreneurs, and talent, the entrepreneurial culture of Prince George's County will remain weak and fragmented. To overcome this issue, many areas across the nation benefit from having a collaborative entity to synchronize activities, provide new programs that fill gaps in the ecosystem, and market/brand the County and its innovative entrepreneurs and small businesses.

Key Elements

The Innovation Collaborative of Prince George's County (IC Prince George's) will function as a partnership of major research and educational anchor institutions, established employers, and relevant entrepreneurial support organizations in the County. While the County's public sector is expected to play a contributing role in IC Prince George's, it will not be the primary leader of such a partnership.

Importantly, IC Prince George's will focus on the four C's guiding the County's partnerships:

- Convene relevant partners in innovation and entrepreneurship—This includes colleges and universities, research institutions, private sector partners, major employers, economic development agencies, entrepreneurial support organizations, and other public, private, and philanthropic partners.
- Coordinate relevant programs, activities, and services—IC Prince George's will offer a one-stop shop for users to navigate the suite of potential resources for innovation-based companies in Prince George's County. These include educational and entrepreneurial support programs, resources to access talent or capital, and connections to established mentoring support services.
- **Catalyze new programs and initiatives**—By making targeted investments in the County's innovation ecosystem gaps, the partnership can effectively raise the level of networking and innovation community engagement and improve inclusive economic growth.

One critical element will be having the staff capacity to establish more peer-to-peer networking across innovation-led businesses in Prince George's County and

generate more countywide meet-up groups in areas of technology and innovation in coordination with existing entrepreneurial support organizations.

Additional gap-filling actions will also need to be championed and advanced by the IC Prince George's initiative as set out below. These new programs include a pre-accelerator program, economic gardening to scale up BIPOC innovationled businesses, and a first-customer program targeting emerging companies in the County.

• Communicating the importance of innovation and success of partners—IC Prince George's can also raise the visibility of entrepreneurs, innovative small businesses, and the novel programs of its partner members by marketing through social media, sponsoring events, and serving as a storyteller for the County. When one member of IC Prince George's wins, the entire County wins, and it is important to communicate and celebrate success.

IC Prince George's will represent a firm commitment to elevating innovation and entrepreneurship through networking, new program activities, awareness building, and communicating success stories to achieve a stronger entrepreneurial culture in Prince George's County.

One opportunity to catalyze IC Prince George's is to leverage TEDCO's Urban Business Innovation Initiative, which would offer the assistance of a part-time staff person in Prince George's County. This staff member could work one-onone with a number of companies in the County to provide mentorship and guidance to other resources in the region, and support deal flow for TEDCO's RUBRIC Program and our Builder Fund. Using this program as a launching point could help IC Prince George's serve its targeted audience of technology-based and technology-enabled entrepreneurs and businesses.

Resources Required

The primary resource required to launch IC Prince George's is staffing resources for engaging relevant partners in a publicprivate partnership effort; supporting enhanced services for networking, meet-up groups, social media marketing and a one-stop website on resources and activities; and helping to champion and design new gap-filling actions recommended in this strategy. Up to \$100,000 in additional resources is recommended to support a full-time, mid-level staffing resource to coordinate IC Prince George's, operating under the Innovation Station arm of PGCEDC.

Lead Organization PGCEDC

Sustain County's Strategic Focus on Targeted Industry Clusters

Why It Matters

Best practices in local economic development recognize the importance of identifying those targeted industries that offer the best opportunities for generating new wealth and offering high-quality jobs to grow the local economy. Still, individual industries do not stand alone within a local economy but are better understood as being part of a broader complex of industries that are interrelated—often referred to as industry clusters. These geographic concentrations of related companies, organizations, and institutions, organized around key localized assets, have been found to increase productivity, stimulate and enable innovation, and facilitate commercialization.

Key Elements

Prince George's County recognized the importance of industry clusters in developing its 2013 *Economic Development Strategic Action Plan.* Today, the improving economic position of Prince

George's County has been enabled by its efforts to organize and strategically focus its economic development efforts around its targeted industry clusters.

PGCEDC should continue its focus on targeted industry clusters as a means to effectively advance business retention, attraction, and new company formation.

The updated analysis of how the County's economic base has evolved suggests that the industry cluster focus should be fine-tuned to focus on four key industries. While maintaining a focus on business retention and attraction in these sectors is important, it is also critical to consider how these clusters intersect with the broader economic development strategies and actions put forth in this report. Table 4 on the following page shows the holistic opportunities to grow and expand the County's four targeted clusters, while additional information on these clusters can be found in the Assessment of Prince George's County's Economic Drivers in Appendix 1:

- Federal Government: Continue to prepare sites for GSA leasing and engage political leaders about the competitiveness of Prince George's County as a location for federal workers.
- **Information Technology and Services:** Facilitate the development of Class A office development and encourage placemaking around the County's transit-oriented downtowns.
- **Hospitals and Health Services:** Continue to invest in placemaking around Largo and other hubs of health services employment.
- **Research-Intensive Industries:** Support the commercialization, retention, and growth of companies in sectors such as Biosciences, Instruments and Electronics, Research and Development, and Engineering Services.

Two other sectors are important for Prince George's County to consider in its operations: transportation, distribution, and logistics, and destination retail. The transportation, distribution, and logistics sector remains a retention target for the County because of its availability of affordable land, location near major highway and rail infrastructure, and its close proximity to two regional airports. These points make the County attractive for both large-scale and last-mile transportation and distribution activities. The County should also support retention in the destination retail cluster, which includes larger retail activities, such as department stores, home centers, and warehouse clubs and supercenters that serve as destination shopping venues.

Resources Required

No new resources required beyond those outlined in other strategic action items.

Lead Organization PGCEDC

	Support innovation and entrepreneurship across and within targeted industry cluster	Cultivating Talent and Connecting Prince George's County Residents with Economic Opportunity	Strengthening Places Across Prince George's County and Improving the Core Business Environment
Federal Government	 Increase the presence of the federal government, which helps encourage the proliferation of federal contractors, especially those in technology- oriented sectors that can encourage innovation and entrepreneurship through their spillover effects. Engage workers at technology-oriented federal contractors and other technology-oriented government employees in value-added networking events to support the County's innovation economy. 	• Enact the actions laid out in the strategic priority area around cultivating talent to help ensure that Prince George's County meets the needs of the federal government and employers in the County's other targeted industry sectors.	 Developing transit-oriented districts creates more sites suitable for GSA and other knowledge/ professional services workers. Increasing placemaking and developing amenities at these sites can help increase the competitiveness of the County in attracting federal leases.
Hospitals/Health Services	 Anchor institutions in the hospitals and health services space could be opportunities for the place-based incentives identified in the first strategic priority area (e.g., participating in a first-customer program). Consider how physicians, surgeons, nurses, as well as other healthcare occupations from both its resident population and its workforce are integrating into increased value-added networking opportunities around innovation and entrepreneurship. 	 As community-based anchor institutions, hospitals can help advance K–12 STEM education pathways for Prince George's County. Jobs in the hospitals and healthcare services sector may be a good fit for several of the strategies within the second strategic action, such as pursuing a consortium around the industry's targeted critical skills and fostering the presence of nonprofit skill development providers. 	 Hospitals and health services can connect to the County's efforts to increase transit-oriented development. These anchors must be accessible to all individuals, and one component of this is accessibility for both transit and walkability. As Prince George's County considers new uses for underperforming commercial and retail developments and its transit-oriented future, they should explore connections with hospitals and health services.

Table 4. Summary of Emerging Issues to Address Through Strategic Priorities

	Support innovation and entrepreneurship across and	Cultivating Talent and Connecting Prince George's	Strengthening Places Across Prince George's County	
	within targeted industry cluster	County Residents with Economic Opportunity	and Improving the Core Business Environment	
Information Technology and Services	 Differentiate the County's services sector by focusing on its key technology niches: cybersecurity, data sciences (including artificial intelligence and machine learning), and quantum computing. It is intended that the Innovation Collaborative of Prince George's County (IC Prince George's) will have a significant focus on IT services, as would related programs such as the pre-accelerator, first-customer, and economic gardening programs. To build on capabilities at the University of Maryland College Park and Bowie State University, Prince George's County should also explore corporate innovation centers related to IT services and should incentivize growing startups in this space. 	 IT Services are a logical sector to pursue a consortium related to critical skills and foster nonprofit skills development service providers. Networking individuals in the IT services sector – whether they are current employees (e.g., developing networks of Blacks in Tech) or interested students (e.g., connecting through K–12 activities, linking individuals to higher-ed and career opportunities). Within IT Services, there are opportunities for Prince George's County to build targeted programming around its specializations in cybersecurity, data sciences (including artificial intelligence and machine learning), and quantum computing. 	 Having flexible live-work-play communities near transit lines and a range of housing options is an essential part of attracting and retaining tech talent. Prince George's County should Develop Business Improvement Districts and ensure that changes to zoning/permitting processes are implemented. Encouraging placemaking around the Discovery District and other areas around the Innovation Corridor should also be prioritized. The County could explore redeveloping underperforming commercial or retail centers for the purposes of data centers. Prince George's County can also continue to support the use of by-right zoning for data centers and explore other options to make this development process more seamless. 	
Research-Intensive Sectors	 Prince George's County has opportunities to diversify its research-intensive industries by focusing on its unique technology niches, closely related to the County's research assets (see Appendix A). IC Prince George's should encourage the development of research-intensive technology companies through its support for related programs such as entrepreneurial support, pre-accelerator, first-customer, and economic gardening programs. These sectors can also leverage important programs at the University of Maryland College Park and Bowie State University. 	• Prince George's County can develop new tech talent and better connect its residents to opportunities in research-intensive technology industries. The County should consider further understand the range of skills needs in these sectors and connect employers with each other to support workforce development goals.	 Support the complex development needs of technology-based companies who make things including biosciences and engineering-related companies – as they relate to regulations, permitting, and zoning. Challenging bureaucratic hurdles point to the importance of advancing lean permitting processes to meet the needs of businesses 	

Table 4. Summary of Emerging Issues to Address Through Strategic Priorities

Create a Countywide Pre-Accelerator Program

Why It Matters

Entrepreneurs need space, tools, and mentorship at very early stages to refine their business ideas and eventually attract capital. Pre-accelerators represent an established method to help develop young, high-growth businesses. Offering a pre-accelerator program is a valuable service addition for established coworking spaces such as the PGCEDC Innovation Station. These programs can help entrepreneurs reach the next level by providing access to a community of like-minded individuals, advice from seasoned professionals, and educational workshops to strengthen skills.

Key Elements

The goal of most pre-accelerator programs is to get participating startups a seed investment, pilot with an enterprise company, or secure a spot in an accelerator program. One approach to a pre-accelerator program is led by Atlanta Tech Village in Buckhead, nearly 10 miles from the city's downtown core.³⁵ Across six cohorts, this group has generated \$480K+ in seed investments and generated \$1.9M in revenue. This program provides startups—specifically those led by women and people of color—the opportunity to gain direct access to community, education, mentorship, and capital.

Another example of a pre-accelerator program that is targeted to innovation-led entrepreneurs is the Innovation Commercialization Assistance Program (ICAP) provided through the SBDC network in Virginia and overseen by George Mason University.³⁶ The Virginia ICAP leverages George Mason University's expertise through the National Science Foundation's I-Corps program, which offers the evidence-based Lean Startup model developed by Steve Blank, and taught at Standard University, for ideation, customer discovery, and business planning for faculty and graduate students to launch new innovation-led startups based on university discoveries.

The Virginia ICAP program is used extensively by accelerators and incubators across Virginia to provide the initial training for entrepreneurs and prepare them for admission. It helps early-stage technology entrepreneurs develop winning business models and go-to-market (GTM) strategies based on the Lean Startup model. ICAP starts with an intensive two-week bootcamp focused on customer discovery and business value proposition, and then provides more one-onone mentoring and coaching assistance over the next 6 to 18 months as entrepreneurs build out their business model and products and seek investment.

This ICAP program has a proven track record in helping entrepreneurs successfully launch their businesses and position themselves for federal Small Business Innovation Research grants, state venture investments, and initial early-stage private investments from angel investors and seed funds. Typically, it works with a cohort of up to 10 entrepreneurs in each region, with well over 10 cohorts each year. In less than 5 years, 519 entrepreneurs have been served by ICAP, and \$34 million in follow-on financing achieved.

Resources Required

Based on the ICAP experience, less than \$250,000 annually is required to tap expertise from the regional I-Corps program.

Lead Organization

PGCEDC (and IC Prince George's), in partnership with the DC-I Corps that is jointly operated by UMCP together with GWU, Virginia Tech and JHU.

Incentivize Growing Startups Nearby Anchor Innovation Institutions

Why It Matters

The research-oriented anchor institutions in Prince George's County represent a wealth of untapped economic development potential when it comes to supporting the startup and scaling of innovation-led companies. Anchor institutions, such as universities, can support startups through their own efforts to commercialize technologies and by creating access to value-added resources such as research partnerships, talent connections, and access to shared-use labs for emerging new ventures whether or not the startup is a university or federal-lab spinout. As a recent Brookings Institution analysis notes, "Successful technology startups are a leading indicator of the interplay between university research and the broader ecosystem within a city because, unlike as in licensing deals, universities give successful research entrepreneurs only their start-they are on their own for capital, mentorship, customers, workers, and opportunities to reach markets, and all of these demand strong connective tissue between universities and the city."37

Although a significant number of research and development expenditures are funneled through the County's anchor institutions, a relatively small focus is targeted toward support and collaboration with entrepreneurs and startup companies. For the County, encouraging startups to colocate around these anchors presents an opportunity to leverage the assets they represent and grow the economy from within. This is especially salient for the County's research-intensive technology sectors, such as Information Technology and Services, Biosciences, Instruments and Electronics, and Research and Development Services.

Key Elements

One proven approach for the County to consider is the development of an incentive similar in structure to Pennsylvania's Keystone Innovation Zone (KIZ) benefits, which support growing startup companies locating in designated areas surrounding institutions of higher education in the state. Over a 10-year period KIZ has assisted over 7,000 emerging new ventures that colocated near universities, retained nearly 35,000 jobs, and created \$4 billion of follow-on financing.

A key element of the success of the Pennsylvania KIZ incentive is that it is focused on new ventures that are growing, which limits the risk of providing assistance to unproven new venture startups. The KIZ incentive is based on increases in gross revenues for innovation-led companies in targeted technology industry sectors in operation for less than eight years. The actual incentive is up to 50 percent of the annual increase in gross revenues, not to exceed \$100,000.

Another incentive approach that rewards colocation of emerging businesses with initial success around universities is to provide a matching grant to companies able to win federal Small Business Innovation Research grants. The federal SBIR program is the largest product development funding source in the nation. Emerging ventures able to win SBIR awards are vetted by federal agencies for their ideas and commercialization planning for advancing innovative technologies. Because the federal government has proved the basic commercial viability of this product, a matching grant can help further company development. For example, Montgomery County, Maryland offers awards at a value of up to 25 percent of a Phase I grant (\$25,000 cap), or 25 percent of a Phase II grant (\$75,000 cap). Grantees under this program may receive one matching county grant each year, and up to five total grants.

Resources Required

\$250,000 to \$500,000 annually can allow Prince George's County to target grant assistance of up to \$25,000 to \$50,000 a year for up to 10 emerging ventures with a track record of success each year to colocate in designated areas near universities or federal research anchors. Company assistance should be limited to two to three years of assistance and a long-term lease of five years or more should be required to get the assistance.

Lead Organization PGCEDC

Establish an Economic Gardening Program for BIPOC Businesses

Why It Matters

While support services for new entrepreneurs and dedicated resources for large, established companies are all valuable components of the economic development toolkit, there is also true value in targeted programs serving smaller and midsized firms. These enterprises typically have between 10 to 99 employees and between \$1 million and \$50 million in revenue, depending on industry. Recognizing that entrepreneurs and new businesses face a set of unique challenges as they grow and move beyond their initial startup phase, there has been a movement nationally toward servicing the needs and challenges of these "second-stage" businesses. "Economic Gardening" programs assist these firms with strategies for growth that might include a new product offering, expanding into a new market or customer base, or enhancing marketing.

Data from the YourEconomy.org research site, a program of The Edward Lowe Foundation's National Center for Economic Gardening, finds that second-stage companies are a critical part of the Prince George's County economy: although they represent 15.15 percent of establishments, they accounted for 33.7 percent of jobs in 2019, and jobs in this segment also grew by 34.6 percent from 2015–2019—both more than any other class of establishment size.³⁸ Establishing an economic gardening program in Prince George's County can provide a continuum of support and intelligence to ensure these companies continue to succeed and grow.

Through programs like the Innovation Station and other partnerships with key business organizations, such as entrepreneurial support organizations and chambers of commerce, the County and PGCEDC help connect small and minority businesses to resources and offer access to targeted programs. However, based on interviews, key informants felt that more can be done to support the growth of small and minority businesses, particularly in the areas of access to financing, procurement, and general support.

Key Elements

The Edward Lowe Foundation's emphasis on a strategy to "grow from within" is a complementary approach to much of modern economic development's focus on business attraction. This approach has been embraced in several states (including Iowa, Florida, Kansas, Louisiana, and Michigan) and many smaller communities at the local and regional levels.

The "sweet spot" for most local and regional economic gardening programs to target is entrepreneurs who have started a venture that is between one and five years old and who want to grow it, regardless of its size.³⁹ While these ventures may not always be high-tech in nature, they should have developed some sort of innovation in their product, process, or delivery method. They should also have a potential or actual market outside the local economic region, and the ability to create high-quality, living-wage jobs.

These nascent, growth-oriented companies can provide significant economic impact and can benefit greatly from the services an economic gardening program typically provides. To concentrate on this target audience, Prince George's County should focus on companies that meet the following criteria:

- Firmly established (in business for one to three years) with a clearly defined market.
- Have financial statements that include profit and loss and cash flow numbers, and demonstrate revenue growth over time (even if the company has not yet reached the break-even point).
- Leadership that clearly intends to grow the business, as expressed in the desire to hire employees, expand operations or market area, or seek capital investment.
- Have a product or service that is scalable and preferably unique (i.e., cannot be easily imitated) with potential or current markets outside the local region.

These growth businesses will sometimes look like conventional businesses such as local retail and service companies. What is most important is that these firms have both the desire and the ability to sell their goods and services outside the local area. For example, a local maker can sell their crafts or food products over the Internet, or a local printing company could offer on-demand printing and graphic services through their website.

The types of support services offered through economic gardening approaches may vary, but several common themes exist. The Pueblo County Department of Economic Development (CO) has long used an economic gardening approach that provides advanced, corporate-level tools for any Pueblo County businesses looking to expand, startup, or relocate. Elements offered free of charge through the County's program include:

- **Market research**: including an in-depth understanding of customers, market dynamics in communities where the business is looking to expand or compete, and a nationwide analysis of competition.
- **Marketing assistance**: identifying the most efficient and effective ways to market to target customers, the marketing methods that appeal to the business's specific audience, and access to continually updated lists of every business nationwide, allowing effective business-to-business sales.
- **Strategy development**: applying detailed market knowledge and financial analytics to help companies gain a more successful and profitable operating model; providing information that is graphic in nature; allowing banks, investors, and venture capitalists to quickly understand the business model; and testing a business idea and locations before the risk of spending money.
- Web optimization: raising visibility for a firm's online web presence, including assistance with social media strategy and search engine optimization tools.
- **Customized research**: including geographic information systems support and other technical assistance, as needed.

To further inform activities in Prince George's County, Rutgers' Center for Urban Entrepreneurship and Economic Development operates an economic gardening program for BIPOC businesses in Northern and Central New Jersey.⁴⁰ The \$20M Connection program works with entrepreneurs of color who are now operating companies with annual revenues exceeding \$3 million and delivering quality professional services.⁴¹ Participating entrepreneurs commit to three months of connection sessions and six months of leadership coaching. Through this program, Rutgers works to intentionally accelerate the next level of business growth in two ways. First, by facilitating and nurturing relationships with select corporate partners, and second, by providing specialized executive education to increase organizational effectiveness to meet the demand created by new contracts. The cost to participate in the program is \$10,000; participants are responsible for 20 percent and the remainder is reimbursed through a scholarship from Rutgers and corporate partners.

Resources Required

It is expected that Prince George's County's economic gardening program for BIPOC entrepreneurs will cost \$100,000 for a cohort of 10 participating businesses, with 80 percent covered by anchor institutions, corporate partners, and other sources.

Lead Organization

PGCEDC in partnership with IC Prince George's, the University of Maryland, and Bowie State University, as well as Prince George's County Community College and UMGC.

Advance Corporate Innovation Centers with Anchor Innovation Institutions

Why It Matters

The rise of corporations relocating major research facilities to be near universities reflects a larger shift in how innovation is advanced. As Bruce Katz, a national expert on metropolitan development, explains in a Harvard Business Review article:

"What's driving companies to relocate near urban universities is the changing role of innovation within the private sector as firms are increasingly relying on external sources to support technology development. In the past, many large companies tended to innovate in isolation," "Today, few firms monopolize the technologies on which they rely, and they can no longer absorb the total costs of radical innovation alone.... Technology "platforms" undergird new products more than in the past. Basic science in genomic is the platform on which new biological drugs rely.... No corporate research center 'owns' any of these platforms, but they all must understand and apply advances within them to new products and services."⁴²

The Innovation Corridor—comprised of BARC, Berwyn Heights, College Park, Edmonston, Greenbelt, Hyattsville, Riverdale Park, University Park, the Route 1 Corridor, and around the University of Maryland —is showing early success at attracting follow-on development.⁴³ Other states and regions are having notable success in attracting applied research centers of companies in fields such as advanced manufacturing, health and life sciences, and information technology to collaborate with their universities and nonprofit research centers. Prince George's County should also capitalize on the mutually beneficial opportunities made available through Corporate Innovation Centers.

Key Elements

Perhaps the best example of a region utilizing its research universities to attract corporate innovation is in the Atlanta metropolitan area with the efforts of Georgia Tech and its Tech Square innovation district development. There are now 23 corporate innovation centers that have colocated in and near the Tech Square area because of proximity to Georgia Tech and its broader community of innovation. Typical aspects of the relationship include:

- Engaging students through programs such as internships and co-ops.
- Offering research sponsorships for both specific applied research projects, as well as precompetitive funding to gain exposure to breakthrough technologies.

- Providing access to startups, especially those in technology-based industries.
- Using common facilities for prototyping (e.g., machining, 3D-printing, characterization, etc.).

Critical to the success of Georgia Tech in attracting corporate innovation centers was creating a dedicated account management team to identify and work with each company. This account management team focused on creating a value proposition for each company customized to their interests and the strengths found at Georgia Tech. It was also important to create a separate approach, apart from normal university policies and procedures, for industry contracting and IP management for corporate innovation centers that were more business-friendly and streamlined.

Learning from the Georgia Tech experience, Prince George's County should seek to work with both UMCP and Bowie State to identify specific corporate partnerships to pursue and support the formation of dedicated account management teams to engage these companies. Prince George's County should encourage both universities to develop contracting and IP management policies specifically to support corporate innovation centers in the County.

Resources Required

For incentives, the County should prioritize corporate innovation centers affiliated with UMCP and Bowie State that colocate in designated areas near each university for EDI funding. In addition, if each university agrees to advance an approach to corporate innovation centers that involves dedicated account management and streamlined contracting and IP management, then the County should consider cofunding operating costs.

Lead Organization

University of Maryland College Park and PGCEDC

Advance a First-Customer Program

Why It Matters

Early customers are arguably as important to a startup's growth as traditional sources of seed-funding. As Prince George's County explores opportunities to further the growth of its younger, smaller- and mid-sized businesses, first-customer programs represent a proven approach worthy of advancement. High-growth potential companies benefit from relationships with corporate partners and specialized executive education, while corporate partners can identify solutions to their real business, technology, or organizational challenges.

For Prince George's County, these types of relationships are important to economic development for two reasons. First, these smaller, more agile startups have the potential to help established businesses or larger anchors solve real business problems. These first-customer partnerships should not be viewed as a philanthropic effort, but instead as a way to improve business competitiveness. Further, an inability to invest in the success of innovative small businesses in Prince George's County could lead to these startups relocating elsewhere in the region, or closer to their primary customers. Prince George's County should ensure that its startups, especially those operating in key industry clusters, are able to grow and scale by connecting them to potential first customers.

Key Elements

First-customer programs center on identifying critical gaps in business development, marketing, and sales, while also linking entrepreneurs with a range of professional services that would otherwise be inaccessible due to cost. One successful model is operated by the Economic Growth Institute at the University of Michigan and funded by the Michigan Economic Development Corporation.⁴⁴ This firstcustomer program cofunds projects with service providers to

address critical gaps needed for a client to acquire their firstcustomer(s). This program focuses on advanced technology startup companies as well as established technology companies that are facing startup-like challenges as they diversify into new markets.

Since its inception, the first-customer program offered by EGI has undertaken 116 projects, which have helped create 827 new jobs and brought 193 new products to market. Program clients have also gone on to raise \$65 million in external capital and generate \$65 million in new sales. Examples of services offered by this first-customer program include:

- Market/Customer Focused Assessment: Professional staff facilitate a focused technology and market assessment based on the company's proposed value proposition, business model, and target market(s). The assessment includes a market-specific overview, which provides valuable information on market characteristics, potential customers, competitive landscape, and prospective leads, if warranted. This assessment also identifies the company's current capability, phase of value proposition, customer validation, product positioning, and required resources to attain customer sales.
- Action Plan Development: Staff helps entrepreneurs develop a plan/path to their first customer with specific actions and resources required. This plan includes information from the market-specific overview, an identified path to their first customer, and specific actions including identified resources (projects) to address high leverage/critical path requirements not available to the company.
- **Implementation**: Together with the company, program staff identifies resources and private sector experts that are capable of addressing critical gaps in business development, marketing, and sales. These high leverage

points (resources and project scopes) are documented in the company's action plan and may lead to cofunded projects with eligible clients.

• **Executive Coaching**: Staff and other mentors provide executive coaching throughout the process, as well as project implementation assistance.

Given the large purchasing power of anchor institutions in Prince George's County, another important element of first-customer programs is assistance with procurement and bonding. For example, the City of San Antonio offers a Bonding Assistance Program to help certified small businesses repair their credit and become bondable, which in turn dramatically increases the potential of being awarded contracts from public and private sector entities.⁴⁵ Services offered through this program include a range of business education classes through a Small Business Boot Camp, as well as one-on-one business counseling.

Resources Required

\$200,000 to \$250,000 for dedicated staffing to source participating companies and ensure that they are meeting their benchmarks throughout the process.

Lead Organization

PGCEDC in partnership with IC Prince George's.

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HUMAN CAPITAL: CULTIVATING TALENT AND CONNECTING PRINCE GEORGE'S COUNTY RESIDENTS WITH ECONOMIC OPPORTUNITY

Situational Analysis

Build on Strengths and Opportunities

- · Upskill residents to embrace the growing diversity of jobs in County
- · Reach into County's robust talent pool
- · Tap the potential of skilled County residents who are out-commuting

Address Weaknesses and Gaps

- Understand and alter the trajectory of "The Tale of Two Counties"
- · Provide external support to help address challenges with K-12 education in the County
- Work to stem the outflows of skilled talent

The availability and quality of labor are key factors impacting the economic development process. Based on Area Development's recently released 2021 *Annual Survey of Corporate Executives*, the availability of skilled talent ranked first in this year's survey, considered "very important" or "important" by 91.4 percent of respondents.⁴⁶ "Despite an increase in remote working during the pandemic, basing the location decision on where the available skilled workers can be found is still paramount. Remember that half of the respondents to our survey say they are only temporarily shifting to remote work, with more than a third making no such transition at all," the study finds. Training programs are also increasingly important to the site selection process, growing from a 50.9 percent importance rating in 1986 to 63.3 percent rating in the most recent survey.⁴⁷

As it pertains to developing talent and skills in Prince George's County, there are several strengths and opportunities to build upon.

Through 2045, Prince George's County is projected to experience strong and stable population, labor force, and employment (by place of work) growth. Based on projections from the Maryland Department of Planning, the County's population is projected to grow by 9 percent, its workforce by 3 percent, and in-County jobs by 13 percent through 2045.⁴⁸ In-County employment opportunities are

projected to increase more rapidly than both population and labor force, as the County continues to transition from a suburban supplier of talent to Washington, D.C. and the larger metropolitan area into an employment center in its own right.

A significant volume of skilled talent emanates from colleges and universities in Prince George's County. With Bowie State University and the University of Maryland, College Park located in the County, Prince George's County has access to a strong talent pipeline, especially for higherskill- and education-level occupations.⁴⁹ Universities in Prince George's County are churning out degrees with a high concentration in fields such as engineering, computer sciences, physical sciences, and biology/life sciences. Prince George's County residents have a higher level of educational attainment than the nation as a whole but lag the larger region and key surrounding jurisdictions.⁵⁰

The industry clusters driving the economy of Prince George's County have created, and are expected to continue to create, a diversity of jobs. The JFI-TEConomy analysis identified that many of the leading industry clusters for Prince George's County are expected to have a major ramp-up in needs for bachelor's-level and middle-skilllevel jobs.⁵¹ Occupations in the management, business, science, and arts occupations experienced the greatest job growth over the 2013–2018 period and are projected to lead in job growth through 2028. The diversity of the Prince George's County workforce—with a broader mix across education and skills compared to the region—suggests an opportunity to align the existing workforce with mix of skill needs of the industry cluster.

Many Prince George's County residents are highly skilled and well-compensated, while also commuting outside of the County for work. With roughly three-fifths of its residents commuting to jobs outside of the County, Prince George's County is an important source of labor to the larger regional economy.⁵² Prince George's County has the sixth highest concentration of out-commuting workers among the comparison jurisdictions. Notably, Prince George's County's out-commuters earn more, are better educated, and are more likely to work in professional services (Table 5). Still, these out-commuters represent an important pool of experienced, highly educated professionals that can support the County's future economic development efforts.

Resident Characteristic	Working in Prince George's County	Working elsewhere in Maryland	Working outside of Maryland (DC or VA)
Average wages	\$48,464	\$56,972	\$66,731
Share with a bachelor's degree or above	30%	37%	40%
Share working in professional occupations ⁷⁷	19%	23%	31%

Table 5. Select Characteristics of Prince George's County Residents by Commuting Status

There are also areas of concern as it relates to the County's workforce skills development. Despite the strengths in the County's talent generation and workforce base, there is a "tale of two counties" emerging in respect to workforce development in the County with a substantial base of low-educated, unskilled workers and youth, including:

- International immigrant workers coming to Prince George's County are less educated and skilled than regional counterparts. With an estimated international net in-migration of 46,700 individuals, immigration is helping fuel the County's population growth. JFI-TEConomy analysis finds that, compared to nearby areas, Prince George's County's foreign-born population is younger, less likely to be a naturalized citizen, less formally educated, less likely to be in a professional/managerial occupation, and has lower levels of household income than the foreign-born population in other parts of the region. Unlocking the potential of these new Americans represents an opportunity for further economic growth.
- K-12 public schools in Prince George's County continue to experience relatively low student performance. Prince George's County Public Schools is Maryland's second largest public school system with 132,667 students enrolled. However, in part due to the "tale of two counties" and an increasing presence of lowincome students, the County's public schools have the state's highest dropout rate, the second lowest graduation rate, the fifth lowest share of completers enrolled in higher education 12 months after completion, and the fourth lowest average SAT scores.⁵³ Across the County, many stakeholders placed an emphasis on improving the school system and increasing the orientation of K-12 students toward STEM opportunities.

While many in Prince George's County are doing well financially, many in the County do not have the skills needed to participate in the economy more broadly. Unfortunately, the COVID-19 Pandemic has further illuminated the disparities between the "have's" and the "have not's" in the County. Examples of individuals currently being left behind in Prince George's County include those with a high school diploma (or those who have less than high school proficiency in reading, writing, math, etc.), and new Americans, who are currently speaking English as a second language.

Another concern that is emerging and needs to be addressed is the outmigration of higher-income households in the County. Although Prince George's County's population is growing, the County is losing residents to outmigration (net outmigration of 13,467), and its outmigrants have notably higher incomes than its incoming residents.⁵⁴ Unlike most, but not all, peer jurisdictions, domestic net outmigration of 60,167 far exceeded international net in-migration of 46,700 persons.

In order to fully develop the untapped potential of Prince George's County, there is a need to fully integrate its residents in the innovation economy by cultivating talent and connecting more individuals to new skills and career opportunities. As the following sections show, Prince George's County is working hard to improve the quality of its workforce, but further efforts are needed.

Prince George's County Activities:

Across Prince George's County, there are a variety of activities contributing to a strong, successful workforce. More can be done to scale, connect, and target these programs to more individuals across the County, helping to ensure inclusive and equitable economic growth. Central to workforce development in the County is EPG and The Prince George's County Local Workforce Development Board. EPG provides a range of direct services for both businesses and job seekers, including programs for youth and support with recruitment, tax credits, and company training. In Prince George's County's driving industry clusters, EPG's support for the Capital Area Healthcare Alliance (CAHA) and Educational Partnership For IT Careers (EPIC) helps drive new skill development in health and life sciences and information technology, respectively.⁵⁵ EPG also supports programs in other identified clusters that support economic development in the County, including its Construction Works Program, Hospitality And Accommodations Institute, Professional Services Institute, and Pathways To Success program.⁵⁶

Importantly, EPG provides services for those individuals who may be presently underserved in the innovation economy. This includes youth, the underemployed, those learning English as a second language, and those with less than a college degree. There are many opportunities to further connect with nonprofit economic development and workforce development providers. Recent partnerships include those with groups such as Vehicles for Change, DC Central Kitchen, and Jobs for the Future's SkillRise program.

Beyond their role as producers of skilled talent, it is also worth noting that major universities in Prince George's County contribute to the development of a strong workforce and further opportunities to connect this talent to the broader economy. For example, in a July 2020 interview, UMCP President Daryl Pines outlined some of his steps to improve the university's relationship with the County and grow the number of students coming to College Park; although the campus sits in Prince George's County, only 3,094 students from Prince George's County were enrolled at the same time, nearly one-third the amount coming from Montgomery County.⁵⁷

UMCP has received significant funding from the National Science Foundation (NSF) to study how educational simulations can help undergraduate students understand and engage with STEM careers. The project aims to enhance the career awareness and skills of students in two areas of national interest: cybersecurity and crisis response.⁵⁸ UMCP is also creating a year-long intensive training program for 40 scholars to expand STEM education research and broaden participation in STEM fields. The research will also focus on increasing representation of minority communities in STEM.

At Bowie State, the Education Innovation Initiative (EI²) is a preK–20 pipeline program that promotes academic success and exposes students from underrepresented groups to STEM careers. The EI² programs are designed to encourage more students to enroll, stay in school, and graduate in four years. Bowie State undergraduates can participate in a broad spectrum of EI² activities that provide the support students need to succeed in their classes and the opportunities to engage in real-world, hands-on projects. Notable examples include colocating students in residential learning communities, providing holistic advising and near-peer mentorship, hands-on training with robotics, and a facultyguided summer research institute.

Prince George's County Community College provides a range of degree and certificate programs to support the County's driving clusters. PGCC offers Collegian Centers, environments for immersive learning, in both STEM and Health and Life Sciences. Notably, the college offers associate degrees in fields such as Computer Engineering Technology, Computer Science, Cybersecurity, Engineering, and Information Technology. These degrees are complemented by certificates in programs such as computer programming and database systems, web technology, network systems administration, cybersecurity, and other technical competencies. To support the County's federal government cluster, PGCC also offers programs to help introduce workers and businesses to security clearance and background checks, and other degrees and certifications in human resources, business, and management. Healthcare programs provide an additional area where PGCC has a critical mass of programming aligned with key driver clusters.

There are also a range of efforts to build further connections with youth in the County:

- **EPG** connects with the youth in Prince George's County through programs such as the Youth Career Connections and the Knowledge Equals Youth Success (KEYS) initiative.⁵⁹ These efforts are targeted at younger students and those between the ages of 15–22 years who are in need of workforce pathways and guidance.
- Prince George's County's Youth@Work/Summer Youth Enrichment Program (Youth@Work/SYEP) offers youth ages 18 to 22 opportunities to apply for permanent and temporary jobs that begin prior to the summer, while the summer youth enrichment program offers youth ages 14 to 22 six weeks of enriching entrylevel summer employment. For more than 30 years, this program has helped young people launch careers by providing them with free job readiness training and paid employment at government, nonprofit, and business worksites in the County and the broader region.
- **Tech Prince George's** is a partnership between the Prince George's County Government, PGCPS, institutions of higher education, nonprofit organizations, and private industry. The STEAM Dream Team Technology Showcase is an effort that matches public school

students with mentors from the Bowie State University business school. Other Tech Prince George's activities include the Prince George's County Office of Information Technology Summer Youth Enrichment Program, career days, and college internships.

- The University of Maryland College Park and the Clark School of Engineering offer a suite of K–12 recruitment programs. These programs are used to encourage participants to apply to the University of Maryland and, if admitted, to enroll in one of nine engineering majors. Programs include:
 - » SeaPerch Camp, which offers students opportunities to learn about robotics, engineering, science, and mathematics while building an underwater, remotely operated vehicle from a kit and following a curriculum that teaches basic engineering and science concepts.⁶⁰
 - » Parent STEM Expo is a free, day-long event that exposes parents to careers and educational opportunities in STEM.⁶¹
 - » WIE Change the World is a virtual program geared toward high-school-aged women considering majoring in engineering and potentially pursuing it as a career. This week-long virtual program introduces participants to the various disciplines of engineering through engaging lessons and lectures, hands-on activities, and conversations with the school's faculty, staff, and students.
 - » Innoworks at the University of Maryland College Park provides Prince George's County students an opportunity to explore science and technology during a week-long, hands-on summer camp. The camp is free of charge, allowing students from all backgrounds to share in this experience, which helps instill a passion for science and technology, promotes teamwork,

builds problem-solving skills, and increases student confidence in the sciences.

- **Bowie State University** is linking with PGCPS to prepare excellent STEM educators from diverse backgrounds to teach students in high-needs schools through a five-year grant from NSF.⁶² The program will recruit, train, and mentor diverse Bowie State students with a love for natural sciences and mathematics to become future STEM teachers.
- The NASA STEAM Innovation Lab, headquartered at NASA-Goddard, is a resource center for a variety of learning environments including makerspaces and classrooms with an emphasis on space science content applications. The program brings together NASA scientists, engineers, and educators to explore and develop new ideas related to the infusion of educational technology into STEM activities, programs, and approaches.
- The Prince George's County Memorial Library System offers a range of virtual STEM programs, special chemistry activity kits, and resources for learning about STEM subjects online.

Interviews with external stakeholders suggested that, while there were promising programs underway in Prince George's County public schools, a more concerted effort was needed in promoting and advertising the expansive opportunities that exist within the County.

PGCPS is one of the nation's 20 largest school districts, has 208 schools and centers, serves more than 136,500 students, and has nearly 22,000 employees. PGCPS is nationally recognized for college and career-readiness programs that provide students with unique learning opportunities, including dual enrollment and language immersion. The district provides access to rigorous curriculum in STEM and Career and Technical Education (CTE) through over 32 career and technical education programs of study and 3 science and technology high schools. As noted by the 2019 Alsobrooks Transition Plan, PGCPS features several promising programs to encourage college and career readiness:

- **3D Scholars Program:** A specialized program where students earn credits toward an associate degree while in high school, then immediately transition to Prince George's Community College to complete their associate degree and are then awarded a scholarship to UMGC to earn their bachelor's degree. Available courses of study include Business Administration, Criminal Justice, and Computer Networks and Cybersecurity.
- **Middle College Program:** The first four-year program in the State of Maryland that combines high school and college courses through dual enrollment credits. Students begin taking college courses during ninth grade and, at the time of graduation from the Academy of Health Sciences, students will have met the requirements for a high school diploma and an associate degree in General Studies. The partnership expanded in 2017 with the new Teacher Preparation program, which prepares students to graduate with a high school diploma and an associate degree in Teaching.
- **Pathways to Technology:** A 9–14 school model, Pathways to Technology combines high school, college, and the world of work. Students receive authentic work experiences in an identified career field, one-on-one mentoring with a business professional in their chosen field, a minimum of one 6-week paid internship, and a dedicated college and career counselor. Support and enrichment programs are provided through extended day and summer bridge programs.

- Career and Technical Education Programs: CTE pairs academic knowledge with technical skills to prepare students for in-demand, high-skilled, and high-wage jobs. CTE programs of study provide the opportunity for students to earn industry-recognized certificates, acquire college credit, and gain work experience. Students may also gain work experience through internships, job shadowing, on-the-job training, and industry-certification opportunities. CTE gives high school students the chance to get a head start on preparing for college and careers. CTE programs of study help students gain the skills, technical knowledge, academic foundation, and real-world experiences they need to prepare for high-skill, high-demand, and high-wage careers.
- Talent Ready: An early college partnership with Prince George's Community College, EPG, four-year colleges, and employer partners designed to expand student access to college, prepare students for careers in information technology, and meet the growing demand for local IT talent in the nation's capital. The program prepares students for one of four high school to career paths: Software Development, Networking, Data Management, and Cybersecurity.
- **3DE:** 3DE re-engineers education to create engaging learning environments that reflect the world in which we live and will empower students with the knowledge, skills, and confidence to unlock greater economic opportunities. Utilizing case methodology, students are taught in a manner that increases engagement, strengthens comprehension, builds critical thinking, and accelerates academic performance. The result is a high school experience that reflects the dynamic pace of activity and interconnectedness of life beyond the classroom walls.

- **Registered Apprenticeship**: PGCPS is the only school district in Maryland that serves as a Registered Apprenticeship Provider. Through their participation in this program, CTE students graduate prepared to access the workforce with hands-on training required for advancement in the field. PGCPS and the community gain employees who are motivated, prepared, and credentialed in critical fields.
- Youth Apprenticeship: The Apprenticeship Maryland Program is coordinated through a partnership between the Maryland State Department of Education and the Maryland Department of Labor, Licensing and Regulation. This "earn and learn" program is designed to lead to sustainable employment and further education based on career pathways in STEM occupations. The STEM-related occupations include Information Technology, Health and Biomedical Sciences, Manufacturing, Construction and Design, and Banking and Finance.

Recommended Strategic Approach:

Taken together, there are a range of activities underway in the County to support the development of skilled talent, a strong workforce, and well-prepared students. To complement these efforts, the County's economic development strategy can seek to accelerate the breadth and depth of publicprivate partnerships for workforce development activities under the auspices of EPG.

This emphasis on public-private partnerships calls for the development a **Prince George's County Partnership for Skills and Jobs Initiative** to engage industry, nonprofits, philanthropies, and higher education to deepen service offerings in the County. Specific activities recommended for this initiative include:

- Accelerate the presence of nonprofit skills development service providers
- Advance corporate higher education K–12 STEM activities
- Pursue a target industry workforce critical skills consortium
- Ensure that program alumni are connected to higher education and career opportunities
- Encourage a "Blacks in Tech" network of computer scientists, engineers, entrepreneurs, and other professionals

The key resource to be tapped as part of the Partnership for Skills and Jobs Initiative will be a staff liaison support function to serve as a facilitator, convenor, catalyst, and coordinator with nonprofits, philanthropies, industry consortia, and higher education institutions. Each of these specific activities having access to planning grants will help advance public-private partnership efforts. Up to \$100,000 in additional resources is recommended to support a full-time, mid-level staffing resource to coordinate this partnership, operating under EPG.

Accelerate the Presence of Nonprofit Skills Development Service Providers

Why It Matters

As a previous study of workforce development in Prince George's County notes, "While there are many organizations that play some role in workforce development, stakeholders feel there is a need for increased coordination, information sharing, and collaborative planning, local workforce development... organizations feel strained by a lack of resources. Prince George's County has a limited philanthropic presence, which makes it difficult to bring successful programs to scale, and to strategically plan new programming."⁶³

As a result of the challenges that resource constraints place on the County's ability to pilot new programs, there are many opportunities to further connect with nonprofit economic development and workforce development providers. Recent partnerships with groups such as Vehicles for Change, DC Central Kitchen, and Jobs for The Future's SkillRise program suggest the promise of this approach.

Key Elements

To foster the presence of nonprofit skills development service providers in Prince George's County, it is recommended that the County, working through EPG and the newly established Partnership for Jobs and Skills Initiative, undertake the following activities:

- Identify which programs currently being deployed in the region could be developed or scaled in Prince George's County
- Identify national programs that could be effectively applied in Prince George's County
- Incorporate the feedback from sector working groups into the attraction of skills-development programs
- Connect graduates of these programs to jobs or educational opportunities in the County
- Ensure that programs are functioning appropriately and are modified as needed based on the County's specific challenges

A dedicated staff liaison position created as part of the Partnership for Jobs and Skills Initiative should be created to support this effort, along with a limited number of planning grants to nonprofit organizations that EPG targets.

Resources Required

Under \$250,000 to support staffing resources and two to three planning grants of up to \$50,000 with matching in-kind or cash contributions required.

Lead Organization

EPG

Advance Corporate-Higher Education K–12 STEM/STEAM Activities

Why It Matters

There are many opportunities in Prince George's County to continue to grow and develop the County's talented workforce by connecting more residents to new skills. As noted in a recent report by the Council on Competitiveness, "a growing community of educators has recognized that experiencing invention, innovation and the fundamentals of entrepreneurship across the K-12 and higher education journey can enhance learning, particularly around STEM, design and adjacent disciplines; open minds and possibilities by fostering student creativity, self-efficacy, and a sense of belonging; and prepare students with the mindsets and skill sets that CEOs are seeking in their future workforce, while further cultivating future inventors and entrepreneurs. Industry partnerships, and the range of resources that they bring, will be key to realizing this goal."64 Many have argued that an increasing emphasis needs to be placed on the arts, as well as traditional STEM skills, using the acronym STEAM. "Proponents of STEAM education recognize the importance of creativity and innovation in the future to solve our problems. In fact, according to one study, nearly all Nobel laureates in the sciences practice some form of art as adults. When you compare these successful scientists with others, they are significantly more likely than other scientists to practice art in a variety of forms, from acting to singing, writing poetry to woodworking, and more. It's

this science success and art connection that make STEAM proponents believe that by integrating arts to a child's education, it creates a person more ready to meet the ingenuity demands of our economy."⁶⁵

For Prince George's County, there is a need to advance partnerships that link the County's K–12 students with local employers and educational/research institutions—especially around areas related to STEM/STEAM education. Interviews with postsecondary institutions and workforce development leaders in the County raised concerns about K–12 student orientation toward STEM careers. External stakeholders also identified the perceived quality of the County's K–12 schools as influencing the persistent outmigration of higher-income households in the county. Strengthening the educational system with a propensity toward STEM may help reverse these trends.

Key Elements

The strength of Prince George's County's future workforce pipelines is heavily dependent on promoting STEM/STEAM competencies from cradle to career. Through its collaborative network of public and private partnerships, the Orange County STEM Ecosystem Initiative offers one example to help guide Prince George's County's activities. This ecosystem initiative, led by the University of California at Irvine and the Samueli Foundation, and functioning as an independent nonprofit for the past decade, conducts a range of programs and activities to support STEM education in Orange County. Key elements of successful corporate, higher-education K–12 STEM partnerships include:

 A focus on professional development and continuing education: Teachers and educators represent one of the most critical entry-points to supporting STEM/ STEAM learners. For example, the Orange County STEM Learning Institute is a professional development

institute of cross-sector partners representing expanded learning, early learning, business and industry, science, foundations, and others.

- Providing educators with mentorship and a platform to address common issues: The Lead STEM Practitioners program brings together district teams with established and emerging teachers. These teams investigate and address a unique challenge within their district that presents an opportunity to strengthen STEM learning opportunities for all students in the county.
- Mobile programming that meets students where they are: In spread out counties, like Prince George's County, there are benefits to a mobile fabrication space that provides students and educators with training, resources, and support needed to engage in open-ended experiential STEM learning.
- **Connecting with students outside of the classroom:** For example, Orange County STEM created and currently manages the Orange County High School E-sports League, which connects the rapidly growing form of E-sports entertainment with resilient, adaptive, and effective learning.
- **Recognizing success:** Celebratory events can help build a culture of excellence around STEM/STEAM education and recognizing connectors, champions, advocates, and other individuals who help encourage a strong STEM ecosystem in the County.
- Repository of STEM resources and data/reports on workforce development: Orange County STEM features events, resources, and other activities available both locally and virtually. In partnership with the Orange County Business Council, the Orange County STEM Initiative developed a supplement to the Orange County

Workforce Indicators report that looked at understanding the critical impact a STEM workforce contributes to Orange County's current and future economy.

• **Incentive Programs:** These can be provided in the form of discounted or complimentary services and salary supplements for industry professionals who seek employment with PGCPS. Investing in quality, industry-based educators can build a stronger workforce pipeline through CTE programs.

Individual companies also advance these types of STEM activities in partnership with higher education institutions, typically through their corporate foundations or diversity offices. For instance, Amgen supports Stanford University with an eight-week program that helps high school students from diverse backgrounds develop an interest in biological sciences and medicine.⁶⁶

Resources Required

Under \$250,000 for part-time staff liaison position support efforts by higher education institutions. Provide limited support of up to \$10,000 for grant writing to corporate foundations and federal agencies with matching in-kind or cash contributions required by higher education institutions.

Lead Organization

EPG in collaboration with Prince George's Community College, Bowie State University, and University of Maryland College Park

Pursue Target Industry Workforce Critical Skills Consortium

Why It Matters

Throughout Prince George's County there is a need to coalesce like-minded industry partners and provide a platform for firms and institutions to address shared workforce issues. As JFI-TEConomy analysis has shown, many of the leading industry clusters for Prince George's County are expected to have a major ramp-up in the needs for bachelor's-level and middle-skill-level jobs. Similarly, the diversity of Prince George's County's workforce—with a broader mix across education and skills compared to the region—suggests an opportunity to align the existing workforce with a mix of skills needed by the industry cluster.

Across Prince George's County's driving industry clusters, EPG' support for the CAHA⁶⁷ and EPIC⁶⁸ helps drive career development in health and life sciences and information technology, respectively. While these programs play a critical role in advancing workforce development in the County, there are also opportunities to view consortia at an even more local level to ensure connectivity between service providers, industry partners, and job seekers. Importantly, by focusing on skills and not just occupations, the County can build crosssector partnerships and further advance human and social capital among County residents and employers.

Key Elements

Successfully building critical skills consortia across targeted industries requires several steps.

- Identifying which industries should be targets: Given the pre-existing frameworks around hospitals and health services, as well as nascent activity in ITrelated fields, these sectors seem like natural launching points. The County should also explore opportunities to build critical skills consortia around other targeted industries, such as those in research-intensive areas like biosciences, advanced manufacturing, or research and development/engineering services.
- Coordinating key anchor employers and other highpriority firms: When coordinating these firms, it is also important to focus on the clear value proposition

made available to the employer—the opportunity to grow their talent pool, to fill their hiring needs, and to upskill current employees.

- **Pin-pointing the skills needed to meet employer needs:** Instead of focusing solely on the types of occupations made available by certain sectors, targeting certain skills within industries allows for multiple advantages. Across each identified target sector, a vigorous analysis of the skills needed to meet their current and future demands should be conducted.
- Developing interventions to help more residents gain these skills and connection to job opportunities and advancement: Based on identified needs, Prince George's County should focus on bringing established skill-building programs to the County, scaling promising existing programs, and developing new pilot programs as needed. Interventions should be formed by these industry consortia working with the Partnership for Jobs and Skills, alongside groups like EPG, Prince George's County Community Colleges, the University of Maryland College Park, Bowie State University, Prince George's County Public Schools, and other education and workforce development service providers.

A critical statewide resource to advance these target industries critical skills workforce consortia is the EARN Maryland program.⁶⁹ It provides grant funds for coordinating education and workforce development to strategic industry partnerships in target economic sectors across regions of Maryland. As of October 2020, it has trained more than 8,500 incumbent workers and aided over 5,300 individuals to find jobs through participating in the program. Prince George's County has seven active EARN industry partnerships in place involving healthcare, construction, sustainable energy and veterans.

Critical to this effort is Prince George's Community College with its focus on certificate and other workforce skills programs. University of Maryland College Park and Bowie State University also can play important roles in higher skill need areas through bachelor's and Master's level certificate programs as well as professional master's programs. There may also be opportunities to collaborate with EdTech companies present in the County, such as 2U, Inc. a leader in online postsecondary education courses and degree programs as well as skill-based boot camps.

In addition, with the new Biden Administration, additional opportunities for federal funding of industry consortium to advance critical skill needs is expected.

Resources Required

Under \$250,000 for part-time staff liaison position to collaborate with PGCEDC industry cluster staff in helping to bring together industry partners to pursue consortiumbased education and training efforts and being able to provide limited support of up to \$10,000 for grant writing to emerging industry consortia to pursue state and federal funding.

Lead Organization

EPG in close collaboration with Prince George's County Community College

Connect Higher Education Students with County Employers

Why It Matters

The robust talent pipeline emanating from the area's colleges and universities is a core workforce and economic development asset in Prince George's County. Major educational institutions such as UMCP and Bowie State University are producing highly skilled graduates, with high concentrations in fields such as engineering, computer sciences, physical sciences, and biology/life sciences. Prince George's County is also home to the state's second largest community college, which offers multiple programs in these high-growth fields.

For Prince George's County, there are distinct opportunities to leverage strong, STEM-oriented higher education talent development to facilitate economic growth. Importantly, the ability to forge stronger connections between the talent in the County with research-intensive startups, and other established businesses operating in the County, represents an area ripe for potential.

Key Elements

Successful programs that link higher education students with area employers contain a variety of common elements. Prince George's County should:

- Connect students with major employers and companies: Working through the Partnership for Jobs and Skills, students will have a clear understanding of the types of internship, career, and other learning opportunities are available to them by County employers.
- Ensure a range of hands-on learning opportunities: While internships are the most common way to develop work experiences for students, high value should also be placed on design projects, mentoring, job shadowing, and other experiential learning opportunities.
- Offer students access to high-growth potential entrepreneurs: Industry-facing research centers at the University of Maryland at College Park and at Bowie State University offer a potential conduit to connect students with careers. For example, The Cornell University's Center for Advanced Technology provides matching grants for biotechnology companies based in New York that wish to employ student interns.⁷⁰ The NSF-supported Cornell Center for Materials Research provides

matching funds for internships at small manufacturing and other research-and-development-intensive small companies in the state.

 Make opportunities available for students with both technical and nontechnical backgrounds: It is important to attract and retain students of all backgrounds to Prince George's County, not just those with technical expertise. For example, the program Students+Startups connects students from any major or department to paid internships at startups in San Antonio, while also offering network events and rent assistance to encourage a vibrant live-work-play environment in the city's downtown.⁷¹

To support internships in Prince George's County, there are opportunities to build on the Maryland Technology Internship Program. Administered by UMBC and funded by the State of Maryland, the program offers financial assistance to technology-based businesses, as well as state and local agencies, to hire more interns. MTIP reimburses employers for up to 50 percent of an intern's wage, up to \$3,000 annually per intern (\$1,800 for the first semester and \$1,200 for subsequent semester). There are several ways that Prince George's County could encourage participation in this program:

- Target outreach to companies and other events to expand awareness of the program among technologybased businesses in the County.
- Make a concerted effort to solicit participation from eligible offices such as the Prince George's County Department of Information Technology.
- Provide funds to supplement state support in instances where County-based businesses apply after deadlines pass or total funds have been accrued.

• Explore new benefits for interns working with local technology-based businesses, such as discounts with local businesses, stipends to assist with transportation, networking activities, or assistance navigating the security clearance process.

Resources Required

Approximately \$150,000 is sufficient to supplement the Maryland Technology Internship Program, generating roughly 100 additional internships with an average cost of \$1,500 per intern.

Lead Organization

EPG in collaboration with PGCCC, Bowie State University, and University of Maryland College Park.

Ensure that program alumni are connected to higher education and career opportunities

Why It Matters

Across Prince George's County there are a growing number of programs to connect youth with college- and careerreadiness skills, and as a result, there is a growing number of skilled program graduates:

- **EPG** connects with the youth in Prince George's County through programs such as the Youth Career Connections and the KEYS initiative.⁷² These efforts are targeted not only at younger students, but also those between the ages of 15–22 who are in need of workforce pathways and guidance.
- Prince George's County's Youth@Work/Summer Youth Enrichment Program (Youth@Work/SYEP) targets individuals between ages 14 and 22, helping young people launch careers by providing them with

free job readiness training and paid employment at government, nonprofit, and business worksites in the County and the broader region.

- **Prince George's County Public Schools** offers several promising college- and career-readiness programs such as the 3D Scholars Program, the Middle College Program, and the Pathways to Technology program.
- The University of Maryland College Park, Bowie State University, NASA-Goddard, and the Prince George's County Memorial Library System all offer disparate and disconnected programs to encourage STEM education in Prince George's County.

Beyond the importance of providing a seamless range of pathways for Prince George's County's residents to advance new skills through targeted programs and initiatives, there is also great value in bringing these participants together and with broader opportunities in higher education and high-paying careers.

Key Elements

To capitalize on the County's meaningful college- and career-readiness programs, where students build meaningful skills and gain valuable work experience, there is value in leveraging this network to ensure that students—especially BIPOC students and those from underserved communities are recruited, hired, and supported by local employers as they enter the workforce.

ConnextMSP, an initiative of the Greater Minneapolis-St. Paul Economic Development Partnership, represents one novel approach to fully-network students from across skill development programs and into the workforce as a whole.⁷³ This initiative is not intended to be another career program, but a platform for leaders to work together and make transformational changes to the early career system. Several elements stand out with this initiative:

- **Consortium consists of a range of collaborators**: The initiative consists of representatives from regional employers, career pathway programs, and colleges and universities. Current employer partners include public agencies (Hennepin County Government and Minnesota Department of Human Services), major companies such as Xcel Energy and Best Buy, and other major employers in the construction, health services, and financial services fields.
- **Real commitments from industry partners**: Coalition partners work together and alongside young adult "fellows" to design a better system for launching a career in the region. These industry partners make mutual commitments to each other and work in one of three teams corresponding to the distinct stages in the career journey.
- Targeting a range of students throughout their trajectories: Members of the network include young adults in high school, college, and the early years of their professional careers. Where the program focuses specifically is on engaging and connecting young adults at three distinct stages in their early career journey following their high school graduation:
- **Before their job and career search:** the program targets students currently in high school and who may be pursuing postsecondary education, career opportunities, or other opportunities.

- During the campus recruiting and hiring process: Nearing and following the end of their postsecondary education, the program ensures these same alumni are aware of campus recruiting and hiring events and are well-prepared to enter the workforce.
- After the job hire: When these same alumni are growing in their first professional roles following graduation, there are further opportunities to engage them with mentorship, professional networking, and further skills training.
- Placing youth-development at the center of the process: The work of the initiative is operated through its three coalition working groups which meet regularly, and which are supported by young adult fellows that ensure youth are well-represented and actively participating in the programs. These diverse fellows are provided a stipend for their help coordinating coalition meetings, are encouraged to participate in networking and educational programming, and receive mentorship and personal growth plans from industry partners.
- **Measuring Success:** This program is focused on achieving results in three main ways: by encouraging the hiring of young BIPOC adults in the network by area employers, by supporting the career development of young BIPOC adults in the network, and by advancing the growth of the coalition of employers and organizations committed to improving the early career system in the region.

Resources Required

Under \$250,000 for part-time staff liaison position to support efforts with higher education institutions, workforce training providers, and company partners to engage past alumni of programs, facilitate working groups across coalition focus areas, support fellowships among young adults, and coordinate networking events and other educational programs for fellows, mentors, and program participants.

Lead Organization EPG County

"Blacks in Tech" Network of Computer Scientists, Engineers, Entrepreneurs and Others

Why It Matters

While the uniqueness of Prince George's County's predominantly Black, professional, and tech-oriented population came up frequently throughout conversations about economic development prospects in the County, there was some concern that this key demographic was not as well-networked as it could be. For example, an analysis of the social networking site Meetup, a platform for individuals to network across areas of shared interest, finds limited entrepreneurial networking activities in Prince George's County compared to other large counties in the region.⁷⁴

Value-added networking plays an important role in boosting the innovation and entrepreneurship ecosystem in a county. Participants in value-added networking can develop more opportunities or general advocates for their own initiatives, whether they be mentors, contemporaries, or potential customers and clients. Networking creates opportunities for more self-reliant tech workers or entrepreneurs to identify expansion opportunities in the form of new partnerships or funding. Networking can also be used a mechanism for learning and professional development.

Key Elements

Best practices in value-added networking to support innovation and entrepreneurship points to the importance of meeting individuals in the communities where they are, not expecting them to always come to where the services are being offered. For Prince George's County, this could suggest the importance of creating new value-added networking programs in partnership with formalized social institutions such as the County's base of large, active churches.

An additional opportunity to support value-added networking is by exploring the activity of Employee Resource Groups (ERG's) or other affinity groups at major employers in Prince George's County. These established networks of likeminded demographic interest groups (such as 2U, Inc.'s Black Engagement Network or the Boeing Black Employees Association) offer an established framework to coordinate and build activities. Bringing together ERG's from a variety of employers in the region (whose residents may live in Prince George's County) could help build an early critical mass of willing participants.

One example of a successful program that links together entrepreneurs of color is the Black Founders Exchange. Established in 2016 by American Underground in collaboration with Google for Startups, this curated program provides rich, hands-on training, meaningful connections, and a supportive community to help Black-led startups grow.⁷⁵ In addition to culturally competent programming to help entrepreneurs develop and refine their product's value proposition, practice and hone their pitch, and learn how to hire and manage developers, community-events, and networking are a critical part of this program.

The program surrounds participants with individuals who can inspire, teach, and guide, all as they seek to grow their business and access capital and customers. As one participating entrepreneur notes, "When we sit down and talk about the problems people are having, a lot of them are common problems. And it feels good to be able to ask people how to solve those problems, and how they've dealt with those things without feeling like you're being judged."

A critical goal of the program is to expand company networks and help founders access a broader pool of talent and capital to fuel their company. Participants can tap into the Black Founders Exchange community to request, find, and share the connections needed for the next growth phase. Notably, the Black Founders Exchange community does not end when the program is over. In 2019, Black Founders Exchange introduced Alumni Programming, which continues serving founders who have graduated to build a strong network that future Black founders can connect with and lean on.

A key focus of Prince George's County's network should be to establish K–12 STEM outreach programs with BIPOC tech workers and entrepreneurs serving as mentors and coaches to students. To help accomplish this goal, the County could also attract or start chapters of national organizations focused on networking Black professionals in tech careers, such as the Black Data Processing Associates, National Society of Black Engineers, Black Girls Code–Women of Color in Technology, Blacks in Technology, or the Black Engineering of the Year Awards network.⁷⁶ Additionally, Prince George's County can also explore new meetup groups with a focus on networking its professional community, as well as other activities such as:

• Technology and market intelligence workshops that help identify individuals with experience in technology development but who may lack entrepreneurial know-how.

- Peer-to-peer networks across CEOs and CTOs, providing individuals at similar levels within their corporate environments an opportunity to learn from each other.
- Investor forums/pitch competitions, connecting entrepreneurs with potential sources of early-stage capital, while also offering skilled technology workers at larger companies more opportunities to connect with the entrepreneurial community.

Resources Required

Under \$250,000 for part-time staff liaison position to collaborate with Black professional development organizations to enhance their efforts or form new chapters in Prince George's County. Limited resources of under \$25,000 would be valuable for hosting meetings with Black professional leaders and specific organizations.

Lead Organization

EPG

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Largo Town Center Station

STRONG PLACES: STRENGTHENING PLACES ACROSS PRINCE GEORGE'S COUNTY AND IMPROVING THE CORE BUSINESS ENVIRONMENT

Situational Analysis

Build on Strengths and Opportunities

- · Capitalize on development momentum
- · Implement promising changes to County's zoning and permitting
- · Encourage development in areas around transit-lines and in designated "downtowns"

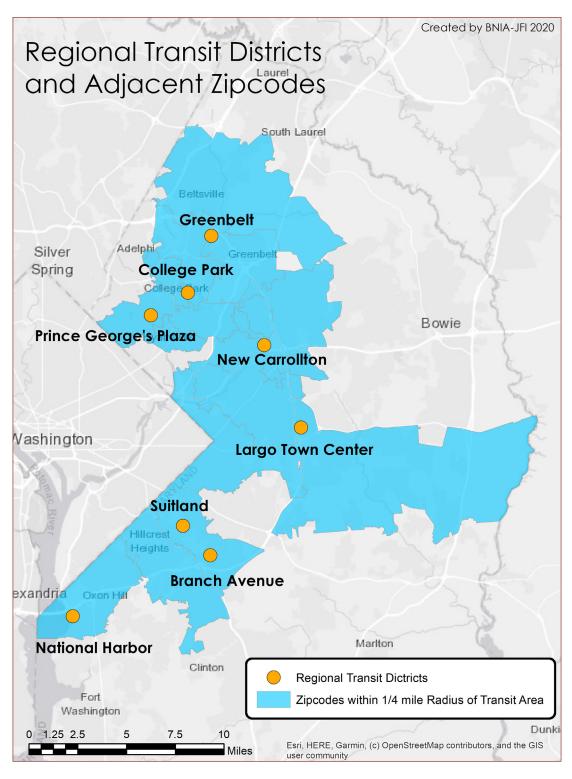
Address Weaknesses and Gaps

- · Change the perception of Prince George's County
- Create a stronger sense of place
- · Overcome hurdles with development processes

It is difficult to overstate the importance of quality, livable places in the 21st century's knowledge-based economy. In an interesting paradox, the more globally integrated the world economy has become, the more that local resources matter and creating robust, dynamic, live-work-play physical environments is becoming a key resource for attracting the talent and investment needed to advance thriving industry clusters. As such, placemaking is an important part of the economic development toolkit.

Prince George's County has placed a significant emphasis on placemaking to support economic development, taking advantage of the County's access to major roadways and its robust transit infrastructure. Plan 2035, the physical blueprint for guiding the County's physical development, identifies eight Regional Transit Districts (RTDs) for focusing denser, mixed-use development over time (see Figure 6). Seven of the RTDs have existing connections to the Metro system, while the eighth (National Harbor) has the potential for future connectivity. As part of the RTDs, Plan 2035 places special emphasis on three of the RTDs that can create more substantial downtown areas in the County—Prince George's Plaza in Hyattsville, New Carrollton Metro, and Largo Town Center. Plus, Plan 2035 identifies an Innovation Corridor for the County that offers economic synergies likely to promote future growth from research and advanced industry development (Figure 7). The Innovation Corridor consists of BARC, Berwyn Heights, College Park, Edmonston, Greenbelt, Hyattsville, Riverdale Park, University Park, the Route 1 Corridor, and around the University of Maryland (see Figure 7). Plan 2035 also identifies the goal to concentrate medium-to high-density housing

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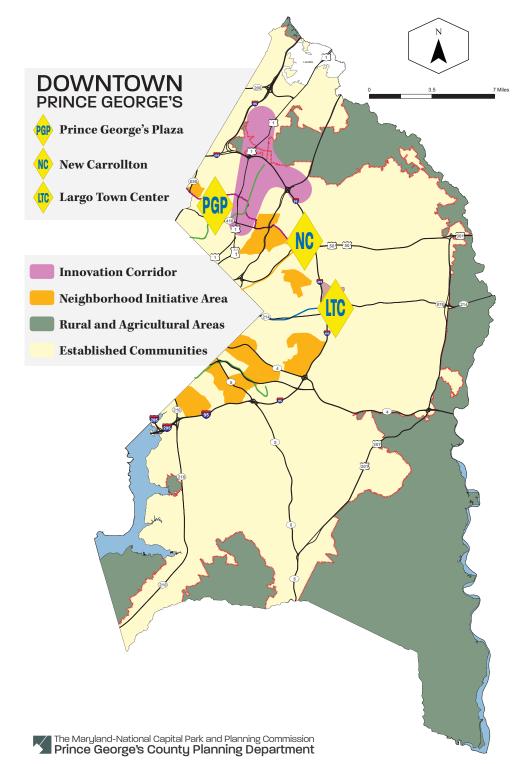


Figure 7. Locations of Prince George's County's Downtowns and Other Targeted Investment Areas

Economic Development Strategic Action Plan For Prince George's County

STRATEGIC PRIORITY 3

development across a range of housing options, including workforce and affordable units, as well as upper-income housing in TOD areas to reduce housing and transportation cost burdens in the County.

An analysis of the development patterns taking place in Prince George's County suggests that the RTDs are becoming key centerpieces to the County's growth. An analysis by JFI-TEConomy of recent real estate trends finds that substantial shares of the proposed office (74.3 percent) and industrial (82.1 percent) space, as well as multifamily units (82.2 percent) are found in areas around the designated RTDs. In addition, the JFI-TEConomy analysis finds the areas along the Innovation Corridor are performing better than the County overall in terms of lower-than-average vacancy rates across all real estate classes.⁷⁸

There is a wide acknowledgment that the pace of development in these designated areas for placemaking in Prince George's County needs to be accelerated to catch up to other parts of the Washington, D.C. region. As County Executive Alsobrooks explained in announcing a study of transit-oriented development by the Greater Washington Partnership, "Major investments in new homes and commercial spaces are already underway at Countydesigned transportation-oriented districts priority sites, but there is more to do."⁷⁹

Among the opportunities noted by stakeholders are:

 Encouraging placemaking and driving further transit-oriented development near the County's universities. The Discovery District near UMCP is included in the Innovation Corridor and was identified by external stakeholders as being among the promising locations in the region for technologybased economic development. Additionally, the plans around the burgeoning Bowie Innovation District emerged as an opportunity for placemaking and transit-oriented development.

 Advancing development along the Purple Line. Despite the initial challenges related to ongoing construction, the areas around the Purple Line also present a strong opportunity for targeted, transitoriented development in Prince George's County. The MTA Purple Line is a 16-mile light rail line currently under construction. It will extend from Bethesda in Montgomery County to New Carrollton in Prince George's County, and provide connection to the Metro Red, Green, and Orange Lines; MARC and Amtrak; and local buses. For the zip codes that will contain future Purple Line stations, office and industrial space have vacancy rates of 15 percent and 11.3 percent, respectively, compared to 13.6 percent and 5.9 percent for the whole county.⁸⁰ This variance in rates suggests that these zip codes are poised to benefit greatly from the light rail line currently under construction. The Purple Line also provides an opportunity to infill development through up-zoning for more density along the line. Increased access and development are likely to lower the vacancy rates of office space as it becomes more competitive with other markets in the metropolitan area.

Still, stakeholders reinforce the challenges facing the County as it seeks to accelerate placemaking in designated transit-oriented areas:

 Ultimately, the development of strong places requires a sophisticated, seamless development process (e.g., zoning, permitting, and incentives) that is competitive with neighboring regions and responsive to the needs of developers, companies, and residents. This is true not only for the development of physical places and buildings, but also for business requiring specialized infrastructure, such as those in research-intensive industries like biosciences or advanced manufacturing.

Throughout the planning process, both company executives and real estate developers in Prince George's County expressed similar concerns with hurdles related to development and permitting. Prince George's County's reputation for slow and complex processes related to real estate and economic development impedes the County's ability to compete for higher profile businesses and projects. Given the importance of these stakeholders in strengthening both the physical places of Prince George's County and the structure of its underlying economy, adapting to meet these needs is critical.

• Beyond streamlining the development process, Prince George's County must also raise awareness and create stronger branding and marketing of its emerging placemaking. While PGCEDC has accelerated its outreach efforts since the development of the 2013 strategy, among stakeholders in the County there was a desire to see even more aggressive and proactive efforts to market the area internally/externally and target incentives and other resources for business attraction and retention. The rise of placemaking offers a new means for introducing Prince George's County as a place to live, work, and play for those living in other parts of the region and beyond.

Prince George's County Activities

Currently, there are multiple efforts across the County to encourage placemaking activities, including many led by The Maryland-National Capital Park and Planning Commission (M-NCPPC), Notable examples include:⁸¹

- Community engagement meetings for residents to contribute ideas and provide feedback.
- New signs and landmarks to help people navigate.
- Places branded through public art, events, and signage.
- Events and initiatives to test for uses and encourage activity in public spaces.
- Streets and sidewalks redesigned for better pedestrian and cyclist experiences.
- Progress of other Planning Department projects measured against indicators for spatial use and diversity.

While placemaking has become an important context for driving real estate development in the County, there has also been significant advancements in the County's overall economic development efforts. The PGCEDC has successfully implemented core elements of the 2013 Strategic Plan, with strong momentum leading up to the COVID-19 Pandemic. From 2013 to 2018, the County outpaced the nation, the State of Maryland, and the Washington metropolitan area in job gains, buoyed by strong growth in manufacturing, transportation/ warehousing, educational services, and hospitality. As laid out in the 2019 Alsobrooks Transition Plan, PGCEDC is also increasingly viewed as the entry point for all economic inquires, working to successfully transition from a planning culture to an economic development centered organization.

Core activities of PGCEDC include business outreach, retention, and attraction. A signature piece of the economic development toolkit in Prince George's County is EDC's \$50 million Economic Development Incentive Fund. This fund helps to stimulate job growth, retain current jobs and businesses, and attract new businesses by offering incentives such as expediting permits, offering tax credits, providing

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workforce assistance, site identification, county and state financial assistance, and financial assistance from the Small Business Association. PGCEDC also facilitates the High Technology Facilities Tax Credit, a property tax credit for manufacturing, fabrication, assembling, and research-anddevelopment-oriented facilities (e.g., engineering, life sciences, computer sciences, and research and development services).

Prince George's County is experiencing momentum by addressing its zoning and permitting issues. For example, the Prince George's County Council approved a new zoning ordinance for the County in 2018, accomplishing one of the first objectives of Plan 2035. This ordinance has the potential to drastically improve density around the County's transit lines, among other improvements.

Prince George's County is also starting to advance more streamlined processes for development. In early 2021, the Prince George's County Council voted unanimously to allow "by-right" development for qualified data centers, which will allow these projects to be fast-tracked. By-right development refers to projects that are permitted under zoning rules and do not require any legislative review or action by the county. Instead, they are approved administratively and do not require public hearings. By-right development was used in the National Harbor project but has been otherwise unavailable. This framework can potentially drive further growth for other targeted sectors and areas in the County, such as biosciences, advanced manufacturing (around fields such as quantum computing or instruments and electronics), and perhaps the priority RTD downtown areas and the Innovation Corridor.

Recommended Strategic Approach

The Washington, D.C. region is becoming a region of places. Across the Washington metropolitan region, areas designated for development like Tyson's Corner, Dulles Corridor, National Landing, Bethesda, and Shady Grove have established their own identities as places that can attract a workforce, companies, and residents.

Ultimately, the brand of Prince George's County will be defined by its range of strong, marketable places. While there is excitement around its growing live-work-play environments, its transit-oriented development districts, and other nodal downtowns, the reality is that the development of these places is hindered by their limited resources, their inability to speak as a branded district, and their inability to support placemaking and economic development.

To strengthen the emerging place-based development in Prince George's County, a strong public-private partnership initiative is needed that brings together key anchor institutions, companies, developers, and residents to work with the County to better market the County's emerging placemaking efforts and ensure continued progress in addressing zoning and permitting issues across these designated areas for placemaking development.

The Alliance for Placemaking initiative seeks to advance new tools to increase the pace of development in County designated RTDs and the Innovation Corridor through marketing and streamlined zoning and permitting. The following elements of the Alliance for Placemaking can help contribute to the success of these places, and in turn, the success of Prince George's County as a whole:

• **Ensure new zoning reforms are implemented:** It is pivotal that the County continue momentum around improving its zoning code.

- Promote new uses for the County's underperforming commercial or retail developments: Given the changes in the nature of work, there are opportunities to explore the untapped potential of this significant base of real estate.
- Advance Lean Permitting Processes: Using "Lean" as a lens, there are a wide range of processes and tools that planning departments and other public agencies can implement to help increase productivity and manage change within a growth environment.
- Explore use of by-right zoning in areas beyond data centers: This is especially important in areas such as biosciences, quantum or other advanced manufacturing, or corporate innovation centers where the County is seeking to be more competitive for economic development projects.
- Develop Business Improvement Districts at select TOD/Downtown areas: This approach will provide specialized places with the resources they need to improve from within, support local economic development, and develop a more cohesive marketing approach.
- Support small-scale makers and other locally serving entrepreneurs: These businesses can help improve placemaking through streetscape retail opportunities, and have the potential to grow and transition into a vaunted, traded-sector product.

Develop Business Improvement Districts at select TOD/Downtown areas

Why It Matters

A Business Improvement District (BID) is an economic development entity that provides a geographically defined area with augmented services, such as placemaking and branding, business attraction, and even infrastructure and real estate development. The advantage of a BID is that it serves as both a management structure and a dedicated funding source for these augmented services, typically generated by a small additional tax assessment on all nonsingle-family and tax-exempt properties located within its geographic boundaries. BID have proven to be impactful tools in localities across the nation and are often referred to by a variety of different names, such as municipal improvement districts, business improvement zones, and community improvement districts.

As reported by HR&A Advisors, Inc in their 2020 Business Improvement District Toolkit for The Maryland-National Capital Park and Planning Commission – Prince George's County Planning Department:

"Although BIDs have been tested and proven in markets across the country, no BIDs currently exist in Prince George's County. However, the County's economic strengths and challenges point to both opportunities and a need for BIDs or similar tools to complement the County's portfolio of existing economic development tools.

BIDs present an opportunity to cement the long-term value of new investments being made throughout the County, as they help to create a lasting sense of place, enhance the beauty of communities, retain existing businesses, and draw new businesses and visitors to budding commercial areas.

STRATEGIC PRIORITY 3

While BIDs are targeted toward commercial districts and corridors, the services they provide also accrue benefits to residents in those communities, helping to increase livability for old and new residents.⁸²

Without the presence of BIDs, Prince George's County has put its overall placemaking efforts at a competitive disadvantage within the region. Across the Washington metropolitan region there are successful placemaking examples, especially in Washington, D.C. and Virginia (e.g., Downtown DC, NoMA, Dupont Circle, Golden Triangle, Rosslyn, Arlington, Crystal City) that benefit from having business improvement districts. Montgomery County is now seeking to transform its three urban districts in Bethesda, Silver Spring, and Wheaton into fully fledged business improvement districts with access to dedicated property tax resources in order to augment their marketing and economic development services to retain and attract businesses.⁸³

For Prince George's County, designating and developing business improvement districts around its targeted downtowns and other critical areas of transit-oriented development presents an opportunity to improve the County's diverse collection of places, and improve the marketability of the County as a whole.

Key Elements

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Prince George's County should seek to advance BIDs within the larger transit-oriented development areas of the County, including the three downtown areas— Prince George's Plaza in Hyattsville, New Carrollton Metro, and Largo Town Center—as well as the Innovation Corridor of the County.

Of particular importance is enabling each of these four newly formed BIDs in Prince George's County to prioritize the provision of identity and branding services, marketing outreach through events and social media, and additional economic development services coordinated through PGCEDC for industry networking, business retention, infrastructure improvements and site developments in collaboration with private developers.

Currently, BIDs in Maryland are authorized by state legislation and must be formed in accordance with the state's legislative requirements, the most crucial of which is meeting an 80 percent approval threshold by property owners within the designated geographic area. This high bar is the reason why Prince George's County has no BIDs in place-and why BIDs are generally not widely used throughout the state. Recently, Montgomery County was able to get state legislation passed to a lower property owner approval threshold of 51 percent to form bids within that County. It is recommended that Prince George's County seek a similar state amendment to reduce the required level of property owner approval required given the urgency of establishing BIDs and the significant County investments being made to allow the County Council to enact a BID in the four designated areas of Prince George's Plaza, New Carrollton Metro, Largo Town Center, and the Innovation Corridor. A similar approach is done in South Carolina, where there are two pathways to enacting municipal improvement districts, either by property owner approval or by a local legislative body upon documentation of a clear public benefit.

Resources Required

No new additional county resources required

Lead Organization

Prince George's County Council and the County Office of the Executive

Ensure New Zoning Reforms are Implemented

The development of strong places also requires a sophisticated, seamless development process (e.g., zoning, permitting, and incentives) that is competitive with neighboring regions and responsive to the needs of developers, companies, and residents. This is true for the development of physical places and buildings, but also for businesses requiring specialized infrastructure, such as those in research-intensive industries like biosciences or advanced manufacturing. Throughout the planning process, both innovation-oriented companies and real estate developers in Prince George's County expressed similar concerns with hurdles related to development and permitting. Given the importance of these stakeholders in strengthening both the physical places of Prince George's County and the structure of its underlying economy, adapting to meet these needs is critical.

Key Elements

In October 2018, Prince George's County Council approved a new zoning ordinance for the County, accomplishing one of the first objectives of Plan 2035. Implementation of the new ordinance was initially slowed by the completion of the Countywide Map Amendment; however, the County has now been fully rezoned and the new ordinace is implemented, publicized, and in effect. While these planning processes were challenged by the COVID-19 Pandemic, the approach still holds great promise. Notably, the new zoning ordinance helps Prince George's County advance its goals related to transit-oriented development by:⁸⁴

- Allowing for new developments at higher densities in neighborhoods adjacent to transit
- Exempting new developments in TOD areas from certain zoning requirements
- Lowering parking minimums in transit-oriented zones and for developments inside the beltway

To help strengthen its places, and position them for holistic economic and community development, Prince George's County should ensure that its new zoning reforms are fully implemented and publicized.

Resources Required

No additional County resources required

Lead Organization

Prince George's County Council and the County Office of the Executive

Promote new uses for County's underperforming commercial and retail developments

Why It Matters

Although consumers and retailers continue to face many challenges related to COVID-19, there is an expectation that in-store shopping is bound to rise again once it is safe for people to resume their normal routines. However, the realities facing this sector are stark. As the Urban Land Institute and PWC note in their 2021 *Emerging Trends in Real Estate* report:⁸⁵

"The retail property sector must right-size and reinvent. Retailers and shopping centers were already struggling before COVID-19, and now conditions threaten to worsen materially as the pandemic and its economic fallout accelerate the pace and magnitude of pre-existing issues. Nonetheless, people still purchase the vast majority of their retail products and services in stores, and some current setbacks will prove to be only temporary once it is safe to shop, socialize, and recreate. The industry, however, faces a painful shakeout as millions of small businesses and familiar national brands shutter their doors, shrinking the ranks of tenants for shopping centers and driving down occupancy and rents." For Prince George's County, the shift in retail poses several challenges. First, the destination retail sector is a large, established employer in the County, accounting for 15,781 jobs in 2018-5 percent of the County's total. Second, the struggles facing this sector have a visible impact on the County's built environment. As the County's 2017 Retail Market Strategic Plan notes, "Prince George's County has a number of corridors and shopping centers that are at risk of failing. These marginal, distressed, or failing centers have significant maintenance and repair needs and are primarily occupied by locally owned tenants rather than national or regional chains. Some centers may be obsolete, without sufficient demand to attract and support better retail despite help with physical upgrades or marketing."86 Of the 200 shopping centers in Prince George's County identified in this report's survey, 36 percent were designated as at risk of failing, four businesses were in the process failing, and three businesses were already defunct-suggesting that at least one in five shopping centers in the County were underperforming as of October 2014.87

Prince George's County's surplus of suburban retail and office parks is increasingly outmoded, undesirable, and in locations that are underutilized. Prince George's County should seek to promote new uses for these underperforming commercial and retail developments. This expands on a recommendation in the 2019 *Alsobrooks Transition Plan*, which suggests that Prince George's County should focus on its underutilized assets (Fed Ex Field, Landover Mall, cultural amenities, parks, waterfront properties, etc.) that require attention and intervention.

Key Elements

One potential option for underutilized developments in Prince George's County is the creation of new, affordable multifamily housing, which is allowed in the new zoning ordinance and will assist in meeting the County's need for

affordable and workforce housing. As both the County and regional population grow and less of a premium is placed on brick-and-mortar retail and in-person offices, more dwelling units will be needed to meet the needs of new and existing residents. These suburban style developments and their parking lots offer a prospective source for new housing. In 2020, the City of Los Angeles' Department of Planning unveiled new zoning rules designed to make it easier to build housing in its downtown by expanding adaptive reuse of warehouses, manufacturing facilities, parking lots, and other types of underutilized buildings downtown. Smaller commercial strips and vacant big box shops could also be candidates for adaptive reuse in future versions of the zoning code.⁸⁸ Prince George's County should explore similar changes to its zoning code to encourage new housing development in designated, underutilized areas across the full range of housing needs identified in Plan 2035, including workforce and affordable units as well as upper-income housing.

There are also opportunities to encourage new commercial uses that help boost entrepreneurship and small business development. Supporting the creation of incubators, coworking spaces, food halls, marketplaces, or other consumer-facing retail establishments can help entrepreneurs start and scale their businesses, and attract new customers. This also helps the County capitalize on the maker movement, another area of importance for encouraging strong places in Prince George's County.

Prince George's County's driving industry clusters offer an array of additional opportunities for framing the redevelopment of the County's underutilized assets. For example, encouraging redevelopment around data centers offers one example with a high revenue potential for the County. Underutilized commercial offices space could be converted toward uses in health services or biosciences. The transportation, distribution, and logistics sector also poses opportunities for redeveloping these parcels.

Ultimately, there is no one-size-fits-all approach to redeveloping underutilized commercial developments in Prince George's County. Instead, feasibility studies will be necessary for communities to galvanize around the potential reuses of these underutilized retail developments. Prince George's County should provide small grants to community groups and local municipalities to create strategies to redevelop or "re-green" underutilized real estate assets such as empty corporate campuses, vacant office buildings, and underused malls and shopping centers.

One potential model for such an initiative is in New Jersey, where the State Economic Development Authority's 21st Century Redevelopment Program provides grants up to \$50,000 and research/technical support to local municipalities looking for ways to redevelop or repurpose empty or underutilized commercial and retail properties.⁸⁹ Applicants provide a 20 percent match for the grant, which can be in the form of a financial contribution, or a contribution of in-kind resources.

Applications for feasibility grants present a site, facility, or collection of properties suffering from significant vacancies that will be the focus of the planning project. Examples could include buildings, corporate campuses that were used by a single entity, buildings that are adjacent to each other, or buildings across a parking surface or structure that is dedicated for use by the buildings. Planning proposals may focus on any number of elements, including:

• Legal analysis to explore the appropriateness of designating one or more relevant properties in the community as an area in need of redevelopment.

- Determining cost-benefits of retrofitting, redeveloping or regreening the property or properties.
- Driving economic growth for the locality and region.
- Creating greater social, economic, and environmental sustainability.
- Expanding affordable and multifamily housing.
- · Attracting employers and a diverse, talented workforce.
- Expanding entrepreneurial opportunities and support local businesses.
- Promoting walkable neighborhoods and improving accessibility and mobility.
- · Connecting to public transportation.
- Improving livability and healthy outcomes for the local population.

Resources Required

Less than \$250,000 to provide up to five feasibility grants to municipalities in Prince George's County to reimagine underutilized real estate assets and work with partners on new uses that promote economic growth and quality of life.

Lead Organization

Prince George's County Planning Department

Advance Lean Permitting Processes

Across the nation, many local governments are experimenting with the use of Lean, Six Sigma, and other continuous improvement programs, which focus on staff performance. While initially focused on areas such as review times and results, recent attention has shifted to the importance of

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changing the culture of city departments, resulting in a great improvement in employee morale while keeping up with changing work environments and new demands.

Lean focuses on identifying and eliminating waste in all work activities by holistically viewing process as a timeline of activities, material, and information flow, and tracking these processes from beginning to end to identify potential waste and areas for added value. By prompting organizations to identify and map simple everyday tasks and ask "why?," they can help find the answers that can optimize efficiency.

Key Elements

To advance Lean thinking to improve county permitting processes, lessons can be learned from successful departments across the nation who have benefited from such an approach. For example, Kitsap County in Washington, a suburban county near Seattle, was able to use Lean thinking to reduce the 26-day processing time for its housing permits down to just 6 to 8 days.⁹⁰

Best practices in streamlining the government permitting process through Lean have been advanced by the Center for Government Innovation, an initiative of the Washington State Auditor's Office, that was formerly known as The Local Government Performance Center. Elements of successful initiatives include:

- **Begin with basic questions**: The Center recommends beginning by asking questions such as the following:
 - » How long does it take to approve a permit from the day it was submitted?
 - » Are there delays in the process while a permit waits in someone's inbox or waits to be delivered?
 - » How many days is the application idle?
 - » Are some parts of the process repeated? Are some parts of the application reviewed multiple times?

- » What percent of applicants have to request assistance to complete the forms?
- » What percent of submitted applications have missing or inaccurate information?
- » Do reviewers need multiple data systems to find the information they need to review applications?
- » How many times do customers have to come to the permitting office?
- » What can customers tell us about the process? What would make it easier?
- **Confirm clear requirements for applicants**: providing applicants with information in advance allows them to better complete applications thoroughly and accurately. The County should review the information on its permitting website to make sure forms, checklists, and information are clear, and that samples of complete applications are available for review.
- Ensure complete applications prior to review process: Staff should proactively review permits to ensure that all required information is included before advancing. Some counties require applicants to schedule an appointment with a planner to review the application for completeness, while others have a team review all newly arrived applications the next day.
- Modify review based on level of complications: Simple applications may not need the same amount of time as other, more intricate proposals. Best practices suggest assigning ratings based on complexity and basing level of attention accordingly.
- **Promptly appoint each permit to a planner**: By quickly assigning applications to the responsible staff person, the County can hasten their review times and increase the accountability for each proposal.

- **Track applications**: Using permit tracking software or a visual tracking board helps counties monitor the status of every application and identify opportunities to continuously improve their operations.
- **Rearrange offices and lobbies**. While many application processes continue to move online, for in-person visits, counties have found that moving application processing desks closer to the front door helps make it was clear where applicants need to go. Reorganizing offices so that the people who need to coordinate on permitting review decisions are seated together also helped improve collaboration and process time.

Resources Required

Allocate up to \$250,000 to undertake a Lean permitting program

Lead Organization

Prince George's County Office of the Executive

Explore use of by-right zoning in areas beyond data centers (e.g., biosciences, advanced manufacturing)

Why It Matters

The term "Use by Right" or "by-right zoning" refers to a property owner's use of property and structures in manners consistent with that which is listed as permissible in the zoning district where the property is located.⁹¹ A use by right is a use permitted in a zoning district and is therefore not subject to special review and approval by a local government. While one still needs to obtain a zoning permit, that permit is usually issued relatively quickly, without going before a planning commission or other boards.

In early 2021, the Prince George's County Council voted unanimously to define a new use for Qualified Data Centers, and within its zoning ordinance, permitting its use by right to a variety of zones: R-R (Rural Residential), C-O (Commercial Office), C-S-C (Commercial Shopping Center), M-A-C (Major Activity Center), E-I-A (Employment and Industrial Area), M-X-T (Mixed Use -Transportation-Oriented), and Industrial Zones of Prince George's County, under certain circumstances and criteria (e.g., regulatory limits, public safety, health, and welfare).

With this framework in place, the County can drive further growth for other targeted sectors and areas in the County, such as biosciences, advanced manufacturing (around fields such as quantum computing or instruments and electronics), and perhaps the priority RTD downtown areas and the Innovation Corridor.

Key Elements

To explore the use of by-right zoning in areas beyond data centers, Prince George's County should:

- **Demonstrate success**: Ensure that this approach to zoning for data centers is competitive with other counties and shows a demonstrated value that would be applicable to other industries or uses.
- **Identify potential uses**: While advanced manufacturing and biosciences stood out in external stakeholder interviews, the County should explore other opportunities for by-right zoning.
- **Implement changes to zoning**: Work with City Council and other important partners to advance byright zoning when reasonable.

Resources Required

No new County resources required.

Lead Organization

Prince George's County Office of the Executive and County Council

Support Small-Scale Makers

Why it Matters

Supporting small-scale makers in Prince George's County presents an opportunity to transition individuals from lowincome jobs into something stable and wealth-creating in the longer term. According to a 2020 study, 72 percent of all Prince George's County manufacturing businesses have fewer than 20 employees, and that many of the County's small-scale makers are in fields such as food processing and locating in areas such as the Greater Gateway Arts District in Hyattsville.⁹² Support for small-scale makers is also an opportunity for Prince George's County to encourage the development of entrepreneurs of color and encourage inclusive economic growth. Makers create a range of jobs that typically pay higher wages and offer greater career mobility and opportunities for wealth building.

Examples of current activities to support small-scale makers in Prince George's County include the Greenbelt Makerspace, and Flavors in Fort Washington. Previously known as Make125, the Greenbelt Makerspace offers resources and programs to engage its members in activities related to science, technology, arts, and crafts.⁹³ Founded in 2019, Flavors is developing a shared commercial kitchen complex and workspace concept that provides state-ofthe-art commercial kitchen space, cold, dry, and freezer storage, demo kitchen, meeting rooms, and a community of culinary professionals.⁹⁴ Importantly, capitalizing on the maker movement presents an opportunity to take advantage of the County's large amount of industrial space and underutilized retail strips. Smallscale makers can positively contribute to vibrant/walkable downtown districts and development.

Key Elements

There are several ways to support small-scale makers in Prince George's County, and best practices suggests the importance of both a place-based and entrepreneurial-based development approach. Notable elements of successful approaches include:

- Developing a physical home for small-scale manufacturers (makerspaces): These collaborative workspaces are typically occupied by startups and small businesses. One best practice approach to makerspaces is Open Works in Baltimore, which supports local entrepreneurship by offering physical space for small businesses, building in practical curriculum within the space, and supporting jobs for those who work at the space and use its studios.⁹⁵
- Offering a range of membership options: Makerspaces are able to improve the inclusivity of their community by offering a wide variety of flexible membership options (four different levels, including a day pass), affordable studio space, industrial fabrication equipment, and classes for all ages.
- Intentionally engaging the community: Programs should be offered with a conscious eye toward diversity, and in partnership with trusted community institutions. Intentional, inclusive programming helps keep promises to residents and helps restore their trust in institutions.
- **Measuring and communicating success:** Examples of metrics tracked by Open Works found that most of its users were from Baltimore City (61 percent), and

that their companies created 114 jobs, and provided jobs almost exclusively to Baltimore residents (91 percent).⁹⁶ This resulted in up to \$8 million in direct economic impact in the city and \$9.9 million in direct economic impact in Maryland. Open Works also keeps track of traditional activity measures, and has delivered educational, community services, and entrepreneurial support programming to 3,145 adults and 1,800 youth.

Resources Required

Up to \$200,000 in total for matching grants of up to \$50,000 for build out and operations of makerspaces with one for each priority TOD district of Prince George's Plaza, New Carrollton Metro, Largo Town Center, and the Innovation Corridor. Renewal will depend upon annual performance.

Lead Organization PGCEDC

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CONCLUSION



This plan has identified a range of actions that allow Price George's County to address core weaknesses and gaps, while also building on strengths and opportunities. As a complement to partnership initiatives that help coordinate and pilot activities, these supporting actions can help deliver broadbased, inclusive economic growth for Prince George's County.

Ultimately, Prince George's County must continue its strategic focus on evolving economic drivers, and should target growth opportunities around innovation, entrepreneurship, and key industry clusters. Importantly, the County must also support the development of human capital and connect more residents to opportunity, all while strengthening placemaking and helping to encourage a stronger business environment.

This strategic action plan recommends that Prince George's County focus on three main areas, and within each of these areas a range of actions are explored:

The first strategic priority is oriented around growth opportunities and the need to support innovation and entrepreneurship across and within targeted industry clusters. Within this area, specific actions include:

- Launch the Innovation Collaborative of Prince George's County (IC Prince George's)
- Sustain the County's focus on targeted industry clusters
- Launch a countywide pre-accelerator program
- Incentivize growing startups nearby anchor institutions
- Establish an economic gardening program for BIPOC Businesses
- Advance corporate innovation centers with anchor institutions
- Advance a first-customer program

The second strategic priority is oriented around human capital, cultivating talent, and connecting Prince George's County's residents with economic opportunity. Discrete actions within this area include:

- Launch the Prince George's County Partnership for Jobs and Skills
- Develop networks of "Blacks in Tech"—computer scientists, engineers, entrepreneurs, and others
- Foster the presence of nonprofit skills development service provider
- Connect higher education students with County employers
- Advance corporate higher education K–12 STEM activities
- Pursue target industry workforce critical skills consortium
- Ensure that program alumni are connected to higher education and career opportunities

Last, Prince George's County must focus on the development of strong places and improving areas across the County and enhancing the core business environment. To accomplish this goal, Prince George's County should:

- Create the Alliance for Placemaking and Marketing
- Develop Business Improvement Districts at select TOD/downtown areas
- Ensure new zoning reforms are implemented
- Promote new uses for the County's underperforming commercial and retail developments

CONCLUSION

- Advance lean permitting processes
- Explore use of by-right zoning in areas beyond data centers (e.g., biosciences, advanced manufacturing)
- Support small-scale makers

The unique identity of Prince George's County is intertwined across these three strategies, and this action plan more broadly. Beyond positioning the County for success in the 21st century, knowledge-based economy, this strategic plan also ensures that all residents can engage in this economy. Furthermore, this lens ensures that the County is well positioned to capitalize on new and long overdue investment in America's predominantly Black communities. Given its unique position as a hub for Black professionals, the diversity of Prince George's County should be celebrated and play an increased role in business attraction, development, and retention moving forward. **Page Intentionally Blank**





APPENDIX 1: ASSESSMENT OF PRINCE GEORGE'S COUNTY'S ECONOMIC DRIVERS

In today's globally based economy, industry clusters – a geographic concentration of related companies, organizations, and institutions organized around key localized assets – are driving regional employment and growth. Clusters have been found to increase productivity, stimulate and enable innovation, and facilitate commercialization. Increasingly, economic development efforts at the state, local, and federal level are focused on identifying and supporting local industry clusters. According to data from the Brookings Institution, the performance of core traded industry clusters is the "foundation of economic prosperity" and efforts to promote cluster-based development have become increasingly important among economic development practitioners.

In order the assess the future growth prospects of an industry cluster, the JFI-TEConomy Team uses as decision tree approach to assess cluster performance. This *Prospects Rating* is based on three criteria: 1) the relative concentration of the industry cluster – as measured by LQs; 2) the job generation for the industry cluster – as measured by employment growth; and 3) the relative growth of the primary industry cluster – as measured by the local growth compared to national growth. Based on these three measures (described individually in the analysis above), industries and clusters can be sorted into five industry/cluster typologies:

- 1. **Current Strength** The cluster is specialized, growing, and outperforming the nation in growth;
- 2. **Higher Priority Retention** -- Cluster is highly specialized and growing nationally, but underperforming in the County;

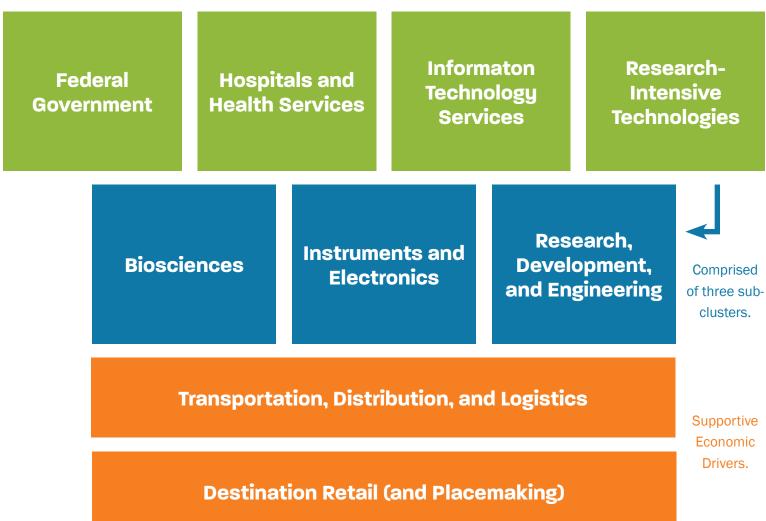
- 3. Lower Priority Retention Cluster is close to US in specialization and growing;
- 4. **Emerging Strength** Cluster is growing and matching or outperforming the nation in growth but is not yet specialized; and
- 5. **Prospects Limited** -- Cluster is well below US specialization with declining growth or well below US growth.

The JFI-TEConomy Team identified twelve economic driver industry clusters for Prince George's County. With total employment of 149,883, these clusters represent 47 percent of total County employment and cluster employment is growing more rapidly than total County employment. Table 6 describes the levels of employment for each of these 12 driving clusters as well as the industry/cluster typology for each. Table 6. Employment Levels and Prospects for the Twelve Economic Driver Industry Clusters in Prince George's County, 2019

Industry	2019 Employment	% of Total	Prospects Rating - 2019
Biosciences	1,360	0.4%	Emerging Strength
Business Services	13,476	4%	Lower Priority Retention
Construction	28,187	9%	Higher Priority Retention
Destination Retail	15,062	5%	Lower Priority Retention
Federal	26,785	8%	Higher Priority Retention
Finance and Insurance	5,462	2%	Prospects Limited
Hospitals & Health Services	15,618	5%	Emerging Strength
Information Technology Services	10,077	3%	Higher Priority Retention
Instruments and Electronics	708	0.2%	Emerging Strength
Research Development and Engineering	5,107	2%	Current Strength
Transportation, Distribution, & Logistics	17,887	6%	Lower Priority Retention
Travel and Tourism	10,155	3%	Current Strength

To complement this analysis, the deliberations of the Project Steering Committee led to the selection of six industry clusters as the focus for targeted development strategies to advance economic development in the County, organized in the following manner:

Figure 8. Prince George's County's Target Industry Clusters



Federal Government

Build on Strengths and Opportunities

- Strong concentration and employment growing faster than regional average
- Source of high-wage jobs
- Continue momentum around TOD to attract new leases

Address Weaknesses and Gaps

- Large amount of national and intra-regional competition
- Difficult to differentiate County's places

Federal Government, the largest of the twelve target industry clusters, was also one of the four key industry clusters identified as targets for the County to focus on in its 2013 Economic Drivers and Catalysts strategy. Federal government employment is an important driver of the County economy, with major facilities including Joint Base Andrews Naval Air Facility Washington (17,500 employees), US Internal Revenue Service (4,735 Employees), the US Census Bureau (4,605 employees), and NASA - Goddard Space Flight Center (3,000 employees).⁹⁷

Compared to the United States and its peers throughout the region, Prince George's County has many strengths in this sector (Table 7). The County is highly specialized in the cluster, with and LQ of 4.36 – signifying a concentration of employment more than four times the national average. Annual average wages of \$111,071 in the Federal Government sector are well above the County average of \$59,939 for all covered workers, and are the highest among the twelve clusters, making this cluster a key generator of highquality jobs for the County.

The federal government cluster is considered a higher priority retention target, which suggests that it is highly specialized, the sector is growing nationally, and the County is growing more rapidly than in the larger Washington DC Metropolitan area, where federal employment declined over the 2013-19 period. As was the case in 2013, an opportunity for the County is to maximize the competitiveness of its sites to win future General Services Administration leases, as existing leases for Federal agencies located in the region get competed. While Prince George's County must direct attention toward retaining its current federal employees, the County has also focused on attracting more federal facilities and was a finalist for attracting the new FBI Headquarters facility. As seen on the following page, a density map of GSA owned and lease space in the county finds that federal government sector is concentrated in the cluster of areas near College Park, Greenbelt, New Carrolton and Largo, as well as in Suitland.

In recent years, actions from both Congress and the Trump Administration signaled support for the relocation of certain federal agencies outside of the Capital Region.⁹⁸ However, with the recent presidential transition, some are predicting that the Biden administration may avoid new relocations away from D.C. and also potentially attempt to reverse the moves the Trump administration announced.⁹⁹ While much remains uncertain, this change in policy and direction could benefit Prince George's County.

According to research conducted by E&Y for the Greater Washington Partnership, GSA rent caps in Prince George's County are often too low to encourage new construction.¹⁰⁰ While low rent is a good thing for lease competitions in existing space where the lowest price often wins, the caps

Assessment Factor		Prince George's County	Washington, D.C Baltimore Region
	Overall Assessment of Industry Cluster	Higher Priority	Lower Priority
	Performance	Retention	Retention
	Number of Jobs, 2019	26,785	362,396
Industry Cluster Performance	Level of Industry Cluster Specialization, 2019	4.36	5.97
	Job Gains/Losses from 2013-19	114	(10,701)
	Change in Competitive Share Compared to the US 2013-19	1.5%	4.8%
Average Wages 2019	Points to the quality of job opportunities found in the industry clusters	\$111,071	\$117,994
Economic Multiplier in Prince George's County	Considers the additional jobs gained in other county industries for each additional job generated in the industry cluster	n.a.	n.a.
Projected National Growth Rates 2018-28	Expected job gains nationally in the years ahead for the industry cluster	0.5%	0.5%

Table 7. Sna	pshot of Driving	Industru Clusters:	Federal Government
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can make new construction a challenge, as GSA bases their decisions on other factors such as building quality, access to transit/transportation, as well as access to amenities such as restaurants, child care facilities, and retail. Despite its lower rent caps (The rent cap in Maryland in 2020 was \$36 per square foot, compared to \$39 per square foot in Virginia and \$50 per square foot in D.C.), suburban Maryland has historically trailed behind other local jurisdictions in the number and size of leases it lands.

While the close distance to the nation's capital creates interest from GSA tenants, the E&Y report notes that it is important to balance this existing demand with the attraction of other tenants that can pay higher rents and support higher-density construction (e.g., technology, R&D and professional services). They recommend targeting incentives to attract new, higherquality commercial developments around Metro stations in order to increase local market rents to support higher GSA rent caps. An additional recommendation includes working with the federal government to increase uniformity in GSA rent caps across jurisdictions in the Washington, D.C., region (e.g., federal policy changes that would allow for varying rates that account for the differences between basic lease renewals in existing buildings vs. leases that require new construction or higher investments for renovations).

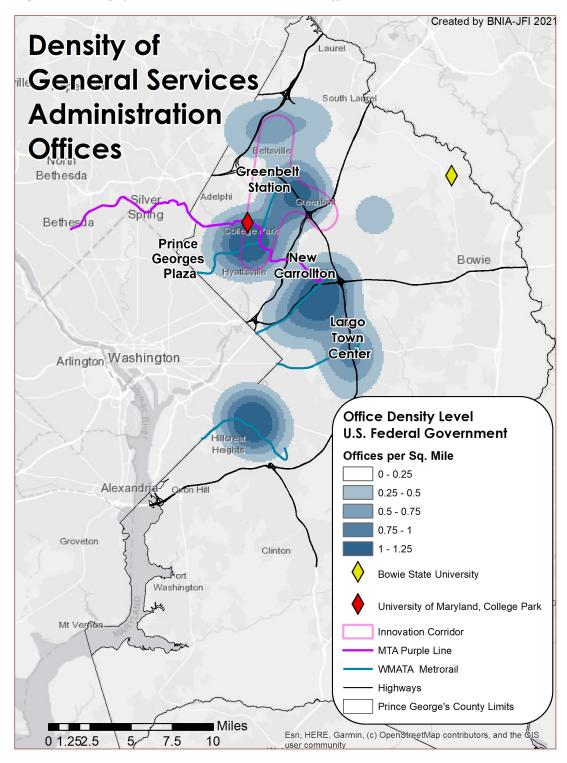


Figure 9. Density of General Services Administration Offices

According to the Washington Business Journals, Maryland Lawmakers have historically discussed three options with the GSA: eliminating the caps all together; creating one cap for the entire region; and, creating separate rent caps for existing buildings versus built-to-suit or renovation opportunities.¹⁰¹

The identified strategic actions pose several opportunities to strengthen the federal government cluster in Prince George's County. For example:

- Workforce quality and availability is critical to the County's ability to attract and retain federal employers and the County's large base of out-commuting federal workers is a key asset to attracting more federal agencies and office buildings. Enacting the actions laid out in the strategic priority area around cultivating talent can help ensure that Prince George's County is meeting the needs of the federal government, as well as employers in the County's other targeted industry sectors.
- Increasing the presence of the federal government helps encourage the proliferation of federal contractors, especially those in technology-oriented sectors which can encourage innovation and entrepreneurship through their spillover effects.
- There are opportunities to engage workers at technology-oriented federal contractors, as well as other technology-oriented government employees, in value-added networking events to support the County's innovation economy.

The development of transit-oriented districts creates more sites suitable for GSA and other knowledge/professional services workers. Increasing placemaking and developing amenities at these sites can help increase the competitiveness of the County in attracting federal leases.

Hospitals and Health Services

Build on Strengths and Opportunities

- Growth exceeding nation
- Investments in medical anchors have catalyzed ancillary development
- · Offers range of low- and middle-skill jobs

Address Weaknesses and Gaps

- County not specialized in employment
- Wages lower than County average

Hospitals and Health Services, another cluster identified as one of the four core target industries identified in the 2013 Economic Drivers and Catalysts strategy, has experienced strong, sustained growth from 2001 through 2018. Since 2013, the completion of the University of Maryland Medical System project in Landover and major investments by regional medical systems serving the County has driven continued employment growth in the health care sector.

Employment growth in both the County and Washington DC Metropolitan area outpaced the nation, yet both have a relatively low level of employment concentration in this cluster (Table 8). The County's LQ for the cluster (0.84) and for hospitals (at 0.63) remains less than the national average, signifying that there is continued room for growth in this cluster, simply to meet County needs. Cluster average wages of \$53,098 slightly lag the County private sector average of \$53,248, and the cluster offers a mix of employment opportunities across the low-middle-to-high-skilled levels.

Assessment Factor		Prince George's County	Washington, D.C Baltimore Region
	Overall Assessment of Industry Cluster Performance	Emerging Strength	Emerging Strength
	Number of Jobs, 2019	15,618	150,002
Industry Cluster Performance	Level of Industry Cluster Specialization, 2019	0.84	0.75
	Job Gains/Losses from 2013-19	1,874	19,369
	Change in Competitive Share Compared to the US 2013-19	3%	4%
Average Wages 2019	Points to the quality of job opportunities found in the industry clusters	\$53,098	\$57,522
Economic Multiplier in Prince George's County	Considers the additional jobs gained in other county industries for each additional job generated in the industry cluster	\$267,056	n.a.
Projected National Growth Rates 2018-28	Expected job gains nationally in the years ahead for the industry cluster	1.8%	1.7%

Table 8. Snapshot of Driving Industry Clusters: Hospitals and Health Services

Businesses related to hospitals and health services are widespread throughout Prince George's County and tend to concentrate around transportation corridors such as the Beltway (I-495) and Route 1. Companies in the hospitals and health services cluster are concentrating near Greenbelt and Largo, with smaller but still significant concentrations near Laurel and Clinton and the Branch Avenue corridor. Other locations with sizable activity include Hyattsville, Beltsville, and Bowie.

The identified strategic actions pose several opportunities to strengthen the hospitals and health services cluster in Prince George's County. For example: Anchor institutions in the hospitals and health services space could be opportunities for the place-based incentives identified in the first strategic priority area. Given their large purchasing power, these anchors could also serve as valuable assets in a first-customer program and in other efforts to support small businesses and entrepreneurs. As community-based institutions, they can also help advance K–12 STEM education pathways for Prince George's County.

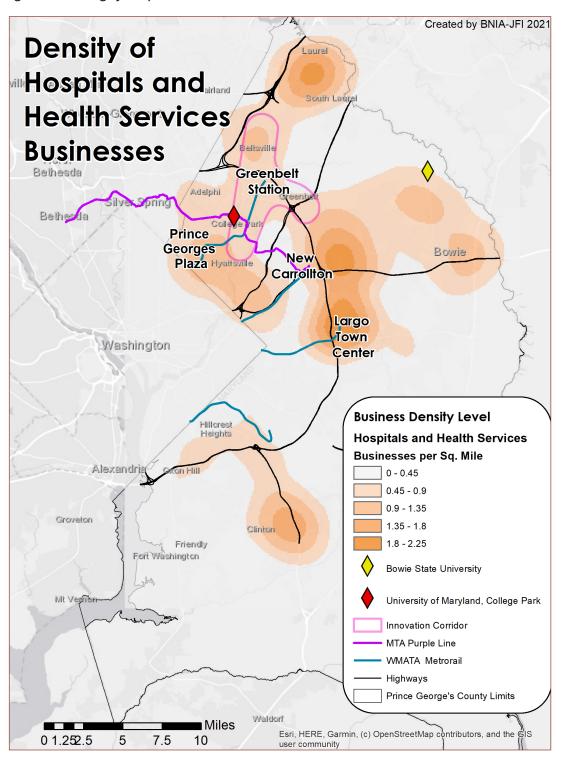


Figure 10. Density of Hospital and Health Services Businesses

- Prince George's County should consider how physicians, surgeons, nurses, as well as other healthcare occupations from both its resident population and its workforce are integrating into increased value-added networking opportunities around innovation and entrepreneurship.
- Jobs in the hospitals and healthcare services sector may be a good fit for several of the strategies within the second strategic action, such as pursuing a consortium around the industry's targeted critical skills, and also fostering the presence of nonprofit skill development providers.
- Hospitals and health services can be connected to the County's efforts to increase transit-oriented development. It is important that these anchors are accessible to all individuals, and one component of this is accessibility for both transit and walkability. As Prince George's County considers new uses for underperforming commercial and retail developments as well as its transitoriented future, connections with hospitals and health services should be explored.

Information Technology Services

Build on Strengths and Opportunities

- Key technology niches in areas such as cybersecurity, data sciences (including artificial intelligence and machine learning), and quantum computing.
- Frameworks in place to grow datacenters and other IT employment
- Federal government helping drive IT growth, but opportunities to diversify this base

Address Weaknesses and Gaps

- High level of intra-regional competition (less specialized than regional peers)
- Opportunities to better network the County's IT workers
- · County employers struggle to attract top-tier talent

Information Technology Services, a cluster comprised of 739 establishments engaged in software development, communications, and computer services, employs 10,077 workers in the County. This cluster has an LQ of 1.38, signifying a concentration of employment 38 percent higher than the national average. While the County is specialized in this cluster, the County's concentration of employment in this cluster is half the highly specialized regional concentration (Washington DC Metropolitan Area LQ of 2.78). Furthermore, although the County's employment in IT services declined from 2013-2019, the JFI-TEConomy Team projects that this sector can return to growth and experience projected growth of 10% from 2019 to 2028.¹⁰² As a result, given the very high

regional level of specialization in information technology, the County's lower than regional concentration of employment may indicate opportunities for growth in this cluster.

Federal government procurement is the key driver of this cluster, with 2018 federal procurement of \$2.6 billion (which increased to \$3.3 billion in 2019) supporting the entire employment of this cluster. County employment is concentrated in the Data Processing, Hosting, and Related Services and core computer services subsectors of the cluster. Annual average wages of \$109,453 in the Information Technology Services cluster are well above the County private sector average of \$53,248 and are the second highest among the twelve clusters, making this cluster a key generator of high-quality jobs for the County. The lack of Class A Office Space in the County has been a barrier to the development of this sector.

A clear ring of information technology services in Prince George's County is visible across the periphery of the 495 Beltway, with a high concentration of businesses near Greenbelt, New Carrolton, and Largo. Other important concentrations of IT companies are in Bowie, near College Park, further up the Route 1 Corridor near Laurel, and to a lesser extent, National Harbor. Key cluster employers include companies in healthcare analytics (Avalere), government contractors (CDW, Leidos) and communications companies (MCI). Startup companies in the IT-space are also emerging

As	sessment Factor	Prince George's County	Washington, D.C Baltimore Region
	Overall Assessment of Industry Cluster Performance	10,077	218,054
	Number of Jobs, 2019	1.38	2.78
Industry Cluster Performance	Level of Industry Cluster Specialization, 2019	(1,615)	16,269
	Job Gains/Losses from 2013-19	(36.1%)	(14.2%)
	Change in Competitive Share Compared to the US 2013-19	\$109,453	\$132,486
Average Wages 2019	Points to the quality of job opportunities found in the industry clusters	\$246,331	n.a.
Economic Multiplier in Prince George's County	Considers the additional jobs gained in other county industries for each additional job generated in the industry cluster	1.7%	1.8%
Projected National Growth Rates 2018-28	Expected job gains nationally in the years ahead for the industry cluster	1.8%	1.7%

Table 9. Snapshot of Driving Industry Clusters: Information Technology Services

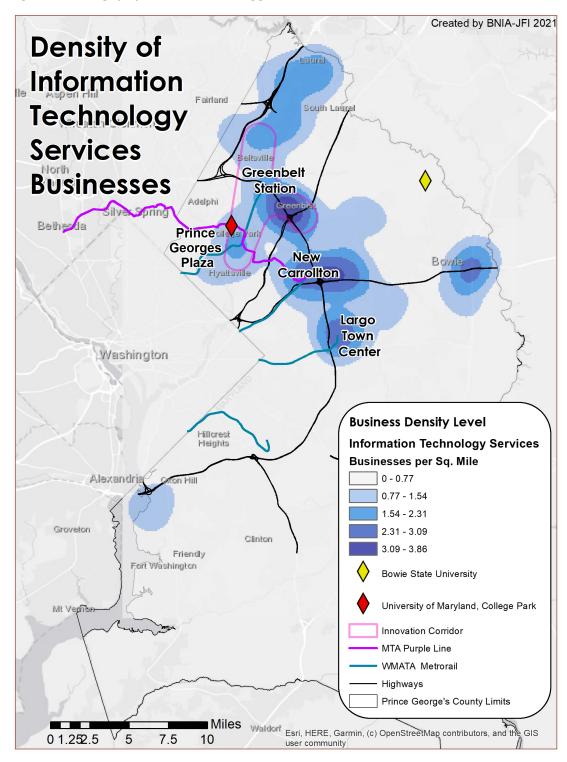


Figure 11. Density of Information Technology Services Businesses

from Prince George's County, with 17 companies raising at total of \$132 million in venture capital from 2012-2019, and with top technology verticals including cybersecurity, artificial intelligence and machine learning, and mobile.¹⁰³

Data Centers are one element of the Information Technology and Services Cluster. Data centers are secure facilities that house computer and network equipment that store, process and distribute large amounts of data. Data centers are at the core of today's knowledge economy

and are a rapidly growing technology sector in their own right. Data centers are also an essential part of Prince George's County driver industry clusters. The economic impact—both direct and indirect—of data centers is substantial. During construction, a typical data center employs roughly 1,700 workers, provides \$77.7 million in annual wages for those workers, injects \$243.5 million into the local economy, and generates \$9.9 million in revenue for state and local governments.104 Every year thereafter, the same data center supports roughly 160 local jobs pays \$7.8 million in annual wages, injects \$32.5 million into the local economy, and generates \$1.1 million in state and local revenue.

Because of the high level of regional specialization and strong near and long-term

growth, the JFI-TEConomy Team considers this industry to be a key target for the County. With strengths in key technological niches such as cybersecurity, data sciences (including artificial intelligence and machine learning), and quantum computing, Prince George's County is poised for specialized growth in IT services. An analysis of patenting finds that the County has specialization in data processing, cybersecurity, and computer vision and machine learning.

The University of Maryland College Park: A Unique Asset to Differentiate Prince George's County Information Technology Sector

As one of the region's largest research universities, improving connectivity with The University of Maryland can strengthen and differentiate its IT industry.

UMCP boasts top programs in information systems, computer engineering, applied math, and quantum physics.

These programs are complemented by industry-facing research centers at UMCP such as:

- Institute for Advanced Computer Studies,
- Maryland Cybersecurity Center,
- Quantum Technology Center.

Prince George's County has a variety of opportunities to build on its strengths in information technology services and take advantage of evident opportunities:

- Information technology is at the heart of the first strategic priority: supporting innovation and entrepreneurship. Prince George's County should seek to differentiate its IT services sector by focusing on its key technology niches: cybersecurity, data sciences (including artificial intelligence and machine learning), and quantum computing. It is intended that the Innovation Collaborative of Prince George's County (IC Prince George's) will have a significant focus on IT services, as would related programs such as the preaccelerator, first-customer, and economic gardening programs. To build on capabilities at the University of Maryland College Park and Bowie State University, Prince George's County should also explore corporate innovation centers related to IT services and should incentivize growing startups in this space.
- Due to the strength of the IT services sector, Prince George's County can also better cultivate tech talent and connect its residents with opportunities in this sector. IT Services are a logical sector to pursue a consortium related to critical skills, foster nonprofit skills development service providers. Networking individuals in the IT services sector – whether they are current employees (e.g., developing networks of Blacks in Tech) or interested students (e.g., connecting through K–12 activities, linking individuals to higher-ed and career opportunities). Within IT Services, there are opportunities for Prince George's County to build targeted programming around its specializations in cybersecurity, data sciences (including artificial intelligence and machine learning), and quantum computing.

- It is important that Prince George's County has a strong business environment and competitive places to attract and retain its IT companies. Having flexible live-workplay communities near transit lines and with a range of housing options continue to be an important part of attracting and retaining tech talent. To further develop its strong, marketable places, Prince George's County should Develop Business Improvement Districts, and also ensure that changes to zoning/permitting processes are implemented. Encouraging placemaking around the Discovery District and other areas around the Innovation Corridor should also be prioritized.
- The County could explore redeveloping underperforming commercial or retail centers for the purposes of data centers. Prince George's County can also continue to support the use of by-right zoning for data centers and explore other options to make this development process more seamless.

Research-Intensive Technology Industries

Build on Strengths and Opportunities

- Fast growing sector in Prince George's County representing both established companies and high-growth potential startups
- Provides high-wage STEM oriented jobs with a mix of both high and middle skilled jobs
- Positions Prince George's County in exciting growth-oriented technology areas from space and climate sciences to biosciences

Address Weaknesses and Gaps

- Create stronger relationships between companies and anchor institutions
- Develop better branding for key technology hubs/corridors
- Challenging development process for biosciences and advanced manufacturing companies

Research-Intensive Technology Industries are an amalgamation of three industry clusters in the County featuring high-paying jobs, skilled workforces, and strong growth opportunities. These industry clusters are R&D and Engineering Services, Instruments and Electronics, and Biosciences. Together these three industry clusters comprising the Research-Intensive Technology industry are growing rapidly in Prince George's County, recording job growth of 29.4% from 2013-2019, and reaching more than 7,000 jobs by 2019. The Research-Intensive Technology cluster consists of 427 business establishments, with 7,175 employees and is classified as an *Emerging Strength* cluster, meaning that it is growing and outperforming the nation in growth but is not yet specialized. The business density of researchintensive businesses is especially high in the areas surrounding Greenbelt and New Carrolton.

• The R&D and Engineering Services cluster is made up of firms in the engineering services and commercial research and testing industries. The cluster consists of 214 establishments with 5,107 jobs in 2018. Most firms provide specialized engineering, research and scientific services to the public sector, with federal procurement reaching \$1.2 billion in 2018, equivalent to supporting almost 90 percent of cluster employment. The R&D and Engineering Services cluster is relatively small, with 5,107 employees, but is the second fastest growing of the key economic driver industry clusters, with employment growing by 37 percent since 2013. The R&D and Engineering Services cluster in Prince George's is classified as a Current Strength, meaning that it is specialized, growing, and outperforming the nation in terms of growth. Annual average wages of \$104,983 in the Research Development and Engineering cluster the third highest among the twelve economic driver industry clusters and are well above the County private sector average of \$53,248, making this cluster a generator of high-quality, high-skilled jobs in the County.

Engineering solutions for defense and space activities, autonomous systems, and energy innovation are among the areas where the County is showing key technological niches within this sector. In patent activity, Prince George's County is specialized in batteries and energy storage, material sciences, and vehicle control systems. The University of Maryland College Park offers top-ranked programs in atmospheric sciences and in electrical and communications engineering, which are complemented by its industryfacing research centers within the Department of Aerospace Engineering and the Maryland Robotics Center and the

As	sessment Factor	Prince George's County	Washington, D.C Baltimore Region
	Overall Assessment of Industry Cluster	Emerging Strength	Higher Priority
	Performance	Emerging Strength	Retention
	Number of Jobs, 2019	7,175	261,462
Industry Cluster	Level of Industry Cluster Specialization,	0.99	2.04
Performance	2019	0.99	2.04
	Job Gains/Losses from 2013-19	1,630	22,220
	Change in Competitive Share Compared	00.70%	7.00%
	to the US 2013-19	20.7%	7.0%
Arrows go We gog 2010	Points to the quality of job opportunities	¢100.707	¢101.220
Average Wages 2019	found in the industry clusters	\$100,707	\$121,332
	Considers the additional jobs gained		
Economic Multiplier in	in other county industries for each	¢000.040	n.a.
Prince George's County	additional job generated in the industry	\$238,848	
	cluster		
Projected National Growth	Expected job gains nationally in the years	0.50	0.007
Rates 2018-28	ahead for the industry cluster	0.5%	0.3%

Table 10. Snapshot of Driving Industry Clusters: Research-Intensive Technology Industries

Institute for Systems Research. Five companies in energy and environmental technologies received VC funding from 2012-2019, raising a total of \$31 million.

Not surprisingly, given the importance of federal contacting, large government contractors such as ATK Space Systems Inc. and SAIC are among the largest employers. A geographic analysis of businesses in the R&D and Engineering Services industry cluster finds that there are high concentrations of activity along the Beltway and up the Route 1 Corridor. A geographic analysis of businesses in the Research Development and Engineering cluster finds that there are high concentrations of activity along the Beltway and up the Route 1 Corridor. These companies are especially prominent in Greenbelt and the surrounding areas (e.g., Beltsville and College Park), as well as New Carrolton, Bowie, and smaller nodes found throughout the County.

• The **Instruments and Electronics** cluster consists of 27 establishments that employ 708 workers in the County. The cluster is made up of firms in the: computer and communications; search, detection, navigation, guidance, aeronautical, and nautical systems and instrument manufacturing; and semiconductor manufacturing sectors. The sector is dominated by the Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing subsector, which accounts

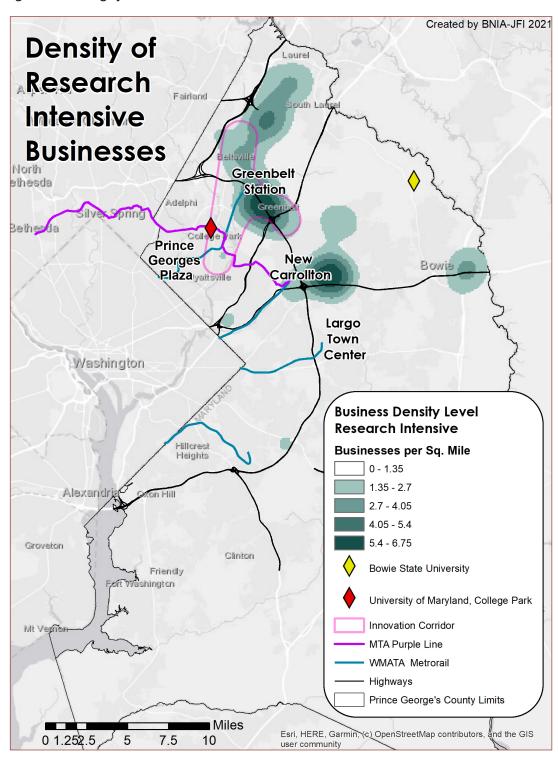


Figure 12. Density of Research Intensive Businesses

for almost 70 percent of cluster employment. The remaining employment is dispersed among a variety of sectors with relatively small levels of employment. Technology niches visible in the instruments and electronics cluster include electronic design and communications systems, as evidenced by patenting strengths in areas such as transmitter systems, navigational instruments, optics, and wireless communications equipment.

The University of Maryland College Park is home to the Center for Advanced Life Cycle Engineering, a national leader in electronics reliability, and a highly-ranked program in electrical and communications engineering. Several companies in the instruments and electronics cluster are small, emerging, technology-driven companies, many with relationships to UMCP. From 2012-2019, four County-based instruments and electronics startups received a total of \$24 million in venture capital funding.

The cluster has a low LQ of 0.4, signifying a concentration of employment 40 percent of the national average, but has experienced significant growth (16%) since 2013. Based on the JFI-TEConomy Team's classification system, the Instruments and Electronics cluster is classified as an *emerging strength*, meaning that it is growing and outperforming the nation in growth but is not yet specialized. Annual average wages of \$106,922 in the Instruments and Electronics cluster are well above the County private sector average of \$53,248 and are the third highest among the twelve target clusters, making this cluster a key generator of high-quality jobs for the County. A geographic analysis of businesses in the instruments and electronics cluster finds that there are high concentrations of activity along the Beltway and up the Route 1 Corridor. Areas with especially high concentrations include Greenbelt (near NASA Goddard) and to the south near New Carrolton.

 The Biosciences cluster is the second smallest of the 12 identified industry clusters but is the fourth fastest growing of these economic drivers. The cluster (combined with healthcare into an aggregated health care and life sciences cluster) was identified as one of the four key industry clusters for the County to focus on in its 2013 *Economic Drivers and Catalysts* strategy. The cluster consists of 186 establishments employing 1,360 workers engaged in activities ranging from conducting life sciences research to manufacturing pharmaceuticals to medical labs. Based on the JFI-TEConomy Team's classification system, the Biosciences cluster is classified as an *emerging strength*, meaning that it is growing and outperforming the nation in growth but is not yet specialized.

The cluster is highly concentrated in research activities, which includes early-stage companies developing new products and accounts for 63percent of employment. Employment in the Biosciences research has increased by more than 70% since 2013, driving the growth of this sector. The remaining employment is largely concentrated in medial labs and diagnostic imaging centers, which is supported by the growth of the County's health care sector. Annual average wages of \$81,422 in the Biosciences cluster are well above the County private sector average of \$53,248 and are the fifth highest among the twelve clusters, making this cluster a key generator of highquality jobs for the County.

Key technology niches within the Prince George's County biosciences sector include Medtech Devices/Diagnostics, where there is a strong level of patenting, and through collaborations with the Food and Drug Administration. Prince George's County also benefits from UMCP's top programs in food sciences, along with its industry-facing research centers like the UM Center of Excellence in

Regulatory Science & Innovation, the Joint Institute for Food Safety and Applied Nutrition with FDA, and the Robert E. Fishchell Institute for Biomedical Devices.

From 2012-2019, six biosciences startup companies in the County raised a total of \$169 million in VC funding. One of the leading biosciences companies in the County is NextCure, which is a publicly traded biopharmaceutical company with products in late-stage clinical trials. Its location in Prince George's County suggests the value of the ICC offering easy access to Shady Grove and Northern Montgomery County's biosciences cluster as well as easy access to Baltimore's academic medical centers via I-95.

Generally, biosciences companies in Prince George's County are concentrated along the Route 1 corridor with a high density near Muirkirk, West of South Laurel. Other hubs include the area east of New Carrolton near Lanham, and South of Hyattsville close to the County border with DC.

The identified strategic actions pose several opportunities to strengthen research-intensive technology clusters in Prince George's County. For example:

- Similar to its IT Services sector, research-intensive technology industries should be targeted by Prince George's County through strategic actions to support innovation and entrepreneurship. Prince George's County has opportunities to diversify its research-intensive industries by focusing on its unique technology niches, which are closely related to the County's research assets:
 - » Grow, attract, and retain companies focused on engineering solutions for defense and space activities, with an emphasis on technology areas such as autonomous and vehicle control systems, energy innovation (e.g., batteries and energy storage), and materials sciences.

- » Seek to grow the County's instruments and electronics cluster by partnering with the University of Maryland College Park and federal installations with a focus on space and climate (e.g., NOAA) emphasizing the County's strengths in electronic design and communications systems (e.g., transmitter systems, navigational instruments, optics, and wireless communications equipment).
- » Support the development of new and emerging companies in Medtech Devices/Diagnostics, and encourage ongoing collaboration with the Food and Drug Administration.
- The Innovation Collaborative of Prince George's County (IC Prince George's) should encourage the development of research-intensive technology companies through its support for related programs such as entrepreneurial support, pre-accelerator, first-customer, and economic gardening programs. These sectors can also leverage important programs at University of Maryland College Park and Bowie State University.
- Prince George's County can develop new tech talent and better connect its residents to opportunities in researchintensive technology industries. The County should consider further understand the range of skills needs in these sectors and connect employers with each other to support workforce development goals.
- Prince George's County needs a strong business environment and competitive places to develop its research-intensive technology industries. While having access to federal facilities is advantageous, the County must also ensure that is has a business environment that is able to support the complex development needs of these companies as they relate to regulations, permitting, and zoning. Of particular concern is that technology-based

companies who make things – including biosciences and engineering-related companies – are dealing with inspectors from utilities and permit officials who lack knowledge of modern industrial processes and mitigation approaches and have shown no interest in learning or tapping knowledge of their counterparts in the region. This points to the importance of advancing lean permitting processes to meet the needs of businesses.

Supporting Clusters

The JFI-TEConomy team also identified two other clusters that were essential to other areas of this strategy. It was determined the destination retail cluster would play a vital role in shaping placemaking and transit-oriented development in the region. Additionally, the transportation, distribution, and logistics sectors is an enabling industry that is growing quickly in the County but is less of a driver of widespread and catalytic economic growth. The figures below show the density of businesses for both of these supporting clusters. As can be seen from these maps, businesses in the transportation, distribution, and logistics sector are concentrated along key transportation corridors. Similarly, businesses in the Destination Retail sector are concentrated alongside freeways and transit lines, with particular nodes in places like Prince George's Plaza, Bowie, and National Harbor.

Transportation, Distribution, and Logistics

The Transportation, Distribution, and Logistics cluster in Prince George's County is classified as a *retention target*, because it is not specialized in the County and lags the nation in growth (but is still growing). As in the last strategy, despite the lower level of specialization and lagging growth, this cluster remains a core target for the County because the availability of affordable land, located near major highway and rail infrastructure and in close proximity to two regional airports, makes the County attractive for both large-scale and "last mile" transportation and distribution activities. With average annual wages of \$58,472, above the County private sector average of \$53,248, this cluster is a key generator of middle-skill jobs in the County.

Destination Retail

The Destination Retail cluster is the fourth largest of the twelve target industry clusters. The cluster includes larger retail activities, such as department stores, home centers, and warehouse clubs and supercenters that serve as destination shopping venues, and excludes retail activities such as food, drug and gasoline retailers that primarily serve the local population. Home to destination retail centers such as Tanger Outlets-National Harbor as well as several major highway accessible large-scale retail centers, Prince George's County is specialized in the cluster, with and LQ of 1.35 – signifying a concentration of employment 35 percent above the national average. With this high level of specialization, it is clear that the County serves as a regional center for destination retail activities for the larger Washington DC metropolitan area.

Destination retail is also linked to the County's Travel and *Tourism* sector, with outlet shopping linked to visitors to National Harbor. Key subsectors within the Destination Retail cluster include Department Stores, Home Centers, Clothing and Furniture Stores. The Destination Retail cluster in Prince George's County is classified as a Lower Priority Retention target, meaning that it is specialized, and outperforming the nation in terms of growth but not gaining jobs. The County's small decline of 208 jobs in 2013-19 was far less than the 2 percent national decline. Annual average wages of \$26,947 in the Destination Retail cluster are well below the County private sector average of \$53,248, making this cluster a generator of lower-skill jobs. Even though this industry is not gaining jobs, it remains a key target industry as the County seeks to broaden its retail base, especially as part of mixed-use transit-oriented development and inner-beltway revitalization.

As	sessment Factor	Prince George's County	Washington, D.C Baltimore Region
	Overall Assessment of Industry Cluster Performance	Lower Priority Retention	Prospects Limited
	Number of Jobs, 2019	17,887	100,465
Industry Cluster Performance	Level of Industry Cluster Specialization, 2019	0.93	0.48
	Job Gains/Losses from 2013-19	1,901	10,828
	Change in Competitive Share Compared to the US 2013-19	1.6%	1.4%
Average Wages 2019	Points to the quality of job opportunities found in the industry clusters	\$58,472	\$82,668
Economic Multiplier in Prince George's County	Considers the additional jobs gained in other county industries for each additional job generated in the industry cluster	\$329,465	n.a.
Projected National Growth Rates 2018-28	Expected job gains nationally in the years ahead for the industry cluster	0.2%	0.2%

Table 11. Snapshot of Driving Industry Clusters: Research-Intensive Technology Industries

As	sessment Factor	Prince George's County	Washington, D.C Baltimore Region
	Overall Assessment of Industry Cluster	Lower Priority	Prospects Limited
	Performance	Retention	1 Tospects Emilieu
	Number of Jobs, 2019	15,062	106,192
Industry Cluster	Level of Industry Cluster Specialization,	1.95	0.00
Performance	2019	1.35	0.88
	Job Gains/Losses from 2013-19	(208)	(5,702)
	Change in Competitive Share Compared	0.00	0.007
	to the US 2013-19	0.6%	3.2%
Arrows go We gog 2010	Points to the quality of job opportunities	¢96.047	¢90.147
Average Wages 2019	found in the industry clusters	\$26,947	\$29,147
	Considers the additional jobs gained		
Economic Multiplier in	in other county industries for each	¢000.000	
Prince George's County	additional job generated in the industry	\$302,009	n.a.
	cluster		
Projected National Growth	Expected job gains nationally in the years	0.007	0.2%
Rates 2018-28	ahead for the industry cluster	0.2%	

Table 12. Snapshot of Driving Industry Clusters: Research-Intensive Technology Industries

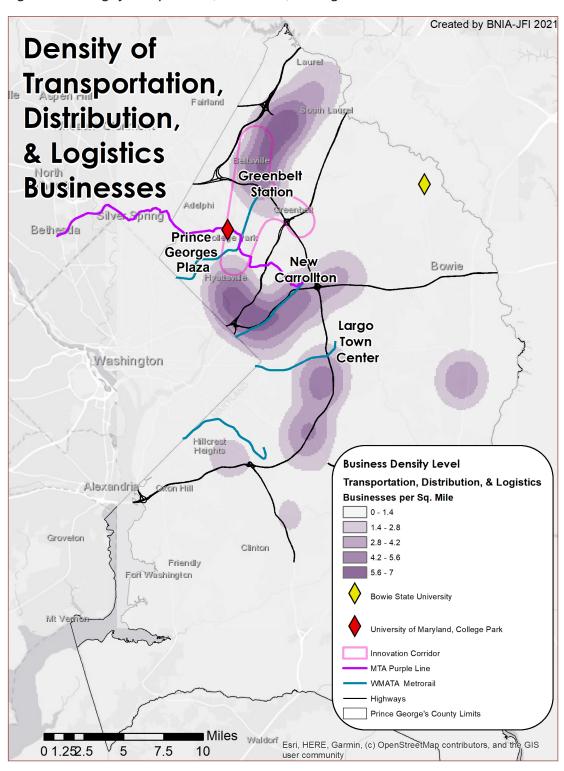


Figure 13. Density of Transportation, Distribution, and Logistics Businesses

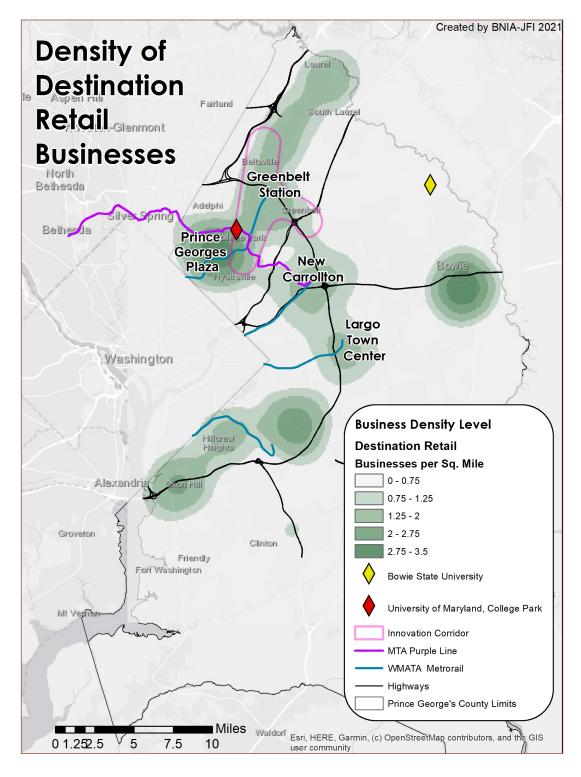


Figure 14. Density of Destination Retail Businesses

APPENDIX 2: DEVELOPMENT CATALYSTS ASSESSMENT

Economic development success is strongly influenced by factors such as infrastructure, capital, workforce, tax climate, and other factors that impact business costs and location decisions. Economic Development Quarterly defines business climate as the *sum total of a place's human and capital resources including infrastructure, public policies, and attitudes that affect the formation and operation of business enterprises*. Because business climate factors are impacted by a variety of factors – most importantly the cost versus the presence and quality of key factors, ranking a state or county's overall business climate is difficult. The JFI-TEConomy team compared Prince George's County to a selection of regional peer jurisdictions in terms of eight areas important to economic development and the overall business climate. Importantly, the opportunities to take advantage of these development catalysts are reflected in the strategies and actions laid out in this report.

The JFI-TEConomy team compared Prince George's County to a selection of regional peer jurisdictions in terms of six areas of business climate factors. Prince George's County's competitive position in the business climate factors are summarized in Table 13, with each business climate area evaluated as a *Weakness, Neutral (+/-)*, or as a Strength.

Item	Weakness	+/-	Strength
Technology Generation			\checkmark
Federal Procurement			\checkmark
Transportation Infrastructure			\checkmark
Development Resources		\checkmark	
Small and Minority Business Environment			\checkmark
Workforce Development		\checkmark	
Tax Climate	\checkmark		
Quality of Life			

Table 13. Assessment of Prince George's County Business Climate

Technology Generation

With its concentration of Federal and university research technology and commercialization resources, the County clearly has access to significant technology resources. These assets play a critical role in innovation-based economy development not only because of their ability to attract funds for R&D, but also because Research generated universitydeveloped intellectual property is disseminated into the broader economy through the technology transfer process.

Prince George's County is home to UMCP, the third largest research university in the three-state area. With \$540.7 million in 2018 research expenditures, UMCP accounts for 8 percent of all academic research in the region. UMCP's role is even larger in federal-sponsored R&D, where it is the second largest performer; however, the university lags in industry-sponsored research, where it is ranked 6th among peers.¹⁰⁵ UMCP accounted for 11 percent of invention disclosures, 13 percent of patent applications, and 10 percent of patents issued in FY2018 to the major regional research universities.¹⁰⁶

Opportunities for Prince George's County

- Leverage research and education anchors in the County, especially University of Maryland at College Park and increasingly Bowie State University and Prince George's County Community College
- Continue to advance the Discovery District/Innovation Corridor as an important place-based development
- Better coordinate and take advantage of the growing entrepreneurship program efforts across higher education in the County.

Federal Procurement

Because of Prince George's County's location as one of the largest jurisdictions in the national capital region, patterns of federal procurement also represent a key driver to the County's economy.

Federal Procurement is driving the growth and success of driver industry clusters, especially in fields such as Information Technology Services and in Research-Intensive Sectors: 91 percent of federal in-County purchases in 2018 and 86 percent in 2019 were made from businesses in these industry clusters, most importantly Information Technology Services, \$3.3 billion and 47 percent in 2019, Research Development and Engineering, \$1.1 billion and 17 percent, and Business Services, \$0.9 billion and 13 percent.¹⁰⁷ Procurement in Prince George's County is driven by civilian agencies, most importantly the Department of Commerce and NASA, both of which have major locations with the County.

Opportunities for Prince George's County

- Ensure local workforce can meet needs of federal government, as well as other employers in the County's other targeted industry sectors.
- Leverage the presence of the federal government to help encourage the proliferation of federal contractors, especially those in technology-oriented sectors which can encourage innovation and entrepreneurship through their spillover effects.
- Enhance placemaking and develop amenities at transitoriented districts to help increase the competitiveness of the County in attracting federal leases.

Transportation Infrastructure

Prince George's County is home to a robust, well-developed transportation network including access to both highways and mass transit, rail service by CSX and Norfolk Southern Railway, and close proximity to both BWI Airport and Ronald Reagan Washington National Airport.

The County has access to an extensive highway system and has the third highest level of interstate mileage compared to the peer jurisdictions analyzed, behind only Baltimore County, in the Baltimore Metropolitan area, and Fairfax County in Virginia. Prince George's County also has access to an extensive mass transit system, including Metro (15 Stations), Light Rail (9 stations), and buses (28 routes). New developments like the ICC and the Purple Line area adding to this transportation advantage.

Opportunities for Prince George's County:

- Build on excitement around developing placemaking around burgeoning live-work-play environments and transit-oriented developments (e.g., Discovery District, Largo Town Center, Bowie Innovation District).
- Consider approaches to accelerate their developments placemaking and economic development, particularly as an opportunity to stem the outflow of younger working professionals (25-34 years old) and higher-income households.

Financial and Development Resources

Access to capital is a key factor that impacts business success, and although the County is moderately well banked, there is room for improvement. Businesses obtain financing from a number of sources, including both traditional banking activity as well as through venture capital. Despite recent growth in venture capital investment, the County remains well behind its regional peers in both dollars and deals. After averaging only \$30 million a year in venture capital funding from 2012-2017, Prince George's County now has sustained venture capital funding of over \$100 million annually for the past two years. Still, the County is well behind the region's leaders in venture capital activity, standing 8th among peer jurisdictions in deals and 6th among peer jurisdictions in investments over the 2012-19 period.

Prince George's appears to be adequately banked, with 18 financial institutions active in the County, operating 139 offices, and with \$10.9 billion in deposits.¹⁰⁸ However, based on the interviews conducted, access to capital represents a significant barrier to Prince George's County's substantial small and minority business base. While PGCEDC offers access to a variety of Federal, State, and County financing programs, additional targeted resources may be necessary.

Opportunities for Prince George's County:

- Help more companies become "venture-ready" by offering targeted entrepreneurial support services such as Pre-Accelerator, First-Customer, and Value-Added Networking events.
- Overcome constrained resource environment by focusing efforts on public-private-partnerships and targeting investments.

Small and Minority Business Environment

Prince George's County has one of the strongest bases of small and minority businesses in the region. Supporting the growth and expansion of these businesses represents a significant area of potential for the County's economic development strategy.

With 4,774 minority-owned businesses with 38,080 jobs in 2012 (the most recent year available), Prince George's County has the third largest number of minority businesses (after Montgomery and Fairfax Counties), the fourth largest number of jobs in minority businesses (after Montgomery and Fairfax Counties and Washington DC), and the second highest level of overall employment in minority businesses. The County has recognized the importance of supporting small and minority businesses and both offers access to targeted programs and works with key small and minority business organizations.

Opportunities for Prince George's County:

- Intentionally support the growth of small businesses, especially those that are Black-, Latinx, and Women-Owned.
- Fully integrate Prince George's County's diverse population in its innovation economy (e.g., at innovative anchor institutions, technology-oriented startups, or other companies).

Workforce Development

The availability and cost of labor are key factors impacting the economic development process, and while there are some strengths in the County, there is also room for improvement. Notably, although educational attainment (as measured by share of population with at least a bachelor's degree) in the County exceeds the national average, it is lower than many peer jurisdictions. Only 34.3 percent of Prince George's County residents ages 25 or above have a bachelor's degree or above, with 14 of 17 comparison region's ranked higher in this measure

A significant share of Prince George's County's educated population commutes outside of the County for jobs. With 60.1 percent of employed residents commuting to jobs outside of the County, Prince George's County has the sixth highest concentration of out-commuting workers among the comparison jurisdictions. These out-commuting residents represent a significant potential pool of labor for businesses in or seeking to locate in the County.

Opportunities for Prince George's County:

- Align existing workforce with mix of skill needs Prince George's County's leading industry clusters are expected to have a major ramp-up in needs for bachelor's level and middle-skill level jobs.
- Leverage strong STEM-oriented higher education talent development in the County by creating stronger connections of talent to businesses in the County.

Business Climate

A state or county's tax climate can influence its overall competitive position for business and economic development. According to the Area Development survey, corporate taxes are ranked as the sixth and tax exemptions as the eighth most important site selection factors for businesses.¹⁰⁹

Maryland ranks similarly to Washington D.C. but well below Virginia in national indices of business climate: According to the 2020 State Business Tax Climate Index, Maryland

is ranked 43rd (eighth worst) nationally and Washington D.C. is ranked 47th nationally, both below Virginia, at 25th nationally.¹¹⁰ While State tax burdens in Maryland are higher than in Virginia and many key competitor states, County taxes are generally competitive (except that Virginia does not have a local income tax)

Opportunities for Prince George's County:

- Accelerate aggressive and proactive efforts to market the region internally/externally and offer incentives/other resources for business attraction and retention.
- Address issues expressed by both innovation-oriented companies and real estate developers about concerns with hurdles in the permitting process.

Quality of Life

In today's talent driven economy, quality of life factors, such as schools, cost of living and the cost of housing can play a critical role in supporting economic development. However, while Prince George's County benefits from its central location in the national capital region, it faces quality of life issues and perceptions that impact its development potential. A common theme in the economic development stakeholder interviews conducted was that Prince George's County is that despite the progress over the past several years, still perceived as a less attractive location than key peers such as Montgomery County and Northern Virginia.

The cost of living in Prince George's County is one of the lowest among key peer jurisdictions. However, the County also has lower levels of median incomes and higher poverty rates. As a result, despite the lower cost of housing/rent, Prince George's County has a higher percentage of homeowners and renters that are cost burdened than its peers. In the area of K–12 education, Prince George's County lags in standardized testing scores, graduation rates and percentage of high school graduates going on to higher education.

Opportunities for Prince George's County:

• Ensure that more of Prince George's County's residents are connected to jobs and skills needed to pursue economic opportunity.

Make systematic improvements with County's K–12 Public Schools, as concerns are expressed that the quality of K–12 schools may influence the persistent outmigration of higherincome households in the County.

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- 2 Ibid.
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- 5 JFI-TEConomy Analysis of 2019 Census ACS 1-Year* B24010 and B24010B
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- For the purposes of this report, diversity refers the quality or state of race/ethnicity, gender and identity, age, physical ability, and sexual orientation represented within a defined group. Inclusion generally refers to the practices that involve and empower individuals to participate, be recognized, and realize their potential.
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- 16 Bruce Katz, Ross Baird and Daniel Palmer in their white paper "Towards a New System of Community Wealth" issued on October 27, 2019 by Drexel University Nowak Metro Finance Lab with BluePrint Local and Accelerator for America define community wealth as "a broad-based effort to build equity for low-income residents of disadvantaged

communities with the aims to: 1) Grow the individual incomes and assets of neighborhood residents by equipping them with marketable skills and enabling full or partial ownership of homes, commercial properties and businesses; 2) Grow the collective assets of neighborhood residents by endowing locally-run organizations with the ability to create, capture and deploy value for local priorities and purposes; 3) Improve the access to private capital that has high standards, fair terms, a long-term commitment to the neighborhood and reasonable expectations around returns and impact; and 4) Enhance inclusion by bringing fairness and transparency to neighborhood revitalization so that community voices are heard and respected and trust is restored, and local residents have the opportunity to participate in wealth that is created." See https://drexel.edu/nowak-lab/publications/reports/community-wealth/ for more details.

- 17 This sector represents a combination of Biosciences, Instruments and Electronics, and Research & Development Engineering Services industries
- 18 JFI-TEConomy analysis of Web of Science Data
- 19 <u>https://www.wsj.com/articles/quantum-computing-startup-ionq-plans-public-debut-in-2-billion-spac-merger-11615201201</u>
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- 26 See, Prince George's County Economic Development Corporation: <u>https://www.pgcedc.com/</u>
- 27 https://www.pgcedc.com/innovation-station
- 28 See, University of Maryland College Park Innovation Gateway: <u>https://innovate.umd.edu/</u>
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- 38 <u>https://youreconomy.org/index.lasso?year1=undefined&year2=undefined&state=MD&msa=&county=24033</u> Other sizes include: Self-Employed sole proprietorships or one job; Small 2 to 9 jobs, including proprietorships; SME (Small-Medium Enterprises) 10 to 99 jobs; Mid Size 100 to 499 jobs; Large 500 and more jobs
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