appalachia partnership initiative progress report

april 2017

Appalachia Partnership Initiative

MAKING OUR NEW ENERGY ECONOMY WORK

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a message from the partners

In the past decade, a dynamic shift has taken place in the tri-state region of western Pennsylvania, eastern Ohio, and northern West Virginia. Once home to coal and steel, our region is re-emerging as a leader in advanced manufacturing, energy production, health care, higher education, and technology. In order for our region to continue to grow—and to secure opportunities for local citizens and communities—it's critical to invest in programs now that will arm our students and workforce with the education and skills needed to keep pace with the transformation.

This is the regional challenge of our time, and it represents an opportunity for public- and private-sector leaders to work together to secure our legacy.

Founding partners of the Appalachia Partnership Initiative, left to right: Dennis Yablonsky, CEO of the Allegheny Conference on Community Development; William P. Getty, President of Claude Worthington Benedum Foundation; Stacey Olson, President of Chevron Appalachia LLC; and Gregg Behr, Executive Director of The Grable Foundation

The Appalachia Partnership Initiative (API) was born out of this opportunity. Launched in 2014 with a five-year, $20 million funding commitment from Chevron, API is a partnership guided by the shared vision of the Allegheny Conference on Community Development, Claude Worthington Benedum Foundation, Chevron, and The Grable Foundation. Our goal is to support education and workforce development programs that create long-term, sustainable economic opportunity for residents of the region. Together we provide not only funding, but also policy leadership, access to resources and information, volunteers, and recognition for programs and partners working to achieve our shared goals.

This report highlights progress made by the API through 2016. In this report you'll learn about the people, programs, communities, and projects that we support. We are very proud of what we have accomplished so far, and we look forward to making even more of an impact in the coming years.

founding partners

Allegheny Conference on Community Development
Founded in 1944, the Allegheny Conference on Community Development (ACCD) is one of the nation's leading economic and community development organizations, combining strong private sector leadership with commitment from public sector partners. The strategic focus is creating a more competitive economic climate and marketing the Pittsburgh region for investment, job creation, and talent. As an API partner, ACCD is the economic development influencer and well-connected to issues, efforts, and regional business and policy leaders.

Chevron Corporation
Chevron is one of the world's leading integrated energy companies, with subsidiaries that conduct business worldwide. The company is involved in virtually every facet of the energy industry. Chevron explores for, produces, and transports crude oil and natural gas; refines, markets, and distributes transportation fuels and lubricants; manufactures and sells petrochemical products; generates power; provides energy efficiency solutions; and develops energy resources, including biofuels. Chevron's business unit headquartered near Pittsburgh is dedicated to developing natural gas from shale in the Appalachian basin.

The Claude Worthington Benedum Foundation
The Claude Worthington Benedum Foundation has served West Virginia and Southwestern Pennsylvania since it was established in 1944 by Michael and Sarah Benedum. A leader in the oil and gas business, Michael Benedum amassed a fortune, ranking him in his day among the 100 wealthiest Americans. This private foundation supports strong education and workforce programs in the API footprint.

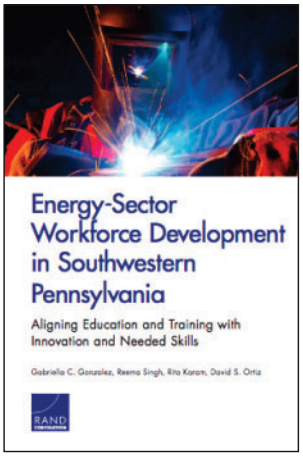
The Grable Foundation
The Grable Foundation is a private, charitable foundation dedicated to improving the lives of children and youth. Focused largely in Pittsburgh, the foundation awards grants designed to support high-quality early childhood education, play, and school readiness; school leadership, educator practice, and enhanced learning in public school classrooms; out-of-school time support; and community-based learning networks.

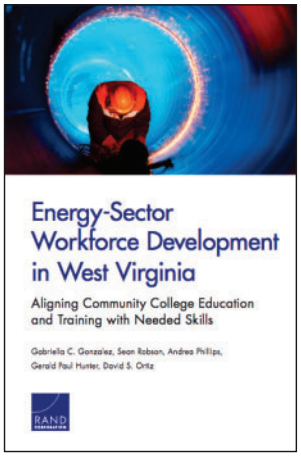
research & analysis

The RAND Corporation
The RAND Corporation is the independent research and analysis lead for the API, providing objective evidence to help the initiative assess progress.

For more than six decades RAND has used rigorous, fact-based research and analysis to help individuals, families, and communities throughout the world to be safer and more secure, healthier and more prosperous. As a nonpartisan organization, quality and objectivity are the two core values, and RAND is widely respected for operating independent of political and commercial pressures. Based in Santa Monica, California, RAND has a significant Pittsburgh presence, addressing public policy issues of education, safety, health, and economic viability.

relevant research publications





www.rand.org/labor/american-worker

www.rand.org/labor/research_areas/workforce-development.html

"As the independent evaluation and monitoring lead for the Appalachia Partnership Initiative, RAND is providing objective analysis to help the initiative assess its progress toward its goals. Specifically, RAND is producing five annual snapshots of the state of the workforce and K-12 education in 27 counties in the tri-state region, as well as assessing how well the programs funded by the Appalachia Partnership Initiative work collectively toward its established goals. Our work can help improve decision-making on the key education, training, and employment issues in the region."

— Susan Everingham
Director of RAND Corporation
Pittsburgh office

our purpose

The Appalachia Partnership Initiative is guided by recent research that emphasizes the need to prepare the region's future workforce to support the growing energy and advanced manufacturing industries. This research informed the API's mission to increase access to science, technology, engineering and mathematics (STEM) education, workforce training, and career awareness.

A 2012 study funded by the Allegheny Conference on Community Development surveyed 37 businesses across 10 local counties in the greater Pittsburgh region and found that these companies planned to make 7,000 new hires by 2020. The study also found that a shortage of STEM-based skills in the local workforce could prevent companies from filling those jobs.

Two years later, a Carnegie Science Center report commissioned by Chevron found there is little understanding of the importance of STEM education, especially in rural areas. Some parents and business leaders were either unfamiliar with STEM as a K-12 education focus or saw STEM as relevant only for students planning to attend four-year colleges.

A third study, *Inflection Point*, commissioned by the Allegheny Conference on Community Development in 2016, provided additional data on regional skills gaps. For example, the study found that energy and advanced manufacturing employers will need to fill 5,000 job openings annually due to an aging workforce, and it highlighted the seven fastest-growing industry-related occupations in the region through 2025:

- Industrial machinery mechanics
- Computer-controlled machine tool operators
- Machinists
- Mechanical engineers
- Petroleum engineers
- Heavy- and tractor-trailer truck drivers
- Installation, maintenance, and repair workers

"The region's demographics, coupled with the increasingly skilled nature of high-demand occupations, will require not only upskilling of incumbent workers but also new employer and educator partnerships to ensure the region's future talent has the technical, academic and behavioral skills that will be required."

— Inflection Point, p. 12

This research is publicly available. Links to studies and references are provided at the end of this report.

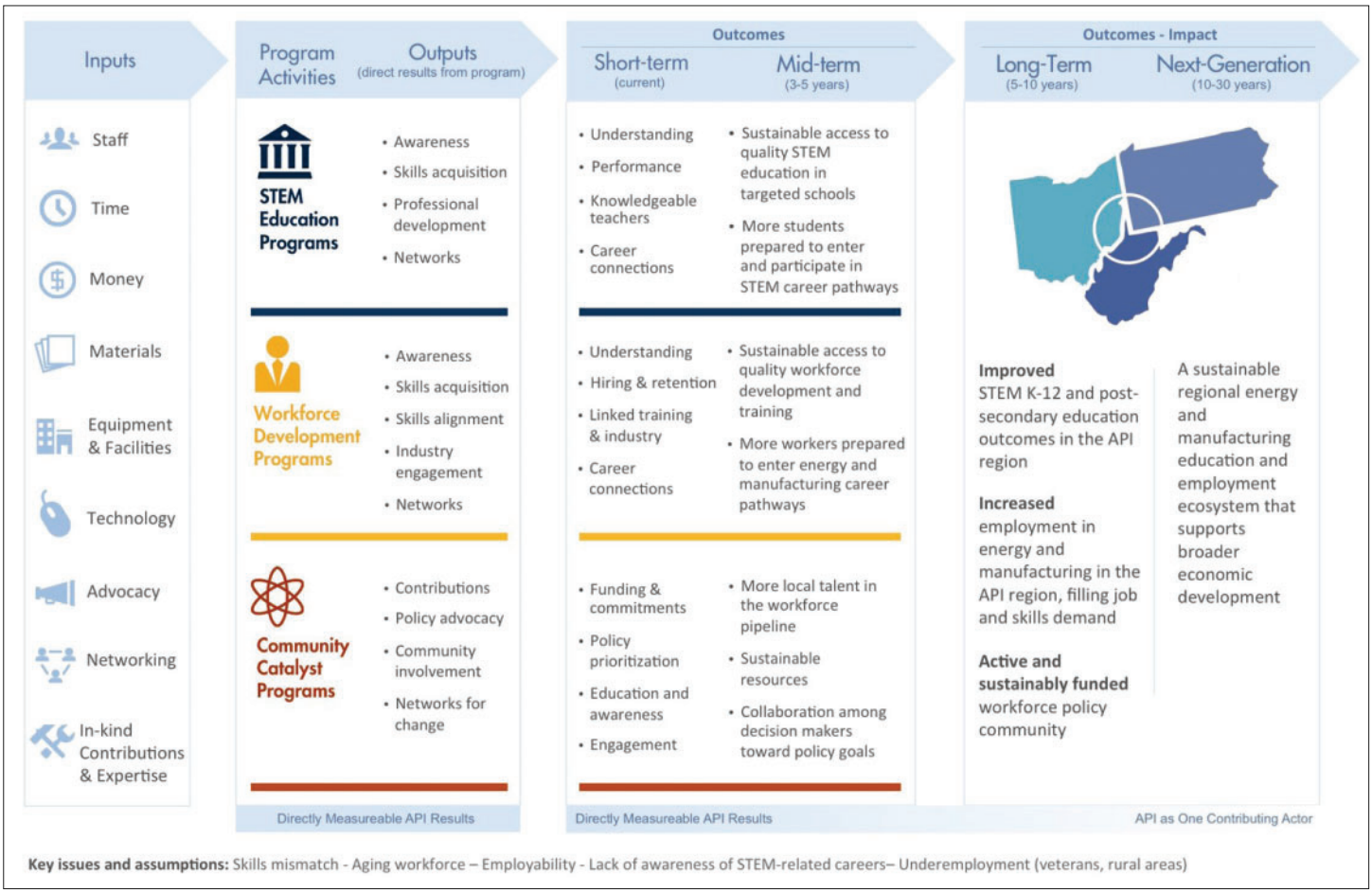
our approach

We believe collaboration drives lasting change, and our approach goes beyond simply providing funding. From day one, the API partners listened to regional stakeholders and applied research to guide our decisions. Our strategy is to engage, mobilize, and catalyze a community of public- and private-sector leaders in education, workforce development, business, non-profit foundations, and government to work together to create multiple pathways for residents to access education, training, and career opportunities.

The Strategic Framework describes how API leaders expect the programs we support to propel improvements in K-12 STEM education, workforce development, and collaborative networks.

27-county API focus area

API strategic framework



advancing STEM education

Carnegie Science Center

Chevron Center for STEM Education and Career Development

This sponsorship was launched in 2011 to enhance K-12 STEM education by fostering great teaching, inspired learners, collaboration, and a committed community. The Chevron STEM Center provides content, events, programming, in-school visits, and online resources.

Student Energy Summit

The Summit is an annual two-day event that introduces middle and high school students to topics related to energy use and consumption. The goal of the program is to increase student interest in STEM-related energy issues.

Grand Slam Science On the Road

This program provides a hands-on, multimedia experience that teaches K-8 students the concepts of physics through baseball. Each session at a school includes a 45-minute assembly followed by a 45-minute interactive experience.

"The Appalachia Partnership Initiative is dedicated to improving the lives of children and youth. At The Grable Foundation, we always look to partner with others to advance life prospects for young people, and we are pleased to collectively support high-quality STEM learning that might open up horizons for students regionally."

— Gregg Behr,
Executive Director,
The Grable Foundation

Children's Museum of Pittsburgh

Explore Making and Annual "Maker Faire"

These two programs are part of the Maker Movement, and they feature hands-on learning programs designed to increase interest in making among first grade students in 32 elementary schools within the API footprint.

Building the West Virginia Maker Network

Children's Museum of Pittsburgh's MAKESHOP team aids the development of seven new makerspaces across West Virginia by providing technical assistance, necessary supplies, and honors for participation.

Fab Labs

Fab Labs are digital fabrication laboratories that provide K-12 students and adults a platform for innovation and a hands-on STEM learning experience. The Fab Labs include 3D printers, laser cutters, computers/software, ShopBot CNC routers, electronics workbench, robotics, mini-mill/3D scanners, sewing/embroidery machines, projectors, and documentation cameras. API partners provided funding to support both a stationary fab lab and mobile fab lab unit in Pittsburgh and Fayette County, PA.

West Liberty University in West Virginia

Nearby Nature

This program allows students in grades 8-12 to use CREATE Lab technology to explore environmental science in natural and indoor settings.

Collaboration with Jason Learning

Jason Learning is a national multimedia STEM education program for K-12 students and educators. West Liberty University partnered with Jason Learning to bring programs to five school districts in the northern panhandle of West Virginia and southwestern Pennsylvania.

Project Lead the Way

Curricula and Professional Development

Project Lead the Way (PLTW) is a nonprofit organization providing K-12 STEM learning materials and teacher professional development to public, private and charter schools throughout the nation. PLTW offers *Launch* for K-5 students; *Gateway* for middle school students; and *Engineering, Biomedical Science, and Computer Science* for high school students. API partners currently support 65 programs in 57 unique schools.

WQED

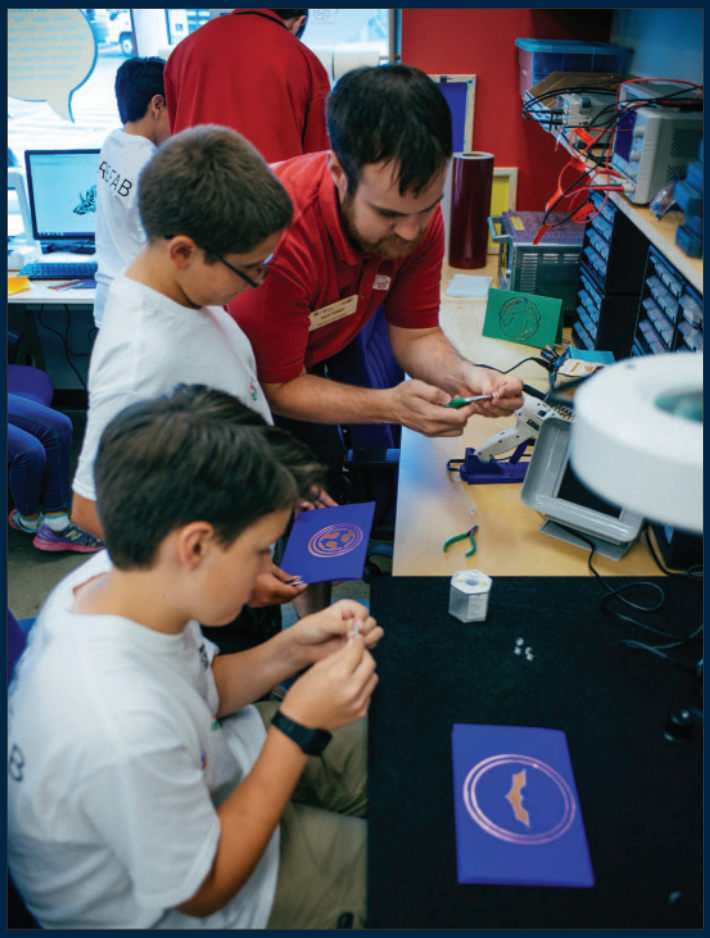
Inquire Within Rural Library Programs

Inquire Within empowers librarians to create innovative programming using research-based, parent-trusted content from PBS. WQED works with local and national library partners to create and implement educational public media using PBS-themed curricula. In seven rural community libraries supported by API, librarians choose from a menu of STEM, early literacy, and PBS's science- and math-based children's shows.

Education Alliance

STEM Network Schools

The Education Alliance selected eight West Virginia schools to receive assistance for three years to develop in-school STEM programs.



Students experience the Fab Lab at the Carnegie Science Center in Pittsburgh.

reach of API STEM programs

increasing technical skills

Advanced technical skills can lead to higher-paying, rewarding jobs. These API programs arm students and adult learners with career awareness, technology, and training in energy and advanced manufacturing.

Catalyst Connection

Explore the New Manufacturing Expansion

This project has multiple objectives: (1) to support internship and apprenticeship opportunities for the local manufacturing industry; (2) to provide professional development to teachers interested in teaching their students skills for the manufacturing industry, such as project-based learning; and (3) to increase student interest in the manufacturing industry.

Energy Safety Passport

Training Program and Certification

Led by Pittsburgh's Energy Innovation Center with support from Chevron and other industry operators, the Energy Safety Passport (ESP) training delivers a standardized, entry-level safety and environmental awareness program for all oil and natural gas producers and business partners in the region.

"Catalyst Connection's work with the API partners strengthens classroom offerings by introducing students to real-life workplace learning. It's often difficult for students to imagine how the science, technology, engineering and math they learn in the classroom connects to real jobs and careers, particularly in manufacturing where technology is changing everything. We see our work as creating job awareness by engaging students in hands-on projects with local manufacturing companies to help them visualize their futures."

— Petra Mitchell, President and CEO Catalyst Connection

Southwest Training Services

Employment Service with focus on Miner Retraining

Southwest Training Services is a workforce development agency that provides education and training for dislocated workers and career guidance for youth. Funding is specifically used for dislocated workers from the energy and manufacturing industries within Washington, Greene, and Fayette counties in Pennsylvania who have expressed interest in pursuing advanced technical degrees.

Service to Opportunity

Veteran's Initiative

Service to Opportunity is an employment website connecting veterans to energy and manufacturing jobs in the Pittsburgh region. The website helps veterans build a resume that translates military experience to civilian experience and provides a list of jobs that match each user's skills and interests.

Central Greene School District

Natural Resources Course

This course provides students with a foundation in the natural gas industry through classroom and field experiences with a focus on geological aspects of the industry as well as safety procedures and OSHA regulations. This career-focused program provides an introduction to geology, environmental science, engineering, and physics, as well as a hands-on focus on safe-working habits, recognition of hazardous situations, excavation safety, and Commercial Driver's License training.

Students training at a ShaleNET program at Stark State College in North Canton, Ohio.

ShaleNET

Technical Training

ShaleNET is a public-private partnership among employers in the energy sector, local communities, and technical colleges to provide training to develop a local workforce in energy and advanced manufacturing. API support for ShaleNET includes scholarships and grants for curricula development, equipment, and instructor training at Westmoreland County Community College and Penn College of Technology in Pennsylvania, Stark State College in Ohio, and Pierpont College in West Virginia.

"I took the Natural Resource course because I believed Mr. Justin Golsky to be a superb teacher. However, that is not the only reason I took this course. I also believed this great class could benefit me tremendously in the future. I have had many friends take this course when they were in high school. Some of these students were able to walk on to the pipeline and obtain a position. Other students who took this course decided to go to college and get a degree pertaining to this field. I also had a neighbor go to WVU for a degree in this field and he became a petroleum engineer making a great living. I believe that this course offers great skills and will help me build a career for myself."

— Thomas Heldreth, Central Greene School District student

reach of API workforce development programs

383
participants receiving API scholarship assistance

77
instructors receiving professional development

100
companies participating in workforce programs

768
veterans and transitioning workers served

largest collective investments

Since 2014, the API partners provided funding for the following STEM and workforce programs.

Project Lead the Way $2.8 mm	Children's Museum of Pittsburgh and programming expansion to WV $980,000	West Liberty University Create Lab $265,000
Fab Labs in Pittsburgh and Fayette County $2.6 mm	Allegheny Intermediate Unit and Intermediate Unit 1 STEAM grants $770,000	Southwest Training Services $177,000
Carnegie Science Center $1.75 mm	Remake Learning Network $675,000	The Education Alliance, WV $152,000
ShaleNET scholarships and programming $1.7 mm	Catalyst Connection programs $424,000	Central Greene School District Natural Resources Course $125,000

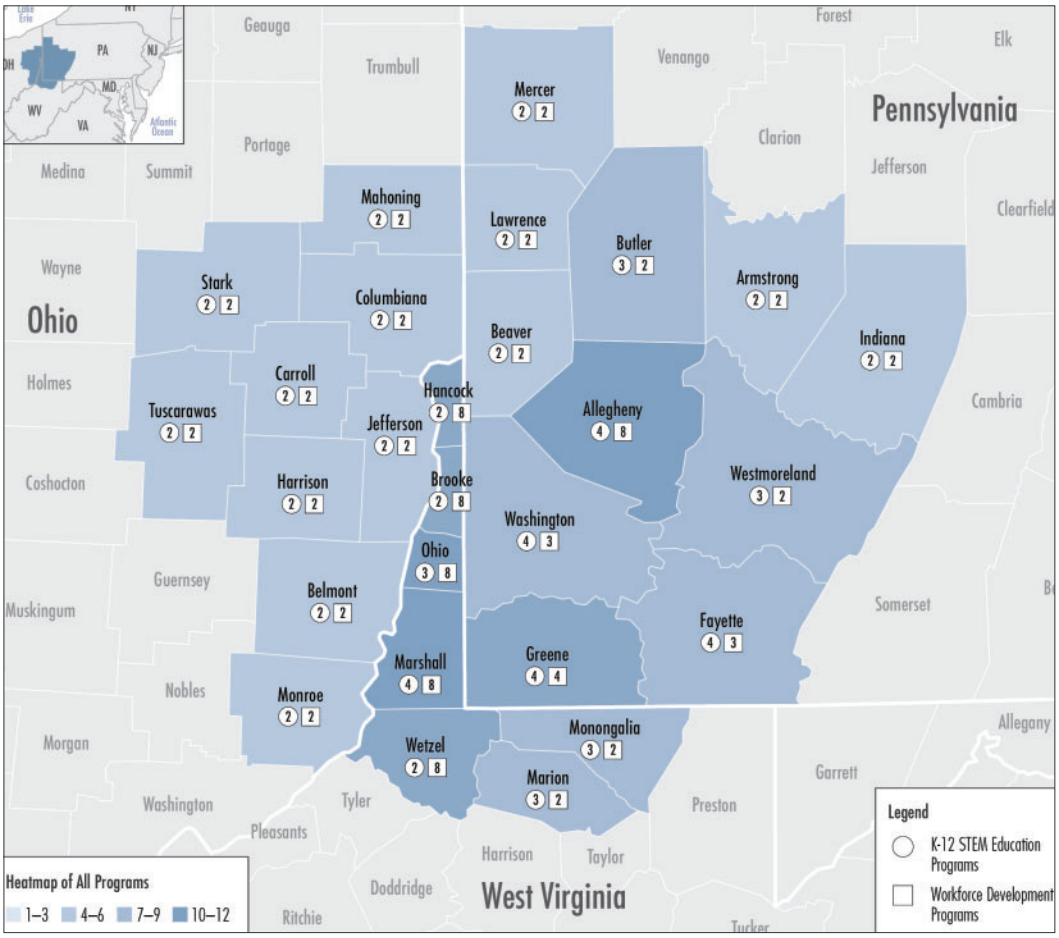
reaching rural communities

A key strategy is to bring innovative teaching and learning tools from the Pittsburgh area to surrounding rural communities.

The energy and advanced manufacturing renaissance in our region is largely taking place in rural areas outside of Pittsburgh. These new job opportunities often require skills and training that have not always been accessible to residents of these communities. By bringing technology and expertise to the region, we hope all communities will benefit.

87
schools

5
post-secondary institutions



The map to the right indicates the number of programs funded by API that reach residents in urban, suburban, and rural communities across 27 counties.

"The Benedum Foundation is committed to improving the quality and relevance of career education. We have a long history of supporting rural communities - especially in West Virginia - and Chevron's commitment to these areas makes us natural partners. We believe our combined efforts are making an important contribution to small towns and rural communities in the tri-state region by offering unique assistance to educators regarding the real-world demands of the workplace."

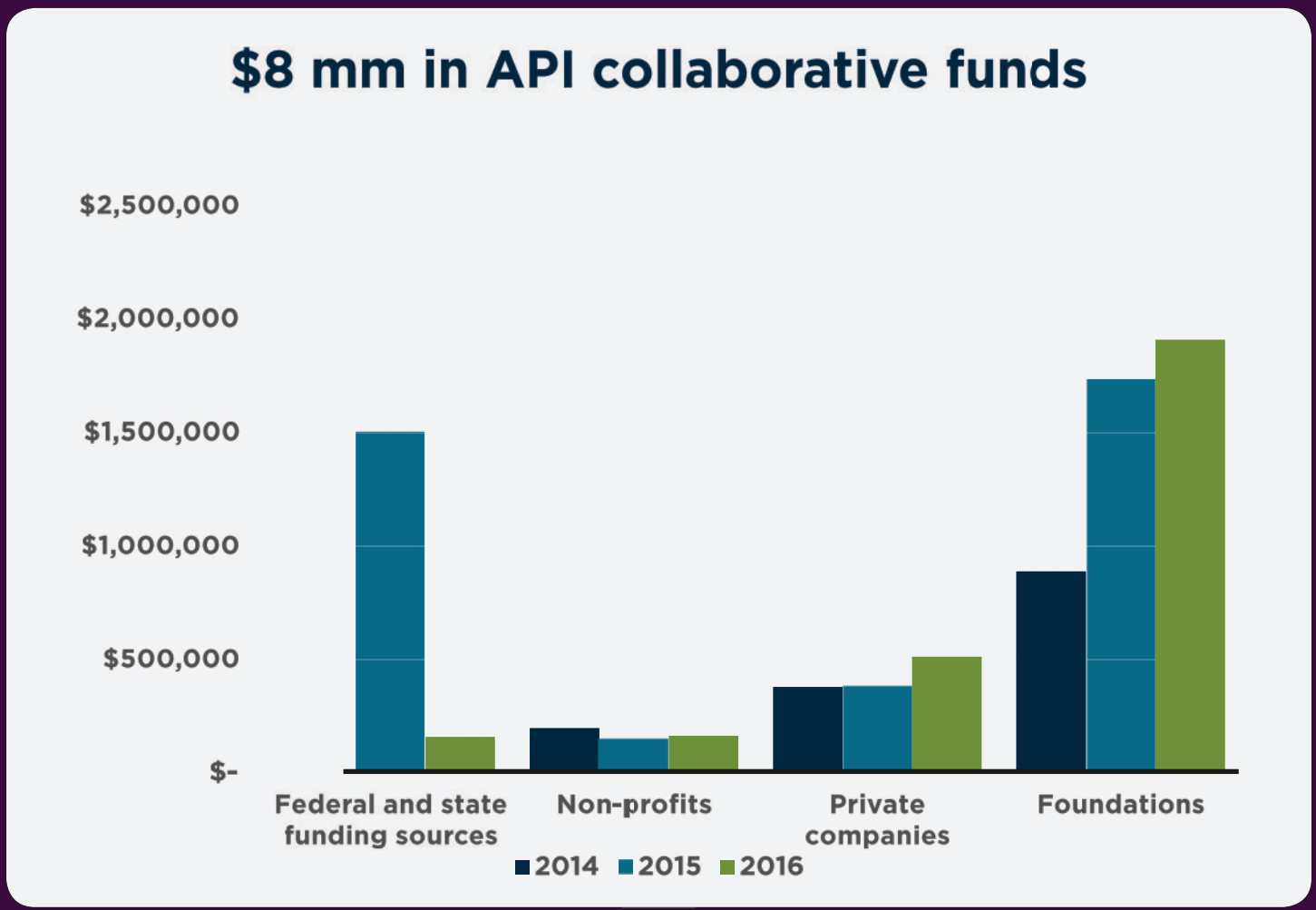
— James V. Denova, Vice President, Claude Worthington Benedum Foundation

partnering for the future

The Appalachia Partnership Initiative hopes to serve as a catalyst for regional cross-sector collaboration, and we invite other corporations, foundations, and public organizations that share our vision to join efforts to maximize economic opportunity for residents of our region.

Since 2014, Chevron has provided $12 million to the API, and an additional $8 million has been invested by the API partners as well as eight private companies, five non-profits, and two public funding sources. However, this regional collaboration goes well beyond dollars to include connecting students, teachers, and workers to additional resources; contributing volunteer time and expertise; evaluating the impact of our efforts; and bringing visibility to education and training.

"While Chevron's commitment to the Appalachia Partnership Initiative represents one of the company's largest social investments, our contribution goes beyond funding alone. We also dedicate time, expertise, and volunteers to support programs that we hope will help residents of our operating region thrive for generations." — Stacey Olson, President, Chevron Appalachia, LLC



references and studies

Inflection Point: Supply, Demand and the Future of Work in the Pittsburgh Region (2016)

www. alleghenyconference.org/PDFs/Misc/InflectionPoint_May2016.pdf

Work to Do: The Role of STEM Education in Improving the Tri-State Region's Workforce (2014)

www.carnegiesciencecenter.org/stemcenter/stemcenter-work-to-do-the-role-of-stem-education/

Workforce Analysis Report: Energy Sector Jobs in Greater Pittsburgh (2012)

www.alleghenyconference.org/PDFs/Misc/

Appalachia Partnership Initiative

www.appalachiapartnership.org

Students explore tools such as laser engravers, vinyl cutters and 3-D printers during the launch of the stationary and mobile Fab Lab units at the Intermediate Unit 1 in Fayette County, PA. The site is frequently open to the public after school hours.

is proudly supported by Chevron

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