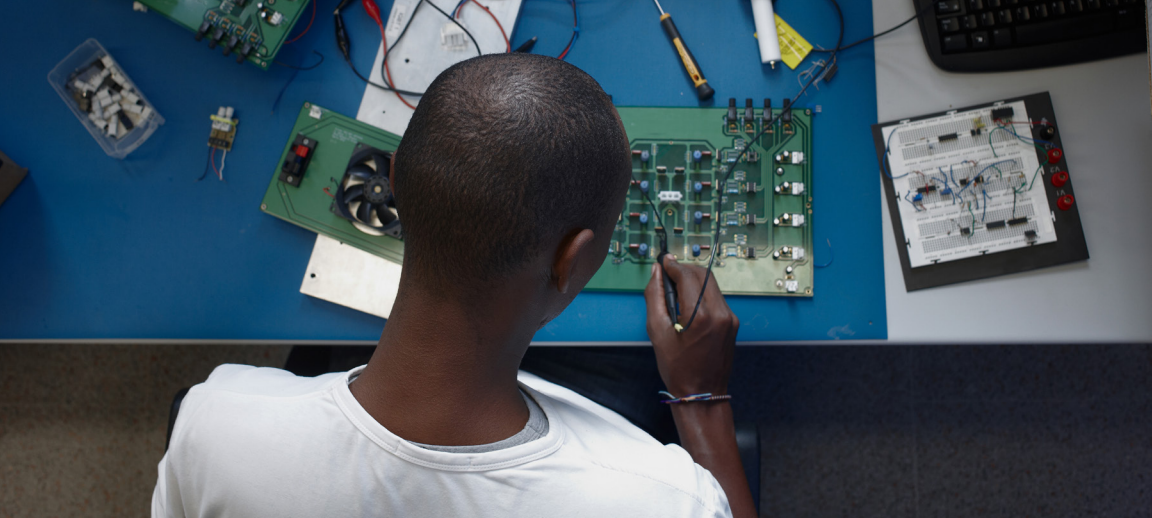


Smart businesses
don't worry about
the STEM pipeline.

They build it.



BE FUTURE
READY



In a fast-paced and ever-evolving global economy, STEM skills are essential in gaining a competitive advantage across all industries. Workforce development trends continue to emphasize growing the STEM talent pipeline, as 2.4 million STEM jobs still remain unfilled. STEM occupations out earn non-STEM jobs by 12-30% across all education levels – with engineering alone predicted to add 140,000 new jobs by 2026.*

NAF is addressing this challenge by transforming high school education, because when students can see the connection between the classroom and their future career options, they are put on a path to success.

By bringing education and business together, NAF is creating a skilled and diverse STEM talent pipeline. Together, we can close the skills gap and create a future ready workforce.

In the Classroom

NAF's rigorous curriculum, created in partnership with industry professionals, is designed around projects that help students acquire valuable workplace skills and begin building a viable career path. NAF's instructional practices foster cross-curriculum integration so students can make connections across subject areas.

Courses begin with the fundamentals and principles of STEM disciplines, and then progress to provide in-depth content in the fields of electronics, biotech, civil engineering, anatomy, global health, computer programming, web design, and more. Curriculum partners include Project Lead the Way, STEM 101, and Paxton/Patterson.

NAF also approves programs of study that align with NAF's certification standards and the federal career clusters, enabling local school districts to meet the needs of their community, as well as district and state requirements.





In Practice

NAF partners with business professionals and volunteers, who provide students with work-based learning experiences through career awareness, exploration, and preparation activities such as resume writing, worksite tours, job shadows, mock interviews, and paid internships. These activities help students gain the skills and knowledge needed to make informed choices about their futures.

Optum is a leading health services and innovation company dedicated to helping make the health system work better for everyone. Optum hosts NAF Future Ready Labs, an innovative internship concept. Through a multi-week experience, groups of interns complete a project of value on behalf of a corporate partner. Interns have developed tools – including a website, an app, an in-home device, a PSA, and specialized classes for seniors – to encourage customers to use the company's services. They also used a Human Centered Design process to create prototypes for recommending solutions for people suffering with low back pain.



In Practice

Verizon participates in various activities to engage high school students in STEM, including internships.

Interns gain experience in coding, data analytics, cloud strategies, software development, robot process animation, and more. An intern in California had the opportunity to work with electrical engineers on the Radio Frequency Design team and learn how a 4G LTE network is designed. Verizon also provides remote opportunities for students to learn about quality assurance and process improvement. Students create a mock business and website and present it to Verizon executives. Verizon has also co-hosted NAF Future Ready Labs, in which interns worked on projects to improve traffic efficiency in New York.

Verizon's Senior Vice President of Technology & Product Development, Nikki Palmer, is Vice-Chair of NAF's STEM Advisory Committee – developed to address the growing role that science, technology, engineering, and mathematics now play in the nation's economy.



In Practice

Lenovo offers many ways for its employees to engage with NAF students. Through virtual and in-person events, employees share their experiences students in IT and STEM.

Since the 2014-15 school year, Lenovo has helped enable the next generation of developers and entrepreneurs through the Lenovo Scholar Network. The mission of the initiative is to encourage high school students' interest in STEM careers by providing them with an innovative curriculum centered on mobile app development and delivery. Students design and build apps to address a community challenge, then develop a strategy to bring the apps to market, and offer them for download through the Google app store. Since its inception, more than 18,000 students have participated in the Lenovo Scholar Network's mobile app competition.



In Practice

In 2016, NAF and **World Wide Technology** (WWT) partnered to extend NAF's work through a strategic and collaborative project in St. Louis. As St. Louis' signature development investors, WWT opened the doors to a community that would greatly benefit from what NAF had to offer. NAF and WWT created the Future Ready Promise - St. Louis, which highlights the shared goals of minimizing the skills gap in STEM, addressing the lack of diversity in technology, and tackling youth unemployment and disengagement. After successfully hosting their first NAF high school interns, WWT committed to expanding their impact by becoming a NAFTrack Certified Hiring partner.

There are currently NAF academies in the Jennings and University City districts in the following themes: engineering, health sciences, information technology, and finance. With WWT's support, students in the St. Louis area are receiving more opportunities to build successful careers.

Daniel Ansher, 2013 Alumnus Software Engineer, Amazon



At the end of my NAF experience, I received an email from my teacher advertising a summer program at Google called the Computer Science Summer Institute (CSSI). It was a three-week program aimed at inspiring diverse students to pursue a computer science education by designing and building an application alongside full-time engineers in the field. Following high school graduation, I was accepted and participated in CSSI at Google's Cambridge office. Little did I know, the resources and network I had built during that summer would enable me to fast track acceptance into a three-month engineering internship at Google the following summer.

Hungry for more tech experience and curious about retail disruption via the e-commerce space, I later interned at Amazon in Seattle, Washington. During that time, I attended the Georgia Institute of Technology in Atlanta and graduated in 2017. This experience ultimately led me to accept my current position with Amazon in Los Angeles, California.

In my current job as a software engineer, I design, build, and scale Amazon's internal products for Prime Video. Working alongside key global stakeholders ranging from product managers to catalog specialists, our team uses machine learning techniques to automatically detect and correct defects in millions of TV shows, movies, and channels in order to improve content quality worldwide.

KaMar Galloway, 2008 Alumnus
Program Manager, Applied Digital
Skills & CS First, Google, Inc



I discovered a passion for technology at 13. Today, I'm incredibly fortunate that I get to share that with young students through my work at Google – especially CS First -- a program that teaches technology and code to students across the globe.

Growing up in St. Croix (U.S. Virgin Islands) was simple and good – going to the beach after school, eating sweet plantains. Life was all about being outside with family and friends – it wasn't until much later that I was exposed to computers.

When I entered high school, I didn't know what software was. I didn't take my first programming class until junior year. After I did well in the class, my teacher suggested that I consider programming in college. College wasn't even on my radar at that point, but with the support I received from my NAF academy, I applied and was accepted to NC State University.

When I graduated with my computer science degree, Google gave me a chance to be a teaching fellow. Together, our young team created CS First -- an online program designed to increase students' access to computer science education.

Now, CS First is a flagship Google education product used by more than 2 million students in over 40 countries. We even partnered with Chance the Rapper and his non-profit, SocialWorks to bring computer science to Chicago public schools.

Diana Ramos, 2012 Alumna
Product Support Engineer
Medtronic



I come from an agricultural area where, at age 16, kids are already working in the fields. College isn't usually an option. Many of us don't have cars and we live in the middle of California. Los Angeles is three hours away, and the nearest university is an hour and a half away. Without a car, that distance is not only geographical—it's psychological. You are truly isolated. All the good opportunities are someplace else. When you live near or below the poverty line, far from the resources most people take for granted, it can get to you. You know you experience unequal access, and it can get you down.

All through my time at NAF, I didn't have internet access at home. I didn't have a laptop. When I did my homework, it was just my brain and my textbook. No Google. I did online research at my academy. I completed my college applications at the public library. The only thing I lacked was access.

I got a full scholarship to the University of Southern California, where I studied biomedical engineering. I'm the first person in my family to go to college. After undergrad, I pursued a Master's degree in Engineering Management. I was the only Latina female in my entire Master's program, and now, I am a full-fledged engineer.

It's because of my NAF academy that I got here so fast. Thank you NAF for sending the elevator of success back down to everybody so we can all rise together.

Get Involved

You have the power to
make a difference in the lives
of young people and create
a highly trained STEM workforce
ready to compete in the global economy.

NAF.org/getinvolved

