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MIND THE 'SKILLS' GAP: APPRENTICESHIPS AND TRAINING PROGRAMS

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BEFORE THE

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OF THE

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MIND THE 'SKILLS' GAP: APPRENTICESHIPS AND TRAINING PROGRAMS

TUESDAY, JUNE 4, 2019

House of Representatives,
COMMITTEE ON SMALL BUSINESS,
SUBCOMMITTEE ON INNOVATION AND WORKFORCE DEVELOPMENT,
Washington, DC.

The Subcommittee met, pursuant to call, at 11:32 a.m., in Room 2360, Rayburn House Office Building, Hon. Jason Crow [chairman of the Subcommittee] presiding.

Present: Crow, Veasey, Houlahan, Finkenauer, Kim, Davids, Balderson, Burchett, Hern, and Joyce.

Chairman CROW. Good morning. The Committee will come to order. Thank you all for joining us this morning. A special thanks to the witnesses for being here today.

Since the recession ended in 2009, our economy has experienced over a decade of economic expansion and despite a low unemployment rate, we know that challenges remain.

Small employers are having an increasingly hard time finding skilled and qualified workers. In fact for over a year, more jobs have been available in the economy than people actively seeking them out.

Two factors seem to be driving this labor market shortage. The first is an existing skills gap among workers and the second is largely due to demographics and increased retirements. According to Pew Research, 10,000 baby boomers turn 65 every day. And this will take place every day until 2030.

Both emphasize the importance of transforming the education process and requirements for the future of work in our country. Small businesses rely on employees with specialized skill sets to build and grow their businesses. But their potential for growth is hindered when they struggle to fill positions that require technical training or certifications. And this problem is not unique to one sector of the economy. From the lack of tower climbers to build out telecommunications networks in the most rural parts of our country, to the void of specialized custodians to clean biomedical waste at healthcare facilities, and the lack of specialized labor in the construction trades, all industries are feeling the strain of inadequate pathways to employment. In fact, more than 80 percent of small businesses have few or no applicants available to fill open positions. Tackling this problem requires working outside of the existing workforce. In today's labor market, skilled employees that cannot be found must be created. One way in which we can do this

is by increasing the number and use of apprenticeship programs throughout the country.

Apprenticeships provide the natural benefit of earn as you learn education for employees and the opportunity to develop otherwise ineligible applicants into valued members of their team. These valuable programs are made available through Federal programs and private industry initiatives.

For instance, the Department of Labor has funded 95 million dollars in grants for the development of registered apprenticeship programs that have resulted in nearly half a million new hires. The ones developed by industry partners have provided resources for potential employees to connect and build skilled teams.

Take for example telecom companies that struggle with daunting costs to build infrastructure on challenging terrain which are then compounded by a lack of skilled workers to climb towers to help connect Americans. Taking matters into their own hands, the telecom community has responded by developing a coalition with the mission of training tower climbers on the job to deploy networks and eventually upskill to build out advanced 5G networks.

These new networks will not only need to be built but also maintained and fixed in response to extreme weather which provides an opportunity for climbers and workers to be trained and remain in their communities. Private industry has taken major steps to prepare the American workforce to address one of the greatest threats to small business, cyber security. Through cyber security certificate programs, American workers can earn valuable certifications required to fill positions in industry and the government. These valuable programs also tap into underutilized talent encouraging women, minorities, and veterans to reenter the workforce. Through a strategic partnership with community-based organizations, registered apprenticeship programs help diversity talent in technical industries by engaging diverse candidates.

The Federal Government can also play an important role in training and retraining the workforce for the future. Programs like the Job Core, a national vocational and employment training program overseen by the DOL provides disadvantaged youth with the education and support they need to secure long-term employment.

Job Core takes it one step further and seeks to match small business owners with the well-trained, entry level employees needed to fill their workforce needs. These are the types of smart policies and programs we should support.

Though registered apprenticeship programs in industry based training have provided valuable resources, much more can be done to close the skills gap. More Federal Government resources should be devoted to train Americans who are not seeking four year degrees. Jobs that require more training than high school but less than a bachelor's degree account for half of the job openings in the U.S.

Expanding existing government programs to support Americans who are willing and able to fill these positions should be a top priority. I hope that today's discussion will shed light on the many ways apprenticeship programs and specialized training can help small business build skilled teams.

I look forward to working with my colleagues in Congress toward breaking down these educational barriers to entry and expand the American workforce.

I thank you each of the witness for joining us today and I look forward to your testimony. I would now like to yield to the Ranking Member, Mr. Balderson, for his opening statement.

Mr. BALDERSON. Thank you, Chairman Crow, for holding this hearing today, this very important hearing and I especially want to thank you and your team and your staff for being flexible with today's hearing timing to accommodate everyone's busy schedules. It is no easy task and I appreciate your teamwork in ensuring this be a productive hearing for everyone.

As a show of our thanks, my staff and I would like to pass over to you the famous buckeye chocolates, the Ohio state buckeye chocolate and I look forward to you enjoying those and with your staff here and graciously appreciate working with us and changing the time schedule on this.

Chairman CROW. Thank you. And as an alumn of the University of Wisconsin, I am not sure if I am allowed to eat these. Chrissy Houlahan can eat them apparently. Thank you.

Mr. BALDERSON. You are welcome. Thank you, Chairman, again, seriously.

The Small Business Committee has heard many accounts of the skills gap and its detrimental impact on small businesses across the country. According to the National Federation of Independent Business, or the NFIB, as we so commonly refer to it, 86 percent of those hiring are trying to hire reported few or no qualified applicants for the positions they were trying to fill. That is not just another statistic. It should be heard as a cry for help from our communities.

We know the skills gap is widening. We can feel these effects on all local economies. Last week I had the opportunity to sit down with the small business leaders from around my Congressional district. These folks were gracious enough to volunteer their time to let me know about some of their communities' biggest challenges.

Without a doubt, the number one issue they face is workforce development and the lack of availability for skilled workers. Today, I intend to learn more about how to address these concerns, what solutions can we the Congress offer.

To help close the skills gap, America needs a workforce development strategy to balance the immediate needs of employer's long term career goals of employees and rapid technology innovation.

One of these strategies is apprenticeships. A centuries old practice that combines on the job learning with related technical mentorship and instruction. In the U.S., there are countless industry led apprenticeship programs. And one formal program run by the Department of Labor called Register Apprenticeship.

Business and industry leaders have been advocating reforms to facilitate industry driven based programs and methods to reduce the risk of investment for employers.

In June 2017, President Trump issued an Executive Order 13801 which established the task force on apprenticeship expansion to identify strategies and proposals to promote apprenticeships espe-

cially in high growth sectors where these programs are underutilized.

I look forward to hearing more about apprenticeships and other workforce development strategies. I am specifically interested in the role small businesses play as providers and the benefactors in these programs. And how we can encourage greater participation.

I appreciate all the witnesses being here today, especially my constituent, Mr. Gee. I look forward to your testimony. Thank you. I yield back my time.

Chairman CROW. Thank you, Mr. Balderson. The gentleman yields back. And if Committee members have an opening statement prepared we would ask that they be submitted for the record.

I would like to take just a minute to explain the timing rules. Each witness gets 5 minutes to testify and the members get 5 minutes for questioning. There is a lighting system to assist you. The green light will be on when you begin and yellow light comes on when you have one minute remaining. The red light comes on when you are out of time and we ask that you stay within that timeframe to the best of your ability.

I now would like to introduce our witnesses. Our first witness, Mr. Joshua Broder hails from Greenwood Village, Colorado in my home district. Mr. Broder is the CEO of Tilson which is on a mission to build America's infrastructure. Tilson has 550 employees and 23 national offices deploying fiber and wireless networks for 4G and 5G cellular, fiber broadband, and grid modernization.

He began his career in leadership as an Army signal officer on missions in Europe, the Middle East and Central Asia where he was awarded the Bronze Star for service in Afghanistan designing, building, and operating the communications network for U.S. forces. Thank you for your service, Mr. Broder.

Mr. Broder holds a bachelor's degree from Middlebury College and is a graduate of AT&T's Operation Hand Salute at JFK University with a certificate in entrepreneurial studies. Welcome, Mr. Broder.

Our second witness, Mr. Tim Herbert. Mr. Herbert is the Senior Vice President of Research and Market Intelligence for the computing technology industry association. Under his leadership, CompTIA publishes a wide range of reports, briefs and data analysis to make sense of the ever changing tech landscape.

CompTIA's cyber states report is recognized as the definitive guide to tech workface trends, economic impact, innovation and more.

Prior to joining CompTIA, Mr. Herbert directed the research program and was a lead analyst at the Consumer Technology Association, producer of the international CES, the largest technology event in the world. Additionally, his entrepreneurial streak led to involvement in launching two startups.

He holds a BS in economics from John Carroll University and an MBA with an economics concentration from George Mason University. Welcome, Mr. Herbert.

Our third witness is Mr. Ronald Marlow. Mr. Marlow serves as Vice President for Workforce Development with the National Urban League. In this role, Mr. Marlow is responsible for the development, delivery and oversight of workforce development pro-

grams for which the National Urban League receives funding. Prior to joining the National Urban League, Mr. Marlow served as Undersecretary for Workforce Development for the Commonwealth of Massachusetts.

Among his many accolades are the NAACP's Distinguished Keeper of the Flame Award, the Small Business Administration's Minority Business Champion Award for both the state of Massachusetts and the New England region. Welcome, Mr. Marlow.

I would like to now yield to our Ranking Member, Mr. Balderson, to introduce our final witness.

Mr. BALDERSON. Thank you, Chairman Crow. Our fourth and final witness is Mr. Talbot Gee, CEO of Heating and Air Conditioning and Refrigeration Distributors International, also known as HARDI. HARDI is headquartered in my district just north of Columbus, Ohio.

Last year, Mr. Gee's organization released a workforce recruitment initiative documentary called Hot Commodity. I have seen the trailer. I encourage everyone to take some time to watch it. It is fascinating. It featured several of his employees and their members. This film explored the future of the HVAC industry and the next generation entering the workforce.

Mr. Gee has held numerous leadership positions for trade associations. He served his—he received his BA in political science in 1997 from Johns Hopkins University in Baltimore, Maryland and has been at HARDI since 2006.

I look forward to learning more about him and how we can mind the skills gap, particularly by taking advantage of young talent. Thank you, Chairman Crow, I yield back.

Chairman CROW. Thank you very much. Mr. Broder, you are recognized for 5 minutes.

STATEMENTS OF JOSHUA BRODER, CEO TILSON; TIM HERBERT, SENIOR VICE PRESIDENT, RESEARCH & MARKET INTELLIGENCE, COMPTIA; RONALD MARLOW, VICE PRESIDENT FOR WORKFORCE DEVELOPMENT, NATIONAL URBAN LEAGUE; TALBOT H. GEE, CEO HARDI (HEATING, AIR-CONDITIONING AND REFRIGERATION DISTRIBUTORS INTERNATIONAL)

STATEMENT OF JOSHUA BRODER

Mr. BRODER. Thank you, Chairman Crow and Ranking Member Balderson. I appreciate the opportunity to speak here today.

My name is Joshua Broder and I'm the CEO of Tilson, a high growth telecommunications and information technology infrastructure deployment company. We were founded in 1996 and we're headquartered in Portland, Maine.

We have experienced extraordinary growth since 2012 and we show no signs of slowing. For the past 18 months, we have been hiring at a clip of about 35 new team members a month across our 23 offices nationwide. With more than 550 employees today across 40 states, our largest offices are located in Maine, Utah, New York, Denver, both in the DTC and in Parker, and we are also in New Hampshire, Alabama, New Mexico, Florida, multiple locations in California and New Jersey, North Caroline and Nevada.

In a tight labor market with low unemployment, most companies that are our peers are struggling to hire and we are certainly no exception. And at our speed, this problem is even more pronounced. Instead of quantity, our hiring challenges are related to the candidate quality and basic knowledge about current and emerging technologies, project management, critical thinking skills, leadership experience, and importantly cultural fit.

In 2017, the Wireless Infrastructure Association of which we were a member sponsored the Telecommunications Industry Registered Apprentice Program commonly known as TIRAP in anticipation of an ever growing workforce demand on the wireless and small cell construction industry for 4 and 5G. Tilson was one of the first companies in the country to become a participant in this competency based apprenticeship which includes 150 hours of course work and up to 12 months of mentor evaluated on the job training.

Today, Tilson has almost 80 employees enrolled in the tower climbing technician I and II tracks, antennae line lead and foremen registered under this apprenticeship program. At Tilson, all tower technician I's which are entry level employee in our tower division are required to be enrolled in the apprenticeship program. And all apprentices have an assigned mentor within the company.

The starting salary of a tower technician I apprentice with no experience is $18 an hour and a foreman at Tilson can make up to $70,000 per year. We offer competitive salaries and an excellent healthcare plan and automatic enrollment in our 401K plan with an employer contribution regardless of our employee's participation. And we think this demonstrates our commitment to long term financial health of our employees. Our apprentices receive these benefits as well.

Earlier this year, to meet the administrative and management requirements of an employer led apprentice program, we made two significant moves to enhance and solidify our commitment to training, development and safety.

In addition to our existing professional safety staff, we added a full-time certified safety professional to manage the compliance of our apprenticeship program and the progression towards completion of these 80 technicians working their way through the program.

Second, we formalized a partnership with the Maine community college system to create a web based TIRAP curriculum accessible to all of our tower climbing crews enrolled in the Tilson TIRAP program regardless of their location within the country.

As I speak right now, the Maine community college system is collaborating with my workforce team to create a four-tiered digital macro badge which certifies the progress of each apprenticeship position. Tower technician I, tower technical II, antennal and line lead, and antennae and line foreman. We are grateful that President Dave Degler and the workforce development staff at the Maine community college system who are eager to lead us and work beside us tailoring the best in class web-based certificate solution for our mobile nationwide crews. This is work that they can do anywhere in the country.

In the industry, apprenticeship participation is fractured, and employer involvement is inconsistent. I lead a high growth com-

pany in a high demand industry. Outside of my company, the growth of our industry will require expertly skilled workers who can collectively deliver efficient and quality networks that run our economy. They will do this when the industry requires contractors and their employees to meet consistent standards of training, learning and safety and in particular, practical application and commitment to safety.

A U.S. DOL registered apprenticeship program helps us in this concept. But simply stated, the administrative requirements entail too much management to compel participation of high growth companies with a national footprint and may dissuade small business from participation all together. These administrations—these administrative requirements play out differently in each state that we operate in.

Coupled with that, insufficient reimbursement incentives will not deliver on adoption unless they can offset administrative obligations. Tight schedules, long hours, and plenty of work leave little room for uniform employer led training and development.

For 2019, with nearly 80 registered apprentices, Tilson will only receive a maximum reimbursement of $6,000 that covers just eight of the apprentice's administrative costs.

Mr. Chairman, like you, I am an Army veteran and for presumptively the same reasons as you, hiring veterans is important to me and I have created ways to hire veterans with or without plainly transferable skills for the merit they bring is important to Tilson's core values of safety, respect, accountability, integrity, professionalism, and composure.

At one point Tilson's veteran population was nearly 50 percent of our company and our growth coupled with that will allow us to hire veterans under this program in a directly transferable way. Thank you.

Chairman CROW. Thank you, Mr. Broder. Mr. Herbert, you are now recognized for 5 minutes.

STATEMENT OF TIM HERBERT

Mr. HERBERT. Chairman Crow, Ranking Member Balderson and members of the Committee, on behalf of the Computing Technology Industry Association, also referred to as CompTIA, thank you for having me here today.

By just about every measure, technology continues to shape the world around us in ever more profound and sometimes unexpected ways. Our economy, our workforce, our day to day lives are more digital, more connected, and more likely to benefit from innovation that until recently was in the realm of science fiction.

Against this backdrop, CompTIA serves as a leading hub for bringing together the $1.6 trillion U.S. information technology sector. And a workforce of nearly 12 million professionals who design, implement, and safeguard the technology ecosystem for large organizations and small businesses alike.

Since its founding, CompTIA has been at the forefront of training, developing, and growing the each workforce. CompTIA is the global leader in vendor neutral IT certifications having issue more than 2.7 million to tech professionals around the world.

CompTIA certifications serve as the bedrock for those working in fields such as tech support, network engineering, cloud computing, cyber security, analytics, IOT, and more.

Now more than ever, organizations such as CompTIA and our many partners in training, academia, industry, workforce development, and government must contend with challenges on many fronts.

In the case of cyber security and our tech workforce, it is not an exaggeration to say that we have indeed reached a new normal of risk, complexity, and urgency. CompTIA research repeatedly confirms cyber security threats have grown in size and scope becoming more sophisticated, harder to detect, and more harmful to our institutions.

Beyond the technical, the people and prospect—process aspects of cyber security have become equally critical and in some cases more difficult for organizations to get right. Especially small business that tend to under estimate the degree to which they could be targets.

By extension, gaps in our tech workforce have cyber security consequences in addition to the usual economic and societal consequences. This may entail gaps in technical skills, soft skills, location, awareness, confidence, affordability, and even generational workstyles.

So what is CompTIA doing to tackle these challenges? First, CompTIA's philanthropic arm, the 501(c)(3) charity, Creating IT Futures works hand in hand with us often acting as our de facto innovation laboratory for workforce development programs. Creating IT Futures flagship program is the IT ready boot camp.

The program is designed to take individuals with no or limited prior experience, especially those in demographics underrepresented in the industry and through technical and soft sills training, validated with CompTIA certifications place graduates in meaningful tech occupations. Because of the stackable nature of the skills and capabilities developed through the IT ready program, with a solid foundation graduates are then well positioned to progress into higher level career paths in areas of specializations such as cyber security, cloud computing or IOT.

Secondly, through our academy partner program, we support high schools, career and vocational centers, two year and four year college programs, and government funded educational agencies by providing a range of instructional resources to maximize the odds of student success.

Given CompTIA's unique role in cyber security, we see firsthand how overwhelming the complexities of the market can be. This was the catalyst for the creation of the cyber workforce analytics took cyber seek.

The platform was developed through a public private partnership of CompTIA, Burning Glass and the U.S. National Institution of Standards and Technologies, Initiatives for Cyber Security Education.

Cyber seek ground the need the provide better visibility into cyber security workforce dynamics. In addition to helping employers, job seekers, and policy makers with smarter, data driver deci-

sion support, the free tool provides a free—a career pathways planner to guide the expansion of the cyber security workforce pipeline.

As our economy and society becomes even more digital in the coming years, it's imperative that we develop the education, training, certification, and career pathway options that build upon the best of what currently works and then address the gaps where shortcomings clearly exist.

Thank you for the opportunity to participate in this hearing and I look forward to your questions.

Chairman CROW. Thank you, Mr. Herbert. Mr. Marlow, you are recognized for 5 minutes.

STATEMENT OF RONALD MARLOW

Mr. MARLOW. Good morning, Chairman Crow, Ranking Member Balderson and members of the Subcommittee. My name is Ron Marlow and it is a pleasure to be here with you this morning. I guess before I begin, I should point out that it is a somewhat gathering of Big 10 conference for I am Penn State. Most definitely.

The National Urban League is the second oldest civil rights organization in the United States founded in 1910 with a mission to empower economically, socially, politically, and from a civic engagement standpoint, African Americans and other disadvantaged populations living in our urban centers. We in 2010, launched the I Am Empowered Platform, a guiding set of principles that will lead us not only into the 21st century but will allow us to connect better with our community based partners, our partners in the employment sector, government, et cetera.

The pillars of that platform are jobs, education, employment, jobs, education, healthcare, and civic engagement. And as we go forward, we will continue to connect not only on the ground but those individuals who have far too often been left out of our economic mainstream.

It is my understanding that there are three overriding principles to today's hearing. One, the exploration of the skills gap and how the skills gap impacts employers both large and small and enhances the challenges that they're facing. Two, the changing nature of work, how IT and the introduction of digital platforms, et cetera, not only are going to change the current face of work but the future face of work.

Third, the role of apprenticeship and meeting the evolving challenges of connecting would be employers to would be individuals seeing employment. It is in this last topic which compels my testimony this morning.

However, please note that the National Urban League stands ready to participate as the subcommittee works through these three interrelated issues to bring forward public policy responses that not only can meet the challenges of any one particular area but all three.

I should point out to you that apprenticeship programs is probably the world's oldest training—job and training program in the world. Existing going back to the 18th century in ancient Babylon and Egypt. Extending through into the 13th century with the creation of the Guilds in western European and to the United States through a formal recognition of a regional approach to registered

apprenticeship with the formalization of legislation in Wisconsin in 1911.

In 1937, the Congress created the Fitzgerald Act which formalized a national platform for registered apprenticeship. Today, registered apprenticeship exists in about 25 states through a state led office of apprenticeship and through the remaining states through the Federal Government and the Department of Labor's Office of Apprenticeship.

The National Urban League through its Urban League Movement and its affiliates, some 90 located in 36 states and serving some 300 communities including the District of Columbia have been involved in registered apprenticeship programs from almost the beginning.

Today that involvement extends. I would be remiss if I did not point out through a contract with the U.S. Department of Labor to expand the diversity and inclusion of individuals and particularly women and people of color in registered apprenticeship programs.

The National Urban League was also proud to serve on the president's taskforce on apprentice expansion. There in that role while the president sought to create a platform that led to a wider adoption of industry based apprenticeship program in particular in those industries and those occupations that had not gravitated towards the registered apprenticeship program, we lent meaningful engagement to ensure that in this more labor based—industry based, excuse me, program that some of the protections that are embedded in our registered apprenticeship program were not lost.

As we move forward, I think it is safe to say that there are certain lessons that have been learned from apprentice programs throughout history.

One, apprenticeship has been and will continue to be a viable alternative to those individuals who neither find higher education necessary or find it viable in their immediate future.

Apprenticeship can offer a platform to learn and earn and bring employees into the workforce in a meaningful way that meets employers where their need is best. Two, a self-regulated system is a system designed to breed exclusion. If we have learned anything from the registered apprenticeship program, we learned that there has to be some regulation, some rules of the road to guide participation or populations will be left by the wayside.

And third but not least and I think the Department of Labor has taken a lead on this, there has to be a blending of requirements. 25 states operating their own program with their own unique idiosyncrasies as well as the Federal Government lends itself to not being able to meet the needs of regional or national employers in a most seamless way and the Department of Labor under Secretary Acosta has taken the lead on engaging the National Governors Association on creating a better platform.

I will conclude by saying that the National Urban League as a community based effort designed to connect disempowered, disadvantaged populations to opportunities stands to ready to meet employers, the Federal Government, and others where they are to help those we need to serve best. Thank you.

Chairman CROW. Thank you, Mr. Marlow. Mr. Gee, you are recognized for 5 minutes.

STATEMENT OF TALBOT H. GEE

Mr. GEE. Thank you very much, Chairman Crow, Ranking Member Balderson, and the Subcommittee for having us here to take part in this.

HARDI, we are the distribution segment of the HVAC and refrigeration industry. Our nearly 500 wholesale members, 80 percent of whom are classified as small businesses buy from the manufacturers and sell primarily to the professional contractors in all of your respective markets.

In fact, we have a member location in every U.S. Congressional district and just earlier this month, we had 80 of our members here and many of them were in your offices for our fly in talking about issues just like this one.

Overwhelmingly the number one issue addressing our industry for the last several years has been the lack of talent or the difficulty finding talent. Most importantly from business standpoint, it's the single limited—single largest limiting factor to growth for distributors and contractors, the inability to add skilled talent to your teams so you can grow and continue to scale your business.

Our industry offers a huge diversity of career opportunities from advanced engineering and data science to entry level, service technicians, drivers and warehouse teams but a lot of people don't know about us.

Today I'm focusing on opportunities not requiring four year college degrees or the debt that often comes with it. And the challenges and the opportunities that come with the new workforce and how they want to work as they come into the economy.

For example the Bureau of Labor Statistics shows that demand for HVACR technicians will grow more than 2 times the growth rate for all jobs through 2026. And by 2022, our industry will face a shortage of over 115,000 technicians.

Now while we are the distributors, I'll take the honor and privilege of helping to represent our brothers and sisters in the contracting community because that is perhaps where the most acute shortage of labor and talent is. So my comments will cross both streams there a little bit. But what we realized is we needed to be better at engaging the next generation of talent.

So more than half of students aren't even aware there are career opportunities in the HVACR industry. More than 80 percent of career opportunities in the HVACR industry do not require bachelor's degree. However, nearly a third of all middle skilled positions today are filled by those with unneeded bachelor degrees.

The—our documentary—we decided to do a documentary because we did the research and found that the new workforce, 73 percent of which Netflix—Netflix viewers watched a documentary at least once in 2016 alone.

48 percent of Gen Z and Gen X viewers watch a video on demand at least once a day. And all indications is the next generation is an even greater rate than that going forward. So HARDI and the HARDI Foundation commissioned a 50 minute documentary called Hot Commodity. We based this and we intend to put this on Netflix and other streaming platforms by the end of the year. We actually extended the production time so we could get more footage from the

contactor community and add that in to our distributor documentary.

Based on true stories from four of our actual industry characters, it demonstrates the quality incomes, work life balance, and career advancement commonly found in our industry, and employees will have an access to all of this content to help in their own recruiting efforts.

We focus on distributor and contractor careers that don't require a college degree which are very secure, don't get outsourced and compensate very well.

Overcoming debt quickly from unused bachelor degrees or avoiding debt all together is something that's very common in our industry now and were seeing faster than—and we are seeing growth in employment rising faster than the average degree holders. We invite the Subcommittee to view and use our documentary.

But we need to overcome some biases that we see in the community today. Median HVACR wage income in 2018 was over $47,000 making it nearly 50 percent higher than the U.S. median wage but no one knows it. Trades often considered only for those troubled or academically challenged which is not accurate. Parents often believe that success is tied to a college degree while less than half actually graduate with the—when seeking a degree.

Despite focus on pursuing college, 63 percent of students lack math and critical thinking skills, 54 percent lack general education readiness and 32 percent lack verbal communication skills all of which are necessary for success in the HVACR industry.

This Subcommittee can help us get the facts out to—that college degrees and debt and the debt that often comes with them don't necessarily result in success and there are too many examples to list in the HVACR industry of success occurring absent a college degree.

Empowering employers to attract new generation of workers, I encourage you to read our written testimony outlining the innovation three HVACR employers are using to attract and develop talent in our industry.

Auer Steel and Heating Supply Company in Milwaukee, Wisconsin helps high school seniors dual enroll and receive credit for graduation for local and technical schools while already starting their HVACR careers.

Isaac Heating and Air Conditioning and Isaac University in Rochester, New York created their own technical school, partnered with a local community college and now issues associate degrees in HVAC technology. They also created a boot camp to take students through 12 weeks of paid training that guarantees full time employment if successfully completed.

And then finally DeFilippo's Service in Paoli, Pennsylvania of course Congresswoman Houlahan, collaboration with a local technical college and created a blended learning program to prepare for apprenticeship. So it was a great collaboration with the local school there.

In other ways Congress could employer employers trying to find and hire today's new kind of workers is DRIVE Safe Act which includes the creation of a training program to attract new drivers

which is a major shortage right now and this would enable more young talent to come into the industry.

Continue to fully fund in the career and technical training authorized through the Strengthening Career and Technical Education for 21st Century Act.

Support 529 OPTIONS Act to allow 529 funds to be used for apprenticeship materials and tools. Thank you to Congress for extending it to allow for using tuition for technical schools but now the tools that you need for those are important.

And then finally, support the Working Family's Flexibility Act since 77 percent of millennials believe that a flexible work schedule would make them more productive and we see that in our own workforce and that of our members.

And support an evaluation of the Fair Labors and Standards Act which is increasingly running counter to how the new workforce wants to do their job, who want to use mobile devices, want to be able to work off hours, want to be able to contribute more but are prohibited by employment law.

And then finally with the apprenticeships, examples from the three HVACR employers I cited earlier, could be examples of industry recognized apprenticeship programs but we would like the Subcommittee to help us understand why there is a currently an exclusion for construction apprenticeships and whether the HAVCR industry is included in that exclusion. Further, we ask the Committee to help the—help DOL accelerate the development of this program so we can get it launched more into our industry.

And then finally partnering with our industry, I mentioned that we are the distributes but I do encourage the subcommittee to engage with the Plumbing Heating Cooling Contractors Association, PHCC, and the Air Conditioning Contactors of America, ACCA, to help our industry head off this massive technician shortage we are facing in the very near future. Thank you very much.

Chairman CROW. Thank you, Mr. Gee. We appreciate the testimony that you have all shared with us. I would like to submit this letter from the Associated Builders and Contractors the record. Without objection so ordered.

I will begin by recognizing myself for 5 minutes. Starting with Mr. Broder, you had mentioned in your opening statement the TIRAP program and the work you are doing with that and the collaborations that you have developed with the community college system. And I would like to just hear a little bit more if I could on the nature of the collaboration and any kind of barriers that you have encountered in establishing those relationships and building out that pipeline?

Mr. BRODER. Certainly, Chairman Crow. So we have partnered with the community college system in Maine, particularly to provide a curriculum where apprentice participants can access the training curriculum remotely from wherever they are. So there are two other community college systems in the country that offer onsite training for tower technicians.

And the barrier we ran into was with a highly mobile workforce and even as a relatively small business working across very broad geographies, the idea of resident training was quite limiting given that these employees lived all over the country and the work was

happening where they needed to get experience all over the country. So having a mobile solution where they could participate remotely was important.

The second was that it needed to be transferrable. Our belief was that if we were going to be part of the solution in solving what is a problem for a largely transient workforce, so technicians could move from company to company. Their credentials need to be good and valid and recognized from an accredited institution across all other areas.

So for us the main barrier was that there didn't exist a program that we could leverage that would be usable everywhere.

Chairman CROW. Thank you. And you had mentioned one other thing and it was in regards to administrative requirements imposed by DOL. And I always get concerned when I hear, you know, some great things that are being done in the private sector and challenges being established by departments or agencies that, you know, make it harder for you to do what you are doing.

So if you could elaborate on that a little bit, what those administrative requirements are that are actually serving as a barrier to the bill out of your program

Mr. BRODER. Certainly. So in our implementation of the TIRAP program, we have 80 technicians and to date we have only been able to get reimbursement for eight which was facilitated I think by an original program funds secured by the Wireless Infrastructure Association.

And so far, we have been unsuccessful at prevailing in navigating the administrative requirements at the Federal and state level. Most of the apprenticeships we are interacting with are fundamentally adjudicated at the state government level and I don't believe even with full time staff focusing on the administrative barriers associated what participating in the apprenticeship have been able to secure reimbursement.

I would add though, that we are moving at a break neck speed and I think this is the important point which is that this process requires a fair amount of front-end coordination. At the time of the hire of the employee, in many cases we have elected to move on and press that employee into active participation in the apprenticeship program and hire them before other necessary hurdles have been overcome.

And so I would be happy as a follow up to this hearing to provide very specific and textured color commentary from my staff on what those mechanical problem might be either at the Federal level or on a state by state basis.

Chairman CROW. It would be helpful. Thank you.

Mr. BRODER. Yes. We will do that.

Chairman CROW. And my final question, Mr. Marlow, you had mentioned the issue of blending of requirements between the state and Federal level and I just if you could very briefly elaborate on what that would look like and in your experience what is the best way to achieve that?

Mr. MARLOW. So, Mr. Chairman, I think when you have a system in which 50 percent of the system is administered at the state level and the other at the Federal level, and that we should think about apprenticeship as a form of licensure or certification, each

state of course has added its own idiosyncrasy to that licensing or certification requirement. Which makes it a little difficult for a multistate or regional or national employer who is looking to embrace registered apprenticeship to navigate those idiosyncrasies of those 25 states in addition to the Federal Government.

Through the work of the Task Force on Apprenticeship Expansion, the task force in pursuit of the presidents goal and Secretary Acosta's goal to bring forward industry recognized apprenticeship programs realized that one, if you were going to have an industry based program you would have to have a system of licensure or certification that would allow it to be mobile across all 50 states.

But two, for those industries that wanted to remain connected to the registered apprenticeship program, you couldn't have IRAP on one hand being seamless but registered apprenticeship being bulky and cumbersome on the other.

Secretary Acosta heard that clearly, heard it well, and is now engaging the National Governors association in ways in which the governors who have, many of whom have embraced registered apprenticeship as a way of fulfilling the needs of employer in their states to look at such things as a compact if you will such that licensure or certification in one state would be good in another state as a way of again making register apprenticeship transportable across the system as a whole.

Chairman CROW. Thank you. My time has now experienced. The Ranking Member, Mr. Balderson, is now recognized for 5 minutes.

Mr. BALDERSON. Thank you, Chairman Crow. My first question is to Mr. Gee and I was wanting to talk a little bit about the clip but you have pretty well gone through that and again you and I both encourage everyone in this room to take some time to watch that.

But I also spoke in my opening statement about having a roundtable last week in the district and one of the things that, you know, we talked a lot about and the conversation really surrounded most of it about was what state and Federal labor regulations are most burdensome for your industry and those businesses that you face?

Mr. GEE. Well, thank you for the question, I appreciate it. The—I made reference to the Working Family's Flexibility Act that has not been enacted, it has not come forward. We would like to see that more forward.

That gives employers or employees the option of accepting one and a half hours of comp time rather than overtime if they choose to have that time versus the compensation. We have noticed this within our own workforce and we have definitely heard about it from the members that a lot of the new workforce coming in really values that work life balance. They want to be able to have that flexibility but right now employers are prohibited from rewarding or compensating employees with comp time. So that act would be a great way of going, of helping in that regard.

And then the second one I had mentioned as far as the Fair Labor Standards Act is even if an employee wants to respond to an email off hours, it puts the employer at risk. The employer is then liable and the employer may have even stated a policy that they are not to be doing that off hours. But a motivated employee, especially today who likes that balance and doesn't mind working in

odd hours in exchange for flexibility in their day to day life are happy to do so.

And I want to make sure everyone understands, that's not limited to just the executives. We are seeing mobile technologies in the hands of the front line technicians now. So this is all throughout the industry, this is not reserved to the C suite or anything like that or the management ranks. So that's just something I think maybe has gotten outdated and just needs to be updated for the new workforce.

Mr. BALDERSON. All right, thank you. My final question, Mr. Gee, for you is in your testimony you explained that the HVAC industry needs workers from all educational levels ranging from high school to advanced STEM programs. Do you use the same strategies when recruiting high, middle, and low skilled workers?

Mr. GEE. No, actually not. However, I know we focus for our members on helping our members be the best employers possible, right. So there are going to be core tenants to being a great employer. However the recruiting process is going to be vastly different.

We have a very large member headquartered in the southeast but is national that is famous for its college recruitment program. So they target in their management program college graduates and Ferguson Enterprises does a fantastic job with that and they rise throughout the organization but they start even as a graduate from a prestigious university in the warehouse and they learn every part of the business as they come up through in their management training program.

On the flip side, as the examples I laid out here which is just a handful of many that we received. Outreach and coordination with trade schools or if there wasn't one, building their own. Creating their own trade school so then those kids who don't feel like college is the right fit for them have a place to go. And the best part is they're out and working and making more money than most college graduates in less time and opening themselves up to a fantastic career going forward.

Mr. BALDERSON. Thank you very much. My next question is for Mr. Broder and I apologize, I am going to do this quickly, I have not left you much time. But we hear a lot about 5G. I hear a lot about it because part of my district is in Columbus, Ohio and we will be one of the cities getting 5G.

In your opinion, I mean, would this backlog with the lack of workforce out there for 5G installment, how far does this put the advancement of the 5G installation?

Mr. BRODER. Mr. Balderson, it's my belief that the skills gap and in particular the employment gap in my country—in my company we have 100 empty positions in the context of a 550 employee company is a major challenge in the deployment of 5G.

And we already see in the field we are currently deploying 5G in dozens of markets around the country today that the lack of skilled and available workers is impacting production schedules. So we think this could be lengthening that deployment by potentially years and needs immediate attention.

We do think the Communications Jobs Training Act of 2019 could be a positive step in the right direction in helping to arm companies with skills-based training locally.

Mr. BALDERSON. And thank you very much. You made it. Well done.

Chairman CROW. Thank you. The gentleman yields back. The gentlelady from Pennsylvania is now recognized for 5 minutes.

Ms. HOULAHAN. Thank you, Mr. Chair, and thank you gentlemen for coming today. I have a lot of questions but only 5 minutes. My first question is for Mr. Broder. I am a veteran as well and I understand that you have been able to use the Maine Hire A Vet Program and the employer's support of the Guard and Reserve program. How did you find out about those programs?

Mr. BRODER. Thank you for that question. So we have participated in the Maine Hire A Vet program which is companies in Maine hiring 100 vets in 100 days. We found out about it through our Vice President of Workforce Development, Adria Horn who at the time was the then Executive Director of the Maine Bureau of Veteran's Affairs.

And so the Maine Bureau of Veteran's Affairs has been aggressively marketing the workforce pathway of both returning veterans and veterans going through reskilling in the economy and that's been just a tremendous asset for our company.

Ms. HOULAHAN. And how would you encourage other small businesses to find out about programs like that other than through the process that you had?

Mr. BRODER. So each state has some kind of an executive agency that engages with veterans workforce transition and in many cases those agencies act as clearing houses for accessing Federal programs so that's been a tremendous boon to us and we think is replicable in other states.

We also know that there are private partners and nonprofit partners as well, for example, in the telecommunications industry, Warriors for Wireless and Airstream Renewables have been helping veterans transition and we would encourage others in other places to find those in their industries that have built those pathways.

Ms. HOULAHAN. And what do you think that we can do as a Congress to help educate service members on these kinds of programs? Is there something that we can be doing to be more helpful

Mr. BRODER. So this is an issue close to my heart. When I transitioned out of the military, I returned from five years overseas so I had an Army career and alumni program experience and largely that Army career and alumni experience as is the case with many services, is very, very short as the veteran is transitioning out.

And so the coaching that they receive prior to that is about retention. And so the moment when the service has realized that that employee is gone forever and is leaving the Department of Defense and is entering an alumni phase, it's simply too short. And so I think a bit more of thoughtful approach to understanding that there may be a longer glide slope than the last two weeks will be important.

Ms. HOULAHAN. That is really, really helpful. Thank you. My next question is for Mr. Herbert regarding cyber seek, the tool that you talked about a little bit.

Can you expand on how you think it is helping small businesses look for talent and are there other tools out there that you are aware of that are also helpful?

Mr. HERBERT. Thank you for the question. Based on seem of the usage statistics, we certainly believe it is having a positive impact and based on many of the conversations it aligns to the missed cyber security workforce framework. So it's important that it provides a common language for how we discuss cyber security.

And especially today we have moved beyond the days of generalists and there are many nuances to cyber security. And we are moving into new areas, penetration testing, information assurance, data loss prevention, and so forth. So I think it's, it helps to provide that reference point for many companies to really think about what their needs are.

And in terms of the other component of cyber seek which is the career pathway so that is especially important in that it is very difficult to just take a student or a job candidate and make them a cyber security expert.

There are many feeder roles and I think it is important, especially to help those that may be entering as a tech support technician with perhaps a two year degree or going through an IT ready program to show them what that path is like over the next three to four years to move into cyber security.

And especially for small businesses as well because they are competing. It's an incredibly competitive market and one of the fastest growing skills over the next 10 years so for small businesses to have a way to go communicate to their prospects about what that career pathway may look like.

Ms. HOULAHAN. So that is actually my final question which is sort of the inverse of what we were talking about on the kind of demand side.

As a small business owner and operator new to this industry, how do I know what I am looking for if I don't understand the career pathways? What is the best way for me to learn what it is that I am looking for in terms of a hire?

Mr. HERBERT. Well, there are certainly many resources from the SBA and from many of the trade associations. One of the challenges we often see because businesses they don't know specifically what they need so they ask for the world.

And we have these really difficult situations where they're asking for advanced degrees and they're asking for 10 different certifications and in some cases they want 5 years of experience in a technology that's only two years old. So it doesn't make any sense.

But we do work very closely with employers to help provide them essentially hiring guides so they can really right size the job candidates and also the acknowledgment that they have to think beyond some of the candidates that they may have a certain sense of IT workers look one way.

And that's one of the missions of CompTIA to really expand the pipeline. And beyond even the technical there are so many different types of skills today so someone with a psychology background may

be very adept at studying social engineering so we really have to be able to bridge the technical and the business and the social side.

Ms. HOULAHAN. Thank you. I very much appreciate your time, gentlemen. I yield back.

Chairman CROW. Thank you. The gentlelady yields back. The gentleman from Tennessee is now recognized for 5 minutes.

Mr. BURCHETT. Thank you, Mr. Chairman. Mr. Gee, some of the statistics that you pointed out regarding those who are in apprenticeship speaks to the desire to continue to grow technical programs.

Along with funding support and incentivizing tax savings accounts which you mentioned in your testimony, what can we do to continue to grow these programs?

Mr. GEE. Well, I think the theme of my comments was empowering the employer. Right. So I would certainly respect your comments about how difficult it can be when you are multistate employer and trying to deal with a lot of patchwork but at the same time, every market is a little bit different and every focus of every business a little bit different.

So the potential power in that industry led apprenticeship program model is you can craft a program that's exactly what your market needs. So getting, making that as easy as possible to implement, as easy as possible to design, and then getting the support you can get from the Federal Government to help you pull that together.

A lot of people may want to do this but don't even know necessarily what type of resources they might have to put into it to do it right. So the best practice is the guidelines, all that sort of stuff will be very helpful. But we have seen—I have tried to give you some examples where I think we have unintentionally already started to build these things. Now we might have the chance of having the weight of the DOL program behind it that can raise its stature and help attract even more talent in other industry.

Mr. BURCHETT. Okay. But do you feel that there is just not enough information out there for the tech programs and for those that are looking to join the workforce? And maybe if it is out there it is not accessible. You know, folks are working and then they are looking for something and——

Mr. GEE. We are definitely seeing a lot of success for second careers in this industry where their first attempt didn't work out the way they wanted it to and then they find our industry later.

But, you know, I don't know why this is but like it or not, there seems to be a bit of a biased against the trades and the vocational schools at the high school level and maybe even at the middle school level. Kids that may show an aptitude in those areas or maybe not have expressed an interest in college.

I don't think it gets presented to them as a real attractive opportunity to go into those fields even though we can document all day the incredible successes when you can go into these fields and grow your own career.

Mr. BURCHETT. I guess I am one of those kids. I have a degree in technological and build education so from UT which is an SEC school by the way.

It is not a two year school like those earlier referenced. No response. Okay. I was going to cut you off.

Chairman CROW. You didn't bring me any chocolates.

Mr. BURCHETT. No, I know. Well, give me a minute and I will run out and get you some.

Mr. Herbert, the growing digital economy and cyber security needs for small business portions for your testimony includes skill gap issues. Could you elaborate just a little further on how we can fix this and would small business and technical schools or universities getting together for a round table be beneficial?

You know, you see those things and generally we do those and they are, I mean, you know, the press comes and everybody makes there little statement and then maybe there is a study and study gets put in a nice binder and it ends up on some shelf somewhere. So I am curious what your thoughts are on that.

Mr. HERBERT. Certainly as it relates to the skills gap, yes, it is a pressing problem and something I tried to emphasize that it's more than just technical skills. And that's something that is often overlooked in technology, that there is such an important component of soft skills which could be collaboration, it could be project management, it could be the basics of communications.

We have often gaps in location where we have trained workers in one city, the jobs may be in another city. So there's a lot of different types of gaps and certainly that's something that we try to dissect and not try to overgeneralize too much. And then in terms of the round table, that is something that we are very active with business advisory groups and especially in technology because it moves so fast that we have to ensure that these skills that we are teaching aling to the needs of the marketplace.

And too often we develop these programs that have very, very long lead times and by time the student is trained, the market has moved and the technology may be obsolete.

So we in the sense that I think a roundtable it does confirm what these skills requirements are, what employers are looking for and then it's also the feedback loop of what I alluded to earlier that some employers, the technology is new to them as well and they may not necessarily know what need from a skills perspective so it really helps to align those two in developing programs and training.

Mr. BURCHETT. Thank you. Mr. Chairman, I yield back my negative 12 seconds to you that I have gone over. Thank you, sir.

Chairman CROW. Thank you, the gentlemen yields back. The gentlelady from Iowa is recognized for 5 minutes.

Ms. FINKENAUER. Thank you, Mr. Chair. And thanks for everyone here testifying today. Obviously this is an incredibly important topic and I know just how important apprenticeships are to closing gaps in our workforce. And I have seen firsthand how important union apprenticeships are when it comes to actually achieving the American dream and keeping it alive. I again got to see that firsthand.

I am a proud great granddaughter of an IVAW lineman and also a bricklayer. But I am an even prouder daughter of a union pipefitter welder.

My dad was in the United Association, still is for over 40 years and the building trades unions invented apprenticeships. Theirs are the gold standard for providing workers with the wages they have earned and the benefits they deserve.

As we look to expand apprenticeship opportunities to meet the needs of our economy, we cannot do it at the expense of worker protections and the quality of training. The building trades built the middle class and truly provide workers and their families with what they need.

While I understand that each industry faces very different challenges when it comes to creating apprenticeships, we should look to the building trade's model as a gold standard. Not just for safety, not just for quality of life, but for all of the benefits that again I got to see firsthand.

Building trades allowed for wages that put food on my table and clothes on my back and helped my dad send all four of his kids to first generation college graduates.

We were able to follow our dreams and he was able to watch that which truly I believe is the American dreams where you can see your kids work hard and be able to follow what they want and that again is what the building trades has provided for my family and countless others across my district.

It also provided for good healthcare and good pensions where my dad was able to retire and buy a bass boat. And high quality apprenticeship programs are also obviously incredibly important to the future of our economy but so are pre apprenticeship programs which I know you all care so much about.

These programs help attract workers to high demand fields and provide them with the strong foundation of the skills needed to succeed. I am a very proud cosponsor of the PATHH Act, the Pre Apprenticeship To Hard Hats Act which provides grants to support pre apprenticeship programs for women, minorities, individuals from high poverty areas, and folks who have faced long standing unemployment. This bill aims to open the door for underserved communities to compete for these good paying jobs.

Mr. Marlow, with your experience and you have extensive experience with workforce development, can you just touch on more for the Committee about how pre apprenticeship programs help level the playing field for women, people of color and others that are traditionally under represented when it comes to apprenticeship programs and how could these grants for pre apprenticeship programs help with this need?

Mr. MARLOW. Thank you for the question. Pre apprenticeship especially in the communities that the National Urban League through the Urban League Movement serves are an incredible bridge to the opportunities that exist in registered apprenticeship.

Absent pre apprenticeship, we would not be able to connect individuals not only to the opportunities but to help them move from where they are to where they want to be.

In fact, under our current contract that we have with the Department of Labor, we are able to recruit diverse individuals not only into registered apprenticeship but to pre apprenticeship. And it is safe to say that 70 percent of the individuals that we recruited are into pre apprenticeship and that's no fault of the client population

themselves, that is actually a reflection in many instances of the education or educational preparation they did not receive while in high school.

Ms. FINKENAUER. Yes.

Mr. MARLOW. In many instances, the pre apprenticeship path is open primarily to individuals because they are not quite ready to pass the aptitude tests that are required to make it into registered apprenticeship.

And pre apprenticeship as you said gives them that foundation in those educational tools as well as introducing them to what a job and more importantly a career pathway means in registered apprenticeship.

And so anything and everything that the Congress can do to not only support registered apprenticeship and I think the Congress has been on record in supporting registered apprenticeship over a number of years including last year's appropriation but extending that bridge one step further if you will to making that pre pathway and the former pre apprenticeship is very important as well and so anything that can be done to help further that or lengthen that bridge would be welcomed.

Ms. FINKENAUER. Well, thank you Mr. Marlow, I know my time is about to expire but again, thank you all for being here today and talking about this very, very important topic. Thank you.

Chairman CROW. Thank you. The gentlelady's time has expired. The gentleman from Pennsylvania, Mr. Joyce, is now recognized for 5 minutes.

Mr. JOYCE. Thank you, Chairman Crow and thank you Member Finkenauer for your incite. We as a team on small business view ourselves as being bipartisan participants in the United States Congress, something that is often not seen. Mr. Gee, I would like to address what I experienced just four or five days ago. I was honored to be the commencement address at Cumberland Valley Christian School in Chambersburg, Pennsylvania where I saw brilliant young men and women, some going to Big 10 schools like I attended, some going into the military, and one courageous young man who is going into the HVAC career.

This was announced and afterwards and during my presentation I acknowledged him how important these people are for our workforce development, for obtaining careers with jobs that have family sustaining wages. We need to elevate these people. That is what we see and that is what we hear from you.

Mr. Gee, I would like you to address who we as members of Small Business Committee how we can continue to elevate the course and encourage those individuals who look to enter into careers such as HVACR.

Mr. GEE. Thank you very much. I really appreciate the comments and I'm glad you had that experience. That individual is going to have a great career and will probably be in leadership or maybe even ownership at some point in time. That's the way our industry works which is fantastic.

Awareness is probably still the biggest issue we have. Don't take this as self-serving but please spread our documentary far and wide. I think that is a medium that will be readily consumed by

the new workforce. I think it will get attractive to them and it will open a lot of their eyes.

Secondly, we are happy to give you the list of the multiple member locations in all of your districts and I encourage you or your staffs to get out there and visit them and get to know the workers and their backgrounds because I think you will get 100 times the stories of what you just experienced with that young individual.

So engagement and awareness are the biggest things I think the Committee can really help with. And then helping us understand what are the roots of some of these biases? Again, I don't know the root of it but I do know having young kids that it is not encouraged through most of your scholastic career to even consider the trades. And even though I know for a fact what a great career it is, right.

And then representing wholesale distributors no one knows what distribution is. Right. So that's the, that's even a more hidden industry. So again any help from the Small Business Committee in terms of awareness, in terms of getting to the root of these biases against some of these skilled trades I think could go a long way and create a lot more incredible careers for a lot of young individuals.

Mr. JOYCE. Thank you. I would like to continue this dialogue because you talk about encouraging and I might suggest to you and, Mr. Gee, I will ask you to address this. But you might want to consider your branding a little bit differently.

I don't think that I would call this boot camp. I think it is difficult to encourage many people today to approach this as boot camp. I would approach this as a career camp, as an opportunity for people more rapidly to enter the workforce with intense training. And your ability to provide that intense training allows people to springboard into the trades. Can you address that?

Mr. GEE. That's a great comment. I know that company well. I know there is a lot of veterans in that company so that's probably where their terminology may have come from. But I'll pass that on.

You're right, branding is an absolute issue. We are working as an industry to rebrand to understand how much technology is in the HVAC and refrigeration industry. Most think it's entirely in, you know, dark places, turning wrenches but there is a ton of electronics, a ton of digital and communicative capabilities that are built into it so that, we are helping our members with their messaging.

I want to give a credit to our partners on this plumbing side, the American Supply Association. They create a fantastic toolkit for their members to go take to jobs fairs and recruitment events and they help the members with all that type of messaging. What, you know, who to brand your industry and then therefore your business more attractively to the incoming workforce.

So that's something that we should probably be doing more of but your points well taken. We do have a branding issue. It is an exciting high tech field and most people don't know that.

Mr. JOYCE. Thank you for your comments. Chairman Crow, I yield back my time.

Chairman CROW. Thank you. The gentleman yields back. Thank you very much to all of our witnesses for sharing your time with us today.

Apprenticeship programs and technical training create pathways to economic empowerment for small firms and their potential employees. Skilled workers will lay the foundation for technological advancement and fuel the growth and development of small employers.

The public and private sector must continue to work together to solve this pervasive issue. Closing the skills gap will require directed resources to support existing programs and incentive the development of new ones.

Members of this Committee must continue to raise awareness of the value of vocational education and the development of the American workforce.

I would ask unanimous consent that members have 5 legislative days to submit statements supporting materials for the record. And without objection, so ordered.

And if there is no further business to come before the committee, we are adjourned. I thank you very much.

[Whereupon, at 12:43 p.m., the subcommittee was adjourned.]

APPENDIX

TILSON
On a Mission

June 4, 2019

Written Testimony of Joshua Broder, Chief Executive Officer, Tilson Technology Management to U.S. House of Representatives Committee on Small Business, Subcommittee on Innovation and Workforce Development: *Mind the Skills Gap: Apprenticeships and Training Programs*

Chairman Crow and Ranking Member Balderson, my name is Josh Broder and I am the CEO of Tilson Technology Management, a high-growth telecommunications and information infrastructure development company. Founded in 1996 and headquartered in Portland, Maine, Tilson has experienced extraordinary growth since 2012 and shows no signs of slowing. For over 18 months, we have been hiring an average of 35 new team members a month across our 23 offices nationwide. With more than 550 employees spread across 40 states, our largest office locations are found in:

(163) Portland, Maine **(60) Salt Lake City, Utah** **(45) Clay *and* Newark, New York**
(25) Denver *and* Parker, Colorado. Tilson's Chief Information Officer and Vice President of Consulting resides in our Denver office and is our most senior Tilson presence in the West.

(25)	**Bow, New Hampshire**	**(21)**	**Spanish Fort, Alabama**	**(21) Las Cruces, New Mexico**
(19)	**Miami, Florida**	**(17)**	**Irvine *and* San Diego, California**	
(15)	**Clifton, New Jersey**	**(13)**	**Charlotte, North Carolina**	**(11) Las Vegas, Nevada**

In a tight labor market with low unemployment, most companies struggle to hire at the speed of Tilson. Instead of quantity, Tilson's hiring challenges are related to candidate quality and basic knowledge about current and emerging technologies, project management, leadership experience and cultural fit.

In 2017, the Wireless Infrastructure Association sponsored the Telecommunications Industry Registered Apprenticeship Program (known as TIRAP) in anticipation of ever-growing workforce demands on the Wireless and Small Cell Construction industry. Tilson was one of the first companies in the country to become a participant in this competency-based apprenticeship, which includes 150 hours of coursework and up-to a 12-month mentor-evaluated on-the-job learning requirement to determine competency. Today, Tilson has almost 80 Tower Climbing Technicians I/II, Antenna and Line Lead and Foreman registered in our apprenticeship program. At Tilson, all Tower Technician I positions are required to be enrolled in our apprenticeship program and all apprentices have an assigned mentor. The starting salary for a TTI-Apprentice with no experience is $18/hr, and a Foreman at Tilson can make up to $70k/year. We offer competitive salaries, an excellent healthcare plan and our automatic enrollment 401(k) program with employer contribution regardless of employee contribution demonstrates our commitment to the long term financial health of our employees – our apprentices receive these benefits as well.

Earlier this year, to meet to the administrative and management requirements of an employer-led apprenticeship program, we made two significant moves to enhance and solidify our commitment to training, development and safety. First, we hired a full time Certified Safety Professional as our Manager of Safety and Compliance to oversee apprenticeship compliance, progression and completion. Second, we formalized a partnership with the Maine Community College System to create a web-based TIRAP curriculum accessible to all our tower-climbing crews enrolled in the Tilson TIRAP program.

As I speak, the Maine Community College System is collaborating with my Workforce team to create a four-tier digital Macro-badge which certifies the progress of each Apprenticeship position: Tower Technician I, Tower Technician II, Antenna and Line Lead, Antenna and Line Foreman. We are grateful to

President David Daigler and his Workforce Development Team who were eager to lead us and work beside us tailoring the best web-based, certificate solution for our mobile, nationwide crews.

In the industry, apprenticeship participation is fractured, and employer involvement is inconsistent. I oversee a high-growth company in a high-demand and high-risk industry. Outside of my company, the growth of this industry will require expertly skilled workers who collectively deliver efficient and quality outcomes. They will do this when the industry requires contractors and their employees to meet consistent standards of learning, practical application and commitment to safety. A USDOL Registered apprenticeship program helps in codrncept. But simply stated, the administrative requirements entail too much management to compel participation of high-growth companies with a national footprint and may dissuade a small business altogether. Coupled with that, insufficient reimbursement incentives will not be a driver of adoption unless they can offset the administrative obligations. Tight schedules, long hours and plenty of work leave little room for uniform employer-led training and development. For 2019 with nearly 80 registered apprentices, Tilson will receive the maximum reimbursement of $6,000: this covers just 8 apprentices.

Mr. Chairman, like you, I am an Army Veteran. For presumptively the same reasons as you, hiring Veterans is important to me and I have created ways to hire veterans with or without plainly transferrable skills for the merit they bring in supporting Tilson's core values of Safety, Respect, Accountability, Integrity, Professionalism and Composure. At one point, Tilson's veteran population was nearly 50%, but our growth coupled with [thankfully] the lowest national Veteran unemployment rate in my lifetime has made hiring Veterans just as competitive as other growth industries. We participate in the annual Maine Hire-a-Vet campaign and the Employer Support of the Guard and Reserve (ESGR) program.

We hire Veteran graduates across the country from both Warriors4Wireless and Airstreams Renewables, which are WIA-approved pre-apprenticeship program providers, but even that hiring depends on matching where we are hiring with where a Veteran wants to live and work.

In March of this year, we made a major benefit investment we believe will increase our ability to recruit and retain all types of employees. We now offer a generous gender indiscriminate parental leave for both the primary and non-primary caregivers. After making our internal announcement, we found that our Tower Climbers were the first to share their appreciation for a leave policy that simply allows this often young and physically exhausted group to spend time with their growing families. We also strengthened our commitment to our currently serving Reserve and National Guard employees by offering 15 days of paid military leave. Their transferrable skills and on-going military training provide an invaluable and incalculable return in exchange for their time away. Thank you for addressing this issue and providing the opportunity to be here and discuss this important topic with you.

Tilson Technology Management is a participating member of the Wireless Infrastructure Association (WIA), a six-year National Association of Tower Erectors (NATE) STAR Initiative member and a member of the National Safety Council. Tilson's VP of Workforce has been a member of the WIA Workforce Committee.

CompTIA

United States House of Representatives
Committee on Small Business
Subcommittee on Innovation and Workforce Development

"Mind the 'Skills' Gap: Apprenticeships and Training Programs"
Testimony by Tim Herbert, Senior Vice President, CompTIA
June 4, 2019

Introduction: The Transition to the Digital Economy

Chairman Crow and Ranking Member Balderson, on behalf of the Computing Technology Industry Association (CompTIA), thank you for having me here today. By just about every measure, technology continues to shape the world around us in ever more profound and sometimes unexpected ways. Driven by waves of innovation over the years, our economy, our workforce, and our day-to-day lives are more digital, more connected, and increasingly, infused with more intelligent technology. Against this backdrop, CompTIA works with companies, academia, workforce development groups, government and more to understand and influence the forces shaping the information technology industry, its workforce, and its business models.

CompTIA is the leading voice and advocate for the $1.6 trillion U.S. information technology ecosystem, and the more than 11.5 million American information technology (IT) professionals who design, implement, manage, and safeguard the technology that powers the world's economy.[1] Through education, training, certifications, advocacy, philanthropy, market research and membership programs, CompTIA is the hub for advancing the tech industry and its workforce.

Since its founding, CompTIA has been at the forefront of credentials, training, professional development, growing, and diversifying the tech workforce. CompTIA is the global leader in vendor-neutral IT certifications having issued more than 2.7 million certifications to tech professionals around the world. CompTIA certifications serve as the bedrock for those working fields such as IT support, network engineering, cloud computing, cybersecurity, and more.

Small and Medium-Size Businesses Place a High Priority on Technology

Small businesses are commonly described as the lifeblood of the U.S. economy. This is not hyperbole as SMBs (small and medium-size businesses) account for the vast majority of the nation's business entities, while serving as a key accelerator of job growth and entrepreneurial vitality. Two-thirds of SMBs indicate technology is now a primary factor in pursuing their business objectives[2]. This prioritization translates to investment, as seen in the estimated $186

[1] CompTIA *Cyberstates*, 2019

[2] CompTIA *Tech Trends Among Small and Medium-Size Businesses* study, 2019

billion spent annually on technology by U.S. SMBs[3]. In many ways, technology has never been more accessible. The emergence of cloud computing and 'as-a-service' delivery models now put enterprise-level technology in the hands of the smallest of businesses, helping them to operate more efficiently, tap into new customers, and compete against larger rivals.

Businesses Contend with the New Normal of Cybersecurity

At one time, cyberattacks were just a backend "IT problem" that featured such nuisances as defaced websites, occasional viruses that made the lives of IT workers miserable, or the odd hacked e-mail account or two. Conditions have changed dramatically in recent years. As noted previously, an already interconnected digital economy – which will become even more connected with the proliferation of the Internet of Things (IoT) and other emerging technologies, means the security arms race will continue in perpetuity.

As CompTIA research suggests, cybersecurity issues have grown in size and scope, becoming more sophisticated, harder to detect and more widespread[4]. Beyond profit-seeking hackers, attacks aimed at the pillars of society – government agencies, critical infrastructure, financial systems, and voting systems, threaten the underpinnings our democratic processes and society.

Cybersecurity Skills Gap Is Especially Problematic

"Skills gap" has become a catch-all term to describe a range of workforce concerns. At the most basic level, the skills gap can be characterized as the variance between the performance employers desire from their workforce and what workers can or choose to deliver. While the notion of a skills gap is a seemingly straightforward concept, below the surface, there are many nuances to the story. Skills gap may be unintentionally used to describe gaps in soft skills, location-labor mismatches, market pay rate disconnects, awareness gaps, confidence gaps, and even generational work style gaps[5].

With that being said, in a world defined by digitization and interconnectivity, shortcomings in cybersecurity expertise and experience make for an ever-more precarious situation, especially among SMBs. Organizations rank data security as the most pressing cybersecurity skills gap domain, reflecting the growing importance of data across every industry sector of the economy[6].

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[3] IDC *Blackbook*, 2010-2026

[4] CompTIA *The Evolution of Cybersecurity Skills* study, 2018

[5] CompTIA *Assessing the IT Skills Gap* study, 2017 | CompTIA *Role of Confidence Gap in Tech Career Development* study, 2018

[6] CompTIA *Assessing the IT Skills Gap* study, 2017

Cybersecurity skills gap concerns manifest themselves in two ways. The first way is the direct referencing of expertise or experience shortcomings that pertain to some aspect of cybersecurity. Importantly, this is not limited to technical skills. The people and process aspect of security are just as critical, which may mean addressing foundational knowledge gaps in the C-suite or boardroom[7].

The second way is indirectly through practices or pursuits that inevitably have a cybersecurity component. For example, 6 in 10 organizations report skills gap challenges that inhibit the integration of different applications, data sources, platforms, or devices. This is a critical step for organizations seeking to modernize through business transformation or move into emerging areas such as IoT.

The Multifaceted Nature of Training, Pipeline, and Skills Gaps Require an Equally Diverse Set of Solutions

The pace of technological change seems to quicken with each passing year. Anything, anywhere, anytime is now the default expectation among customers and constituents. Businesses face more pressure than ever to operate with agility and quickly respond to the customer needs of today, while anticipating the needs of tomorrow.

Compounding the challenges of shifting workforce skills needs is the extremely tight labor market for tech talent. As of April 2019, the unemployment rate for IT occupations stood at 2.4 percent, nearly a full percentage point below the national unemployment rate[8]. This means employer demand in many regions of the country and for many skills routinely outpaces the supply of workers. For small businesses seeking to keep up, competing for scarce tech talent can be incredibly trying. The bottom line, there is much work to be done on multiple fronts to ensure a healthy, vibrant, and sustainable tech workforce.

CompTIA works closely with public sector and private sector entities through a highly rigorous ISO-accredited process to ensure our certifications validate the knowledge domains and expertise required in the market. Through performance-based testing, CompTIA certifications validate more than "book knowledge," ensuring holders of CompTIA's A+, Network+, Security+, or other certifications are job ready[9].

Through our Academy Partner Program, CompTIA supports high schools, career and vocational centers, two-year and four-year college programs, government-funded educational agencies, Department of Labor educational agencies, and correctional facilities in helping to enhance the

[7] CompTIA *Building a Culture of Cybersecurity: A Guide for Corporate Executives and Board Members*, 2018

[8] U.S. Bureau of Labor Statistics

[9] https://certification.comptia.org/certifications

career opportunities of students. In addition to discounts on certifications, the program provides a range of instructional resources, including CompTIA-approved learning materials, training courses, career roadmaps, and more[10].

CyberSeek: Leveraging Data to Connect the Dots

Given CompTIA's unique role in the cybersecurity workforce ecosystem, we saw firsthand the challenges in not only coming to grips with a rapidly changing threat environment, but simply trying to keep up in understanding the many moving parts of the cybersecurity landscape. This was the catalyst for the creation of the cyber workforce analytics tool and career pathways planner called CyberSeek. The platform was developed through a partnership of CompTIA, Burning Glass Technologies, and the U.S. National Institute of Standards and Technology's National Initiative for Cybersecurity Education (NICE) initiative[11]. CyberSeek grew out of the need to provide public and private employers, job seekers, educators/trainers, and policy makers better visibility into cybersecurity workforce dynamics.

CyberSeek is a unique tool designed to decode the relationship between job seekers and employers hiring for in-demand cybersecurity skills[12]. This one-of-a-kind interactive set of maps, tools, and career pathways aligns to the NICE Workforce Framework and is an important step towards addressing one of the most critical workforce challenges of our time. CyberSeek has been widely used by government and private industry alike since its launch.

CyberSeek supports the NICE Strategic Plan goal to "guide career development and workforce planning," specifically implementing the objective to "identify and analyze data sources that support projecting present and future demand and supply of qualified cybersecurity workers." Additionally, it supports a value articulated in the NICE Strategic Plan to "seek evidence – inform actions and decisions with data and pursue objective and reliable sources of information."

In other words, tools such as CyberSeek are needed to help support making smart, data-driven decisions as it relates to developing and maintaining a best-of-class cyber workforce.

Creating IT Futures: Building and Sustaining the Pipeline

Certifications are one leg of the proverbial stool. The other two are training and work experience. CompTIA's philanthropic arm, the 501(c)(3) charity, Creating IT Futures, works hand-

[10] https://partners.comptia.org/become-a-partner/academy-partner

[11] https://www.nist.gov/itl/applied-cybersecurity/nice

[12] https://www.cyberseek.org/heatmap.html

in-hand with us, often acting as our de facto innovation laboratory for workforce development programs[13].

The mission of Creating IT Futures is to create on-ramps for more people to succeed in technology careers. The organization gives special attention to encouraging a pathway for demographics often under-represented in tech, such as women, people of color and veterans. A quick scan of the Creating IT Futures' success stories page confirms the degree to which IT-Ready truly transforms lives[14].

Creating IT Futures' flagship program is the IT-Ready bootcamp. Launched in 2012 with two locations and now grown to seven U.S. cities, the program is designed to take individuals with no or limited prior IT experience, and through technical and soft skills training, and certification, place graduates in a meaningful IT job, where median wages exceed most comparable occupations[15]. Typical first jobs out of IT-Ready include roles in tech support, networking, quality assurance and cloud support. It's important to keep in mind the stackable nature of skills and capabilities, beginning with a solid foundation and progressing into higher levels of expertise or specialization, such as cybersecurity[16].

How IT-Ready Works

The core IT-Ready bootcamp program is an 8-week, classroom-based, instructor-led course that teaches the requisite technical skills, along with the increasingly important soft skills, such as teamwork and collaboration, needed for career progression. In addition to the IT-Ready training locations found in Charlotte, Chicago, Minnepolis, Phoenix, Portland, San Diego, and San Antonio, a 12-week online program recently launched in partnership with the Wounded Warrior Project[17].

In-person and online classes are held five days a week, Monday through Friday. Instructors utilize a range of training techniques, training materials, certification exam prep tools, and student engagement to present the material.

While the IT-Ready program does not guarantee a job, the staff work closely with local employers to connect students to jobs. After students graduate from IT-Ready, they may apply for these jobs, whereby the vast majority (86 percent) of IT-Ready graduates are able to secure

[13] https://www.creatingitfutures.org/

[14] https://www.creatingitfutures.org/resources/blog/-in-tags/tags/successful-graduates

[15] CompTIA *Cyberstates*, 2019

[16] https://certification.comptia.org/docs/default-source/downloadablefiles/it-certification-roadmap.pdf

[17] https://www.creatingitfutures.org/about/news/details/cognizant-us-foundation-gives-4-5-million-to-help-america-s-wounded-warriors-transition-into-digital-economy-careers

full-time employment in the IT industry within a few months of their completing the program and earning certification.

The IT-Ready bootcamp program is underwritten by grants and financial donations, so there is no cost to students. While our classes are offered free to enrolled students, the program costs donors about $6,000 per student.

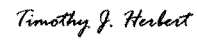
The Role of Apprenticeships

Continuing the thread of the need for multi-faceted solutions to address our complex workforce challenges, CompTIA views apprenticeships as another critical piece. We actively engage with industry, academic and training partners, government entities, and others to work towards expanding apprenticeships for employers and students who previoulsy may not have considered it as an option. As it relates to federal policy, CompTIA strongly supports H.R. 1733/S. 777, the Championing Apprenticeships for New Careers and Employees in Technology (CHANCE in Tech) Act. The CHANCE in Tech Act would make commonsense reforms to the Department of Labor's registered apprenticeship program and generate job and economic growth. The proposal would create technology apprenticeships and help forge public-private partnerships to serve as intermediaries between employers participating in the registered apprenticeship program, industry, training partners, and government entities. We urge members of this committee who have not done so already to cosponsor this bill and for Congress to pass this legislation.

Conclusion

Thank you for the opportunity to participate in this hearing. Undoubtedly, many of the topics covered in this testimony are complex. Developing new approaches, rethinking longstanding practices, or changing mindsets takes time, creative problem solving, and resources. CompTIA is committed to working with stakeholders – from students to parents, and private sector to public sector entities, to meet our workforce challenges head on. As our economy and society become even more digital in the coming years, it's imperative that we develop the education, training, certification, and career pathway options that build upon the best of what currently works well, and then address the gaps where shortcomings clearly exist. Again, thank you for the opportunity to participate in this hearing and we look forward to further engagement with the Committee.

Respectfully,



Tim Herbert
Senior Vice President, Research and Market Intelligence
CompTIA

Tuesday, June 4, 2019

Good Morning Chairman Crow, Ranking Member Balderson and Members of the Subcommittee

It is a pleasure to be here this morning. My name is Ronald Marlow, and I serve as Vice President for Workforce Development at the National Urban League.

Founded in 1910, the National Urban League (NUL) is the nation's oldest and largest civil rights organization devoted to empowering African Americans to enter the economic and social mainstream. NUL is a nonprofit, nonpartisan, community-based movement headquartered in New York City. The Urban League movement reaches nearly 2 million people, nationwide, through direct services, programs, and research through its network of 90 professionally staffed affiliates serving 300 communities in 36 states and the District of Columbia.

The mission of the National Urban League is to enable African Americans (and other disadvantaged urban residents) to secure economic self-reliance, parity & power and civil rights. Utilizing policies and tailored services, we carry out our mission by closing the equality gaps in education, the economy, health and quality of life, civic engagement, and civil rights. In 2010, to commemorate our 100th anniversary, NUL launched I AM EMPOWERED, an initiative focusing on four aspirational goals for empowering communities in education, employment, housing, and healthcare, the cornerstones of the organization. Today, leveraging this platform, NUL works to ensure that:

1. **Jobs**: "Every American has access to jobs with a living wage and good benefits."
2. **Education**: "Every American child is ready for college, work, and life."
3. **Housing**: "Every American lives in safe, decent, affordable and energy efficient housing on fair terms."
4. **Health**: "Every American has access to quality and affordable health care solutions."

Mr. Chairman, as I understand the purpose of this hearing, the Subcommittee is interested in exploring three inter-related topics:

1. he so-called "skills gap," and the challenges the skill gap create for employers, large and small, but in particular small;
2. The changing nature of work and how the changing nature of work will impact current and future employees; and,
3. The role of Apprenticeships in meeting the existing and evolving demand for workers

It is this last topic which compels my participation in this morning's hearing; however, please note that as the Subcommittee explores the other matters, it is my hope that you will continue to involve the National Urban League especially as the Subcommittee seeks to bring forward public policy responses to meet and overcome the challenges associated with investing in this country's most important economic asset – its citizens, and maintaining (and yes, improving) the environment for continued economic growth and expansion.

History of Apprenticeships:

According to the Encyclopedia of Britannica, the practice of "apprenticeship"[1] can be traced back to ancient Egypt and Babylon. In these countries, training in craft skills was organized to maintain an adequate number of craftsmen. In fact, the Code of Hammurabi of Babylon required artisans to teach their crafts to the next generation. In Rome, craftsmen began to organize into independent collegia intended to uphold the standards of their trades. Craft guilds emerged in the 13th century in Western Europe. Guild members supervised the product quality, methods of production, and work conditions for

[1] See https://www.britannica.com/topic/apprenticeship

each occupational group in a town. Master craftsmen controlled the guilds. Recruits entered the guilds after completing training as an apprentice.

Over time, local governments were forced to contend with the exclusionary practices of the guilds, whose members could monopolize their trades in each town. Guilds could levy high fees against outsiders to prevent them from entering a trade. Guilds restricted access to apprenticeships with preference given to the sons of guild members or the sons of wealthy acquaintances. In response, the English government defined the conditions of apprenticeship with the Statute of Artificers of 1563. This statute sought to limit exclusionary practices and to ensure adequate labor. Apprenticeship, in the form of indentured apprenticeship existed in colonial America.

As the industrial revolution took hold and assembly-line methods of production, which increased efficiency, expanded the number of unskilled or semiskilled jobs, the rise of such jobs was incompatible with the time required to complete apprentices

In 1911, the first legislation in the United States to promote an organized system of apprenticeship was enacted in Wisconsin. The law placed apprenticeship under the jurisdiction of an industrial commission and this followed the enactment of state legislation requiring all apprentices to attend classroom instruction for a set number of hours per week. In the 1920s, national employer and labor organizations, educators, and government officials began a concerted effort to bring about a national, uniform apprenticeship system. The effort led in 1934 to the participation of the Federal Government in the national promotion of apprenticeshiph, and in 1937, the creation of the Bureau of Apprenticeship and Training[2] within the U.S. Department of Labor. Today, the system of registered apprenticeship is available in each of the 50 states through a combination of federal and local (state) responsibility. In about one-half of the states, registered apprenticeship is governed by a State

[2] No the Office of Apprenticeship

Apprenticeship Agency (SAA); and, in the other half, registered apprenticeship is governed via the Department of Labor's Office of Apprenticeship.

Opportunities:

For much of the 80+ year history of registered apprenticeship has been the province of the skilled trades and a few other industries. As such, the number of registered apprentices has remained fairly constant over the years. However, the demand for a viable source of labor and increasing pressures to remain economically competitive, from a global perspective, have spurred a renewed interest in the apprenticeship model.

The Obama Administration, in recognition of these twin challenges, launched a concerted effort to understand how western European countries have used the apprenticeship model both to respond to a need for industry access to labor and individual's desires to enter into the labor market successfully. These efforts led to the Administration placing an emphasis on promoting registered apprenticeship to industries for whom it remained a foreign (and thus risky) concept and making investments, in partnership with the Congress, to invest in expanding participation both by way of incentivizing state and local action, industry participation and other "access to opportunity" efforts.

And while public commentary seeks to identify the any number of ways in which the Trump Administration has differed from the Obama Administration relative to policy initiatives, apprenticeship represents one policy area in which Presidents Obama and Trump have found common ground, at least with respect to strategy even if differences have appeared by way of tactics.

In 2017, President Trump took executive action that led to the formation of a Task Force on Apprenticeship Expansion, whose was to "identify strategies and proposals to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient."[3] In May of 2018, the Task Force

[3] See https://www.dol.gov/apprenticeship/task-force.htm

submitted final recommendations to the President. The final report and recommendations supported the creation of an Industry-recognized Apprenticeship Program or IRAP, which as its name implies, would rely on industry trade organizations to take on the responsibility of sponsoring of designing and implementing industry led apprenticeship programs that would operate parallel to the registered apprenticeship system but that would also be free from the regulatory requirements that undergird the operation of the registered apprenticeship system. Thus, the industry-recognized apprenticeship system would be largely self-regulating, and, presumably, more nimbly responsive to industry and occupation needs.

The National Urban League and Apprenticeship

In September of 2016, the United States Department of Labor awarded a contract to the National Urban League. The National Urban League, performing as an Equity Contractor, is working to promote access and opportunity within registered apprenticeships to women, African Americans and other populations who have historically been under-represented among the ranks of apprentices. In this role, the National Urban League, working with 12 of its Urban League Affiliates and the Multicultural Media, Telecom and Internet Council has recruited over 1,000 individuals into registered apprenticeship, pre-apprenticeship and preparatory training opportunities. These individuals have joined programs operating across a number of occupations in the following industries: construction, telecommunications, information technology, manufacturing, transportation, and healthcare.

The National Urban League was a named member of the Task Force on Apprenticeship Expansion. We were proud to have pushed for recommendations that urged the Secretary of Labor to take meaningful steps to update and improve the system of registered apprenticeship even as it embraced the IRAP model. The legacy system has served the country well; and, while it may be in need of refinements in response to well-intended industry constructive criticisms as to how it could better

meet industry and occupation needs, no one should interpret the advent of the new system as abandonment of the legacy system.

Additionally, the National Urban League is proud of its role in encouraging the Department of Labor to develop clear and expectations and policy dictates relative to economic and safety protections to be afforded apprentices and expectations of access and equal opportunity to be afforded to all individuals in particular women and persons of color.

Lessons Learned:

The apprenticeship model has been and can continue to be a viable, alternative means of affording access to educational and skills training that leads to employment, this is especially true for individuals for whom higher education is neither a necessary nor a viable path to the labor market. The fact that both the Obama and Trump administrations have embraced apprenticeship as an effective strategy to meet industries' needs is proof of apprenticeships' continuing viability.

The registered apprenticeship model would benefit from a single system of common and shared expectations and requirements relative to registering an apprenticeship program. Companies that operate regionally and/or nationally have rightfully identified that local (i.e. – state) licensing requirements, which differ from state to state introduce a degree of uncertainty and additional administrative burden to operating registered apprenticeships across their regional and/or national footprints. It is my understanding that, in response to this challenge and consistent with a Task Force recommendation relative to improving the legacy system, the Secretary of Labor and/or his appropriate designees have initiated discussions with the National Governors Association to explore how commonality in state requirements might be achieved.

History has demonstrated that self-regulation is likely to lead to practices that exclude various populations. I need not call into question the history of challenges encountered by women and persons

of color in this country; instead, one only need look to the history of the old guilds and how they operated to see that self-regulation is an implicit invitation to the implementation of practices that will limit access and opportunity.

Moving Forward:

The two approaches to apprenticeship available to industries – registered and industry-recognized, represent a viable alternative to meeting the needs and demands of employers and would be employees. I use the term "alternative" advisedly. No single strategy should be adopted wholesale to the exclusion of other policy options that remain available.

The National Urban League, consistent with its historic mission of connecting African Americans and other disadvantaged urban residents to economic opportunity, stands ready, willing and able to play a meaningful role in bridging the gap between those seeking to employ individuals and individuals seeking access to employment. This is true for the strategy that is apprenticeship – registered and industry-recognized as well as for more traditional workforce development activities.

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Testimony of

Talbot Gee

Chief Executive Officer
Heating, Air-conditioning, & Refrigeration Distributors International
(HARDI)

HARDI

HEATING AIR-CONDITIONING REFRIGERATION DISTRIBUTORS INTERNATIONAL

Submitted to the
Subcommittee on Innovation and Workforce Development

Hearing on
Mind the 'Skills' Gap: Apprenticeships and Training Programs

2360 Rayburn House Office Building
June 4, 2019

Thank you for this opportunity to provide input on an important issue that affects many industries across the country. My name is Talbot Gee and I am the Chief Executive Officer of Heating, Air-conditioning, & Refrigeration Distributors International (HARDI), a trade association representing wholesale-distributors of heating, ventilation, air-conditioning, and refrigeration (HVACR) equipment, parts, supplies and controls.

HARDI is comprised of approximately 1,000 member companies, nearly 500 of which are U.S.–based wholesale distribution companies. More than 80 percent of HARDI's distributor members are classified as small businesses that collectively employ over 40,000 U.S. workers, representing more than $35 billion in annual sales and an estimated 85 percent of the U.S. wholesale distribution market of HVACR products. HARDI members do business in every U.S. congressional district. Recently, 85 HARDI members came to Washington, DC to discuss issues important to our industry with legislators. One issue we have constantly discussed on Capitol Hill is the lack of qualified workers in the HVACR industry.

The Skills Gap in the HVACR Industry is Growing

The HVACR industry is vital to Americans' everyday lives. We supply the products that keep homes and businesses cool in summer and warm in winter. Our industry also supplies the commercial refrigeration used in a variety of industries ranging from the production, storage, and preparation of food and beverages to scientific research in hospitals and universities. The demand for jobs in the HVACR industry is also growing. According the the Bureau of Labor Statistics demand for HVACR mechanics and installers will grow at 15 percent between 2016 and 2026, twice the growth rate of all jobs.[1] This job growth is also accompanied by growing

[1] U.S. Bureau of Labor Statistics, U.S. Department of Labor Statistics, *Heating, Air Conditioning, and*

wages, the median wage in 2018 was $47,610,[2] nearly 50 percent higher than the median individual wage in the United States.[3] This growth of installers and mechanics must be matched with more workers to supply the products through wholesale distribution, additional manufacturing both domestically and abroad, and more engineers to design new equipment to meet changing customer needs. While many view HVACR as a low-to-medium skill industry, the industry as a whole needs workers ranging from high school graduates to advanced STEM degrees. Without systematic changes to how potential employees enter the industry, HVACR will not have enough employees to meet demand, and the employment gap will begin with technicians who install and repair HVACR equipment.

The need for technicians will ripple through every layer of the HVACR industry. Lack of workers will lead to increased labor costs for home builders, reduced sales for distributors, and a changing market for manufacturers. Perhaps the most important negative result will be air-conditioning becoming more expensive for middle class families, potentially moving it from a staple technology to a luxury item.

One of the most common statistics reported across the industry is that 25 percent of the technician workforce will reach retirement age by 2020. Additionally, the increased demand for air-conditioning will lead to a job growth rate of 15 percent.[4] Based on the predicted losses due

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Refrigeration Mechanics and Installers. 30 May 2019. www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm.

[2] ibid

[3] Federal Reserve, Economic Data, Real Median Personal Income in the United States, 31 May 2019, https://fred.stlouisfed.org/series/MEPAINUSA672N.

[4] U.S. Bureau of Labor Statistics, U.S. Department of Labor Statistics, *Heating, Air Conditioning, and Refrigeration Mechanics and Installers.* 30 May 2019. www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm.

to retirement and growth in demand, the HVACR industry will face a shortfall of more than 115,070 workers by 2022 (Figure 1).[5]

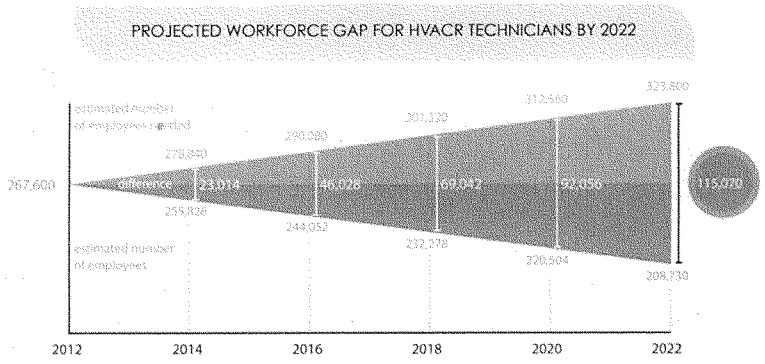


Figure 1: Projected Workforce Gap for HVACR Technicians in 2022

Even given the large number of opportunities, there is a lack of potential employees searching for careers in the HVACR industry. In a survey of HVACR instructors and administrators, 56 percent reported their programs were under-enrolled while only 10 percent reported their programs were over-enrolled (Figure 2).[6] This reported lack of demand stems in part from the lack of information about the industry shared with students by the industry, trade schools, parents, and guidance counselors.

HVACR plays an important role in our everyday lives, but is one of the least thought about industries when students begin to look for careers. Only 3 percent of students are "extremely" or "very" aware of jobs in the HVACR industry, while 54 percent are "not at all"

[5] HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians,* September 2015. www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf

[6] ibid

aware.[7] With such a steep lack of awareness about the industry, and the trades in general, it is difficult for students to find their way into well paid middle-skill careers in industries such as HVACR.

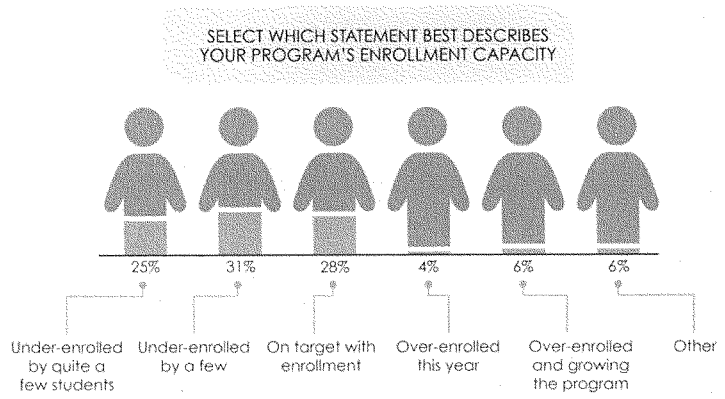


Figure 2: HVACR Program Enrollment Capacity

Using New Media to Reach Potential Employees

"Everybody says you should try college; you should at least try it. Which is a nice thought, but it's a really expensive thought." [8] This is the quote that starts the documentary "Hot Commodity" commissioned by HARDI with the purpose of attracting students and potential employees to the HVACR industry. HARDI premiered the documentary at our annual conference in December and we expect the film to be available on Netflix later this year. The documentary spotlights members from across the HVACR distribution and technician community while promoting the wide variety of jobs available in the industry that do not require a four-year degree but still provide a quality income and work-life balance. More

[7] EGIA Foundation, *Bridging the HVAC Employment GAP*, 2018, https://egiafoundation.org/report.
[8] HARDI, *Hot Commodity,* Trailer, 2018. www.vimeo.com/298687332.

information about HARDI's workforce recruitment initiative and the documentary can be found at www.hardinet.org/workforce-recruitment/.

A survey of owners of contracting companies specializing in HVACR identified several negative public perceptions about the industry that could lead a potential employee away from a career in HVACR. In addition to negative perceptions about the industry, two of the most common perceptions were based on the bias that students must go to college: education focuses students on a four-year degree and all "good" jobs require a college degree (Figure 3).[9] This bias towards college and away from trades has lead to a lack of awareness of the industry and is preventing students from entering HVACR. Without changing the bias away from trades there will be no way to prevent the growing skills gap.

An additional survey found that the top five career characteristics are easily attainable

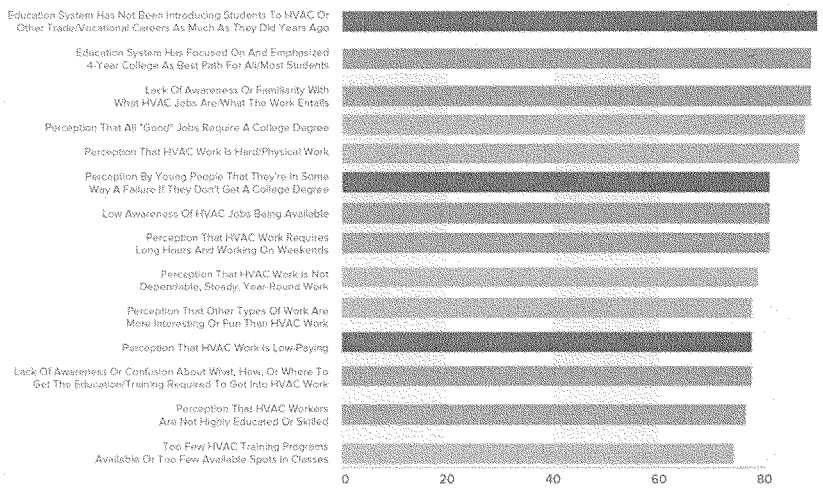


Figure 3: Negative Perceptions Biasing the Choice to Pursue a Trade Career

[9] EGIA Foundation, Bridging the HVAC Employment GAP, 2018, www.egiafoundation.org/report.

in the HVACR industry. According to students and parents surveyed, the top five characteristics students are looking for in a future career include: something the student is interested in, good job security, offers steady year-round work, good opportunities for advancement, and good potential for increasing earnings (Figure 4).[10] A similar survey of HVACR contractors found several corresponding attributes including: easy to get started in and provide growth and advancement, in demand and available anywhere in the U.S., able to provide good job security/stability, and steady year-long work opportunities. Given these positive attributes, it is easy to see why students who enter apprenticeships and training programs have high rates of

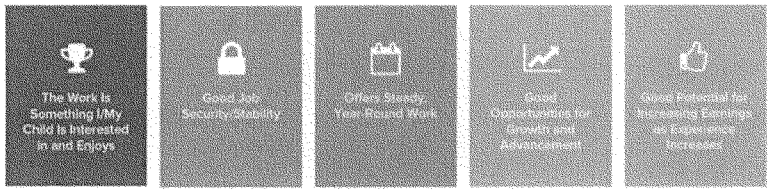


Figure 4: Top 5 Career Characteristics From Students and Parents

retention in the industry.

Apprenticeships and training programs are better at retaining students than four year colleges

According to the Department of Labor, less than 30 percent of college graduates plan to have the same job three years after graduation, while registered apprenticeships have an 89 percent retention rate three years after completion.[11] Additionally, more than 90 percent of individuals completing an apprenticeship retain employment.

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[10] ibid

[11] U.S. Department of Labor, *Apprenticeships ROI Research and Statistics,* www.apprenticeshipusa.workforcegps.org/-/media/Communities/21stcenturyapprenticeship/Files/Apprenticeship-ROI-Research-and-Statistics.ashx?la=en

Training programs also maintain high completion rates and result in employment in the HVACR industry. According to a survey by the HVACR Workforce Development Foundation, only 16 percent of students fail to complete the course without attaining employment in the field.[12] Some training programs also offer high school students the ability to graduate with a professional certificate upon completion of high school allowing students to enter the workforce at a younger age.

Bias Against Trades Prevents Quality Candidates from Entering HVACR

Contractors and educators have pointed to perceived stereotypes against the trades as one reason there are a lack of qualified candidates entering the industry. Far too often mass media portrays students entering trade schools as troubled and lesser academically than their four-year college peers. The push for students to go to college has caused nearly a third of middle skilled positions to seek candidates with an unneeded bachelors degree.[13] This up-credentialing puts pressure on students to seek out the four-year college path when more than 80 percent of job opportunities in HVACR do not require a bachelors degree.

Students also receive pressure from parents to attend college. According to one survey, "51 percent of parents expect their child to attend a four-year college."[14] When students are asked a similar question, 61 percent expect to attend a four-year college while only 10 percent

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[12] HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians,* September 2015, www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf

[13] HVACR Workforce Development Foundation, *Heating Up: The Sweltering Demand for Heating, Ventilation, Air Conditioning, and Refrigeration Workers,* July 2015, www.careersinhvacr.org/Portals/_Appleseed/documents/Demand%20ReportHeating%20Up%20-%20The%20Sweltering%20Demand%20for%20HVACR%20Workers.pdf

[14] EGIA Foundation, Bridging the HVAC Employment GAP, 2018, www.egiafoundation.org/report.

expect to attend a trade school.[15] Educators have long touted the benefits of a college degree, and rightly stated that college graduates earn more than their peers with a high school diploma or G.E.D., unfortunately less than half of students admitted to a four-year program actually graduate.[16] Moving more students into well paid trades could reduce this dropout rate.

With so many students pursuing college, many of the remaining candidates are underprepared for work in HVACR. According to one survey, 63 percent of students lack math and critical thinking skills, 54 percent lacking general education readiness, and 32 percent lack verbal communication skills.[17] This lack of basic skills requires many training programs to teach skills to bring students to a level where they can be effective in learning the trade. This remedial education delays students from entering the workforce and further reinforces the stereotype that trade schools are for student struggling academically.

Another source of students entering training programs are considered "second-career adults." These students are between 22 and 29 years old with a majority changing from their original career path.[18] A survey of contractors found that 31 percent had a four-year degree, unfortunately it did not report how many degrees were in unrelated fields.[19] Removing the bias from trades would allow more students to choose HVACR as a first career path.

Businesses Promote HVACR Industry Locally

The tightening labor market has made it even more important for small businesses to

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[15] ibid
[16] National Center for Education Statistics, Digest of Education Statistics, *Graduation rate from first institution attended for first-time, full-time bachelor's degree- seeking students at 4-year postsecondary institutions,* https://nces.ed.gov/programs/digest/d17/tables/dt17_326.10.asp
[17] EGIA Foundation, Bridging the HVAC Employment GAP, 2018, www.egiafoundation.org/report.
[18] ibid
[19] ibid

recruit students as early as possible into the HVACR industry. Several HVACR businesses have developed programs to bring students into the HVACR industry:

1) DiFilippo's Service, Wayne, Pennsylvania (Pennsylvania 6th Congressional District)
    a) DiFilippo's Service has expanded their presence at job fairs with the intention of educating more students and parents on the benefits of working in the HVACR industry. DiFilippo's works directly with Chester County Technical College and local high schools' Cooperative Education Programs to find apprentices. Qualified applicants are invited to tour the office and state of the art training facility. Once an applicant joins an individual or group training program they are able to use a mix of classroom time for learning theory and lab work to develop hands on skills. Apprentices also utilize outside classes for specialized training. After finishing their classroom education, apprentices participate in extensive hands-on training with experienced technicians.[20]
2) Auer Steel & Heating Supply Company, Milwaukee, Wisconsin (Wisconsin 4th Congressional District)
    a) Auer Steel utilizes local high school technical education programs to create a pipeline of interested students in HVACR. Auer Steel Director of Business Development Jon Hirsch has presented to over 5,000 high school students and led over 250 in-classroom presentations throughout Wisconsin and Minnesota. Auer Steel has also developed and launched a five day "Intro to HVAC" training at Horlick High School in Racine, WI which introduces students to careers in HVAC and provides parents with materials explaining the benefits of working in HVACR. Partnering with technical education teachers through

[20] Laura DiFilippo, President, Difilippo's Service

the Wisconsin Technical Educators Association, Minnesota Tech Engineering Educators Association and 12 technical colleges, Auer steel has developed a pipeline to connect students with the HVACR industry. Auer Steel also helps high school seniors dual enroll and receive credit for graduation from local technical programs jumpstarting their careers in the industry. Finally, Auer Steel connects technical program graduates with employers across Wisconsin, Minnesota, and North Dakota to be placed in a career.[21]

3) Isaac Heating & Air Conditioning, Rochester, New York (New York 25th Congressional District)
    a) Isaac Heating & Air Conditioning created Isaac University in 2001 as a way of increasing the technical capabilities of their employees. After seeing success educating employees, Isaac opened up the program to members of the public seeking careers in the industry. Today Isaac University employs a fulltime training director, a second fulltime instructor, and a part-time administrator to manage its 16 training programs. To further expand the program Isaac University created a "boot camp" where students with no experience attend 40 hours of paid training per week for 12 weeks with the guarantee of a fulltime position upon completion. Boot camp students may receive up to 18 credit hours with Monroe Community College towards an Associates Degree in HVAC Technology. Since 2015, 74 students have graduated from the boot camp with nearly 75 percent still working in the industry.[22]

Congress can make Apprenticeships, Training Programs, and Jobs in HVACR more attractive

[21] Jon Hirsch, Director of Business Development, Auer Steel & Heating Supply Co.
[22] Eric Knaak, Isaac Heating & Air Conditioning

HARDI is encouraged by progress that has been made in Congress and federal agencies to improve apprenticeships and technical programs, but more progress is needed. Last year, HARDI supported passage of the *Strengthening Career and Technical Education for the 21st Century Act* to reauthorize the Carl D. Perkins Career and Technical Education program, also known as Perkins V.[23] This legislation authorizes Congress to appropriate up to $1.2 billion for local career and technical education programs. Increasing funding for these programs will help introduce students to the trades earlier. Starting on July 1, 2019, Perkins V allows local stakeholders, like HVACR distributors and technicians, to provide input on the curriculum used to teach students about the trades. States are also increasing funding for career and technical education, a recent Columbus Dispatch Editorial supported Lt. Governor Husted's request for $69 million for workforce education to prepare students for careers in the trades.[24] HARDI encourages Congress to continue to fully fund this important program.

Another priority that will help attract students into apprenticeships is extending the use of 529 account funds to apprenticeship materials and tools. The House of Representatives recently passed legislation that includes a provision allowing 529 tax advantaged funds to be used for materials necessary for apprenticeships. This commonsense policy change will put apprentices on par with four-year college students using tax advantaged funds for college materials. HARDI encourages Congress to adopt language from the *529 OPTIONS Act*[25] allowing

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[23] U.S. Congress, House, *Strengthening Career and Technical Education for the 21st Century Act,* HR 2353, 115th Congress, 1st session, www.congress.gov/bill/115th-congress/house-bill/2353

[24] Editorial Board, *Lawmakers should include workforce development in state budget,* Columbus Dispatch, 31 May 2019, www.dispatch.com/opinion/20190531/editorial-lawmakers-should-include-workforce-development-in-state-budget

[25] U.S. Congress, House, *529 OPTIONS Act,* HR 2679, 116th Congress, 1st session, www.congress.gov/bill/115th-congress/house-bill/2679

apprentices to use 529 funds for apprenticeship materials and tools.

HARDI also supports legislation that allows employers to offer more flexibility to employees. HARDI has long supported the *Working Families Flexibility Act*[26] which allows employees the option of receiving compensatory time (comp time) in lieu of overtime pay. Employers would be required to give workers the same value in comp time as overtime pay, meaning employees would receive one and a half hours comp time for every hour of overtime worked. Many HVACR distribution positions are well paid and do not require employees to work overtime to make ends meet, this added flexibility would be welcomed by potential employees. According to a Bently University study, 77 percent of millennials believe that a flexible work schedule would make them more productive (Figure 5).[27] As more technicians use smartphones and mobile devices to receive job notifications at all hours of the day, workers are no longer bound to the 9-to-5 routine. Allowing workers to receive comp time is an easy way to provide flexibility in the workplace that no longer follows set hour. HARDI encourages Congress

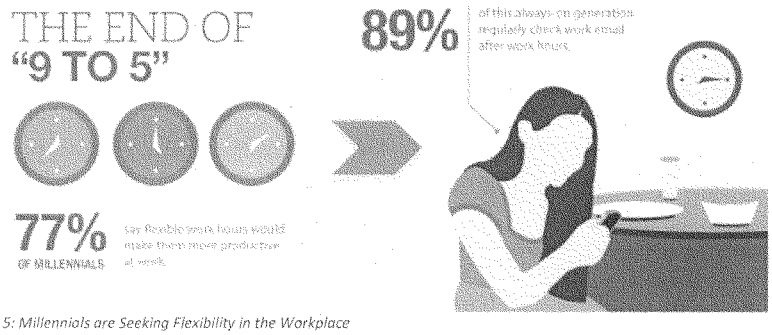


Figure 5: Millennials are Seeking Flexibility in the Workplace

[26] U.S. Congress, Senate, *Working Families Flexibility Act,* S 1043, 116th Congress, 1st session, www.congress.gov/bill/116th-congress/senate-bill/1043

[27] Bently University, *The Millennial Mind Goes to Work,* October 2014, www.bentley.edu/newsroom/latest-headlines/mind-of-millennial

to pass the *Working Families Flexibility Act*.

In addition to bills currently in Congress, HARDI supports recent actions by the Department of Labor to develop a pilot program for "Industry Recognized Apprenticeship Programs."[28] This program allows trade associations to recognize apprenticeship training programs without the requiring that the programs receive government approval. The current iteration is a pilot program that excludes construction apprenticeships. HARDI encourages Congress to work with the Department of Labor to develop the "Industry Recognized Apprenticeship Program" into a full program usable by all industries.

Lastly, HARDI is concerned recent technological developments are making regulations developed under the *Fair Labor Standards Act* (FSLA)[29] burdensome by not accounting for modern technology. As an example, many distributors must currently police the use of work smartphones afterhours to prevent employees from working overtime without proper reporting. Under the current interpretation of FSLA, if an hourly employee answers a call or an email from a customer and does not report it, the employer is legally liable for not paying the employee overtime. Millennials entered the workforce at a time when they are always connected and 89 percent report checking emails afterhours.[30] Since employers have no ability to prevent employees from answering their phones or checking email afterhours, other than setting a company policy it is difficult for employers to stay in compliance even while making

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[28] U.S. Department of Labor. (2018). "Creating Industry-Recognized Apprenticeship Programs to Expand Opportunity in America" (Notice No. 3-18). Washington, DC: U.S. Department of Labor.
[29] United States. 2011. The Fair Labor Standards Act of 1938, as amended. Washington, D.C., U.S. Dept. of Labor, Wage and Hour Division.
[30] Bently University, *The Millennial Mind Goes to Work,* October 2014, www.bentley.edu/newsroom/latest-headlines/mind-of-millennial

every attempt to comply with FLSA. HARDI encourages Congress to make a deliberate evaluation of the *Fair Labor Standards Act*. Reviewing FLSA will ensure technology does not cause unwanted problems for small business owners while protecting the rights of workers. Congress should make recommendations for regulators to make changes if an Act of Congress is unnecessary.

Conclusion

HARDI once again thanks the Committee for holding a hearing on the importance of apprenticeships and trade programs in reducing the skills gap. Additional information on the technician skills gap is available from HARDI's industry partner trade associations: Air Conditioning Contractors of America and Plumbing-Heating-Cooling Contractors Association (PHCC). The HVACR industry is facing a drastic shortfall of technicians in a few short years unless more students and potential employees can be introduced to the industry. Apprenticeships and training programs work to bring employees into the HVACR industry, but without removing the bias away from trades not enough students will seek careers in HVACR. With some of the small changes recommended in this testimony it is possible to close some of the gap and HARDI encourages Congress to work together to pass these important changes.

Figure References:

Figure 1: HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians,* September 2015. www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf.

Figure 2: HVACR Workforce Development Foundation, *The Next Generation of HVACR Installers and Technicians,* September 2015. www.careersinhvacr.org/Portals/_Appleseed/documents/Supply%20ReportExecutive%20Summary%20Labor%20Report.pdf.

Figure 3: EGIA Foundation, Bridging the HVAC Employment GAP, 2018, www.egiafoundation.org/report.

Figure 4: EGIA Foundation, Bridging the HVAC Employment GAP, 2018, www.egiafoundation.org/report.

Figure 5: Bently University, *The Millennial Mind Goes to Work,* October 2014, www.bentley.edu/newsroom/latest-headlines/mind-of-millennial



June 4, 2019

The Honorable Jason Crow
Chair, Subcommittee on
Innovation and Workforce Development
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Troy Balderson
Ranking Member, Subcommittee on
Innovation and Workforce Development
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Crow, Ranking Member Balderson and Members of the Subcommittee,

On behalf of Associated Builders and Contractors, a national construction industry trade association with 69 chapters representing more than 21,000 members, I write today regarding the U.S. House Committee on Small Business' Subcommittee on Innovation and Workforce Development hearing, "Mind the 'Skills' Gap: Apprenticeships and Training." ABC commends the subcommittee for calling this hearing to help draw attention to the efforts that are being taken to address America's skills gap.

ABC and the construction industry are fueled by small businesses: according to the most recent census data, businesses employing fewer than 100 employees account for 99 percent of all construction firms. In an industry of 7.5 million construction professionals, 89 percent of ABC member companies earn annual revenues of $20 million or less. While attracting and retaining a qualified workforce is one of the primary concerns of all ABC members, it is especially challenging for small- and medium-sized ABC members.

The skills gap continues to be a driving force creating the urgent need for workers in the construction industry. In fact, 92% of ABC contractors report some form of skilled labor shortage and only 2% said they are not experiencing a skilled labor shortage, according to a recent ABC workforce development survey. Additionally, more than three quarters (77%) cited busy schedules as the main obstacle to workforce development.

To bring more Americans into skilled construction careers and to help companies find the workers they desperately need, ABC member contractors invest an estimated $1.6 billion per year in workforce development to educate and upskill more than 1 million people annually. Using existing innovative and flexible learning models, ABC members, including small- to mid-size contractors, build a safe, skilled, and productive workforce that will be an essential part in addressing the skills gap and hiring the additional 440,000 construction workers needed in 2019 alone.

These models include teaching industry-recognized curriculum, such as NCCER, a not-for-profit 501(c)(3) education foundation with more than 1,400 locations across America, which is recognized globally as the gold standard for industry-recognized education modules. Our network also operates ABC member company created programs, ABC chapter programs and partnerships with high schools and community colleges.

As the subcommittee notes, many small businesses lack the necessary resources to combat the skills gap through federal and state programs. As ABC and its chapters continue to develop construction professionals using innovative and flexible apprenticeship models, private industry can only do so much. Changes must be made to the education system to promote apprenticeships in the current education system just as we promote traditional four-year degrees.

ABC asks Congress to consider the following recommendations to expand apprenticeship opportunities and help everyone achieve the American Dream:

- States and school districts should have equal funding for college education and apprenticeships.
- States should measure performance outcomes by students who continue their education at colleges and universities as well as earn-and-learn programs.
- College savings plans should cover Department of Labor-registered and industry-recognized apprenticeship programs. Congress should consider expanding 529 savings plans and financial aid to be eligible for apprenticeship programs. Currently, apprenticeships see none of the $275 billion from 529 savings plans and receive zero funding from the $80 billion of federal financial aid.
- Pell grant eligibility should be expanded to include more compact, skills-focused instruction.
- Apprenticeships, both industry-recognized and government-defined, should have equal access to incentives such as tax breaks, tuition assistance and scale wages.

As the Committee on Small Business examines the challenges that are posed by the skills gap and the merits of apprenticeship programs, ABC would urge the committee to do their part to address the skills gap by supporting an all-of-the-above strategy for workforce development.

We thank the subcommittee again for calling this hearing and would welcome the opportunity to host any member of Congress at a facility in their district or state to demonstrate ABC's vast workforce development system.

Sincerely,

Kristen Swearingen
Vice President of Legislative & Political Affairs

CC: Members of the House Committee on Small Business

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