

2020 SNAPSHOT

GREATER WASHINGTON REGION

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OVERVIEW

Across the globe, information technology (IT) continues to be one of the fastest growing industries. This trend holds true for the Greater Washington, DC, region, which is home to the third highest concentration of IT employers in the United States.¹ Another global trend that is also true for the region is that supply is not keeping pace with demand for local talent. In 2016, the Greater Washington region led the nation in graduating IT students, training more than 17,000 postsecondary graduates.² Yet, 35,000 local IT jobs went unfilled that same year. At the same time, too many young people growing up in the greater Washington region are not connected to good high-wage jobs that do exist, particularly in IT. Despite economic growth in the region, the poverty rate in Washington, DC remains one of the highest in the nation, particularly among youth.³

Looking forward, projections indicate that employers in the Greater Washington region will need to recruit even larger numbers of students over the next five years — 20,000 — presenting both an opportunity and a challenge for the region.⁴ As demand increases, there is a need to ensure that training is aligned with current regional labor market demands. That means ensuring that IT pathways — in secondary, postsecondary and certificate programs — are aligned to the skills, credentials and workplace experiences employers need most.

As part of its New Skills for Youth initiative, JPMorgan Chase & Co. invested \$7 million to help meet the growing demand for IT talent in the Greater Washington region and expand access to economic opportunity for young people. JPMorgan Chase is partnering with five school districts, colleges and universities, workforce partners, and IT employers from across the region on a collaborative four-year initiative to explore how the public and private sectors can work together to grow the local IT economy by creating pathways to good jobs in the industry for young people growing up in the region. To meet this goal, the Greater Washington Partnership (GWP) and Education Strategy Group (ESG) are supporting a region-wide effort to better align career pathways to employer demand. GWP is a civic alliance of CEOs working to make the Washington, DC, region one of the world's best places to live, work and build a business.⁵ ESG is a consulting firm that works with education leaders to design, scale and implement strategies that improve attainment.⁶ In addition to the JPMorgan Chase investment, Bloomberg Philanthropies invested \$1.5 million in the Greater Washington region initiative.

JPMORGAN CHASE NEW SKILLS FOR YOUTH INITIATIVE

Launched in 2016, New Skills for Youth⁷ is a \$75 million, five-year global initiative aimed at transforming how cities and states ensure that young people are career ready. The overarching goals of the initiative are to:

- Dramatically increase the number of students who successfully complete career pathways that begin in secondary school and culminate in postsecondary degrees or credentials tied to high-wage, high-demand jobs; and
- Catalyze transformational approaches to the design and delivery of programs and policies to increase students' career readiness and disseminate lessons learned around the world.

This snapshot is part of a series documenting the progress of the local investments from across the globe that aim to identify and implement the most promising ideas in career education, with a special focus on communities with the greatest needs.

THE K-16 IT PATHWAYS INITIATIVE

The New Skills for Youth investment is supporting five school districts in the region (Baltimore City Public Schools; DC Public Schools; Fairfax County Public Schools; Montgomery County Public Schools; and Prince George's County Public Schools) and eight colleges and universities (Northern Virginia Community College, George Mason University, University of the District of Columbia, Montgomery College, the Universities at Shady Grove, Baltimore City Community College, University of Baltimore, and Prince George's Community College) with the resources needed to build a talent pipeline for the IT industry in the Greater Washington region. The goals of the initiative are to:

- **Create a region-wide employer signaling system that collects information from employers about technology skills and credentialing demands and disseminates it to schools to ensure that career pathways are aligned with employer demand;**
- **Build and strengthen career pathway programs connecting five school districts to regional community colleges and universities to give students the credentials they need to fill high-growth, in-demand technology jobs;**
- **Develop and embed high-quality work-based learning experiences for high school students to foster technical and professional readiness for the workplace; and**
- **Facilitate a regional collaboration network that enables schools to work together to learn from best practices, design regional strategies and leverage their collective strengths.**

To support this work, GWP is tapping its Capital CoLab, a forum for connecting business leaders with education leaders to communicate need and grow the talent pipeline to meet demand. ESG is delivering technical support to educational institutions and facilitating a regional collaboration network that enables educators to collaborate and learn from each other.



GWP's Capital CoLAB serves as the coordinating entity for the K-16 IT pathways initiative and is leading work around the employer signaling system. As the skills and talent arm of GWP, Capital CoLAB is an action-oriented partnership of businesses and academic institutions in the Greater Washington region (from Baltimore to Richmond). The CoLAB, which started in 2018, focuses on three broad areas: developing the talent and workforce the region needs now and in the future, connecting innovators across sectors to develop and commercialize cutting-edge technologies, and improving awareness of the region as a leading innovation hub.

"Our students are our best assets, and we need to invest in their futures. As we prepare students with the proper skills for in-demand jobs in the region, we're glad to see many local employers come to the table to invest in career development and lift up our students."
—Community College President

At the official launch event for the initiative, held in December 2019 at Northern Virginia Community College (NOVA), GWP announced that a group of 19 major employers in the region endorsed the comprehensive framework to cultivate in-demand digital tech skills for students in local K-12 public schools, community colleges and four-year universities to create career pathways for local residents into the region's booming digital tech industry.⁸

Employers endorsing the Capital CoLAB's principles include: Amazon, Apex Systems LLC, AstraZeneca PLC, Booz Allen Hamilton, Capital One, the Central Intelligence Agency,

Exelon Corp., EY, General Dynamics Corp., Inova Health System, JPMorgan Chase, McKinsey & Co., MedStar Health, Monumental Sports & Entertainment, Northrop Grumman Corp., Stanley Black & Decker Inc., T. Rowe Price, Under Armour Inc. and Washington Gas.

GWP's Capital CoLAB and ESG are in year one of the implementation timeline of a four-year initiative and have primarily focused on developing the project plan and on identifying and beginning to engage stakeholders across the five jurisdictions.

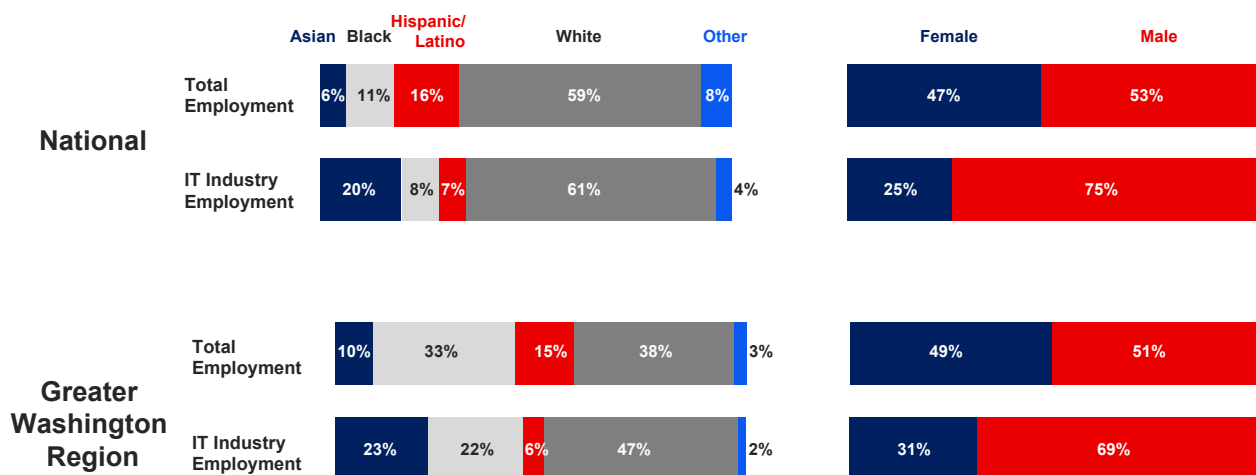
IDENTIFYING OPPORTUNITIES AND GAPS

In 2017, JPMorgan Chase partnered with ESG to conduct an analysis of the regional labor market, which helped guide the design of the K-16 IT pathways initiative. As part of the scoping work, ESG identified the biggest growth opportunities in the IT field. ESG further examined the education land-

scape across the region and determined that a certificate straight out of high school was not sufficient for a career in the IT field, identifying a need for a better cross-sector approach between secondary and postsecondary aligned to employer demand.

IT INDUSTRY

IT Industry



Note: Industry represented by the "computer and mathematics" occupational cluster in the American Community Survey. Source: ACS 2018 data



The ESG analysis also revealed racial and gender gaps in the region's IT industry, finding that black, Hispanic/Latinx and female candidates are all under-represented in IT jobs.⁹ To better reflect the Greater Washington community, ESG

identified a need to implement strategies to ensure that greater numbers of under-represented students obtain the skills and credentials needed to work in the Greater Washington region's IT industry.

BUILDING THE INFRASTRUCTURE FOR THE INITIATIVE

The goal of the initiative is to start with one industry — IT — and create a template that can be scaled and applied to other sectors, such as health care, following the grant period for the New Skills for Youth investment. The first year of the initiative in the Greater Washington region has focused on identifying and convening partners from each of the five jurisdictions, gathering input from stakeholders and refining metrics, developing detailed action plans, defining partner roles, and coordinating the administration of contracts and disbursement of funds to partners across each of the five jurisdictions.

Defining Partner Roles

Because this initiative is multi-faceted, GWP and ESG have goals and action plans, each jurisdiction has individualized action plans, and then there are cross-jurisdictional targets that are part of the broader regional collaboration network.


GWP, through the Capital CoLAB, is charged with developing a regional employer signaling system that will involve:

- Analyzing labor market data to identify IT occupations that are in high demand and offer a family-sustaining wage, as well as the commonly requested skills and credentials for those occupations;
- Convening regional employers to validate those labor market analyses and identify the knowledge, skills, abilities and credentials (KSACs) needed for entry-level IT roles; and
- Organizing and disseminating that information to school systems and their postsecondary partners for use in building demand-driven career pathways.

In fall 2019, the CoLAB put out a call for industry advisers to help identify the key KSACs needed within various career pathways so that educators can embed them into

curriculum. The CoLAB called for advisers in four key areas: cybersecurity, with occupations including information security analysts; data management/database administration, with occupations including computer and information research scientists and database administrators; networking, with occupations including network and computer systems administrators, computer network architects, computer user support specialists and computer systems analysts; and software development, with occupations including software developers (applications) and web developers.¹⁰

The CoLAB employer signaling system will draw from labor market information on high-demand IT occupations that will guide future KSAC development. Employer working groups will meet in person every January to review and refresh KSACs. The CoLAB will make the KSACs available to educators through a web-based system.



“Every grant has a beginning and an end. What you really want to do is build something that lasts beyond the grant period and has a broader impact beyond those specific dollars. If we can do it right, then we are creating a model for other industries.”
—Mayor’s Office Partner

With support from ESG, school districts and their postsecondary partners are:

- Leveraging the signaling system to assess current IT pathways to determine the degree of labor market alignment and needed changes;
- Transforming and/or build new demand-driven IT pathways that begin in high school and continue into and through higher education (“9-16 career pathways”); and
- Ensuring that the career pathways include opportunities to participate in industry-aligned work-based learning, earn early postsecondary credit and attain high-value credentials.

ESG will also facilitate a regional collaboration network that will:

- Foster stronger partnerships among districts, postsecondary institutions, employers and intermediary organizations across jurisdictions; and
- Design solutions to common challenges, such as identifying industry-recognized credentials to be embedded within career pathways, developing articulation agreements that award college credit for attainment of high-value industry-recognized credentials, and designing high-quality work-based learning that can be scaled across jurisdictions.

The K-16 IT pathways initiative includes five jurisdictions: Baltimore City; Fairfax County; Montgomery County; Prince George’s County; and Washington, DC. Each jurisdiction has a lead grantee. In Fairfax County, it is NOVA; the school district is the lead grantee in the other four jurisdictions. Each jurisdiction also has an executive committee, which includes community leaders, such as the superintendent of the school system, a representative from the mayor’s office or the county commissioner’s

office, and higher education presidents. In addition to the executive committee, a working group of staff across the partners/stakeholder groups is charged with carrying out the action plans. GWP and ESG point to the importance of the jurisdictional leaders’ support for and involvement in the initiative to send a clear signal to the staff charged with carrying out the action plans.

For example, in Washington, DC., the jurisdiction team includes District of Columbia Public Schools staff, state education agency staff, staff from the University of the District of Columbia, a representative from the workforce investment council, the deputy mayor for education, and partner organizations from throughout the city that coordinate work-based learning opportunities and apprenticeships. All sub-grants to the jurisdictions are administered through the Capital CoLAB.



Convening Stakeholders

The five jurisdictions began convening in spring 2019 with GWP and ESG to get to know each other, develop a common vision for the initiative, and learn about each jurisdiction’s strategies for carrying out the work. An important part of this initiative is listening to the needs of each stakeholder group, finding common ground, and developing a shared path for moving forward. Early convenings are helping on that front, giving stakeholders an opportunity to share needs and pain points. For example, GWP is using input from year one of the initiative to think more broadly about how to engage employers. Employers get asked about needed skills frequently and often give different answers, leading to educators getting mixed signals about priorities. GWP is streamlining that employer voice for educators to create meaningful signals that educators can use to align programming.

K-16 IT Pathways Initiative Jurisdiction Strategies¹¹

<p>Baltimore City</p>	<p>Strategy 1: Expand IT pathways in five high schools across the city using information from the employer signaling system.</p> <p>Strategy 2: Expand industry-aligned work-based learning opportunities within IT pathways.</p> <p>Strategy 3: Embed early postsecondary opportunities and high-value credentials within IT pathways.</p>
<p>Fairfax County</p>	<p>Strategy 1: Leverage the employer signaling system and gap analysis to identify needed changes to existing high-skill, high-demand IT and cybersecurity pathways.</p> <p>Strategy 2: Redesign IT pathways at Mount Vernon High School.</p> <p>Strategy 3: Ramp up career exploratory experiences.</p> <p>Strategy 4: Secure internship opportunities for every student concentrating in an IT pathway at a target school.</p> <p>Strategy 5: Implement in five other high schools modified career pathways that accelerate students through two-year IT degree programs.</p>
<p>Montgomery County</p>	<p>Strategy 1: Leverage data from the employer signaling system and IT pathways gap analysis.</p> <p>Strategy 2: Provide aligned work-based learning experiences throughout IT pathways.</p>
<p>Prince George's County</p>	<p>Strategy 1: Create a curriculum team and an IT Career Academy Advisory Board to lead the work of analyzing and translating employers' signals.</p> <p>Strategy 2: Develop a comprehensive IT academy at Largo High School.</p> <p>Strategy 3: Scale by infusing IT skills into the curricula of related career academies and add the Largo IT pathways to two other schools.</p> <p>Strategy 4: Increase the number of IT pathways students who participate in aligned, high-quality work-based learning experiences.</p>
<p>Washington, DC</p>	<p>Strategy 1: Leverage and expand current successful models, such as career academies, to increase the number of IT pathway completers.</p> <p>Strategy 2: Improve IT pathways through articulation agreements.</p>

Initial Analysis for Employer Signaling System and IT Pathways Alignment

In 2019, GWP produced a preliminary report on priority job opportunities in IT and is in the process of drilling down into specific occupations. Jurisdictions provided feedback on the preliminary analysis. The CoLAB also surveyed employers about IT roles requiring sub-baccalaureate credentials. ESG used the GWP findings as the basis for a gap analysis to look at the current IT pathways in high schools' "to-and-through" four-year programs to help jurisdictions understand whether or not they are focusing on the right IT pathways. Across the five jurisdictions, ESG found that IT pathways were generally aligned at a high level with priority opportunities in the Greater Washington region, with gaps primarily in cybersecurity and data analytics.

Project Management

On the project planning side, GWP and ESG refined metrics and timelines for the four-year initiative to better align with input stakeholders shared during the initial convenings in year one. As one example, there are now clear schedules for how often GWP will update the employer signals. Educators are not able to update curriculum at the pace of a constantly changing industry, so stakeholders coalesced around an annual update instead of a more frequent update originally proposed by GWP and ESG. GWP also spent year one negotiating contracts and distributing funds to support the numerous partners involved in each jurisdiction.

LOOKING FORWARD

The next large piece of work for the K-16 IT pathways initiative is to analyze what is being taught in IT pathway programs to determine if curriculum is aligned to employers' needs. GWP is leading the next phase to identify KSACs aligned to priority careers. In early 2020, the leadership teams from each jurisdiction will work with ESG to identify which program aspects are on track and which programs need to embed additional skills, workplace experiences and credentials. Typically this type of curriculum work is done in silos, but the infrastructure GWP and ESG have been building will leverage a cross-jurisdictional curriculum and alignment team.

GWP is also building out the work-based learning program. GWP is adding staff with expertise in work-based learning and is in the process of identifying intermediaries who are already working in the space to avoid duplication of effort. GWP learned that employers often do not have a history of hiring high school students, so they are prioritizing how to create meaningful work-based learning opportunities for youth in the region.

ACKNOWLEDGMENTS

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ENDNOTES

¹ Building the Tech Talent Pipeline, Launch Event, December 12, 2019.

² TalentReady: Building Pathways to Opportunity in the Capital Region, Kick-Off Event, April 11, 2019.

³ <https://data.ers.usda.gov/reports.aspx?ID=17826>.

⁴ Building the Tech Talent Pipeline, Launch Event, December 12, 2019.

⁵ For more information about GWP, see <http://www.greaterwashingtonpartnership.com>.

⁶ For more information about ESG, see <http://edstrategy.org>.

⁷ For more information about New Skills for Youth, see <https://www.jpmorganchase.com/corporate/news/stories/newskillsforyouth.htm>.

⁸ <https://www.jpmorganchase.com/corporate/news/pr/coalition-of-19-major-employers-commit-to-work-with-greater-washington.htm>.

⁹ TalentReady: Building Pathways to Opportunity in the Capital Region, Kick-Off Event, April 11, 2019.

¹⁰ GWP.

¹¹ TalentReady: Building Pathways to Opportunity in the Capital Region, Kick-Off Event, April 11, 2019.