

Public Policy Institute ||| March 16, 2016

NYS P-TECH

Q&A FOR BUSINESS PARTNERS

What is NYS P-TECH?

NYS P-TECH is establishing grade 9-14 career schools throughout the state. These innovative schools focus on a two-year college degree in addition to a high school diploma and mastery of professional skills. Each school is a local partnership among school districts, private sector companies and a community college. Students will also gain the workplace experience necessary to be first in line for STEM jobs.

Why should the business community become involved in this initiative?

The “skills gap” is a well-documented phenomenon that leaves millions of jobs unfilled in the U.S. In New York alone, approximately 350,000 jobs go unfilled¹ because employers are unable to locate workers qualified for middle skills jobs (those that require more than a high school diploma but less than a four-year degree).

These *industry-driven* NYS P-TECH partnerships allow businesses to play a direct role in addressing this skills gap, assuring that the program delivers requisite skills and experiences while providing students with mentors and on-site learning experiences. These partnerships give employers the ability to better develop and manage their talent pipeline.

How many schools are open under the program?

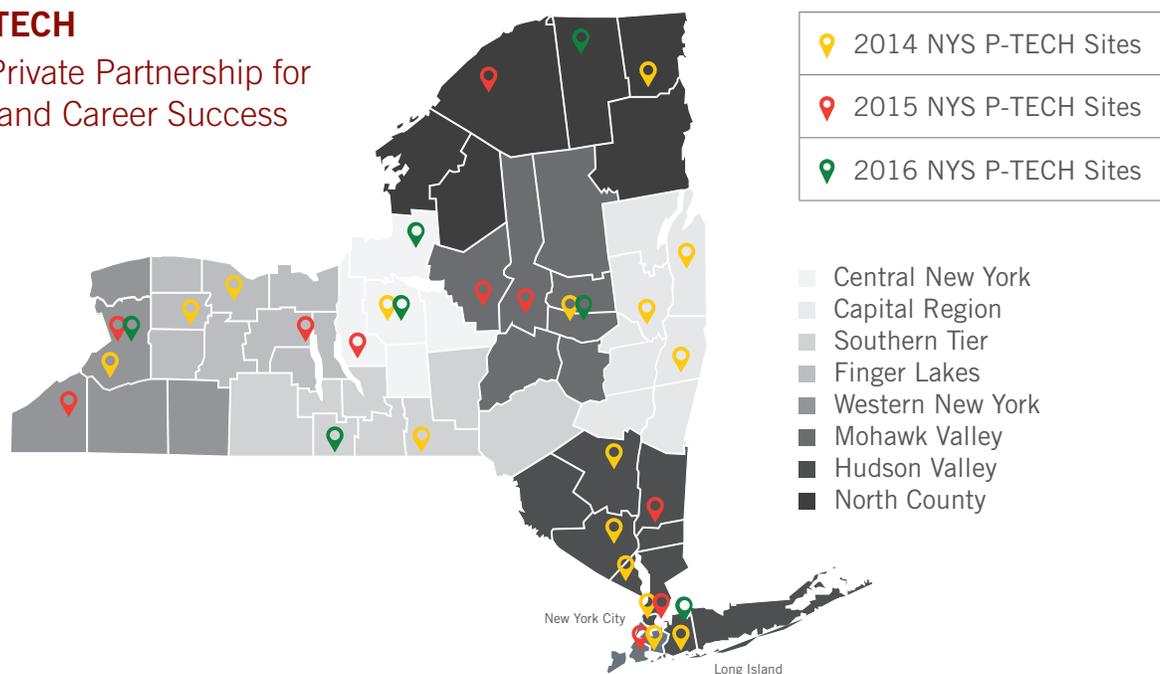
There are currently 33 NYS P-TECH partnerships that are receiving state grants. Sixteen statewide P-TECH schools opened their doors in September 2014, joining five additional P-TECH-model schools operating in New York City. Schools are structured after the flagship P-TECH school in Brooklyn—a collaboration between IBM, New York City Department of Education, City University of New York and City Tech—which opened in September 2011. Ten additional grant-winning partnerships opened in September 2015, and seven more are slated to open in September 2016.

Where are the NYS P-TECH schools located?

The schools represent all 10 economic development regions in New York. The following provides an overview of all schools currently operating, as well as the additional schools approved in November 2015 for their planning year and scheduled to open in September 2016.

NYS P-TECH

Public-Private Partnership for
College and Career Success



Capital Region

2014

Advanced Manufacturing Early College High School Program—Washington-Saratoga-Hamilton-Essex BOCES, Hudson Falls CSD leading a regional consortium, SUNY Adirondack and GLOBALFOUNDRIES. Focus: Advanced manufacturing

Clean Technologies & Sustainable Industries Early College High School—Ballston Spa CSD leading a regional consortium, Hudson Valley Community College, GLOBALFOUNDRIES, Cisco and TRC. Focus: Clean technologies

Troy Riverfront P-TECH—Questar III BOCES, Troy City SD, Hudson Valley Community College, GE Health Care, Regeneron and SMT Corp. Focus: Manufacturing/health

Central New York

2014

Syracuse P-TECH—Syracuse City SD, Onondaga Community College and the Manufacturers Association of Central New York (MACNY). Focus: Advanced manufacturing

2015

Auburn P-TECH—Auburn Enlarged City SD, Cayuga Community College and MACNY. Focus: Advanced Manufacturing

2016

Syracuse CSD, Onondaga Community College, Broome Community College, SUNY Upstate Medical Center, St. Joseph's Hospital Health Center and the Laboratory Alliance of Central New York. Focus: Health careers (clinical laboratory technician and health information technology/medical records)

Altmar-Parish-Williamstown CSD, Onondaga Community College, Novelis, Huhtamaki and the Fulton Companies. Focus: Advanced manufacturing (electrical engineering technology and mechanical technology)

“P-TECH in Brooklyn captured the attention of education and elected officials worldwide by proving that students, regardless of their preparation to date, could complete rigorous coursework and master the professional skills necessary for career success. Now that we have designed and opened 16 new schools serving every economic region of the state and a wide range of industries and careers, we have moved beyond a unique success to a relevant, effective model preparing thousands of students in New York State.”

—Robin Willner, Director, P-TECH Leadership Council

Finger Lakes

2014

Western New York Tech Academy—Genesee Valley Educational Partnership, Byron-Bergen CSD leading a regional consortium, Genesee Community College and Genesee County Economic Development Center (with a local consortium of businesses including Arkema Innovative Chemistry, Bonduelle, Clark Patterson Lee, Five Star Bank, Hodgins Engraving Co., Innovative Energy Systems, Liberty Pumps, M&T Bank, National Grid, Oliver's Candies, Oxbo International Corp., Sedgwick, Alpina, Gunlocke, West's Bookkeeping Services, SWBR Architect, Superior Group, FreedMaxick, Muller Quaker Dairy, Perry's Ice Cream, US Marine Corps and United Memorial Medical Center). Focus: Agribusiness

P-TECH Rochester—Rochester City SD, Monroe Community College, Rochester Community College and Monroe Community College Business Consortium. Focus: Information technology (IT)

2015

Finger Lakes P-TECH—Wayne-Finger Lakes BOCES, Geneva CSD leading a regional consortium, Finger Lakes Community College, Finger Lakes Advanced Manufacturers' Enterprise and Digital Rochester. Focus: Advanced manufacturing

Hudson Valley

2014

Excelsior Academy—Newburgh Enlarged City SD, SUNY Orange and IBM. Focus: IT

Hudson Valley P-TECH—Rockland BOCES, North Rockland CSD leading a regional consortium, Rockland Community College, Rockland Business Alliance and Rockland Economic Development Council (with a local consortium of businesses including SUNY IT, Avon, Fairway Testing, All Bright Electric, Hightech Security Services and Wick Arborists). Focus: IT, engineering and green building technology

Hudson Valley Pathways Academy—Ulster BOCES (with Sullivan, Dutchess, Orange and Sullivan BOCES), Kingston City SD leading a regional consortium, Ulster County Community College (with Dutchess, Orange and Sullivan Community Colleges) and Hudson Valley Council of Industry. Focus: IT and manufacturing

Yonkers P-TECH—Yonkers Public Schools, Westchester Community College, Fuller & D'Angelo and Yonkers Workforce Investment Board. Focus: Architecture and civil engineering

2015

Riverside P-TECH—Yonkers CSD, Westchester Community College, Verde Electric Corporation and the Yonkers Chamber of Commerce. Focus: Advanced manufacturing

E-TECH—Poughkeepsie City SD, Dutchess Community College and Central Hudson Gas & Electric Corporation. Focus: Advanced manufacturing/energy

Long Island

2014

Long Island P-TECH—Nassau BOCES, Uniondale UFSD (with Freeport Public Schools and Wyandanch UFSD), Farmingdale State College and Arkwin Industries (with a local consortium of businesses including APICS, ADDAPT, Long Island Forum for Technology and Farmingdale State College's STEM Diversity Summit). Focus: Mechanical engineering

2016

Hempstead UFSD, Nassau Community College, Lockheed Martin and Intralogic Solutions. Focus: Advanced manufacturing (information technology and electrical engineering technology)

Mohawk Valley

2014

Hamilton-Fulton-Montgomery (HFM) P-TECH—HFM BOCES, Gloversville Enlarged CSD, Fulton-Montgomery Community College, FM Chamber of Commerce and the Center for Economic Growth (with a local consortium of businesses including Townsend Leather, GLOBALFOUNDRIES, NBT Bank, Benjamin Moore, CISCO, Broadalbin Manufacturing, Nathan Littauer, Keymark Corp., Palio Ignite, Work Force Solutions, St. Mary's Health Care, Gloversville Sewing, Air Jet Technologies, Beech Nut Corp., Tetra Tech and Bouchey & Clarke). Focus: Business, IT, advanced manufacturing and health care

2015

Valley P-TECH—Herkimer-Fulton-Hamilton-Otsego BOCES, Herkimer CSD leading a regional consortium, Herkimer Community College, Mohawk Valley Edge, Mohawk Valley Applied Technology Corp. and King & King Architects. Focus: Quality assurance

P-TECH OHM—Oneida-Herkimer-Madison BOCES, Utica City SD leading a regional consortium, Mohawk Valley Community College and Mohawk Valley Edge. Focus: Advanced manufacturing and IT

2016

HFM BOCES, Canajoharie CSD, Fulton-Montgomery Community College, SUNY Cobleskill, Avanti Control Systems, CG Roxane, Empire State Health Solutions, Fulton Montgomery Chamber of Commerce, Goderie's Tree Farm, Gray's Garden & Greenhouse, Hu-Hill Farm Store, Hulten Speed Sports, Little Falls Veterinary Clinic, Randall Implements Co. Inc., RC Enterprises, Rockview Farms, Rogers Family Orchard, Seattle Family Farms, and Wemple and Edick's. Focus: Agriculture

"P-TECH has really helped me to become a more independent person... open(ed) up my eyes to really see what's in store, what's next, what it really is when you get out there, and how to prepare for it. It showed me how to be when I reach the next level, and I think that really changed my life rather than if I was to go to 'regular high school.'"

—3rd year student, Brooklyn P-TECH [excerpt from Rockland BOCES recruitment video]

New York City

2014

Business Technology Early College High School—New York City Department of Education, Queensborough Community College and SAP. Focus: Business IT

2015

City Poly—New York City Department of Education, CUNY, New York City College of Technology (City Tech), Building Trades Employers' Association of New York City and CH2M Hill. Focus: Construction skilled trades

North Country

2014

ADK P-TECH—Peru CSD leading a regional consortium, Clinton Community College, Clarkson University, ETS, Fujitsu, Bombardier, Nova Bus, Spencer ARL, Swarovski and Camoplast. Focus: Advanced manufacturing

2015

Northern P-TECH Academy—St. Lawrence-Lewis BOCES, Norwood-Norfolk CSD, North Country Community College, SUNY Canton, St. Lawrence Health System, Claxton-Hepburn Medical Center, Massena Memorial Hospital, United Helpers, Kinney Drugs and Northern Area Health Education Center. Focus: Health care

2016

Salmon River CSD, Franklin Essex-Hamilton BOCES, North Country Community College, Adirondack Health Institute, Northern Area Health Education Center, St. Regis Mohawk Tribe Education Services, North Country Workforce Development Board, Alice Hyde Medical Center, Citizens Advocates Inc. and multiple CBOs. Focus: Health careers

Southern Tier

2014

Southern Tier P-TECH—Broome-Tioga BOCES, Binghamton City SD leading a regional consortium, Broome Community College, Lockheed Martin MS2, Rockwell-Collins, Delta Engineers, Architect & Land Surveyors, P.C., Bothar Construction, Our Lady of Lourdes Memorial Hospital, Inc. and United Health Services Hospitals, Inc. Focus: Health-tech, IT and advanced manufacturing

2016

Elmira CSD, Greater Southern Tier BOCES, Corning Community College, Corning Incorporated, Hilliard, Cameron Manufacturing and Design, Hardinge, Vulcraft, Dresser-Rand, Southern Tier Custom Fabricators, Corning Hospital, Arnot Health, Chemung County Health Department and Hunt Engineers. Focus: Advanced manufacturing, IT

Western New York

2014

P-TECH Health Occupation Pathways to Employment (HOPE)—Lackawanna City SD, Erie I BOCES, Trocaire College and Catholic Health System. Focus: Health careers

2015

BE GREEN—Buffalo City SD, Alfred State College, TEAM (Technology, Engineering and Architecture Mentoring), Compliance Administrative Services of New York, Montante Solar, Montante Construction, Construction Exchange of Western NY, and the Construction Industry Education Foundation. Focus: Construction skilled trades

Western New York P-TECH STEM College and Career Academy—Erie 2 Chautauqua-Cattaraugus BOCES, Dunkirk CSD leading a regional consortium, Jamestown Community College, Chautauqua County Industrial Development Agency, the Manufacturers Association of the Southern Tier and the Chautauqua Chamber of Commerce. Focus: Advanced manufacturing

2016

Buffalo City SD, Erie Community college and Technology, Engineering and Architecture Mentoring (TEAM) through the Compliance and Administrative Services of New York (CASNY) and SolarCity Inc. Focus: Sustainable technologies

How well are students doing in the program?

The legacy cohort—those students who entered Grade 9 at the Brooklyn P-TECH school in September 2011—are achieving impressive milestones. Eleven students have already graduated with both a high school diploma AND an AAS degree in just four and a half years. These students are working at IBM or entering a four year competitive college program. There were no high school dropouts from the first class and dozens of students will complete their AAS degree within the six year schedule, a rate that far exceeds the average community college completion rates. The NYS P-TECH first cohort of schools continues to model this success, serving a population that is more disadvantaged than the average for their school districts and completing high school and college courses and passing Regents exams at a higher rate.

How do the new partnerships compare to the original P-TECH school?

All partnerships must include the following: a six-year curriculum culminating in an industry-recognized AS or AAS; work-site visits and activities leading to internships; mentoring; incorporation of academic, technical and workplace skills; and several other structural components. Aside from these stipulations,

innovation is encouraged so that partnerships can develop a program that suits the needs of the target industry and community.

There are a number of industries represented at the different schools, including: advanced manufacturing, clean technologies, IT, agribusiness, green building technology, engineering, health care and architecture.

Curriculum is back-mapped to ensure students are thoroughly prepared to succeed in real jobs. They are in a professional career-ready environment beginning on their first day at a P-TECH school, and begin taking college courses no later than grade 10.

How are the partnerships funded?

A total of 33 partnerships have been funded through the state budget.

What is the cost to the private sector partner?

There is no financial contribution expected of business partners involved in NYS P-TECH partnerships. However, employer participation in the program design is essential to assure that students will master all of the skills that are required for successful employment. Additionally, the work-based learning component — which is integral to the success of the students — emphasizes mentoring and worksite visits (which begin as early as Grade 9) and internships, all of which take planning and time. Employers are advised to plan out their participation in the full range of work based learning, a six-year commitment, in advance. The Business Council and NYS P-TECH Leadership Council provide guidance on how best to design and implement mentoring programs, workplace visits and internships to meet student and employer needs and comply with relevant regulations. With the support of Citizens Bank, a new Work Based Learning Toolkit is available.

“[Our intern] is a pleasure. He is extremely motivated, driven, and asks the right questions. He goes above and beyond expectations, always offering to lend a hand and curious to know about the additional work our team does. We are constantly looking to give him more responsibility as he is proving to be a valuable asset to any team!”

—IBM P-TECH supervisor discussing 3rd year intern

What does the six-year mentoring component look like?

There are many ways to provide mentoring and guidance to students in the program. The following is a basic guide to the job of a mentor in each year:

- » **Year 1:** Mentor provides exposure to the workplace and careers in the school’s focus areas
- » **Year 2:** Mentor supports workplace learning projects
- » **Year 3:** Mentor offers tailored college and career guidance; in the summer, mentor supports internships
- » **Year 4-6:** Mentor supports internships and continues to offer college and career guidance as students approach graduation

IBM has developed a secure platform for online mentoring, MentorPlace, that is available free of charge to all NYS P-TECH partnerships. The platform connects registered mentors to students using activities that correspond to classroom lessons². Contact Robin Willner for more information on how to participate as a mentor.

Are private-sector partners all “big business?”

No. In fact, many of the partnerships feature a consortium of small- and mid-sized business.

Can I join an existing partnership?

Yes. Please contact Robin Willner for more information.

Why should my company get involved in this education initiative?

NYS P-TECH offers businesses an opportunity to assure that students are prepared with the skills necessary for success in real world jobs. The success of these partnerships between schools, community colleges and employers will lead to the success of local businesses by building a robust talent pipeline and fostering economic growth.

Who should I contact for more information?

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¹ Source: "Ensuring the Central New York Region's Global Success" (April 2014). ReadyNation/America's Edge

² According to IBM (www.ibm.com/ibm/ibmgives), more than 6,000 employees provide academic assistance and career guidance to over 7,000 students

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