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MODERNIZING APPRENTICESHIPS TO EXPAND OPPORTUNITIES

HEARING

OF THE

COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS

UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

SECOND SESSION

ON

EXAMINING MODERNIZING APPRENTICESHIPS TO EXPAND OPPORTUNITIES

JULY 26, 2018

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MODERNIZING APPRENTICESHIPS TO EXPAND OPPORTUNITIES

Thursday, July 26, 2018

U.S. SENATE,
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS,
Washington, DC.

The Committee met, pursuant to notice, at 11:03 a.m. in room SD–430, Dirksen Senate Office Building, Hon. Lamar Alexander, Chairman of the Committee, presiding.

Present: Senators Alexander [presiding], Isakson, Cassidy, Young, Scott, Murray, Casey, Bennet, Baldwin, Warren, Kaine, Hassan, Smith, and Jones.

OPENING STATEMENT OF SENATOR ALEXANDER

The CHAIRMAN. The Senate Committee on Health, Education, Labor, and Pensions will please come to order.

Senator Murray and I will each have an opening statement. I will introduce the witnesses and then we will hear from the witnesses. Senators will each have 5 minutes to ask questions.

We are here today to explore ways to modernize apprenticeships, which are training programs that allow workers to earn and learn at the same time.

Let me tell you the story of a couple of hypothetical Tennesseans who are interested in earning money while they learn job skills.

A high school senior, let us call him Jason from Nashville, has decided he wants to be an electrician. Jason might join a middle Tennessee electrical contractor as an apprentice in a federally registered program. He would learn the skills he needed on the job while also receiving technical instruction in the classroom.

At the end of the apprenticeship, Jason would have a certificate that demonstrates that he has the skills to be a successful electrician, such as safely running wire, and he could use that certificate to find work in Nashville or anywhere else around the country.

Or, take Samantha from Memphis. While taking classes at a local community college, she hears about an apprenticeship program started by a local insurance firm to train insurance claims handlers.

Even though it was not registered with the Department of Labor, the program was designed by industry experts to help Samantha receive the skills she would need to be successful in the insurance industry, such as analytical and investigatory skills. Just like Jason, Samantha would be able to get the instruction and skills she needs while earning money at the same time.

For millions of Americans who are looking for ways to improve their skills, make a good wage, and live the American Dream, high

quality apprenticeship programs, whether federally registered or not, are a smart path forward.

The United States is in the midst of the best economy in 18 years. In one month this year, the unemployment rate fell as low as it has been since 1969, nearly half a century ago.

In recent months, we have seen the lowest rate of African American unemployment since the Federal Government started keeping track of unemployment.

In this booming economy, still there are 6.6 million job openings, and what I hear from Tennessee employers is that they need more skilled workers.

The shortage of skilled workers is something the Trump administration has been actively working on, and just last week announced an executive order aimed at training more Americans for these jobs.

Congress is doing our part. On Monday, the Senate passed an update to the Perkins Career and Technical Education Act, which this Committee worked on, a nearly $1.2 billion Federal program of grants to states that help fund Career and Technical Education programs at high schools and community colleges. And states spend nearly 10 times that much each year on Career and Technical Education.

That bill is on its way to the President's desk, because the House passed it yesterday.

A second way for workers to learn new skills is what we are looking at today: apprenticeships. Apprenticeships have been around since the Middle Ages. In America, Paul Revere learned the family silversmith business as an apprentice and Elvis Presley apprenticed as an electrician before he recorded "Jailhouse Rock."

In 2017, the United States had approximately 533,000 apprentices in federally Registered Apprenticeship programs, training to become electricians, carpenters, craft laborers, or plumbers.

In 1937, Congress created these federally Registered Apprenticeships, which means they are certified by the Department of Labor or state agencies as meeting certain requirements.

Today, federally Registered Apprenticeships are especially concentrated in construction and manufacturing, and work well for many employers and workers.

A federally Registered Apprenticeship program must meet a number of prescriptive requirements. For example, the number of experienced workers to apprentices.

Another type of apprenticeship is the "Industry Recognized Apprenticeship," which has other characteristics. They are an alternative to federally Registered Apprenticeships, with more flexible requirements developed by industry and less administrative tape.

The requirements for a federally Registered Apprenticeship may not meet the needs of every workforce. Growing industries, such as health, finance, and information technology, have not historically harnessed the potential of apprenticeships, and are facing a shortage of skilled workers.

The hope is that with a modernized approach to apprenticeships, industries that were not around when Paul Revere was training to be a silversmith, or even when Elvis was learning to be an electrician, would be able to start apprenticeship programs.

Senator Murray.

OPENING STATEMENT OF SENATOR MURRAY

Senator MURRAY. Well, thank you, Chairman Alexander.

I want to thank all of our witnesses for being here today, especially Ms. Sandi Vito from the 1199 SEIU Training and Employment Funds.

Ms. Vito, I look forward to hearing from you on how your program is helping workers in the health care sector get the training and skills they need to succeed in our changing economy. And about the impact, in many cases negative, that some of this Administration's proposals would have on workers, and businesses, and our economy.

As we have talked about in this Committee before, our economy continues to grow and change with new technologies and industries. Unfortunately, too many workers, and businesses, and local communities are still struggling.

Workers are still struggling to find good paying jobs to support their families. Businesses are still struggling to find workers with the skills and training to do in-demand jobs. And as a result, local communities across the country are still struggling to adapt and modernize in a 21st century economy.

It is clear there is a lot of work that needs to be done to fill the skills gap in this country. So I am really pleased we are having this hearing today.

But instead of reinventing the wheel of workforce training, I think it is important to highlight what is working in our Nation's job training programs. Registered Apprenticeships have long been considered the gold standard of workforce training.

They give workers structured, on the job training focused on in-demand skills and competencies needed in the occupation with nationally recognized credentials employers can trust. They guarantee workers are able to advance their careers and that their pay increases with their skills and training.

There is a lot working in Registered Apprenticeships. That is thanks, in large part, to the leadership unions have taken for almost a century in ensuring these workforce training programs are high quality, while protecting workers.

For example, the building trade unions are the largest providers of registered apprenticeships in the United States, investing over $1 billion a year in training skilled workers in the construction industry at over 1,600 training sites around the country.

As our economy changes, and industries and technologies advance, we should be looking for ways to mirror what the building trades are doing to other sectors of our economy.

I hope today instead of getting distracted by shiny, new programs that are, unfortunately, set up to be low quality or unaccountable or ineffective, we should focus on strengthening and modernizing our current Registered Apprenticeship programs.

There are a number of steps we can take to achieve this goal:

First, we should work to increase the historically bipartisan investments and resources for apprenticeship programs, both in traditional and in new industries.

I was proud to work with Senator Isakson and others in 2014 to pass the bipartisan Workforce Innovation and Opportunity Act. I am hoping we can keep working together to build on that to support a full range of high quality workforce training programs, Registered Apprenticeships included.

Second, we should find ways to update current apprenticeship programs to support workers and businesses in new fields, especially in growing industries with clear paths to the middle class.

Finally, we do need to support and encourage more intermediaries that create partnerships among employers, and educators, and workers to create high quality apprenticeship programs that benefit everyone. Ms. Vito, your SEIU Training and Education Funds are a perfect example of that.

One recent study found that one-fifth of all new jobs are going to be in the health care sector. So I look forward today to hearing how your Training Fund partners with hospitals and employers around the country, and supports nurses and other health care professionals with the training and skills they need to advance in their careers and meet the growing need for skilled workers in that field.

If we do these things, there is no need to have duplicative, confusing, low quality programs that do not protect workers or provide them with the full range of skills to succeed at any job in their field, not just the one they are currently in.

Now unfortunately, it seems President Trump does not agree with this. He is more interested in getting credit, it seems, at flashy executive order signings on television than helping our workers and businesses actually succeed.

If you look at what he is actually trying to do, it is clear why this is a bad idea. His proposals would actually:

Weaken and water down our current Registered Apprenticeship programs in a way that would weaken worker protections;

Remove the focus of equity and equal opportunity;

Lower the quality of credentials and training; and,

Provide taxpayer dollars to unaccountable organizations, including for profit colleges and corporations, without any quality assurance or real accountability.

If he were serious about job training, he would stop consistently proposing to cut the funding for workforce training programs, including Registered Apprenticeships and the bipartisan Work Force and Innovation Opportunity Act and, instead, work with us to improve and modernize the Registered Apprenticeship programs that we do have now.

I hope this Committee will reject those misguided proposals. I hope that this Committee can work together, just as we did to reauthorize the Perkins and Technical Education Act, to reject the partisan ideology, and really work together to improve workforce training and Registered Apprenticeships.

Thank you.

The CHAIRMAN. Thank you, Senator Murray.

We welcome each of our witnesses. If you could summarize your remarks in 5 minutes or so, that would give the Senators time to have a conversation with you.

The first witness we will hear from today is Montez King. Mr. King is the Executive Director for the National Institute for Metalworking Skills in Fairfax, Virginia.

He began his career as a machinist's apprenticeship at Teledyne Energy Systems, and now works to develop national standards and competency-based credentials in the manufacturing trades.

Michael Holland is the Chief Operating Officer for MAREK, a construction firm with locations across Texas, as well as Atlanta, Georgia, and Nashville.

Mr. Holland serves as a Board Member and past President of the Associated Builders and Contractors trade association, Houston Chapter.

Third, we have Sandi Vito. Ms. Vito is the Executive Director of the 1199SEIU Training and Employment Funds in New York City. Her experience includes serving as Secretary of the Pennsylvania Department of Labor & Industry, and that Department's Deputy Secretary for Workforce Development.

Our fourth witness today is Glenn Johnson from Houston, Texas. He is the Workforce Development Leader for the BASF Corporation, a chemical manufacturer with more than 15,000 employees in 148 locations in the United States, including two in Tennessee.

Welcome, again, to all of our witnesses.

Mr. King, please begin your testimony.

STATEMENT OF MONTEZ KING, EXECUTIVE DIRECTOR, NATIONAL INSTITUTE FOR METALWORKING SKILLS, FAIRFAX, VIRGINIA

Mr. KING. Good morning.

My name is Montez King and I am the Executive Director of NIMS, the National Institute for Metalworking Skills. We develop skill standards, credentials, and training frameworks for advanced manufacturing and related industries.

I want to thank Senator Alexander, and Senator Murray, and the Senate HELP Committee for having me today to talk about a topic that is very close to me.

I was honored to serve on Secretary Acosta's Task Force for Apprenticeship Expansion, charged with identifying strategies to expand apprenticeships. Our work together culminated in a recently released report that includes recommendations on how to bring apprenticeships into the 21st century and ensure widespread access and utility.

Now, apprenticeship in its basic form really works. I think all of us can agree to that, but the Registered Apprenticeship system has barely changed since it was established in the 1930's and is burdened by rules and restrictions. Because of this prescriptive nature, it is sometimes unappealing to companies.

But what if there was an alternative? What if a new model of apprenticeship recognized and encouraged innovation and creativity?

This alternative is coming to fruition through the Industry-Recognized Apprenticeship Program, also known as IRAP. This new model recognizes that you do not grow something by creating more rules, but by creating an environment of innovation and excellence, and offering greater flexibility to both employers and apprentices.

Perhaps the best way for me to describe the differences between the two models is through a metaphor of LEGO blocks.

[Chart.]

Mr. KING. On the right of me, I have the IRAP model. This is an alternative. To my left, I have the registered model.

To the right, this model is a platform that uses different LEGO blocks to build a house. Rather than rules and restrictions, IRAP is a set of quality metrics. Each LEGO block is a quality metric to measure quality. The companies can use these metrics to design and build their program specific to their needs.

On the registered side, this model does not give that much flexibility. Instead, it is a LEGO house that is built already. It is unable to meet the needs of every company, maybe some companies, but not every company. Companies must conform to the limitations within the house.

For example, we are currently working with Raytheon's Missile Systems Division to launch an apprenticeship program, and this design uses quality metrics included in the IRAP model, but it exercises creativity and ingenuity that cannot be implemented within the rules and restrictions of the Registered Apprenticeship. The existing house just does not work.

This design is revolutionizing the culture of Raytheon and is accelerating learning at a velocity parallel to the innovative technologies of their organization. Innovation and technologies require innovation in training.

Appendix B of my written testimony provides more details of Raytheon's design, but here is an example of the cultural change that is taking place within the organization.

Prior to implementing this design, I asked Raytheon's leadership the following questions. How many machinists do you employ? The answer was, "Roughly 500." How many of those machinists are apprentices? The answer was, "Maybe 15."

Here are the answers to the same questions after implementing this new design. How many machinists do you employ? It was the same, "Roughly 500." How many of those machinists are apprentices? The answer changed, "Every machinist in our organization is an apprentice. Even our support staff can tap in and out of the apprenticeship program at will."

A salesperson or an estimator can tap into their apprenticeship program to perform their jobs better. You see, innovation is the real driver of expansion, not rules and restrictions.

Raytheon's apprenticeship design is just one example of how an Industry-Recognized Apprenticeship Program can be applied. There is truly limitless potential.

Again, apprenticeship works, but we must allow innovation and creativity.

I want to thank you for your time and I welcome you for questions.

[The prepared statement of Mr. King follows:]

Testimony of Montez King, Executive Director, NIMS
To the Senate Committee on Health, Education, Labor and Pensions (HELP)

July 26, 2018

Good Morning, my name is Montez King and I am the executive director of NIMS (The National Institute for Metalworking Skills), which provides skill standards, credentials, and training frameworks for advanced manufacturing and related industries. I want to thank Senator Alexander and Senator Murray and the Senate HELP committee for having me here today to talk about a topic close to me professionally and personally.

I was honored to recently serve on Secretary Acosta's Task Force on Apprenticeship Expansion, charged with identifying strategies and proposals to promote apprenticeships, particularly in industries where apprenticeships are insufficient. Along with my 19 colleagues representing diverse perspectives, we looked at all angles of apprenticeship—including challenges and solutions, design and delivery, equity and employer engagement, and regulations and administration. Our work together culminated in a recently released report that includes recommendations on how to bring apprenticeships into the 21st century and ensure widespread access and utility across economic sectors. Before I get into the specifics of those recommendations, I want to explain the current landscape.

Apprenticeship in its basic form has long been a staple of workforce preparation in this country. Its core components like blended learning and mentorship make it a successful work and learn model, providing an alternative to traditional, costly education pathways for individuals to access good-paying jobs. The traditional Registered Apprenticeship established by the National Apprenticeship Act of 1937 was passed to regulate apprenticeships and other on-the-job training programs. These regulations focused on the health, safety and general welfare of apprentices, and few updates have been made to make this system relevant in today's world. Instead, we have an apprenticeship system burdened by rules and restrictions and counterproductive to our nation's economic imperative to innovate and evolve. The system pushes businesses into a "one size fits all" box. The system is not able to easily adapt to changes in industry, and it is often an unattractive option for individuals who may look to programs like apprenticeships to launch their careers and seek economic betterment through more flexible education opportunities. In the

current Registered Apprenticeships system, there are specific ideas about who can be an apprentice—typically individuals entering from high school or a post-secondary institution. When they enter the program, they face time requirements and benchmarks based on hours spent in the classroom or on the shop floor instead of on their mastery of skills or performance. Because of the proscriptive nature of the Registered Apprenticeship, it is proving to be an unappealing proposition for companies and prospective recruits, and has limited applicability in new and emerging business sectors.

But what if this paradigm shifted? What if a new model of apprenticeship recognized and encouraged innovation and creativity? What if this new model was more inclusive of diverse pools of apprentices, opening work and learn opportunities for both new and incumbent workers in a variety of occupations from the front line to the executive suite? What if this new model put industry—instead of government—in the driver's seat, allowing for the development of training programs designed by real experts?

This paradigm shift is coming to fruition through the Industry-Recognized Apprenticeship Program, a model described in the Task Force's formal report as the vehicle for remodeling and expanding apprenticeship to meet the needs of the modern economy. This new model recognizes that you don't grow something by creating more rules, but by creating an environment of innovation and excellence. By definition, Industry-Recognized Apprenticeships include quality components of a work and learn model, are structured with standards-based industry credentials, and offer greater flexibility and affordability to both employers and apprentices. In our final report, the Task Force outlines a set of recommendations for how to build and support this kind of new system.

The details of these recommendations can be found in Appendix A.

Perhaps the best way to describe this new industry-recognized model is to use the metaphor of Lego blocks. The model is the platform upon which you use different Lego blocks to build a house. The platform supports limitless designs, while keeping the components reinforced and cohesive. Rather than a proscription of standards and rubrics, the Industry-Recognized model is a set of quality metrics companies use to design programs specific to their needs and the needs of

their talent pool. The Registered Apprenticeship model does not give employers this flexibility—instead, it is the Lego house that is already built, unable to be modified or enhanced to meet the needs of the user. Through the Industry-Recognized Apprenticeship platform, companies can build their own customized apprenticeship, designing work and learn programs that fulfill their workforce needs and create greater probabilities of success for participants. Innovation—the real driver of growth—is left alone to take its course.

At NIMS, we are working with Raytheon to develop an Industry-Recognized Apprenticeship that creates a work and learn training system and includes apprenticeship opportunities for diverse occupations and job levels. In the creation of this program, we used the quality guidelines included in the Industry-Recognized Model, but exercised creativity and ingenuity in our approach. The result is a structured on-the-job training system that delivers quality talent to the company, provides a long-term talent management solution, and accommodates the wave of working learners representing a large portion of the current and future labor force. This new model not only changes the trajectory of talent acquisition for the company, but also changes the culture of training from one that focuses just on the entry-level to one that is inclusive of every company employee, regardless of position or occupation. A description of the different components of the NIMS program can be found in Appendix B.

The biggest distinction in the NIMS apprenticeship lies in its flexibility and rigor. Being competency based and delivered in a dual classroom and real-life production environment, apprentices are poised to complete their learning in the most efficient and highest quality way possible. Apprentices are not bound to a certain number of hours, but instead progress through the program by obtaining a specific skill set and performing those skills in a real manufacturing environment.

The NIMS apprenticeship model is just one example of how the Industry Recognized model can be practically applied. And there is truly limitless potential. Apprenticeship works. I know it works, because it worked for me. A work-and-learn apprenticeship opportunity with a local machine shop turned my life around. Having grown up in an underserved West Baltimore community, I came close to falling prey to a life of crime and drugs like so many of my friends.

My apprenticeship opened my eyes—and heart—to another world, one in which I could be successful and in charge of my own destiny. I worked my way up in the industry and later became the head of a renowned manufacturing training center, an experience that prepared me for my work here at NIMS.

It's time we give more people the opportunity to succeed. Widespread expansion of apprenticeship can occur if congress and the administration implements strategies to incentivize employer and apprentice participation.

Now is the time to act. Now is the time to bring the United States Apprenticeship into the 21st century and harness and employ the great talent we produce.

Thank you for your time, and I welcome your questions.

APPENDIX A

TASK FORCE ON APPRENTICESHIP EXPANSION

Final Report to:

The President of the United States

May 10, 2018

SECRETARY OF LABOR
WASHINGTON, D.C. 20210

The President
The White House
Washington, DC 20500

Dear Mr. President:

I am pleased to present the Final Report of the Task Force on Apprenticeship Expansion.

Your June 15, 2017, Executive Order, *Expanding Apprenticeships in America*, called for the Secretary of Labor to chair this Task Force, "to identify strategies and proposals to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient." To meet this challenge, we brought together representatives from companies, labor unions, trade associations, educational institutions, and public agencies. These distinguished participants understand that expanding apprenticeships is essential not only to our economy, but to put more Americans on the path to good, safe, family-sustaining careers.

Together, members of the Task Force pooled their expertise to meet this goal. The Task Force's work was aided greatly by my Vice-Chairs, Secretary of Education Betsy DeVos and Secretary of Commerce Wilbur Ross. Senior Advisor to the President Ivanka Trump added great insight during our meetings.

The centerpiece of the Task Force's work is its proposal to build on the apprenticeship concept by creating a pathway to new, industry-recognized apprenticeships. This final report lays out that proposal as the first step toward the goal of expanding apprenticeships broadly over the next five years.

Sincerely,

R. ALEXANDER ACOSTA

THE SECRETARY OF EDUCATION
WASHINGTON, DC 20202

President Trump has made apprenticeship expansion a national workforce priority and embraces apprenticeship as a national education priority – as do I. In his Executive Order *Expanding Apprenticeships in America*, the President's message was clear: by leveraging the time-proven apprenticeship model, we can serve more Americans, bring new educational opportunities to those who prefer active learning and help more individuals achieve the American dream.

The President created and challenged this Task Force on Apprenticeship Expansion to create new apprenticeship opportunities to serve a more diverse group of learners and a more expansive set of occupations in well-paying, personally rewarding and high-demand fields. It has been a pleasure to work with and learn from so many dedicated leaders from industry, education and government to challenge old notions and generate new ideas that will expand the number of educational and career pathways available to Americans.

Through this report, the Task Force has created a roadmap for advancing apprenticeships, including through the development of a new and more flexible apprenticeship model, the Industry-Recognized Apprenticeship. This innovative model will engage a diverse student population, serve a broader array of industries and enable a larger number of employers to directly engage in growing and developing a qualified workforce to meet the needs of the 21st century.

I was pleased by the speed with which the Task Force came to the unanimous agreement that the negative stigmatization of apprenticeship must come to an end, and that a traditional college education and a modern-day apprenticeship are no longer mutually exclusive education options. A four-year degree is a good way – but not the only way – to cultivate one's talents, fulfill one's passions and enjoy a lifetime of career opportunity and success. Indeed, preparing some students for success in career and technical education is just as important as preparing other students for college.

My goal is to help all Americans understand that work-based learning adds an important new dimension to the education tool kit – one that is engaging for learners, cost effective for employers and starts to tackle the growing problem of rising student loan debt. Apprenticeships can also provide unique educational opportunities to individuals with disabilities, who have extraordinary talents that sometimes go underappreciated or underdeveloped by traditional education.

Bringing our workforce development efforts into the 21st century is critical to our nation's economy, security and prosperity. President Trump and his Administration will not waver in our commitment to helping all Americans appreciate the value of work-based learning experiences and empowering all students to have the option to work, earn and learn.

Sincerely,

Betsy DeVos

Betsy DeVos

UNITED STATES DEPARTMENT OF COMMERCE
The Secretary of Commerce
Washington, D.C. 20230

In his first year in office, President Trump quickly implemented historic tax cuts and smart deregulation to unleash the full power of the United States economy. He has begun correcting long-standing trade imbalances and introduced a plan to reinvigorate our neglected infrastructure. These policy changes have restored jobs, jump-started capital expenditure, and put our country on the path to prosperity. We have transitioned from a dismal recovery to an expansion that benefits all Americans. However, this expansion will slow if our labor force cannot fill the high-skilled jobs that American businesses create. Job creators across the country are sounding the alarm about the lack of skilled workers. Each day that their jobs go unfilled, our economic expansion is held back.

Apprenticeships are an underutilized tool to help solve today's labor market challenges and help create the workforce of the future. President Trump's Executive Order Expanding Apprenticeships in America directed the Administration to undertake much-needed changes to the 80-year-old apprenticeship system that serves few sectors well. The current half a million apprentices are simply not enough to fill the more than 6 million unfilled jobs at U.S. companies in today's labor market.

While apprenticeships are fundamentally a business investment, rapid expansion of apprenticeships hinges on a cultural change across companies, colleges, high schools, labor unions, trade associations, and other institutions. The Executive Order created the Task Force on Apprenticeship Expansion (Task Force) and directed it to examine the multiple barriers to growth and utilization of apprenticeships. The Task Force's report outlines a series of thoughtful, practical recommendations that will make 2018 an inflection point in the history of American apprenticeships.

The recommendations span four complementary policy areas:

1. expanding access, equity, and career awareness
2. administrative and regulatory strategies
3. attracting business to apprenticeship
4. education and credentialing

The 20 Task Force members are not merely thought leaders, but also doers in the field of work-based learning and apprenticeships. In six short months, the Task Force came together in partnership to make these recommendations, and continued partnership and leadership are required to implement the Task Force's proposals. I pledge to continue to work together as we translate these ideas into an action plan that will relegate labor shortages to a thing of the past. Apprenticeships can no longer be a niche program. They must become a first option for job seekers and businesses alike.

Wilbur Ross
U.S. Secretary of Commerce
Vice Chair, Task Force on Apprenticeship Expansion

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Michael Bellaman, President and CEO, Associated Builders and Contractors

Joshua Bolten, President and CEO, Business Roundtable

Walter Bumphus, President and CEO, American Association of Community Colleges

Wesley Bush, Chairman, CEO and President, Northrop Grumman

The Honorable Dennis Daugaard, Governor, South Dakota

Emily Stover DeRocco, Founder & CEO, E3 Engage Educate Employ

Cari Dominguez, Director, Manpower Inc.

Thomas J. Donohue, President and CEO, U.S. Chamber of Commerce

Montez King, Executive Director, National Institute for Metalworking Skills

Andrew Liveris, Chairman and CEO, Dow Chemical Company

Katherine Lugar, President and CEO, American Hotel & Lodging Association

Douglas J. McCarron, General President, United Brotherhood of Carpenters and Joiners of America

Sean McGarvey, President, North America's Building Trades Unions

Marc H. Morial, CEO, National Urban League

John Ratzenberger, Workforce Training Advocate

The Honorable Kim Reynolds, Governor, Iowa

Mark B. Rosenberg, Board of Directors, Association of Public and Land-Grant Universities

Joseph Sellers, Jr., General President, International Association of Sheet Metal, Air, Rail and Transportation Workers

Dawn Sweeney, President and CEO, National Restaurant Association

Jay Timmons, President and CEO, National Association of Manufacturers

Executive Summary

Apprenticeship programs, when implemented effectively, provide workers with a career path featuring paid on-the-job training, skills development, and mentorship, while at the same time providing employers with a steady source of highly trained and productive workers. These programs have the potential to grow into a critical and successful component of America's workforce strategy, but are currently underutilized. Meanwhile, the American higher education system is churning out a pool of in-debt job seekers who are not equipped to meet the skills needs of many employers in the modern American economy. Recognizing this state of affairs, President Trump issued Executive Order (E.O.) 13801, *Expanding Apprenticeships in America*, which required the establishment of a Task Force on Apprenticeship Expansion to identify strategies and recommendations to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient

The Task Force, which is comprised of 20 highly experienced members representing a balanced range of perspectives, met multiple times beginning in November 2017, and concluding in May 2018. The full Task Force was subdivided into the following subcommittees: (1) Education and Credentialing; (2) Attracting Business to Apprenticeship; (3) Expanding Access, Equity, and Career Awareness; and (4) Administrative and Regulatory Strategies to Expand Apprenticeship. Each subcommittee met individually to develop the strategies and recommendations identified in this report, which are summarized below. The subcommittees presented their recommendations and rationale to the full Task Force, which deliberated and voted to send the recommendations forward.

The ***Subcommittee on Education and Credentialing*** recommended that Industry-Recognized Apprenticeship programs expand more traditional work-and-learn models to achieve higher levels of employer engagement and better outcomes; include work-based learning and performance assessment; and feature national recognition and portability of standards-based, industry-recognized credentials, the requirements for which should be articulated by the public-private sector partners implementing the programs. In addition, the Subcommittee recommended that the Federal partners of the Industry-Recognized Apprenticeship program should implement and support strategies for making technical instruction more affordable for apprentices. Lastly, the Subcommittee recommended that the Federal Government identify and make available capacity-building resources for certifying organizations, institutions of higher education, and other service providers. The Subcommittee also recommended that employers should partner in planning for and building capacity.

The ***Subcommittee on Attracting Business to Apprenticeship*** recommended that the Industry-Recognized Apprenticeship program should streamline and simplify program funding through various methods, such as updating Federal funding criteria, streamlining State grant access, and exploring sector-led financial options. In addition, the Subcommittee recommended that the U.S. Department of Labor, along with other Federal agencies and industry groups, should conduct and make available a needs analysis to identify existing skills shortages and quantify the benefits of apprenticeships in meeting labor challenges, and also compile apprenticeship information in a single, online, centralized website.

The ***Subcommittee on Expanding Access, Equity, and Career Awareness*** recommended that the Federal Government should fund a brand awareness campaign for apprenticeships and take steps

to expand access to and incentivize the use of an "earn-and-learn" model for employers and apprentices. To ensure equity of access to Industry-Recognized Apprenticeship programs, the Subcommittee recommended that the U.S. Department of Labor should implement clear guidelines and fund community-based organization efforts, and certifiers and sponsors should develop comprehensive outreach strategies. Lastly, the Subcommittee recommended that the U.S. Department of Labor should vet concerns about the existing Registered Apprenticeship system and take action to make improvements.

The ***Subcommittee on Administrative and Regulatory Strategies to Expand Apprenticeship*** recommended that implementation of an Industry-Recognized Apprenticeship program should begin with a pilot project in an industry without well-established Registered Apprenticeship programs. The Subcommittee also recommended that the Industry-Recognized Apprenticeship programs should focus on mastery and competency, not just seat-time or training hours, and that program implementation guidelines should spell out the quality standards. In addition, the Subcommittee recommended that Industry-Recognized Apprenticeship program participants cannot be considered as apprentices for the purpose of meeting the Davis-Bacon Act wage requirements (for the construction industry), and that programs are not required to follow specific wage progression rules but clarify to apprentices what wages they will be paid and under what circumstances wages will increase. Lastly, this Subcommittee categorized key questions highlighted by their recommendations and recommended several administrative reforms and changes that could be made to the Registered Apprenticeship system that would also expand apprenticeship utilization in the United States.

Introduction

On June 15, 2017, President Trump issued E.O. 13801, *Expanding Apprenticeships in America*, which directed the Secretary of Labor to establish a Task Force on Apprenticeship Expansion (hereafter, "the Task Force") to identify strategies and proposals to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient. America's education and workforce development programs are in need of reform in order to meet the challenges of today's rapidly changing economy, namely the "skills gaps" that result from a workforce that is insufficiently trained to fill existing and newly created jobs. As the E.O. asserts, expanding and promoting apprenticeships, which provide paid on-the-job training, and valuable skills development, and reforming ineffective education and workforce development programs will help promote more affordable pathways to rewarding jobs for U.S. workers. As such, the E.O. directed the Task Force to submit strategies and recommendations addressing the following areas:

1. Federal initiatives to promote apprenticeships;
2. Administrative and legislative reforms that would facilitate the formation and success of apprenticeship programs;
3. The most effective strategies for creating Industry-Recognized Apprenticeships; and
4. The most effective strategies for amplifying and encouraging private sector initiatives to promote apprenticeships.

In July 2017, the Secretary of Labor published in the Federal Register a solicitation of nominations for Task Force members.[1] In August 2017, he executed a Task Force Charter pursuant to the Federal Advisory Committee Act.[2] The E.O. specified that the Task Force would be chaired by the Secretary of Labor, vice chaired by the Secretaries of Education and Commerce, and comprised of no more than 20 members. In order to achieve the balanced representation of points of view and subject matter expertise on apprenticeship-related matters contemplated by the E.O. and the Charter, the Task Force includes individuals representing the perspectives of trade and industry groups, companies, non-profit organizations, unions, joint labor-management organizations, education institutions, State or local governments, and other individuals designated by the Secretary of Labor. These members, all vetted by the U.S. Department of Labor to ensure compliance with all legal and ethical requirements, come from a cross-section of those directly affected, interested, and qualified as appropriate to the nature and functions of the Task Force.

The Task Force met in person for its inaugural meeting in November 2017, followed by several additional meetings, either in person or via conference call, held in February 2018, March 2018, April 2018, and May 2018.[3] Subsequent to the inaugural meeting, the full Task Force was sub-divided into the following four subcommittees that developed the requested strategies and recommendations to promote apprenticeships in America:

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[1] Nominations for the Task Force on Apprenticeship Expansion, 82 FR 34553 (July 25, 2017).
[2] U.S. Department of Labor Task Force on Apprenticeship Expansion Advisory Committee Charter (Aug. 7, 2017), *available at* https://www.dol.gov/apprenticeship/docs/2620_2017.08.07_DOL_2620_Task_Force_Charter.pdf (last accessed May 3, 2018).
[3] Public meeting minutes are available on the Task Force website: https://www.dol.gov/apprenticeship/task-force.htm (last accessed May 3, 2018).

1. Education and Credentialing;
2. Attracting Business to Apprenticeship;
3. Expanding Access, Equity, and Career Awareness; and
4. Administrative and Regulatory Strategies to Expand Apprenticeship.

Each subcommittee was directed with a scope of work linked to the duties of the Task Force and met independently via conference call to develop subcommittee recommendations, which they subsequently presented to the full Task Force in its public meetings. Many Task Force members participated in more than their one assigned subcommittee. Many felt they had expertise to offer on a variety of issues within the mission of multiple subcommittees. This broad participation was welcomed.

All four subcommittees reported their agreed upon strategies and recommendations to expand apprenticeships in America to the full Task Force at the public meetings where all members were able to participate in discussion on each individual recommendation. During the April 10, 2018, meeting of the Task Force, all members considered the full and final suite of strategies and recommendations. At that time, the Task Force voted to send forward to the President all strategies and recommendations submitted by the four subcommittees, including a glossary of terms, to expand and promote apprenticeships in America, as directed by E.O. 13801.

Apprenticeship in America

In today's rapidly changing economy, it is more important than ever to prepare workers to fill both existing and newly created jobs and to prepare workers for the jobs of the future. Higher education, however, is a narrow path that is not working for enough young people, in part because it is becoming increasingly unaffordable and no longer guarantees a middle-class income. For these reasons, the President has called for expanding apprenticeships as a compelling and underutilized way to connect education and workforce training. Apprenticeship is a proven model that provides paid, relevant work experiences and opportunities to develop skills that employers value. For workers, including individuals with disabilities, apprenticeships offer affordable paths to good jobs and, ultimately, careers.

Under an apprenticeship program, which generally lasts from 1 to 6 years, workers develop occupational skills and receive work-based training, classroom instruction, and mentorship all while performing productive work for their employer and earning competitive wages. As defined in the Registered Apprenticeship system administered by the U.S. Department of Labor, apprenticeship training differs from other types of workforce training in that it includes the following four key criteria:

1. Participants who are newly hired (or already employed) earn wages from employers during training;
2. Programs provide on-the-job learning and job-related technical instruction;
3. On-the-job learning is conducted in the work setting under the direction of one or more of the employer's personnel; and
4. Training results in an industry-recognized credential.[4]

A model for "earn-and-learn" opportunities, formal apprenticeship programs have played a key role in creating a skilled workforce in America since 1933.[5] The regulations governing the National Apprenticeship System (29 CFR part 29) provide the framework for the current American apprenticeship system. The U.S. Department of Labor, working in conjunction with independent State Apprenticeship Agencies, administers the program nationwide. While traditionally associated with the construction trades and manufacturing, apprenticeship is also instrumental for training and development in growing industries, such as health care, information technology, transportation and logistics, and energy.[6]

When developed and executed effectively, apprenticeships can provide relevant, paid, on-the-job training and development of skills that employers seek, and viable paths to worthwhile jobs that apprentices can build into productive, secure, and satisfying careers. Apprenticeships fill employers' skill needs while reducing unemployment and providing a debt-free career path for young people. They can ease the transition from school to career, and remove barriers for students, including those with disabilities, who are faced with choosing between higher education and earning income. In addition, apprenticeship programs can help older members of the workforce

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[4] U.S. Department of Labor, *Frequently Asked Questions about the Apprenticeship Program*, https://www.dol.gov/featured/apprenticeship/faqs (last accessed May 3, 2018).
[5] Apprenticeship USA, http://www.apprenticeship-usa.com/ (last accessed May 3, 2018).
[6] U.S. Department of Labor, *Apprenticeship USA Toolkit – Frequently Asked Questions*, https://www.dol.gov/apprenticeship/toolkit/toolkitfaq.htm (last accessed May 3, 2018).

acquire new skills and change employment pathways ("upskill and reskill"), which can play an important role both economically and socially, especially as jobs become increasingly automated and technology-dependent. Apprenticeships can also provide long-term careers and stability for individuals and their families in low-income communities.

While apprenticeships represent a cost for companies, data shows the programs are worth the investment.[7] Companies that utilize apprenticeship programs experience higher productivity and higher employee retention rates.[8] Another benefit to apprenticeship sponsors is the increased opportunity for innovation; because apprentices understand the principles behind the work they are doing, they are often more adept at problem-solving and can adapt to new technologies.[9] International studies suggest that for every dollar spent on apprenticeships, employers may get an average $1.47 back in increased productivity, reduced waste, and greater innovation.[10] In addition, a review of Washington State's workforce training outcomes found apprenticeships boosted participants' future taxable incomes and thus yielded a $23 return to taxpayers for every public dollar spent, compared with a $3 return for community college.[11] At the Federal level, apprenticeships are an extremely effective workforce training method, as every Federal dollar invested in apprenticeship programs brings a $27 return on investment.[12]

Praised and prioritized for their ability to create good jobs with long-term potential, apprenticeship programs have recently garnered increasing bipartisan support. President Trump, in particular, as well as his predecessor, State Governors, and elected officials on both sides of the aisle have touted the benefits of apprenticeship to the American economy and workforce development. This support has led to recent legislative and executive actions in support of expanding apprenticeship in America. In June 2017, President Trump signed E.O. 13801 calling for the expansion of apprenticeships in America and doubled the commitment of taxpayer money spent on apprenticeship grants to $200 million.[13]

Along with increasing support for apprenticeship programs, participation in the programs has grown substantially in recent years. The United States has experienced a 42 percent growth in apprenticeships since 2013, and the current number of active apprentices is 125 percent higher

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[7] A. Elejalde-Ruiz, *Apprenticeship Programs Enjoy New Life as a Workplace Solution*, Chicago Tribune (Oct. 26, 2017), *available at* http://www.chicagotribune.com/business/ct-biz-apprenticeship-expansion-1029-story.html (last accessed May 3, 2018).
[8] Jobs for the Future, *Expanding and Enhancing Registered Apprenticeship for Career Success*, http://www.jff.org/initiatives/apprenticeships-future (last accessed May 3, 2018).
[9] S. Helper, Economics & Statistics Administration, U.S. Department of Commerce, *How U.S. Companies Use and Adopt the Apprenticeship Model to Create an Innovative Workforce* (Nov. 17, 2016), http://www.esa.doc.gov/economic-briefings/how-us-companies-use-and-adapt-apprenticeship-model-create-innovative-workforce (last accessed May 3, 2018).
[10] U.S. Department of Commerce, National Apprenticeship Week: Joint the Movement, Now Half a Million Strong (Nov. 14, 2016), https://www.commerce.gov/news/blog/2016/11/national-apprenticeship-week-join-movement-now-half-million-strong (last accessed May 3, 2018).
[11] A. Elejalde-Ruiz, *supra* note 7.
[12] N. Wyman, *Why Investing in Apprenticeship Makes Good Dollars and Sense*, Forbes (Nov. 1, 2016), *available at* https://www.forbes.com/sites/nicholaswyman/2016/11/01/why-investing-in-apprenticeship-makes-good-dollars-and-sense/#7bb320915de0 (last accessed May 3, 2018).
[13] L. Kellman, *Trump Orders More Cash, Industry Input for Apprenticeships*, AP News (June 15, 2017), https://apnews.com/6c006b33b63c4f899e9e8abbbb1a5278?utm_campaign=SocialFlow&utm_source=Twitter&utm_medium=AP (last accessed May 3, 2018).

than the 20-year annual average. In Fiscal Year 2017, more than 190,000 individuals nationwide entered the apprenticeship system, and there are over 533,000 apprentices currently in apprenticeship programs nationwide.[14]

The Need for Expanded Apprenticeship in Modern America

While the use of apprenticeship as a workforce training strategy has experienced a renewed interest in America, apprenticeship programs are not currently fulfilling their potential to help meet America's employment needs. There are multiple issues affecting the efficacy of apprenticeships in building up the American workforce, and these issues are cross-cutting, affecting labor, business, and education.

Higher education, namely 4-year baccalaureate degree programs, have become increasingly unaffordable for the average American, culminating in the current student loan crisis. On average, a student graduating college in 2016 possessed $37,000 in debt, and the total student loan debt climbed to more than $1.3 trillion, triple the level from a decade ago.[15] Compounding this, many of the graduates who are able to obtain degrees are leaving college without the skills required by businesses in the modern and increasingly changing American economy. Only about 43 percent of the current labor force are suitable for the 53 percent of job openings that are "middle skill," requiring less than a 4-year degree but more than a high school education. These openings not only include blue-collar jobs such as carpenters, plumbers, and electricians, but also dental hygienists, paralegals, and nurses.[16]

American companies are bearing the burden of these unfilled positions due to the workforce's lack of relevant skills. Many American companies are optimistic and anticipating growth, but the lack of a skilled workforce impedes expansion. This problem is particularly acute for small companies. According to a February 2018 report from the National Federation of Independent Business, 52 percent of small business owners reported hiring or trying to hire, 47 percent of owners reported that they had few or no qualified applicants for the positions they were trying to fill, and 34 percent of owners reported job openings they could not fill.[17] The disconnect between the capabilities offered by American job seekers and the skills demanded by the 21st century workplace, known as the "skills gap," contributes to the nation's 6.3 million open jobs.[18] The skills gap is especially prevalent in economically disadvantaged communities with high unemployment rates.

Apprenticeship can offer a key component to the solution to the skills gap. A recent Harvard Business School study examined the skills demanded in job postings for more than 23 million openings in 2016, identified the underlying skills in apprenticeship roles, and looked for similarities

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[14] U.S. Department of Labor, Employment and Training Administration, Registered Apprenticeship National Results Fiscal Year (FY) 2017, https://doleta.gov/oa/data_statistics.cfm (last accessed May 3, 2018).
[15] J. Chamie, *Student Debt Rising Worldwide*, Yale University, YaleGlobal Online (May 18, 2017), https://yaleglobal.yale.edu/content/student-debt-rising-worldwide (last accessed May 3, 2018).
[16] J.B. Wogan, *Can Apprenticeships Train the Workforce of the Future? States Hope So*, Governing (March 2018), http://www.governing.com/topics/mgmt/gov-work-study-student-debt-apprenticeships.html (last accessed May 3, 2018).
[17] https://www.nfib.com/foundations/research-center/monthly-reports/jobs-report/ (last accessed May 3, 2018).
[18] U.S. Department of Labor, Bureau of Labor Statistics, Economics News Release, Job Openings and Labor Turnover Summary (Apr. 13, 2018), https://www.bls.gov/news.release/jolts.nr0.htm (last accessed May 3, 2018).

in other positions. Based on this skills analysis, the study concluded that the opportunity to expand apprenticeships in the United States is significant. In particular, creating apprenticeships in fields such as graphic design, insurance claims adjustment, and medical transcribing could mean nearly tripling the number of occupations commonly filled via apprenticeships for openings that employers often find difficult to fill. By using an apprenticeship approach, businesses struggling with skills gaps can take steps to ensure workers are trained to employer specifications and gain the value of apprentices' work during their training.[19] Moreover, any apprenticeship system should be designed to ensure that the apprentice acquires skills that are applicable to and transferable within the labor market and not tied to the needs of a single employer.[20]

The current skills gap not only puts American workers and businesses in a precarious economic position, but it could also negatively affect the United States' position as a global economic leader. Other developed countries, such as Germany and Switzerland, have more successfully integrated apprenticeships into their education systems and workforces, leveraging the full potential of apprenticeship programs to lower unemployment rates and contribute to economic success. In Switzerland, for example, most 15-year-olds are in apprenticeships[21] and two-thirds of students in the final stage of secondary education opt for vocational training, mostly in 3- or 4-year "dual" programs combining classroom study with workplace training.[22] In Germany, apprenticeships are supported financially by strong national trade unions, resulting in one-third of the workforce moving through an apprenticeship program.[23] In fact, various apprenticeship models in the United States have German or Swiss influence or roots.[24] Since G20 nations share the same concerns relating to skills development and job creation and fulfillment, solving the skills gap in America by establishing tailored frameworks comparable to those in other countries that have robust apprenticeship programs would increase the U.S. global competitive advantage.

At the same time, despite the significant investment of taxpayer dollars each year, federally funded education and workforce development programs are not equipped to serve the millions of Americans who must learn work-related skills at an affordable cost. The Registered Apprenticeship program is underutilized in a majority of industries, with only 0.3 percent of the workforce coming up through Registered Apprenticeships.[25] In addition, some of the potential participants have expressed concerns about the cumbersome regulatory process and the relatively low return on investment, as compared to larger-scale private-public partnerships, while other employers have

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[19] A. Smith, *Expanding Apprenticeships Across More Jobs*, Inside Higher Ed (Dec. 1, 2017), https://www.insidehighered.com/news/2017/12/01/opening-more-occupations-apprenticeships-could-mean-more-job-opportunities?utm_source=Inside+Higher+Ed&utm_campaign=b5ef334b09-DNU20171201&utm_medium=email&utm_term=0_1fcbc04421-b5ef334b09-231632457&m (last accessed May 3, 2018).
[20] B. Parton, *Youth Apprenticeship in America Today: Connecting High School Students to Apprenticeship*, New America (Dec. 14, 2017), https://www.newamerica.org/education-policy/policy-papers/youth-apprenticeship-america-today/ (last accessed May 3, 2018).
[21] J.B. Wogan, *supra* note 16.
[22] R. Atkins, *Switzerland Thrives on Apprenticeship Tradition*, SWI (Dec. 27, 2017), https://www.swissinfo.ch/eng/training-for-success_switzerland-thrives-on-apprenticeship-tradition/43769858 (last accessed May 3, 2018).
[23] J.B. Wogan, *supra* note 16.
[24] E. Redden, *Importing Apprentices*, Inside Higher Ed (Aug. 8, 2017), https://www.insidehighered.com/news/2017/08/08/interest-grows-us-germanswiss-model-apprenticeships (last accessed May 3, 2018).
[25] J.B. Wogan, *supra* note 16.

expressed satisfaction with the registration process because it provides a key measure of quality control and diversity in the registered apprenticeship system.

In addition to exploring the degree to which the current Registered Apprenticeship program will remain intact for those who successfully employ it, a key part of the Task Force's mission was to develop effective strategies for creating a separate, streamlined, industry-led, and employer-driven apprenticeship program that develops and recognizes high-quality, competency-based apprenticeships. While there are challenges to overcome, developing such a refocused and revitalized apprenticeship program will fully leverage the potential benefits to workforce development and economic growth.

Implementation Challenges for U.S. Apprenticeship Expansion

There are several complex and interrelated challenges that must be overcome in order to fully harness the potential of apprenticeship programs. Many of the Task Force's recommendations specifically focus on addressing workforce stability and growth.

Multiple challenges exist from the perspective of student interest and engagement in apprenticeship programs (i.e., the "worker supply" side of the labor market). Many students and their parents lack "career awareness" as it relates to apprenticeship programs. Young Americans do not understand that apprenticeships are a viable track to a prosperous career. A key facet of developing a revitalized apprenticeship approach is changing the ingrained societal mind-set that a traditional 4-year baccalaureate degree is the only pathway to success. As discussed by Task Force members, many no longer connect the idea of apprenticeships with a good living, as they have done in the past via shop classes or technical training. This issue is further complicated by high school counselors' particular encouragement of 4-year university programs, in part because high schools' success is measured on college attendance rates.

Along with expanding the career profile of apprenticeships, students must also be made aware of the skills needed to qualify for a good job that sets them on a successful career path. Businesses have been challenged in communicating the skills needed (i.e., the "demand signal") to workforce agencies and educational institutions, and students are not typically offered early career counseling and work experience in high school. This all culminates in the fact that high school students, their parents, counselors, and teachers lack the information they need to make informed choices relating to in-demand skills and opportunities outside 4-year college degree programs. Exposure to the marketable skills necessary to enter the market, the job opportunities that exist in each State (in particular, "middle skills" jobs that require innovation), and what career paths and advancement opportunities exist would all contribute to stimulating student interest in apprenticeship programs.

Hand-in-hand with promoting apprenticeships as an equally viable postsecondary option, apprenticeship advocates must overcome the negative perception of a job in the skilled trades, which contributes to older apprentices aging out of the programs without being replaced by younger workers. Some industries, for example manufacturing, face a talent shortfall as baby boomers who dominate its workforce retire and young people raised to prioritize college retain outdated perceptions of "dirty" factory jobs.[26] As Task Force members asserted, apprenticeship

[26] A. Elejalde-Ruiz, *supra* note 7.

program supporters must work to "elevate the dignity of the work" and hold these types of family-sustaining jobs in esteem, as they do in other countries with robust apprenticeship models.

Other barriers to enhancing student acceptance of and successful engagement in apprenticeship programs exist. For example, traditional apprenticeship programs may not effectively promote advancement, leaving apprentices feeling limited to a single job with one company. Building sufficient flexibility into apprenticeship programs, namely emphasis on program reciprocity and portable "stackable" credentials, would allow apprentices the flexibility to build their careers on their own terms, as these credentials could lead to certificates and transfers to 4-year colleges and universities if so desired. An additional barrier is that many apprenticeship positions require transportation to or from remote training or work sites, which may be a significant challenge for members of low-income communities.

Another significant challenge to overcome in the establishment of a successful apprenticeship framework is garnering increased employer participation in apprenticeship programs (i.e., the "employer demand" side of the labor market). As discussed in the U.S. Department of Commerce report, *The Benefits and Costs of Apprenticeship: A Business Perspective*, apprenticeships have gained prominence as a proven training model for workers, yet they have not necessarily been an "easy sell" for businesses.[27] Many employers, especially small businesses, are concerned about the return on investment for developing apprenticeship programs. They are wary of the costs associated with sponsoring an apprenticeship program, such as management fees, wages, and tuition, relative to the time it takes for an apprentice to become productive. Further, businesses express concern that there is no guarantee that these trained workers will stay on after such an investment in them is made. Despite clear pay off from apprenticeships, companies tend to give secondary attention to apprenticeships rather than embracing it as their first option for talent development.[28]

While many employers currently engaged in the Registered Apprenticeship system report satisfaction with the registration process because it is a key factor in quality control and to foster greater diversity, some employers have expressed concern that regulatory challenges that impede the success of the current Registered Apprenticeship system also exist, including the cumbersome creation and registration process and the bifurcated Federal/State approval system, which are among those regulatory components that need to be addressed in a new Industry-Recognized Apprenticeship approach in order to foster successful apprenticeships in America.

Call to Action

The Task Force recognizes that any meaningful expansion of the American apprenticeship framework requires the collaboration of a number of critical stakeholders, including the private sector, State and local governments, academia, unions, and trade associations. While the Federal Government can establish the framework for a successful apprenticeship program and provide support, substantial change must begin with industry-led partnerships playing the pivotal role of creating, managing, and certifying apprenticeship programs.

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[27] U.S. Department of Commerce, The Benefits and Costs of Apprenticeship: A Business Perspective (November 2016), *available at* https://www.commerce.gov/news/fact-sheets/2016/11/benefits-and-costs-apprenticeships-business-perspective (last accessed May 3, 2018).
[28] *Id.*

In its mandate, E.O. 13801 enabled the flexibility needed to create a new apprenticeship model that meets modern American workforce needs. The Task Force strove to assist in building a value-based program that progressively reinforces the apprenticeship model as a viable alternative to traditional career pathways and to expand and promote American apprenticeship programs to reach their full potential as a key component of a bipartisan workforce strategy. Based on the superb qualifications, diverse perspectives, and hard work of the Task Force members, this report contains recommended strategies to effectively promote the expansion of apprenticeships in America that are innovative, robust, and agile to meet the needs of the rapidly changing 21st century economy.

Recommendations for Apprenticeship Expansion

Education and Credentialing

The Subcommittee on Education and Credentialing was charged with exploring educational opportunities to help ensure that more individuals are able to enroll in and complete apprenticeships; strategies for increasing consistency among providers of related technical instruction; strategies for making technical instruction more affordable for apprentices and employers; and strategies for relying on standards-based, nationally portable, industry-recognized credentials as critical elements of quality assurance and accountability.

While paid, on-the-job training is a hallmark of apprenticeship opportunities, also important to the apprenticeship experience is classroom instruction, whether delivered by the employer, a 2-year or 4-year institution, or a trade association. Not only does this education provide theoretical knowledge to support technical skills and practices, it also facilitates the development of strong interpersonal communication and problem-solving skills.

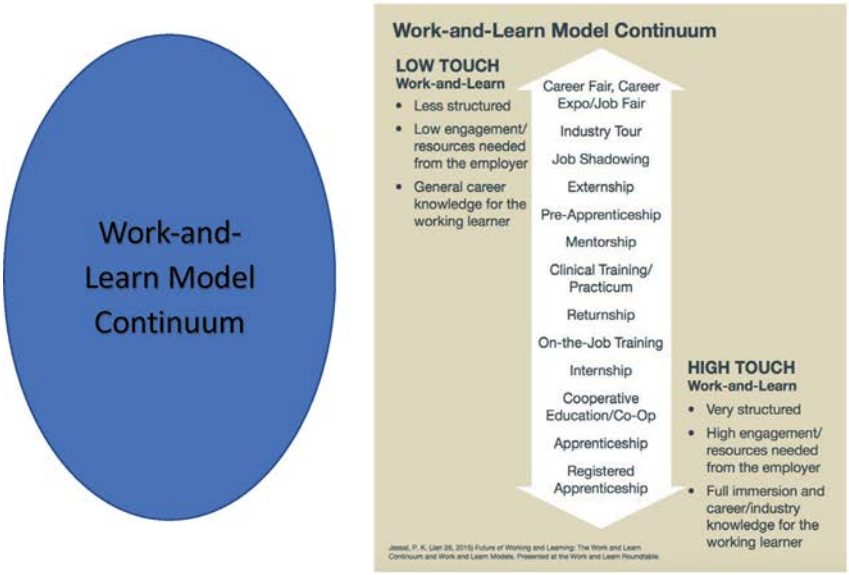
Recommendation 1: Expansion of Traditional Work-and-Learn Models

Referencing the Work-and-Learn Model Continuum (see Figure 1), the Industry-Recognized Apprenticeship program should expand more traditional work-and-learn models to incorporate the criteria of modern apprenticeship and to ensure better outcomes for workers and employers.

There is a well-recognized continuum of work-and-learn models ranging from career fairs, industry tours, job shadowing to mentorship, clinical practicums, on-the-job training, internships, and co-ops. Generally, these models are on a continuum from "low touch" – less structured, low employer engagement, and varying practical experiences that reflect daily job tasks – to "high touch" – very structured, high employer engagement, and full immersion in the most relevant working environment by the learner.

Today, many employers and industry sectors have developed and are implementing competency-based work-and-learn models that link success to the mastery of established skills sets, rather than completing courses and on-the-job training based on a rigid – and sometimes arbitrary – set of hours. The Industry Recognized Apprenticeship program is a vehicle to move more traditional work-and-learn initiatives to higher levels of employer engagement and to achieve better outcomes for workers and employers.

Figure 1. Work-and-Learn Model Continuum



Recommendation 2: Core Components of Work-and-Learn Models

Industry-recognized apprenticeships must include work-based learning and performance assessment to ensure that the individual can apply knowledge, skills, and abilities related to the job, as well as obtain the education credentials needed to advance on the job and in his/her career. Certifiers of Industry-Recognized Apprenticeships should help ensure those apprenticeships incorporate the core components of the most successful work-and-learn models, namely:

A. Blended Learning
B. Credit for Prior Knowledge and Experience
C. Industry-Recognized Skill Standards and Credentials
D. Structured Mentorship
E. Paid Work Experience and Advancement Opportunities
F. Portable, Industry-Recognized Credentials, Program Completion Certificates, and/or Degrees with Demonstrable Labor Market Value

Hands-on, real world work opportunities help students connect the dots between what they learn in school and what they will need to know to be successful in their careers. Features of today's workplaces make this connection more important than ever. Members of today's workforce often need specific and advanced skills; they need to be agile and flexible; and they must come ready with employability skills such as teamwork and problem solving. These skill sets are increasingly important in the modern workforce. With the infusion of technology into virtually every workplace and industry sector, employees also need to be able to innovate quickly and continuously while also acquiring new skills.

Work-and-learn partnerships are the most successful way to address these challenges, and Industry-Recognized Apprenticeships that incorporate the core components outlined above will provide a clear pathway for working learners to gain the real-world experience they need.

Recommendation 3: National Recognition and Portability of Credentials

Where there are standards-based, nationally portable, industry-recognized credentials in the field of new Industry-Recognized Apprenticeships, the Industry-Recognized Apprenticeship program should ensure integration of the opportunity to earn the credential[s] and evidence that related technical instruction is aligned to both the theory and performance-based learning outcomes required for the credentials.

These credentials are important vehicles to better connect employers and learning providers. They ensure that competency-based instruction is aligned with the knowledge, skills, and abilities needed on the job and increase consistency among providers of related technical instruction. Learning providers as referenced throughout this paper include career and technical education, 2- and 4-year institutions, as well as virtual learning programs or systems.

When industry sector leaders take responsibility for convening employers within their sector, they expend time and financial resources to identify and continuously update and document the knowledge, skills, and abilities necessary for workers to perform in their jobs. When industry sector leaders do so, the resulting standards-based learning outcomes and industry-recognized credentials present to workers, educators, and employers a unified identification of the competencies required for success on the job.

Industry organizations that invest in the creation and continuous improvement of industry-recognized credentialing programs report that the credentials provide workers with a clear understanding of the knowledge, skills, and abilities needed to be successful on the job; they provide educators with the competencies that should drive – and often accelerate – educational pathways to employment and advancement; and they also provide employers within the industry with workers whose knowledge and skills have been validated through performance assessment.

With increasing evidence that workers no longer tend to remain in one job, one company, or even one industry sector for their entire career, the national recognition and portability of standards-based, industry-recognized credentials are critical attributes and of great value to both workers who will be mobile in their careers and lives, and employers who expand business lines and grow operations in multiple venues across the country.

Recommendation 4: Clearly Articulated Requirements for Credentials

To rely on standards-based, nationally portable, industry-recognized credentials as a key element of Industry-Recognized Apprenticeship program quality assurance and accountability, the public-private sector partners implementing these programs should articulate the requirements for standards-based, nationally portable, industry-recognized credentials.

To ensure an educated and skilled workforce for their companies, many industries have successfully developed and implemented industry-recognized credentials to connect individuals to the skills they need to enter into and advance in jobs. Most of these industry credentialing programs are tied to competency models that national industry associations are issuing to help businesses identify workers who possess the skills and competencies necessary to perform in high-growth occupations. The type, scope, use, and delivery of these credentials are as diverse as the industries that employ them. The commonalities that exist within the wide range of industry credentials include national portability, a foundation in industry-developed standards, and recognition by industry – attributes that contribute to their labor market and consumer value.

As one of several examples, the National Network of Business and Industry Associations, which is managed by the Business Roundtable and includes 25 national trade/industry associations, has articulated the requirements for and attributes of standards-based, nationally portable, industry-recognized credentials, which the public-private sector partners implementing Industry-Recognized Apprenticeship programs could use as part of their review.

Recommendation 5: Strategies for Affordability

As Industry-Recognized Apprenticeship program Federal partners, the U.S. Departments of Labor and Education should implement and/or support strategies for making technical instruction more affordable for apprentices and employers by:

- ***A. Partnering with virtual learning providers to expand the reach and reduce the costs of technical instruction;***
- ***B. Identifying or producing foundational, core curriculum in each sector and "open sourcing" it for learning providers; and***
- ***C. Where duplications are evident, cease federally funding development of duplicative curriculum or assets.***

As the Industry-Recognized Apprenticeship program differentiates itself from the Registered Apprenticeship program, the technical instruction must be competency-based, not seat-time based, and must be directly aligned with knowledge, skills, and abilities needed on the job. The instruction also must be more readily available to new apprenticeship participants. Participants must be able to progress at their own pace suited to their personal learning styles, so the training is more efficient and tailored to individual needs and employer requirements. Having virtual learning options, e.g., platforms, providers, etc., will help ensure the Industry-Recognized Apprenticeship program remains flexible, agile, and attuned to working learners' needs.

It also should be recognized that in virtually every industry sector, there are some core underlying employability skills, foundational processes, and technologies that merit the creation of

foundational, core curriculum which could be "open-sourced" for an array of learning providers, ultimately saving duplicative development costs at multiple institutions or by multiple providers.

Recommendation 6: Identification and Availability of Capacity-Building Resources

The Federal Government should identify and make available capacity-building resources for Industry-Recognized Apprenticeship program certifying organizations to ensure they are equipped to provide quality services in support of Industry-Recognized Apprenticeships, and for institutions of higher education, other service providers, and employers to partner in planning for and building needed capacity. The Registered Apprenticeship program should be reformed to modernize the system and encourage greater employer and industry sector involvement.

Many employers and industry organizations today report that the uneven interpretation of guidelines and regulations by the workforce development system makes it difficult, if not impossible, for employers to access the relatively limited funding available to support apprenticeship through the Workforce Innovation and Opportunity Act (WIOA). Sponsors of apprenticeships must also navigate additional Federal agency structures and processes in order to access available apprenticeship supportive funding that may be available through the U.S. Departments of Education, Justice, Veterans Affairs, Agriculture, Defense, Energy, Transportation, Health and Human Services, and Housing and Urban Development.

As a result, the Task Force urges clarification or alignment of funding availability (or both) via WIOA, the Carl D. Perkins Career & Technical Education Act, Federal Work-Study, and/or the Federal Pell Grant Program, at a minimum. This subcommittee also urges consideration of use of H-1B resources for competitive grants to partner business organizations and learning providers to support the development of American talent via non-redundant, competency-based educational pathways that include integrated work experience.

Attracting Business to Apprenticeship

The Subcommittee on Attracting Business to Apprenticeship was charged with recommending actions or initiatives that industry or government or both can take to attract more employers from a diverse set of industries to apprenticeship. Further, this subcommittee was asked to recommend strategies for growing apprenticeship to scale more rapidly, in particular by establishing and attracting more businesses to Industry-Recognized Apprenticeship.

A unique and critical element of apprenticeship is the requirement that the apprentice is employed in the job for which he or she is training, with the expectation of continuing in that job upon completion of the program. Therefore, in order to grow apprenticeship more rapidly, more employers must be attracted to serve as sponsors and to value apprenticeship-related credentials in the employers' hiring, promotion, and talent management policies and strategies.

According to the Bureau of Labor Statistics, U.S. businesses will need to fill 18.7 million job openings by 2026.[29] As today's labor shortages demonstrate, it is foolish to assume that current training models are suited to preparing workers for these jobs, let alone tomorrow's "new collar" jobs.[30] The need for postsecondary education is a common element across industries and occupations: 65 percent of all replacement jobs and 85 percent of all new jobs will require some level of postsecondary education. However, the traditional 4-year education model often is disconnected from business needs and not suited for providing workers the combination of skills and practical work experience that employers value. Today, there are over 500,000 technology jobs open, but U.S. colleges and universities produce only 50,000 graduates each year, creating a shortfall in skilled candidates across economic sectors.

Apprenticeships provide businesses and educational institutions a proven, but underused, partnership model to develop a skilled, flexible, and mobile workforce that will meet businesses' current needs, be prepared to adapt to tomorrow's needs, and alleviate workforce shortages.

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[29] U.S. Department of Labor, Bureau of Labor Statistics, Employment Projections, https://www.bls.gov/emp/ep_table_102.htm (last accessed May 3, 2018).
[30] Board of Governors of the Federal Reserve System, Beige Book (Mar. 7, 2018), https://www.federalreserve.gov/monetarypolicy/beigebook201803.htm (last accessed May 3, 2018).

As the Federal Government establishes a new institutional foundation for American apprentices, it is critical to foster increased business investment in apprenticeships by building robust financial and technical tools to incentivize and streamline the use of apprenticeship, strengthening our collective understanding of workforce needs, and creating a comprehensive online platform to disseminate resources and tools targeted to business. There should be clearly defined incentives for employers who choose to participate.

Recommendation 7: Improved Risk-Sharing Tools and Streamlined Processes to Manage Them

The Industry-Recognized Apprenticeship program should streamline and simplify program funding through the following:

- ***A. Updating Federal funding criteria to ensure equal treatment of Registered Apprenticeship and Industry-Recognized Apprenticeship programs, encourage the development of apprenticeship programs both for new hires and incumbent workers, and encourage reallocation of State resources;***
- ***B. Streamlining State grant access by creating a single apprenticeship program application;***
- ***C. Exploring sector-led financial options to help scale Industry-Recognized Apprenticeship programs and Registered Apprenticeship programs. Examples include new models of public/private partnership, income sharing agreement models with private sector capital, and others that can be developed across sectors.***
- ***D. Evaluating all Federal Government workforce development programs according to a robust set of criteria and realign funding for underperforming programs to Industry-Recognized Apprenticeship programs as a strategy to kick start the adoption of the model across industry sectors.***

Launching new apprenticeship programs requires companies to make a significant resource commitment and assume long-term risks to build out new recruiting and training models. A long-term focus does not necessarily mean that programs are long or costly; in fact, apprenticeship programs vary significantly in length and cost. According to a 2016 joint study by the U.S. Department of Commerce and Case Western Reserve University, "the longest program studied lasted more than four years; the shortest, one year, and costs range from $25,000 to $250,000 per apprentice. In addition to labor costs, other apprenticeship program costs included program start-up, tuition and educational materials, mentors' time and overhead."

As Federal and State Governments promote apprenticeships, they need to ensure that existing financial programs are aligned with current apprenticeship policy and that businesses know how to access them.

According to recent research by the U.S. Government Accountability Office (GAO), there are more than 40 workforce development programs across nine Federal agencies.[31] Data shows that these

[31] U.S. Government Accountability Office, Multiple Employment and Training Programs – Providing Information on Colocating Services and Consolidating Administrative Structures Could Promote Efficiencies,

programs were funded with more than $42 billion, although less than half that amount ($17 billion) went to employment and training activities. Based on this data, there is a clear need to streamline and simplify programs by developing an organized approach that recognizes and preferentially funds apprenticeship.

In order to simplify and emphasize apprenticeship funding, Federal funding criteria should be updated to ensure that Registered Apprenticeship and Industry-Recognized Apprenticeship programs are treated equally, encourage the development of apprenticeship programs for both new hires and incumbent workers, and encourage the reallocation of State resources to apprenticeship.

Recommendation 8: A Robust Needs Analysis to Narrow Down the Areas of Most Acute Skills Shortage

Businesses and policymakers lack information about skills shortages in individual companies and across the economy – that is, on the gap between workforce needs, available labor supply, and education and training programs. Businesses, especially those without dedicated HR staff, may not know how to conduct a needs assessment, let alone how to connect the needs identified to the development or adoption of work-based learning programs.

At the same time, businesses are unclear about the solutions apprenticeship can offer to common labor challenges. They lack information on how apprenticeships can be created to broaden their recruiting pool and potentially lower recruiting cost. Apprenticeships also allow companies to diversify their workforce by reaching pools of candidates that companies previously had not considered as well as upskilling incumbent workers, effectively creating new career paths for long-tenured workers whose prior jobs have changed due to technology or other factors. According to the U.S. Department of Labor, 91 percent of apprentices retain employment after the program ends – a data point that is highly attractive to employers.

Via the U.S. Department of Labor apprenticeship website, the Department should include a needs analysis adaptable to businesses of all sizes and catered to priority Industry-Recognized Apprenticeship program sectors, as cited in the E.O. and the President's 2019 budget.

The Bureau of Labor Statistics and the U.S. Census Bureau should develop a joint project to measure businesses' skills shortages and training investments through existing survey, administrative, and third-party data. The Bureau of Labor Statistics should develop a supplement to the Job Openings and Labor Turnover Survey, and the U.S. Census Bureau should develop a module to the new Annual Business Survey as potential new survey vehicles.

The U.S. Department of Labor's Office of Apprenticeship should establish a partnership with the U.S. Census Bureau to research and publish metrics on the long-term employment outcomes and retention of apprentices relative to other workers. This project could build upon an existing joint project between the U.S. Census Bureau, the National Association of Manufacturers, and the National Skills Clearinghouse.

Industry associations should be encouraged to play a critical role in gathering data from sector

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GAO-11-92 (January 2011), *available at* https://www.gao.gov/new.items/d1192.pdf (last accessed May 3, 2018).

employers. As a means of evaluating effectiveness and broadening awareness, associations could produce sector-wide case studies to help companies quantify the return on investment for both apprenticeship programs and other training programs where employer dollars are being spent. As companies and trade associations gather this return on investment data, the Federal Government should enable the dissemination of this information, as well as other aspects of a well-rounded return on investment, including incentives, recognitions by the U.S. Department of Labor, and the applicability of Registered Apprenticeship and Industry-Recognized Apprenticeship program experience to college credit or articulation.

To allow widespread adoption of apprenticeship, certifiers of Industry-Recognized Apprenticeship programs should keep consistent data and metrics as established by the U.S. Department of Labor to indicate their program success, as well as showcase proof of concept to enable industry expansion.

Recommendation 9: Centralized Apprenticeship Resources

For many organizations, the creation of an in-house apprenticeship program is daunting. Apprenticeship is considered a highly structured, expensive, and long-term commitment by companies and candidates alike. In times of quick economic shifts and pressure on quarterly earnings, it is difficult to garner leadership support for a long-range workforce development effort.

What many employers do not consider is that, according to the Center for American Progress, "86 percent of Registered Apprenticeship sponsors in the United States say they would strongly recommend hiring an apprentice, in addition to the 11 percent who say they would recommend Registered Apprenticeship with some reservations. All told, a total of 97 percent of sponsors in the United States recommend apprenticeship programs."[32] It is as close to a "sure bet" in talent development as we have.

Much of the hesitation on the part of the private sector to embark on apprenticeship program development is due to the lack of a single, online community for apprenticeships targeted to businesses, as well as to educational institutions and workers. As a first step to creating this community, the U.S. Department of Labor, in partnership with the U.S. Departments of Commerce and Education and with industry groups, should compile the best existing information available to companies on apprenticeship. The U.S. Department of Labor's Apprenticeship Toolkit is an excellent starting point for basic information on apprenticeship.[33] However, the launch of the Industry-Recognized Apprenticeship program has created the need and opportunity for a robust, centralized site to attract and bring together more employers to create apprenticeships.

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[32] S.A. Steinberg & B. Schwartz, Center for American Progress, *The Bottom Line: Apprenticeships Are Good for Business* (July 14, 2014), https://www.americanprogress.org/issues/economy/news/2014/07/14/93768/the-bottom-line-apprenticeships-are-good-for-business/ (last accessed May 3, 2018).
[33] U.S. Department of Labor, *supra* note 6.

These resources should include:

A. The Apprenticeship Playbook[34];

B. The Benefits & Costs of Apprenticeship: A Business Perspective[35];

C. Industry-developed occupational competencies;

D. Industry-developed, competency-based apprenticeship standards;

E. Curricula that align with those standards (made available through a central provider or a network of providers);

F. Instruction and resource guides for trainers/educators;

G. Instruction and resource guides for mentors;

H. Resources on how to develop online learning programs that can be used to complement or replace traditional classroom training, when appropriate;

I. National certification for Industry-Recognized Apprenticeship programs and Registered Apprenticeship programs;

J. Research that assesses the effectiveness of various models of work-based learning; and

K. Detailed company case studies spanning industries targeted for apprenticeship expansion, such as manufacturing, health care, and cybersecurity.

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[34] Advanced Manufacturing Partnership 2.0, Employer's Playbook for Building an Apprenticeship Program, *available at* http://www.themanufacturinginstitute.org/~/media/53456D700856463091B62D1A3DA262F4/Full_Apprenticeship_Playbook.pdf (last accessed May 3, 2018).

[35] U.S. Department of Commerce, *supra* note 27.

Expanding Access, Equity, and Career Awareness

The Subcommittee on Expanding Access, Equity, and Career Awareness was charged with recommending steps that could be taken to reduce the stigmatization of non-college pathways, broaden awareness of the many different kinds of careers that pay a family-sustaining wage, expand access to apprenticeship, and ensure equity of opportunity to prepare for those jobs and careers.

In order for apprenticeship to meet current and future workforce demands, it must attract employers and qualified apprentices who see this form of postsecondary education and training as the preferred pathway to an exciting and financially rewarding career. Potential apprentices must be made aware of the large number of careers and career pathways available to them through apprenticeship, and we must ensure that all Americans have equal access to these opportunities.

Multiple on-ramps must be created to build an American talent pool for industry. To that end, all Americans must have an opportunity to participate in the Industry-Recognized Apprenticeship program, a new apprenticeship model. Additionally, the responsibility to make the Industry-Recognized Apprenticeship program effectively inclusive must be shared by the key stakeholders (e.g., sponsors and certifiers) and the U.S. Departments of Labor and Education, respectively. This inclusion should involve community-based organizations functioning as national intermediaries or within local markets. Community-based organizations represent a tested methodology for reaching populations that have historically faced barriers to employment, such as women, people of color, and individuals with disabilities.

Recommendation 10: Building Brand Awareness of Apprenticeship through a Multi-Faceted Campaign Will Promote Faster, More Respected, and More Diverse Pathways to Employment

To realize the full benefits of Industry-Recognized Apprenticeship programs, the Federal Government should invest in the development and deployment of a multi-faceted campaign of awareness to multiple stakeholders such as industries, employers, educators, counselors, workforce development practitioners, and potential apprentices. For the campaign to be effective, these stakeholders cannot be passive recipients of the message; they must also become conduits of message delivery.

This should be done through the following:

The Federal Government should provide financial support to online campaigns that use high impact digital and social media vehicles that speak to multiple generations.

Apprenticeships should be promoted as a positive earn-and-learn pathway that can benefit new and current employees seeking to move up career ladders. This could be realized by the utilization of all Federal funding mechanisms to ensure both the traditional trades, as well as non-traditional industry sectors, are engaged through apprenticeship.

The Federal Government should fund the research and promotion of the findings of the monetary return on investment of employing and training American apprentices through the Registered Apprenticeship program, Industry-Recognized Apprenticeship program, and other industry-based programs.

Recommendation 11: The Federal Government Has Acknowledged the Necessity of Apprenticeship Programs as a Model That Can Expand Pathways of Opportunity and Incentivize Utilization of an Earn and Learn Model for Both the Employer and Apprentice

A. ***To realize the full benefits of Industry-Recognized Apprenticeship programs, the subcommittee recommends the following: Federal investment to specifically expand and support pre-apprenticeship activities in middle and secondary schools for career and technical education and/or other educational certificates;***
B. ***Examination and reduction of barriers that exist around reciprocity of industry-recognized credentials;***
C. ***Promotion of the use of technology for all learners to access information about industry-approved apprenticeship programs early on in their education;***
D. ***Streamlined credit for prior learning and/or work experiences to accelerate the time to full employment; and***
E. ***Development of linkages for digital platforms and/or social media channels where employers and potential apprentices can more easily connect.***

Recommendation 12: Ensuring Equity

Equal access to employment opportunities will be a defining element of the Industry-Recognized Apprenticeship program. Equity is about ensuring that each American has equal access and opportunity to the benefits of apprenticeship and employment. In some cases, regulatory benchmarks are important, but can prevent industries from participating due to burdensome compliance or overly bureaucratic or inconsistent processes.

To that end, the U.S. Department of Labor should implement clear guidelines that reinforce the principles of equity and define certifier, sponsor, and Office of Apprenticeship responsibilities. The U.S. Department of Labor should continue funding community-based organization efforts to expand access to populations who have historically suffered from unequal access to and underutilization of Registered Apprenticeship programs, and to expand funding to Industry-Recognized Apprenticeship programs. In addition, certifiers and sponsors should develop comprehensive outreach strategies to reach diverse populations.

Recommendation 13: Improvements to Existing Registered Apprenticeship Program

Registered Apprenticeship has been a viable tool for decades. Notwithstanding its utility, potential industry operators and others have identified several concerns regarding the operational efficiency and/or bureaucratic nature of Registered Apprenticeship. The U.S. Department of Labor should vet these concerns and where such vetting bears out the validity of the concerns, the Department should take available legislative and regulatory actions to improve and preserve the Registered Apprenticeship system.

Administrative and Regulatory Strategies to Expand Apprenticeship

The Subcommittee on Administrative and Regulatory Strategies to Expand Apprenticeship was charged with making recommendations regarding the structure of the new Industry-Recognized Apprenticeship program, the processes for identifying qualified third parties to recognize high-quality programs, and the overarching guidelines for ensuring that Industry-Recognized Apprenticeships meet industry-relevant quality standards. Further, the subcommittee was asked to identify administrative or regulatory provisions that would encourage more industries and employers to participate in apprenticeship and to more efficiently take apprenticeships to scale.

Apprenticeship provides a well-proven mechanism to prepare individuals for career entry and career mobility, but the Registered Apprenticeship program has been the only option for employers seeking government approval and access to government funding. Many employers elect to establish apprenticeship programs outside of the Registered Apprenticeship program, in part because of the paperwork and bureaucracy involved in registering a program, especially for employers with a national presence that would need to work with both Federal and State representatives to gain program approval. In addition, there is insufficient flexibility in program requirements within the Registered Apprenticeship program to meet the varying needs of different industries. Industry-recognized apprenticeships provide a new apprenticeship pathway that gives industry organizations and employers more autonomy and authority to identify high quality apprenticeship programs and opportunities.

Industry Recognized Apprenticeship Program Implementation Questions and Recommendations

General

Recommendation 14: Pilot Project

The Industry-Recognized Apprenticeship program should begin implementation with a pilot project in an industry without well-established Registered Apprenticeship programs. This would test the process for reviewing certifiers and would help the Federal Government better understand how to support industry groups working to develop standards and materials for Industry-Recognized Apprenticeship programs.

Several Task Force members have expressed interest in beginning pilot programs in their industry sectors as soon as the U.S. Department of Labor can begin the implementation process.

Recommendation 15: Industry Sector Standards

Industry-recognized apprenticeship programs should focus on mastery and competency, not just seat-time or training hours. Sectors should set standards based on industry needs. Different requirements may be established in technical vs. professional occupations within sectors.

Different industry sectors are expected to develop different apprentice training standards based upon the needs of employers within these industries. The U.S. Department of Labor's Industry-Recognized Apprenticeship program implementation guidelines should allow for flexibility in determining these standards.

Recommendation 16: Standards and Guidelines

The U.S. Department of Labor Industry-Recognized Apprenticeship program implementation guidelines should spell out the quality standards for the Industry-Recognized Apprenticeship programs and require that industry groups describe in detail the structured learning experience that is at the heart of every apprenticeship program.

Fundamental to the success of apprenticeship is a well-designed and highly structured work experience. This is where most learning takes place. Industry-Recognized Apprenticeship program standards and quality guidelines must support this structured learning experience, as well as ensure the safety of apprentices and their coworkers.

Recommendation 17: Inapplicability of the Davis-Bacon Act

Industry-recognized apprenticeship program participants cannot be considered as apprentices for the purpose of meeting the Davis-Bacon Act wage requirements.

This recommendation is specific to the construction industry.

Recommendation 18: Inapplicability of Wage Progression Rules

Industry-recognized apprenticeship programs are not required to follow specific wage progression rules but should make clear to apprentices what wages they will be paid and under what circumstances wages will increase.

Industry-Recognized Apprenticeship program guidelines should specify that apprentices have detailed and up-to-date information regarding the wage structure for the duration of their apprenticeship and opportunities for advancement in their respective industries.

Because the new Industry-Recognized Apprenticeship and Registered Apprenticeship programs will be parallel and complementary apprenticeship systems, the members of this subcommittee believe that their simultaneous reform and launch could create uncertainties for companies, trade or industry groups, educational institutions, labor unions, and other key stakeholders, which could slow the needed expansion of apprenticeships in the United States. Our recommendations highlight key questions for the Administration to address in the Industry-Recognized Apprenticeship program implementation process. We have categorized these questions into three areas: governance, reporting requirements, and the Industry-Recognized Apprenticeship program certification process.

Governance

Recommendation 19: Multiple Associations in a Single Industry Sector

The U.S. Department of Labor should solicit proposals for governing or oversight bodies that include multiple trade or business associations within an industry sector. This governing body should be required to reach agreement on certification standards as a criterion for the Department's approval. Leadership of this governing body should rotate on an annual basis between members to ensure a balanced perspective over time.

This recommendation is intended to address the following questions: What will the U.S. Department of Labor do if there are multiple trade or business associations within an industry sector and they develop conflicting or inconsistent industry standards? What safeguards will be put in place to prevent conflicts of interest on the part of certifiers that are also membership organizations?

Recommendation 20: Credentialing Standards

Industry-based governing bodies, in consultation with the U.S. Department of Labor, should be responsible for developing the Industry-Recognized Apprenticeship program credentialing standards, as well as confirming that these standards are achieved through the work-based learning and related technical instruction requirements. Industry-based governing bodies should be able to influence or negotiate with employers and colleges to partner on transfer or credit agreements before verification of the credentialing standard.

This recommendation is intended to address the following question: How will trade associations and industry groups who do not have expertise in developing curricula negotiate college credit on behalf of their members? Colleges control prior learning assessment and transfer of credit issues, and while certifiers could encourage partnerships between employers and colleges, they could not enforce these partnerships or prior learning credit agreements.

Recommendation 21: State Agency-Administered Training Funds

The U.S. Department of Labor should clarify whether training funds are available for the Industry-Recognized Apprenticeship programs and, if training funds will be available, how these training dollars will be distributed to credentialing bodies. Given that the new Industry-Recognized Apprenticeship programs should require consistency in credentialing standards within industry sectors and uniform reporting requirements at the State and Federal levels, States should be able to distribute federally funded, State-administered grant funds, consistent with funding guidance.

This recommendation is intended to address the following questions: How will State Apprenticeship Agencies interact with the Industry-Recognized Apprenticeship programs? Can States distribute Federally funded, State administered grant funds to sponsors or participants in the Industry-Recognized Apprenticeship system?

Reporting Requirements

Recommendation 22: Performance Reporting Requirements

The new Industry-Recognized Apprenticeship system should have a single reporting platform that is utilized at both the State and Federal levels. Funding may need to be available for State efforts to align to the Department's designed reporting platform.

This recommendation is intended to address the following question: What systems will the U.S. Department of Labor put in place to collect and verify outcomes data for Industry-Recognized Apprenticeship programs?

Certification Process

There are several process-related questions that will need to be answered once the scope of the Industry-Recognized Apprenticeship system is finalized. Among these questions are the following:

A. How will the U.S. Department of Labor differentiate between high/low quality certifiers, especially since no potential certifiers will have prior experience administering an Industry-Recognized Apprenticeship program?

B. How often will certifiers be reviewed, and under what conditions would the positive recommendation be removed?

C. What does it mean for a certifier to be "recommended" by the Department?

D. How will the Department differentiate between high value and low value credentials?

E. What constitutes "sufficient support and input from sector participants" for potential Industry-Recognized Apprenticeship program certifiers?

Registered Apprenticeship Program Recommendations

In its deliberations on ways to expand apprenticeships in the United States, the members of the Subcommittee on Administrative and Regulatory Strategies also discussed several administrative reforms and changes that could be made to the Registered Apprenticeship system that would also expand apprenticeship utilization in the United States. The specific reforms discussed by the subcommittee included changes to WIOA, the Employee Retirement Income Security Act of 1974, and wage and hour laws. Among these recommendations are the following:

Recommendation 23: WIOA Waivers and Set-Asides

WIOA should include waivers/set-asides to make it easier for sponsors to receive WIOA funding, allowing sponsors to serve incumbent workers moving up the career ladder.

Recommendation 24: WIOA Performance Measures – Earnings

WIOA outcome measures must take into account that apprentices are employed from the start of programs, so pre- and post-program earnings may appear to be smaller than for other programs designed to serve those unemployed until their program is over.

Recommendation 25: WIOA Performance Measures – Time to Completion

WIOA outcome measures must recognize that apprenticeships take longer to complete, and persistence in an apprenticeship program, earning credentials, and moving through wage progression schedules should serve as positive interim outcomes.

Recommendation 26: Wage and Hour Rules

Wage and hour rules should be reformed to allow apprentices under 18 to work on the manufacturing floor, use hoists and lifts in healthcare settings, use power tools and equipment, etc., when properly supervised – only in non-high-risk occupations. Since apprentices are paid a wage, they are prohibited from participating in these activities.

Conclusion

The Task Force brought together business, labor unions, trade and industry groups, nonprofit organizations, educational institutions, and public officials to answer the President's call to discuss various perspectives and make recommendations on how to design and grow high-quality Industry-Recognized Apprenticeship programs that can help expand educational pathways to successful careers and better support American business in today's modern economy. Alongside the President, and Secretaries Acosta, DeVos, and Ross, the Task Force recognizes the historical significance of this focus on expanding and promoting apprenticeships in America, as it is an opportunity to make a difference for business and industries, as well as young students and lifelong learners to ensure they are prepared for the jobs of today and tomorrow. Implementation of these recommendations will begin to break down the silos that currently exist between traditional education and workforce learning, with the goal of creating and nurturing a flexible and thriving American workforce capable of responding to the needs of an increasingly dynamic American economy.

Appendices

Glossary

Apprenticeship

An arrangement that includes a paid-work component and an educational or instructional component, wherein an individual obtains workplace relevant knowledge and skills.

Blended Learning

Multiple learning modes are available to engage an individual, including theory-based classroom instruction, simulations and online or distance learning, and other innovative learning modes. This is coupled with, and supplemented by, performance-based or "hands-on" learning in the work environment.

Credit for Prior Knowledge & Experience

Individuals who have developed knowledge and skills through prior educational and work experience can receive credit for their demonstrated abilities.

Industry-Recognized Apprenticeship

A high-quality apprenticeship program that includes a paid-work component and an educational or instructional component, wherein an individual obtains workplace-relevant knowledge and skills. Programs will be developed by third parties that may include trade and industry groups, companies, non-profit organizations, unions, and joint labor-management organizations. Developed programs are those that can be certified as a high-quality program by a third-party certifier that has received favorable determination from the U.S. Department of Labor.

Industry Skill Standards & Credentials

Curriculum/training is based on industry skill standards, while third-party assessments (including industry credentials) measure and acknowledge individual proficiency.

Job Training Programs

A Federal program designed to promote skills development or workplace readiness and increase the earnings or employability of workers, but does not include Federal student aid or student loan programs.

Mentorship

Employer mentors support an individual during his/her work-based learning experience, providing guidance on company culture, specific position functions, and workplace policies and procedures. In many cases, mentors help develop learning objectives for a mentee and assist in measuring his/her progress and proficiency.

Paid-Work Experience & Advancement Opportunity

An individual will earn a wage during the work based learning portion of the program. Work, full or part-time, is usually paid and tied to an academic credit from a secondary or postsecondary school partner. Wages/workplace responsibilities will often increase at defined milestones as determined by an employer based on the individual's advancement.

Program Completion Certificates

Individuals who complete the program receive nationally portable, industry-recognized credentials, program certificates, and/or degrees that have demonstrable consumer and labor market value.

Task Force Charter

U.S. Department of Labor

Task Force on Apprenticeship Expansion Advisory Committee Charter

1. Committee's Official Designation:

   Task Force on Apprenticeship Expansion (hereinafter "the Task Force" or "the panel.")

2. Authority:

   The Task Force is authorized pursuant to section 8 of Executive Order 13801, entitled "Expanding Apprenticeships in America" (hereinafter "the Executive Order"), issued on June 15, 2017 (82 Fed. Reg. 28229), which directs the Secretary of Labor to establish and chair such a Task Force in the U.S. Department of Labor. The Task Force is being established and will operate in accordance with the provisions of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. App. 2, and its implementing regulations (41 CFR 101- 6 and 102- 3).

3. Objectives and Scope of Activities:

   As stated in section 8(b) of the Executive Order (and as elaborated in the "Description of Duties" section of the Charter below), the Task Force is being established by the Secretary of Labor for the purpose of identifying strategies and proposals to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient. Upon completion of its duties, the Task Force will transmit to the President a report recommending strategies and proposals to foster the expansion of apprenticeships in the United States.

4. Description of Duties:

   Section 2 of the Executive Order sets forth the following general policy directive with respect to the promotion of apprenticeships:

   > It shall be the policy of the Federal Government to provide more affordable pathways to secure, high-paying jobs by promoting apprenticeships and effective workforce development programs, while easing the regulatory burden on such programs and reducing or eliminating taxpayer support for ineffective workforce development programs.

   Under section 8(b) of the Executive Order, the Task Force is charged with the mission of identifying strategies and proposals to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient. Upon completion of this assignment, the

Task Force shall submit to the President a report which details these strategies and proposals. Pursuant to the Executive Order, the report must specifically address the following four topics:

- Federal initiatives to promote apprenticeships;
- Administrative and legislative reforms that would facilitate the formation and success of apprenticeship programs;
- The most effective strategies for creating industry-recognized apprenticeships; and
- The most effective strategies for amplifying and encouraging private-sector initiatives to promote apprenticeships.

The Task Force is solely advisory in nature, and will consider testimony, reports, comments, research, evidence, and existing practices, as appropriate, to develop recommendations for inclusion in its final report to the President.

As soon as practicable, the Task Force shall prepare an interim report for the Chair, which details the progress made towards the development of apprenticeship-related proposals and strategies, and which identifies areas requiring additional research and discussion by the panel. It is expected that this interim report will be transmitted to the Chair within six months after the date of the filing of this Charter.

5. Agency or Official to Whom the Task Force Reports:

The Task Force, through its Chair, will transmit its final report to the President of the United States.

6. Support:

Pursuant to section 8(c) of the Executive Order, the U.S. Department of Labor shall provide administrative support and funding for the Task Force, to the extent permitted by law and subject to the availability of appropriations. Within the Department of Labor, the Employment and Training Administration is the agency that has been designated to provide the Task Force with such administrative services, funds, staff, equipment, and other support services as may be necessary to carry out its mission to the extent permitted by law and within existing appropriations.

7. Estimated Annual Operating Costs and Staff Years:

As noted below in the "Membership and Designation" section of the Charter, the Secretaries of Commerce and Education shall serve as Vice Chairs of the Task Force. However, in keeping with the requirements set forth in section 8(c) of the Executive Order, and in order to ensure that the operations of the Task Force are conducted in an administratively efficient manner, the U.S. Department of Labor's Employment and

Training Administration will assume full responsibility for all staffing needs and operational costs associated with the functioning of the Task Force. Accordingly, the U.S. Departments of Commerce and Education will not be contributing any staff or operational funding towards the administration of the Task Force.

FTE: 1.5 staff years	$200,000
Payments to Federal Staff	$248,000
Travel for Non-Federal Members	$120,000
Payment to Meeting Logistics Contractor/Consultant/Experts	$ 50,000
Travel for Meeting Logistics Contractor/Consultant/Experts Other	$ 60,000
TOTAL	$678,000

8. Designated Federal Officer (DFO):

The Assistant Secretary for the Department of Labor's Employment and Training Administration (or his/her designee) will serve as the DFO for the Task Force. In the absence of the Assistant Secretary, the Secretary of Labor may appoint an interim DFO.

The DFO, as required by FACA, will approve and call all Task Force committee and subcommittee meetings, prepare and approve all meeting agendas, attend all Task Force committee and subcommittee meetings (or designate someone to attend in his or her stead), chair meetings when directed to do so by the Chair of the Task Force, adjourn any meeting when the DFO determines adjournment to be in the public interest, assemble and maintain the reports, records, and other papers of the Task Force, and carry out the provisions of the Freedom of information Act (FOIA) (5 U.S.C. 552) with respect to the Task Force reports, records, and other papers. In the DFO's discretion, the DFO may request the assistance of other Federal employees as support staff to assist the DFO in fulfilling these responsibilities.

9. Estimated Number and Frequency of Meetings:

The Chair of the Task Force (or his or her designee) shall determine when the panel will meet. It is anticipated that the Task Force will conduct approximately two to four meetings (virtually or in person) per year, as time and resources permit.

10. Duration:

The Task Force will not be continuing in nature. While the Executive Order does not set forth a definite time frame by which the panel must complete its final report, the duration of its existence is expected to be less than two years. The Charter of the Task Force is subject to renewal every two years pursuant to the requirements of the FACA.

11. Termination:

Pursuant to section 8(h) of the Executive Order, the Task Force shall terminate 30 days after it submits its final report to the President.

12. Membership and Designation:

Representation - Pursuant to section 8(d) of the Executive Order, the Secretary of Labor shall serve as the Chair of the Task Force. The Secretaries of Education and Commerce shall serve as Vice-Chairs of the Task Force. The Secretary of Labor shall appoint the representative members of the Task Force, which shall consist of no more than 20 individuals who work for or represent the perspectives of trade and industry groups, companies, non-profit organizations, unions, joint labor-management organizations, educational institutions, state or local governments, and such other persons as the Secretary of Labor may from time to time designate. The Task Force's members shall include distinguished citizens from outside the Federal Government with relevant experience or subject-matter expertise concerning the development of a skilled workforce through quality apprenticeship programs. Pursuant to section 8(g) of the Executive Order, a member of the Task Force may designate a senior member of his or her organization to attend any Task Force meeting.

Membership on the Task Force will be balanced. Members will come from a cross- section of those directly affected, interested, and qualified as appropriate to the nature and functions of the Task Force. The composition of the Task Force will depend upon several factors, including: the Task Force's mission; the geographic, ethnic, social, or economic impact of the Task Force's mandate; the types of specific perspectives required; the need to obtain divergent points of view on the issues before the Task Force; and the relevance of State, local, or tribal governments to the development of the Task Force's recommendations.

Terms of members - The Executive Order does not set forth a definite time frame by which the Task Force must complete its development of apprenticeship- related strategies and proposals and submit its final report to the President of the United States. Accordingly, each member of the Task Force shall serve at the pleasure of the Secretary of Labor for a term that will cease 30 days after the delivery of the Task Force's final report to the President, at which time the Task Force will be officially disbanded in accordance with section 8(h) of the Executive Order. The Secretary of Labor may also appoint members to fill any vacancies that may emerge while the Task Force is in existence.

Compensation of Task Force Members - Pursuant to section 8(t) of the Executive Order, members of the Task Force shall serve without additional compensation for their work on the Task Force, but shall be allowed travel expenses, including per diem in lieu of subsistence, to the extent permitted by law for persons serving intermittently in the Government service (5 U.S.C. 5701 -

5707), consistent with the availability of funds.

Consultation with Experts - To assist the Task Force in fulfilling its responsibilities and meeting its objectives, the panel will consult with experts from business, industry, labor organizations, community organizations, State and Federal agencies, and others as appropriate.

13. Subcommittees:

The Chair shall have the authority to create Task Force subcommittees as needed. All subcommittees must always report back to the full Task Force, and must not provide advice or work products directly to any Federal agency or official on behalf of the Task Force.

14. Recordkeeping:

The records of the Task Force shall be handled in accordance with General Records Schedule 6.2, Federal Advisory Committee Records, and the approved agency records disposition schedule. These records shall be available for public inspection and copying subject to the FOIA.

15. Filing Date:

This Charter is filed on the date indicated below:

R. ALEXANDER ACOSTA
Secretary of Labor

AUG 7 - 2017

Date

Task Force Member Bios

Michael Bellaman, President and CEO, Associated Builders and Contractors (ABC)
Mr. Bellaman has lengthy experience in the construction industry and continual leadership on workforce development, safety, and building careers. In his current role, Mr. Bellaman oversees a membership of more than 21,000 construction and industry-related firms that include both large and small contractors. He oversees a nationwide network of training programs that share a goal of growing the number of skilled tradesmen and women. ABC and its members together operate the most open shop, U.S. Department of Labor Registered Apprenticeship programs in the country. He is experienced as a project engineer, CDO of a multi-billion-dollar construction company, and representative of small businesses across the country.

Joshua Bolten, President and CEO, Business Roundtable (BRT)
Josh Bolten is the President & CEO of Business Roundtable, a trade association of 200 CEOs of leading companies, working to promote a thriving economy and expanded opportunity for all Americans. Prior to joining Business Roundtable in 2017, Mr. Bolten served as the Managing Director of Rock Creek Global Advisors LLC, a consulting firm he co-founded. From 2001 to 2009 Mr. Bolten served in the White House under President George W. Bush, as Chief of Staff, Director of the Office of Management and Budget, and Deputy Chief of Staff for Policy.

Walter Bumphus, President and CEO, American Association of Community Colleges (AACC)
Dr. Bumphus currently serves as President and CEO of the American Association of Community Colleges, which represents 1,108 community colleges. AACC works with employers, economic development agencies, workforce groups and related partners across the country to build effective and efficient talent pipelines. Related to apprenticeship, AACC has supported college engagement, registration on the Registered Apprenticeship-College Consortium (RACC) site, and coordinated to showcase the Federal focus on apprenticeship. AACC was also an early partner to establish colleges as apprenticeship sponsors. AACC provides a unique ability to take recommendations from the panel and encourage wide scale adoption and implementation. Dr. Bumphus has worked to encourage community colleges to join the RACC.

Wesley Bush, Chairman, CEO, and President, Northrop Grumman
Mr. Bush is Chairman, CEO, and President of Northrop Grumman Corporation, providing leadership for the more than 65,000 employees of Northrop Grumman. Mr. Bush serves on the board of directors of Norfolk Southern Corporation, as well as the boards of several nonprofit organizations, including the Aerospace Industries Association, Business-Higher Education Forum, Conservation International, and the U.S. Naval Academy Foundation.

The Honorable Dennis Daugaard, Governor, South Dakota
Mr. Daugaard currently serves as the Governor of South Dakota. Governor Daugaard has emphasized job creation, sound fiscal management, and efficient government operation. In 2015, Governor Daugaard assembled the Blue Ribbon Task Force to propose solutions to improve education in South Dakota. The Task Force put forth recommendations which Mr. Daugaard then brought as legislation the following session.

The Honorable Emily Stover DeRocco, Founder & CEO, E3 Engage Educate Employ
Ms. DeRocco is the founder and CEO of a consulting practice focused on linking education, workforce, and economic development assets for competitive advantage. DeRocco currently serves as Director of the National Network of Business and Industry Associations and is an officer and Director of Education & Workforce for the Detroit-based Manufacturing USA Institute. She is the immediate past President of The Manufacturing Institute where she launched and implemented a strategic national agenda on education reform and workforce development, innovation support and services, and research on behalf of U.S. manufacturers. Previously, Ms. DeRocco was the Assistant Secretary of Labor for the Employment and Training Administration.

Cari Dominguez, Director, Manpower Inc.
Ms. Dominguez serves on the boards of Manpower Group Inc., Triple-S Management Corporation, a managed healthcare company, where she serves as Vice Chair of the Board and Independent Lead Director, and the Calvert Funds. A former Chair of the U.S. Equal Employment Opportunity Commission (EEOC), her public service includes two Presidential appointments and unanimous Senate confirmations. She also served in the U.S. Department of Labor in roles including Assistant Secretary of Labor for Employment Standards and Labor Management, and Director of the Office of Federal Contract Compliance Programs. She currently serves on the board of the National Association of Corporate Directors, where she chairs the Nominating and Governance Committee and is on the faculty of their Board Advisory Services.

Thomas J. Donohue, President and CEO, U.S. Chamber of Commerce
Thomas J. Donohue is President and CEO of the U.S. Chamber of Commerce. Since assuming this position in 1997, Donohue has expanded the work and influence of the Chamber in the United States and across the globe. Previously, Mr. Donohue served for 13 years as President and CEO of the American Trucking Associations, the national organization of the trucking industry. Earlier in his career, he was Deputy Assistant Postmaster General of the United States and Vice President of Development at Fairfield University in Connecticut.

Montez King, Executive Director, National Institute for Metalworking Skills (NIMS)
Mr. King is currently the Executive Director of NIMS, a national 501(c)3 that provides world-class, industry-developed and validated, competency-based skill standards, credentials, and training frameworks that enable collaboration between educators, manufacturers, policymakers, and community-based organizations. Over the course of his career, Mr. King has instructed apprentices, managed apprenticeship programs, and directed national scale credentialing programs while earning a BS in IT and an ME in Adult Education and Training. Mr. King is an advisor and advocate of 21st Century training methods that blend pedagogy and andragogy with work-and-learn settings in an effort to advance U.S. Manufacturing. He represents an extensive stakeholder network of industry employers, associations, and education training providers, and is a member of the national Network of Business and Industry Associations.

Andrew Liveris, Chairman and CEO, Dow Chemical Company
Mr. Liveris is Chairman and Chief Executive Officer of The Dow Chemical Company and a director and former Executive Chairman of DowDuPont. A recognized global business leader with more than 40 years at Dow, Liveris advocates the criticality of manufacturing worldwide. He has been tapped by President Donald J. Trump to help find ways to spur innovation, revitalize the U.S. manufacturing sector, and drive economic growth and prosperity with a particular focus on workforce development. Previously, he served as Co-Chair of the prior administration's Advanced Manufacturing Partnership and as a member of the President's Export Council. He sits on the Board of Directors of IBM, WILL ASSUME HIS POSITION ON THE BOARD OF Saudi Aramco IN JULY, is Vice

Chair of the Business Roundtable, and is an Executive Committee member and past Chairman of the U.S. Business Council.

Katherine Lugar, President and CEO, American Hotel & Lodging Association (AHLA)
Katherine Lugar is President and CEO of AHLA, setting a strategic vision for our industry's advocacy efforts while championing the industry's voice on Capitol Hill, within the Administration, and beyond Washington, D.C. Working directly with the volunteer officers and board of directors, Katherine has transformed AHLA since joining a few short years ago, tripling its membership and revenue, quadrupling its Political Action Committee, and putting it in the top 14 of more than 700 industry PC's, and getting the industry and our pressing issues national attention. She has also redoubled the industry's efforts around job creation, and through the Foundation (AHLEF) has spearheaded a new apprenticeship program in conjunction with the White House and is helping fund community-based grants that advance the careers of Opportunity Youth in the hospitality industry. Her success at AHLA has been recognized beyond the hotel industry. She's been named by The Washington Post as a "leader to watch," and an "influence guru" inside the Beltway. With her at the helm, the story of our industry's career pathway and the unique aspects of hotel jobs is garnering attention from the White House and beyond.

Douglas J. McCarron, General President, United Brotherhood of Carpenters and Joiners of America (UBC)
Since Mr. McCarron has been General President, the UBC has partnered with thousands of employers to create and operate hundreds of apprenticeship, pre-apprenticeship, and other training programs throughout North America over the past century. Collectively, more than $200 million is spent annually on skills training and more than 49,000 apprentices are in the programs. Currently, UBC operates over 250 training centers across North America, in eight distinct craft areas. The union develops, writes, publishes, and teaches curriculum designed to bring skills to high school students, pre-apprentices, apprentices, journey level workers, foremen, and superintendents throughout the industries they serve.

Sean McGarvey, President, North America's Building Trades Unions (NABTU)
Mr. McGarvey has served as the President of North America's Building Trades Unions (NABTU) since 2012. As the preeminent organization involved in apprenticeship readiness and apprenticeship education and training today, NABTU and its affiliated unions appreciate efforts by the Federal Government to increase utilization of apprenticeship education. For over 100 years, our affiliate unions and their employer partners have cultivated effective strategies for amplifying and encouraging private-sector initiatives to promote apprenticeships without reliance on Federal dollars. The NABTU has a long tradition with joint labor-management apprenticeship training committees in the Building Trades and a prominent role on the overall apprenticeship system in the U.S.

Marc H. Morial, CEO, National Urban League (NUL)
Mr. Morial has been President of the National Urban League since 2003 where he oversees a transformation for the 100-year-old civil rights organization. His energetic and skilled leadership has expanded the League's work around an Empowerment agenda, which is redefining civil rights in the 21st century with a renewed emphasis on closing the economic gaps between Whites and Blacks as well as rich and poor Americans. Under his stewardship the League has had record fundraising success towards a $250 million, 5-year fundraising goal and he has secured the BBB nonprofit certification, which has established the NUL as a leading national nonprofit.

John Ratzenberger, Workforce Training Advocate
Mr. Ratzenberger is Hollywood's most outspoken advocate for American manufacturing, skilled labor, and the companies that are the foundation of our great country, working tirelessly to shine a light on the importance of manufacturing and trades. He works with legislators on both sides of the aisle to bring back trades training in schools, build apprentice programs for returning veterans, and support the reshoring of American companies. He has recently launched phase one of the American Museum of Manufacturing in Bridgeport, CT – once the industrial epicenter of America – which will celebrate the ingenuity and impact of American manufacturing throughout our country's history.

The Honorable Kim Reynolds, Governor, Iowa
Ms. Reynolds currently serves as the Governor of Iowa. Iowa currently has over 800 total active Registered Apprenticeship programs; 8,178 total active registered apprentices; and 95 new apprenticeship programs have been created in FY17. Through Ms. Reynolds' involvement in Future Ready Iowa, the State's strategic plan to have 70 percent of the workforce with training or education (or both) beyond high school by 2025, she has proven to be a leader in the area of apprenticeship. In 2016, Iowa received $1.8 million from the U.S. Department of Labor to help expand apprenticeship in the State. The projects will expand apprenticeships to diverse populations, focusing on women, minorities, and other underrepresented groups. Expanding Registered Apprenticeships is an important strategy in the Future Ready Iowa Initiative.

Mark B. Rosenberg, Board of Directors, Association of Public and Land-Grant Universities
Dr. Rosenberg was the 109th Chair of the Greater Miami Chamber of Commerce and led the Academic Leaders Council of the Beacon Council, Miami-Dade County's economic development organization, for 5 years. Mr. Rosenberg is also a member of the Florida Council of 100, a non-partisan organization of business leaders, and the Business Network of South Florida, representing the academic sector. Under the leadership of Dr. Rosenberg, Florida International University has significantly improved student graduation and retention rates generally, and in high demand State and national fields, specifically, demonstrating he has made the alignment between university activity and employer workforce needs a university priority. This commitment is also evident in his significant expansion of internships, the nurturing of the Talent Development Network, which creates internship and other experiential learning opportunities in seven industries, his partnerships with Miami Dade Public schools and Royal Caribbean Cruises LTD, an innovative public private partnership around talent development.

Joseph Sellers, Jr., General President, International Association of Sheet Metal, Air, Rail and Transportation Workers (SMART)
Mr. Sellers became SMART's General President on May 1, 2015. He was president of many groups, including the Pennsylvania State and New Jersey State Councils of Sheet Metal Workers; the Mechanical Trades District Council of Delaware Valley; the Metropolitan Association of Presidents and Business Representatives; and the board of directors for the National Energy Management Institute (NEMI). He also was Secretary/Treasurer of the Mechanical and Allied Crafts Council of New Jersey. He has held several positions with the AFL-CIO and Building and Construction Trades Department at the national, State, and local levels.

Dawn Sweeney, President and CEO, National Restaurant Association
As President and Chief Executive Officer of the National Restaurant Association, Dawn Sweeney has been instrumental in focusing the mission of the Association through a unique, multi-year strategic plan, highlighting key areas of opportunity within the restaurant industry. The National Restaurant Association's members include quick service, fast casual, managed foodservice, casual and fine dining – along with manufacturers, suppliers, and distributors. The American restaurant industry is

composed of 1 million restaurant and foodservice outlets and 14 million employees. Since taking the helm at the end of 2007, Sweeney has led the Association in a wide range of policy issues, while offering services and products that promote the industry and help individual operators and large multi-unit companies succeed.

Jay Timmons, President and CEO, National Association of Manufacturers *(NAM)*
Since 2011 Mr. Timmons has served as the President and CEO of the National Association of Manufacturers (NAM) and the Chairman of the Board of Directors of The Manufacturing Institute. NAM is the largest manufacturing association in the United States representing small and large manufacturers in every industrial sector. His previous experience includes serving as Chief of Staff to Congressman, Governor and Senator George Allen (R-VA) from 1991 to 2002, and a term as Executive Director of the National Republican Senatorial Committee during the 2004 election cycle. The Manufacturing Institute is leading the response to President Trump's call to establish Industry-Recognized Apprenticeship programs. In cooperation with key allies in the business community, the Institute is working to design a quality framework that will, for the first time, allow the Institute to recognize apprenticeship programs that are leading to the incredible careers available in manufacturing.

APPENDIX B

NIMS Competency-Based Apprenticeship

Overview

NIMS has developed a truly competency-based apprenticeship model to meet the needs of both employers and working learners. The components are modular, scalable and portable throughout industry, the supply chain and education. It allows tens of thousands of new and incumbent workers to access accelerated learning opportunities and benefits communities at large by creating a pipeline of skilled workers.

At a fundamental level, the definition of apprenticeship is a structured on-the-job training program where an employee can earn and learn. However, the current hourly-based, registered model is too rigid and cannot meet the 21st century needs of employers and the workforce at the speed and scale necessary. In order to expand opportunity and close the skills gap, there must be a significant change in how industry, education and government understand working learners including apprentices, interns and incumbent workers.

NIMS competency-based, modular system allows greater flexibility while simultaneously providing more rigor and better outcomes than traditional hourly-based programs. Companies can select the elements that meet their talent demands, and students and workers have clear career pathways with multiple entry and exit points.

Paradigm Shift

Industry typically innovates at a faster velocity than the government or education. This model upends the traditional paradigm. Rather than trying to force companies to fit into a rigid system that cannot meet their needs, NIMS recognizes what companies already do well in their OJT environments and provides solutions to close any gaps.

In order to be truly competency-based, training must be fully self-paced. This modernized approach allows the learner to schedule training time as needed and "test out" of competencies already attained. Learners may progress as quickly as they are able to show competency and proficiency.

This model puts industry in the driver's seat. They set the standards for their workforce needs and establish the criteria for evaluation, and the system adapts and expands to accommodate. Companies and their education partners can adopt all elements of the program or pick and choose those that work within their current environment.

Occupational Ladder

The foundation for this model is the Occupational Ladder which identifies the core competencies for an ideal employee in a particular occupation set. It is not specific to one job role, but rather a potential career pathway. That means that every employee doesn't need every competency. The competencies may be organized into groups for specific job role training, or they can be accessed by other incumbent workers individually.

Two Types of Working Learners

Occupational Learners are those who enter into a training program for a specific job role, usually an apprentice, intern or an entry-level new hire. Multiple job roles may fall within one ladder, each combining their own subset of competencies which may or may not overlap.

Non-occupational Learners are those who access the training outside of a specific job role for the purpose of upskilling or cross-training. This could include managers, sales people, skilled new hires and other incumbents who may benefit from gaining one or two competencies, but do not require them to perform their job role. For example, a sales person may benefit from learning the basic start-up and safety procedures for a machine in order to better answer customer questions when making a sale.

Identifying Competencies and Performance Measures

A competency is an observable and measurable knowledge, skill, ability or attribute. Each competency is broken down into performance measures (PM) which provide a framework to assess how well the learner is achieving desired outcomes. A key component of the NIMS model is to help companies establish portable performance measures.

Portable Performance Measures allow companies to identify the competencies and methods of performance evaluation that best support their talent needs. Those PMs can then be pushed out to the larger community to create a pipeline of qualified workers.

High schools and community colleges can use them for pre-apprenticeships, traditional vocational training or to support other company work and learn programs. PMs can also be shared throughout the supply chain to ensure the same quality and performance throughout the entire production process.

What's in a Performance Measure?

- Performance agreement with evaluation project, criteria and skills checklists
- Reproductive documentation to standardized process
- Set-up instructions
- Grading and reporting schemes
- Feedback mechanism

Scenario-Based Performance Evaluations

To truly demonstrate competency, evaluations must move beyond basic checklists and theory-only exams, and evaluate an apprentice's ability to perform on the job. Scenario-based evaluations help prepare trainees for a real world environment and provide assurance to employers of both competency and proficiency.

As the apprentice gains skills, he/she is evaluated through formative assessments. These are a critical element of any training program. The key to a successful competency-based program is combining formative and summative assessments. The summative assessment is scenario-based and replicates a real world situation and requires the apprentice to combine their newly attained skills in a way that mimics requirements of the job.

Each work process is broken down into skills required at basic, intermediate and advanced levels. Those skills and work processes are then cross-walked to national, industry credentials.

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Structuring the Environment

Once the occupational ladder has been established and all competencies and performance measures identified, the next step is to set up the training environment. Training can be either theory-based or hands on. The primary consideration is ensuring that it is structured in such a way to support competency-based evaluation.

The Master Schedule – Empowering the Individual

The Master Schedule is the key to a truly competency-based system. It empowers the leaner to set their own pace and attain the skills they need when they need them. The key to the schedule is creating enough opportunity for students and workers to gain the skills and knowledge necessary to satisfy the performance measures, and to test out of those in which they already have competency.

Dual Learning Environments

This model separates skills training from procedural training by establishing two OJT environments, an academy and a production environment. The academy may be a separate facility or area, or it may be integrated into the shop floor with dedicated training time and/or equipment. The key element is that it includes the same equipment and materials used in production.

In the academy, specific skills, such as turning a thread, are taught. Training is conducted by a certified OJT trainer through a formalized process. The learner may practice and hone the skill in the academy. Once the skill is learned, they may demonstrate competency and be allowed to perform the skill in production.

In the production environment, learners take their competency to proficiency by gaining experience in the procedures of production, such as meeting quotas and pulling lots. This allows the learner to apply the skills in a real world environment.

To be successful, the employer must provide adequate time and ensure availability of equipment and trainers so apprentices and incumbents have the opportunity to schedule training when needed. As mentioned above, there is no minimum hourly requirement for the apprentice. Once competency is demonstrated, the learner may move on to the next skill. There may be maximum time limits to attain a skill and to complete the program.

Why Two Training Environments?

There are many benefits to separating skills training from the production environment. It:

- Minimizes inherent reduced productivity when facilitating skills training in a production environment
- Detaches skills attainment from the flow of production requirements
- Removes foremen/manager biases toward apprentices
- Empowers apprentices to govern their advancement in the shop
- Allows leadership to focus more on production requirements

Just-In-Time Training (JITT)

Traditional programs usually include hours-based related technical instruction that usually requires learners to leave the workplace and complete hours of training offsite. While the tuition is covered by the employer, the time for training and traveling to the training site are usually not covered.

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JITT provides online training and resources to learners to complete on their own time in correlation with their skills training. For example, a worker may be required to complete a specific online theory course in basic CNC controls prior to scheduling skills training for CNC operation.

In this model, training may be delivered directly by the company or by education partners. The key element is allowing the students to complete the courses at their own pace and test out of areas they already know.

Role of Community and Technical Colleges

Traditionally, community and technical colleges provided structured, time-based coursework in support of registered apprenticeships. With the new system, they will continue to play an important but changing role.

Colleges may interact with apprentices and companies in a variety of ways:

- Articulation agreements: providing credit for industry-recognized credentials earned
- Pipeline: pre-apprenticeship training and helping applicants meet pre-requisites
- Testing facility: allow apprentices to test-out of various competencies
- Online, self-paced training: provide self-paced training opportunities.

Students can begin pre-apprenticeship training in high school and/or two-year colleges and be prepared to meet any prerequisites. For those entering the apprenticeship, it is critical that they are able to articulate their training for credit. When both the apprenticeship training and college courses align to industry standards and credentials, it allows colleges to articulate those credentials for credit.

Mentorship

The role of the mentor is vital to the success of a self-paced system. The mentor serves as advocate and advisor to the apprentices and quality assurance for the overall program. Once the company has established the program components, the mentor works with supervisors and management to ensure adequate training times are available for scheduling. Then, they work with the apprentices to help them navigate the system, ensure they meet milestones and mitigate stumbling blocks.

Credentialing Effect

When companies and training providers align their competency-based apprenticeships to nationally portable, industry-recognized credentials it creates a system that is easily replicable and transferable.

The work processes of OJT and learning objectives of courses are aligned to performance-based, competency-driven industry credentials providing a framework. It also allows for greater expansion and applicability beyond apprentices in one company. Incumbent workers can access the system to upskill or document existing skills.

Conclusion

The NIMS Competency-Based Apprenticeship model addresses the needs of employers, workers and students. The self-paced, open nature of the program allows tens of thousands of apprentices to begin careers, and incumbents or career changers to upskill and advance in their existing careers in a quality system that supports the skills requirements of industry.

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[SUMMARY STATEMENT OF MONTEZ KING]

Apprenticeship in its basic form has long been a staple of workforce preparation in this country. Its core components like blended learning and mentorship make it a successful work and learn model, providing an alternative to traditional, costly education pathways for individuals to access good-paying jobs. The Registered Apprenticeship system we have today is burdened by rules and restrictions and counterproductive to our Nation's economic imperative to innovate and evolve. The system pushes businesses into a "one size fits all" box, is not able to easily adapt to changes in industry, and is unattractive to individuals who may look to programs like apprenticeships to launch their careers and seek economic betterment through more flexible education opportunities. Because of the proscriptive nature of the Registered Apprenticeship, it is proving to be an unappealing proposition for companies and prospective recruits, and has limited applicability in new and emerging business sectors.

But there is a new industry-recognized model of apprenticeship on the horizon that recognizes and encourages innovation and creativity, and will open work and learn opportunities for a diverse range of occupations and job levels. This new industry-driven model is the Industry-Recognized Apprenticeship Program, a model described in the final report of the Task Force on Apprenticeship Expansion as the vehicle for remodeling and expanding apprenticeship to meet the needs of the modern economy. This new model recognizes that you don't grow something by creating more rules, but by creating an environment of innovation and excellence. Through the Industry-Recognized Apprenticeship platform, companies can build their own customized apprenticeship, designing work and learn programs that fulfill their workforce needs and create greater probabilities of success for participants.

NIMS is working with Raytheon to develop an Industry-Recognized Apprenticeship that creates a work and learn training system and includes apprenticeship opportunities for diverse occupations and job levels. The result is a structured on-the-job training system that delivers quality talent to the company, provides a long-term talent management solution, and accommodates the wave of working learners representing a large portion of the current and future labor force. This new model not only changes the trajectory of talent acquisition for the company, but also changes the culture of training from one that focuses just on the entry-level to one that is inclusive of every company employee, regardless of position or occupation.

The CHAIRMAN. Thank you, Mr. King.

Mr. Holland, welcome.

STATEMENT OF MICHAEL HOLLAND, CHIEF OPERATING OFFICER, MAREK, HOUSTON, TEXAS

Mr. HOLLAND. Good morning, Chairman Alexander, Ranking Member Murray, and Members of the Committee.

Thank you for allowing me to be with you today to discuss the important topic of modernizing apprenticeships to expand opportunities.

My name is Mike Holland and I am the Chief Operating Officer of the Marek Companies. I am testifying today on behalf of Associated Builders and Contractors. A.B.C., and its 21,000 members, are leaders in workforce development and apprenticeships. This year A.B.C., and its members, will spend over $1 billion educating and up-scaling approximately 450,000 construction professionals.

MAREK is a specialty interior contractor founded more than 80 years ago operating in Texas, Georgia, and Tennessee. We offer services from drywall, painting, ceilings, and acoustical solutions to innovative services related to 3-D modeling, scheduling, and integrated project delivery.

I have been with MAREK for my entire 47 year career in the construction industry. I am an example of the rewarding and fulfilling careers that working with your hands can provide. My motivation and commitment to workforce development stems from my

own path and I want to give all Americans the opportunity to build successful careers in any path they choose.

We are here today because as a country, we need to do a better job of equipping our youth with the skills necessary to succeed in the 21st century. We should also work to give displaced or underemployed citizens a second chance at reaching the middle class.

If the collective efforts of our government and my industry were working at maximum effectiveness, we would not be here having this conversation today. That is why I am happy to be here with you so the public and private sector can work together to give Americans more opportunities to learn skills, earn family sustaining wages, and grow their careers.

I want to commend the Members of this Committee for working together to pass the reauthorization of the Perkins CTE Act. That was a great, bipartisan effort that will help many Americans.

In my written testimony, I offer specific recommendations about how we can create more apprenticeship opportunities. Because a small percentage of the construction industry is developed through Department of Labor Registered Apprenticeships, I believe government policies should be more reflective of how the industry is actually training its craft workers. Department of Labor Registered Apprenticeships are one way of teaching people skills, but they are often inefficient, not reflective of the market's demand, and carry enormous burdens to stay in compliance.

Instead of promoting Registered Apprenticeships, I encourage you to promote all apprenticeships, both market driven and those that are government defined.

I am critical of the Registered Apprenticeship system, but I also want to be critical of the private instruction market. The Government and industry need to be doing more. There are successful programs and collaboratives in the workforce arena, but we have not managed to replicate those best practices broadly.

I want to share an example of a successful Collaborative that highlights my industry, recognizes a problem, and comes together to drive change and create opportunities.

That example is C3, the Construction Career Collaborative based in Houston Texas. C3 is an alliance of construction owners, general contractors, and specialty contractors with a mission to develop a safe, skilled, and sustainable craft workforce.

As a private industry solution, C3 is built on three principles. One, is to advance the financial security, health, and well-being of the construction craft workforce through a W–2 employer relationship, as opposed to independent contractors.

Two, to actively implement and support the best construction safety practices; currently OSHA 10 and 30 training.

To commit to the development and delivery of continuous skills training linked to construction career paths for the craft workforce; credentials that are portable and stackable.

These principles are mandated by project owners who do so in their enlightened self-interest, then insert them into the project requirements for the general contractor and the specialty contractors to follow.

At C3, we are literally teaching our competitors how to build a safe, constructive, and successful workforce development program

at their companies. To date, ten owners that endorsed C3 have designated their projects for C3 status.

Fundamentally, we are reshaping the supply chain for procuring construction labor and thus the way employers think about their own needs for workforce. I believe this is the missing element in workforce development. When it comes to training, the contractor employer sits at the top of the supply chain. If their needs are clearly articulated, the network of providers becomes clear.

I share this as a positive example of industry taking it upon itself to address their needs. I hope other industries recognize the value in the apprenticeship model and also commit to equipping workers with the skills they need to succeed.

I want to thank you for allowing me to present today and I am ready to field any questions you may have.

[The prepared statement of Mr. Holland follows:]

PREPARED STATEMENT OF MICHAEL HOLLAND

Chairman Alexander, Ranking Member Murray and Members of the U.S. Senate Committee on Health, Education, Labor and Pensions, thank you for allowing me to be with you today to discuss the important topic of modernizing apprenticeships to expand opportunities. My name is Mike Holland, and I am the chief operating officer of MAREK Companies.

I am testifying today on behalf of Associated Builders and Contractors, a national construction industry trade association established in 1950 that represents more than 21,000 members. Founded on the merit shop philosophy, ABC and its 70 chapters help members develop people, win work and deliver that work safely, ethically and profitably for the betterment of the communities in which ABC and its members work. ABC and its members are committed to spending over $1 billion on apprenticeships, earn-and learn opportunities and other programs to educate more than 450,000 construction workers this year.

One of those 21,000 companies is my company, MAREK, which was founded more than 80 years ago, and operates in Texas, Georgia, and Tennessee. As a specialty interior contractor, MAREK offers commercial and residential services from drywall framing, flooring, ceilings and acoustical solutions to innovative professional services related to 3-D modeling, scheduling, and integrated project delivery. MAREK is an industry leader because of our unwavering commitment to safety and our workforce.

I am an example of the rewarding and fulfilling careers the construction industry can provide. After 2 years of college, I realized that college was not the best path for my future so I dropped out and enrolled as a drywall apprentice. During my 3 years in the drywall field, I committed myself to learning new skills and advancing my career in construction. I rose through the industry as a project manager, sales manager, branch manager, and was eventually appointed MAREK's chief operating officer in 2015. My motivation and commitment to workforce development stems from my own path, and I want to give all Americans the opportunity to build successful careers in the construction sector.

Today, I hope to paint a picture of what workforce development looks like in the construction industry, and how workers are achieving their dreams through industry-recognized apprenticeship programs. I will offer recommendations and suggestions that will open more opportunities for students, women, minorities, veterans, non-graduates, and people seeking new careers, re-entry into the workforce or a second chance.

MAREK would not be the thriving company it is today without our skilled and dedicated team of craft professionals. We recognize our employees are the foundation on which our success is built, and why we strive to attract and retain the best talent available. A job at MAREK is just the beginning of a long and rewarding career. We treat our employees like the talented experts they are, offering competitive wages and salaries, healthcare benefits, on-the-job training programs and opportunities for career advancement. We take pride in building strength from within.

All of MAREK's workforce development and education is delivered through industry-recognized apprenticeship programs with the primary focus on safety. An industry-recognized apprenticeship program is a structured career development ladder developed by the private construction market. It is a paid position, which costs nothing to taxpayers, and includes classroom instruction along with supervised on-the-job

training. Our programs are competency-based, which means that apprentices advance as they master each skill, or become competent. Rather than a specific time requirement for advancement, we require that a worker know and demonstrate their skills—which allows the highest performing employees to advance quicker. It also ensures apprentices who may struggle learning a skill not get left behind. The vast majority of workers in the construction industry are trained in industry-recognized programs. [1]

For classroom content, we use select curriculum from NCCER—founded in 1996 as the National Center for Construction Education & Research—which we combine with custom MAREK content. NCCER, which was started by 120 construction CEOs, associations and academics who identified the need for a standardized training and credentialing program, provides portable curriculum that results in an industry-and nationally recognized credential. Across sectors, NCCER can and should serve as a model for other industries looking to develop their own standardized apprenticeship programs, which will allow industry leaders to combine resources and develop a standard set of credentials for all positions.

MAREK's education programs are structured to provide the highest value to our workforce and our clients. Once a MAREK employee completes a NCCER module, they can sit for a credential exam. If they pass, they receive a stackable and portable industry-recognized credential. Therefore, if an employee decides to leave our company, they can prove their knowledge and demonstrate their skills with that credential anywhere and at any jobsite in the country. An important issue discussed later in this testimony is the Federal Government's resistance to accepting industry-recognized credentials, which limits opportunities for millions of workers.

MAREK has developed an education system that we believe provides limitless opportunities for all our workers. For example, once an employee has graduated from one of our apprentice programs and gained experience in the field, they can enter our foreman field leader training program. We have multiple examples of strong candidates who have progressed from entry-level apprentice to entry-level leadership roles within 5 years. This program is also available to incumbent workers. At MAREK, we believe continuing education should be a lifelong endeavor and that all employees regardless of age should have the opportunity to earn a leadership position.

Recruitment

As the Members of this Committee know, America is facing an enormous workforce shortage. There are currently six million open jobs in the United States and 500,000 of those are in the construction industry. At MAREK, we are taking proactive steps to give Americans terrific opportunities in the construction industry by partnering with high schools and nonprofit community organizations to educate students about the lucrative and rewarding careers in the skilled trades.

We have also partnered with Texas A&M University to better target underrepresented populations to grow and diversify our workforce. In addition, we have committed significant resources to bringing women into our industry. While there is a stigma that construction is a man's job, nothing could be farther from the truth. We have a "Women at MAREK" initiative and offer peer advisors for our female employees. We want to create a welcoming environment for all our employees.

Partnering with community groups and nonprofits, such as the United Way, has helped us to hire individuals experiencing hardships. These partnerships are critical to helping disadvantaged Americans and rely on two-way communication. The United Way contacts us when they believe they have an individual that would be a great fit for our company and we reach out to them when there are roles to be filled. If our employees are struggling with sections of a test to obtain credentials, we partner with adult education centers to ensure they have the attention they deserve.

How We Can Expand Apprenticeship Opportunities

Our apprenticeship programs are constantly modernizing to provide the best possible development opportunities to our workforce. Roughly 10 years ago, we made the decision to train some of our workforce with Department of Labor-registered apprenticeship programs, and committed significant company resources to ensure we were in full compliance. We made this decision because we wanted to bid on Federal construction projects, and to win those contracts, it is practically required that you use DOL-registered apprenticeships.

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[1] *https://doleta.gov/oa/data*_statistics.cfm; *https://www.bls.gov/iag/tgs/iag23.htm*.

After 6 years, we ultimately decided to de-register and instead exclusively utilize our in-house development program. We found the DOL's hours requirements inflexible and somewhat arbitrary because the instruction is based on time in the classroom, not on the jobsite. And when DOL requires apprentices to sit in the classroom after they have already demonstrated their knowledge on the jobsite, it hinders their growth and prevents them from advancing onto the next skill. Without compromising our unwavering focus on safety, our program is more flexible and allows someone to master skills and progress at their desired speed.

In our experience, apprentices and instructors experienced burnout with the DOL-registered program's extensive after-hours classroom requirements because it was not flexible enough to accommodate business fluctuations, which led to both some apprentices dropping out and instructors choosing not to participate as mentors.

The purpose of sharing this story is not to criticize DOL-registered programs, and especially not graduates, but to demonstrate the difficulties that many companies face in administering these programs. I hope that the lessons I share can spur change to create more apprenticeship opportunities for more people.

While MAREK had the resources to register a DOL program, de-register it, and return to our successful industry-recognized training method, unfortunately, most small-and medium-sized businesses do not have that luxury. The reporting requirements are often duplicative and stretched our smaller branches to their administrative capacity. As a company, we had to divert resources away from education and training and put them toward paperwork, which ultimately hurt our workers and their families. DOL's assistance often felt like requirements rather than recommendations.

DOL's rigid apprenticeship programs are one of the reasons why most of the construction industry chooses to train their workforce through the industry-recognized model. As I mentioned, this model allows employees the flexibility to progress at their own speed and obtain nationally recognized, portable and stackable credentials.

Unfortunately, the Federal Government does not recognize this successful model when procuring their construction projects. Because of Davis-Bacon requirements, only apprentices in DOL-registered programs can be considered "apprentices" under the law's job classifications. When you are a DOL-registered apprentice, you can be paid a wage relative to your experience. On the other hand, if you are an industry-recognized apprentice working on a Federal project, the government mandates that you are paid the same wage as your more experienced, more skilled peers.

As an example, this would be equivalent to allowing construction workers in one state to be paid wages based on experience and education, but all workers in a different state to be paid the same, regardless of skill level. This unfair advantage and preference to DOL-registered apprenticeships dramatically reduces the amount of people that can be trained in our industry and limits opportunities for all.

According to the recently published DOL task force report on expanding apprenticeship opportunities, an apprenticeship is an arrangement that includes a paid-work component and an educational or instructional component, wherein an individual obtains workplace relevant knowledge and skills. The apprentices at MAREK and in other industry-recognized programs are paid, receive on-the-job training and classroom instruction, and earn a stackable, portable credential. If a company is forced to pay that apprentice the same as his or her more experienced peers, then that company may not be able to afford to bid on a Federal project. This decision is passed down the chain and ends up hurting the apprentice the most, as they will have less on-the-job experience, mentoring by company leaders or the wage for a day's hard work.

I urge Members of this Committee to work together to open more apprenticeship opportunities. Without arguing the merits of Davis-Bacon, there are simple reforms that would allow apprentices in industry-recognized programs to have the same opportunities that those in DOL-registered programs have. The system should be equal and fair to all.

Chairman Alexander, Ranking Member Murray and Members of the Committee: thank you once again for inviting me to participate in today's hearing. I look forward to working together to expand apprenticeship programs and give all Americans the opportunity to build successful careers.

[SUMMARY STATEMENT OF MICHAEL HOLLAND]

My name is Mike Holland, and I am the chief operating officer of MAREK Companies. I am testifying today on behalf of Associated Builders and Contractors. MAREK is a specialty interior contractor offering commercial and residential serv-

ices in Texas, Georgia, and Tennessee. I started in the construction industry as a drywall apprentice after dropping out of 2 years of college. I rose through the ranks as a project manager, sales manager, branch manager and eventually was appointed MAREK COO in 2015.

My goal today is to paint a picture of what workforce development looks like in the construction industry and offer recommendations about how the public and private sectors can help open apprenticeship opportunities. All of MAREK's workforce development and education is delivered through industry-recognized apprenticeship programs with the primary focus on safety. An industry-recognized apprenticeship program is a structured career development ladder developed by the private construction market. It is a paid position, which costs nothing to taxpayers, and includes classroom instruction along with supervised on-the-job training.

For classroom content, we use select curriculum from NCCER which we combine with custom MAREK content. NCCER, which was started by 120 construction CEOs who identified the need for a standardized training and credentialing program, provides portable curriculum that results in an industry-and nationally recognized credential. If an employee decides to leave our company, they can prove their knowledge and demonstrate their skills with that credential anywhere and at any jobsite in the country.

As Senators know, America is facing an enormous workforce shortage. There are currently six million open jobs in the United States and 500,000 of those are in the construction industry. We are proactively recruiting women, underserved populations and folks experiencing hardships through partnerships with nonprofits and community groups.

Roughly 10 years ago, we made the decision to train some of our workforce with Department of Labor-registered apprenticeship programs because we wanted to bid for Federal contracts. After 6 years, we ultimately decided to de-register because we found the DOL's hours requirements inflexible and somewhat arbitrary because the instruction is based on time in the classroom, not on the jobsite. Without compromising our unwavering focus on safety, our program is more flexible and allows someone to master skills and progress at their desired speed.

Unfortunately, the Federal Government does not recognize our successful training method when procuring Federal projects because our trainees cannot be considered "apprentices" under Davis-Bacon job classifications. This decision is passed down the chain and ends up hurting the apprentice the most, as they will have less on-the-job experience, mentoring by company leaders or the wage for a day's hard work.

Without arguing the merits of Davis-Bacon, there are simple reforms that would allow apprentices in industry-recognized programs to have the same opportunities that those in DOL-registered programs have.

The CHAIRMAN. Thank you, Mr. Holland.

Ms. Vito, welcome.

STATEMENT OF SANDI VITO, EXECUTIVE DIRECTOR, 1199 SEIU TRAINING AND EMPLOYMENT FUNDS, NEW YORK, NEW YORK

Ms. VITO. Good morning, Chairman Alexander, Ranking Senator Murray, and the Members of the Committee.

Thanks for the opportunity today to present and testify before you about the important role Registered Apprenticeships play in our workforce system.

My name is Sandi Vito. I am the Executive Director of the 1199 SEIU Training and Employment Funds, and also the President of the Health Career Advancement Project Education Association.

First, the Training and Employment Funds operate as industry partnerships jointly governed by the largest health care local union in the country and health care employers from across New York, Massachusetts, Maryland, Washington, DC, and Florida.

We administer education benefits on behalf of more than 250,000 workers and 450 employers. Each year, we provide training, workforce development, and allied health degree programs for 35,000 frontline health care workers.

The Health Career Advancement Project, or H-CAP, is our national organization. Our Training Funds along with other training funds from across the country, employers, and unions collaborate through H-CAP. This national network encompasses nearly 1,000 employers and 600,000 workers in the health care industry.

H-CAP also currently serves as the contractor for the U.S. Department of Labor to support the expansion of apprenticeships in the health care sector.

Modern health care has not traditionally used apprenticeships with any frequency. However, over the last 2 years, with H-CAP's support, apprenticeships in more than 17 health care occupations have been registered either nationally or locally. The employer sponsors of apprenticeships are varied, large and small, from Kaiser Permanente in California to Mount Sinai Health System in New York City.

While our network of training funds and industry partnerships administer a myriad of training and education programs, Registered Apprenticeships are, as Senator Murray, said, the gold standard of workforce development.

A "New York Times" article recently cited two studies. They noted an analysis of 11 different workforce training programs in Washington State and found that Registered Apprenticeships had, by far, the largest positive effect on short and long term salaries with an ROI, Return on Investment 18 times the cost of the program.

A 2012 study of 10 states found that Registered Apprentices earn $240,000 more over a lifetime than similar workers who had not gone through such a program.

To highlight just a few of the benefits of apprenticeship, first of all, our employers choose apprenticeship because this strategy fills a labor market gap. It augments classroom instruction with hands-on learning under a mentor, which is, in many cases, the best way to gain competencies for certain occupations.

The combination of formal instruction and mentored on the job learning is what makes apprenticeship the high quality standard of workforce development standards.

Employers know that apprentices must demonstrate in a real world environment the skills needed to perform the job. And a worker with a journey certificate is guaranteed, not just to have the competencies, but to have labor market mobility by carrying that certificate. Workers obtain high wage jobs, an industry recognized credential, and labor market mobility.

The wage progression feature of Registered Apprenticeships assures that as workers gain new skills and perform more and more work independently, they are appropriately paid for the work that they are delivering. The registration process ensures that apprenticeships are not just aligned to a single employer, but to industry standards.

There are other work-based learning strategies, and they are valuable, but they are not the same as Registered Apprenticeships, and that distinction is very important.

The term "registered apprenticeship" for nearly a century, denotes a level of quality to employers and workers. Diluting the

meaning or the practice of Registered Apprenticeships will undermine the tradition of those high quality outcomes.

As we look to the future of expansion of Registered Apprenticeships, and we should, the tradition of quality is the true benefit to workers, communities, employers, and industries.

Thank you so much for the opportunity to testify today, and I am happy to take any questions at the appropriate time.

[The prepared statement of Ms. Vito follows:]

PREPARED STATEMENT OF SANDI VITO

"Modernizing Apprenticeships to Expand Opportunities."

Chairman Alexander, Ranking Member Murray, and other Members of the Committee, I appreciate the opportunity to testify before you this morning as you consider the important role that registered apprenticeships play in our workforce system.

My name is Sandi Vito, I am Executive Director of the 1199SEIU Training and Employment Funds and President of the Healthcare Career Advancement Program Education Association.

The Training and Employment Funds operate as an industry partnership jointly governed by 1199SEIU United Health Care Workers East, the largest healthcare union in the United States and health care employers from New York, Massachusetts, Maryland, Washington DC and Florida. The Funds are multi-employer Taft-Hartley trusts established in accordance with Section 186(c) of the Labor Management Relations Act of 1947 and an "employee welfare benefit plan" as that term is defined in Employee Retirement Income Security Act of 1974, 29 U.S.C. 1001 et seq. ("ERISA"), as amended. As a multi-employer trust fund, the Funds are financed with contributions from employers pursuant to various collective bargaining agreements between 1199SEIU United Health Care Workers East ("the Union") and healthcare employers.

The Funds administer education benefits on behalf of more than 250,000 healthcare workers and 450 employers. Each year, more than 35,000 frontline healthcare workers receive workforce development and higher education benefits in allied health programs through the Training Funds. Through our programs we support career pathways for entry level healthcare workers, while meeting the workforce needs of employers. The Training and Employment Funds' programs include:

- Citizenship
- English as a Second Language
- High School Completion for adult learners
- College preparation
- Allied Health Certificate and Degree Programs in more than fifty occupations as wide-ranging as surgical technologist and nursing to pharmacist and social work
- Skills enhancement and continuing education to assist the industry with healthcare delivery system transformation
- Registered Apprenticeship

Partnering with more than 100 colleges, the Training and Employment Funds' workforce development model uses an intensive support service model to increase completion and career advancement success rates.

The 1199SEIU Training and Employment Funds are members of the Health Career Advancement Project (H-CAP), which is a national labor/management cooperation organization of industry partnerships across 16 states plus Washington, DC. This national network encompasses nearly 1,000 employers and more than 600,000 workers from all sectors of healthcare. Working as a national industry intermediary contractor with U.S. Department of Labor (USDOL) and with the support of foundations—such as JP Morgan Chase—H-CAP has provided technical assistance, subject matter expertise, shareable resources, and capacity building infrastructure to support the development of Registered Apprenticeship in healthcare.

Modern healthcare has not traditionally been an industry in which registered apprenticeships are used with any frequency. However, over the last 2 years, through H-CAP support, more than 17 apprenticeship programs have been registered and implemented across the country. The employers associated with those apprenticeships are varied. They include Kaiser Permanente in California, Colorado, and soon

to be in Washington State, Care New England in Rhode Island, University of Rochester—Strong Memorial Hospital in New York, Steward Health Care in Massachusetts, and Mount Sinai Health System and BronxCare in New York City.

Other employers not associated with H-CAP or SEIU, such as, Norton Healthcare in Kentucky, Ochsner Health System in Louisiana, Dartmouth Hitchcock in New Hampshire, and Fairview Health Services in Minnesota have invested in registered apprenticeship programs. Registered apprenticeships continue to expand throughout the U.S. healthcare industry without sacrificing standards or quality.

The occupations registered with the USDOL and state departments of labor through H-CAP support are varied, ranging from community health worker to medical coder. In all, 17 occupations, with two more pending, have been registered over the last 2 years.

Nationally Registered Occupations:

- Advanced Home Health with Specialties (pending)
- Ambulatory Coder
- Central Sterile Processing Technician
- Community Health Worker
- Emergency Medical Technician
- Hospital Coder
- Medical Assistant
- Surgical Technologist (pending)
- Support and Retention Coordinator I and II (Home Care Supervisor)

Occupations Registered at the state Level:

- Certified Nurse Assistant
- Community Health Nurse
- Direct Support Professional
- Early Childhood Educator
- In-patient Nurse Residency
- Licensed Vocational Nurse to Registered Nurse
- Paramedic
- Patient Care Technician
- Physical Therapist Aide
- Substance Abuse and Behavioral Disorder Counselors (LACD Counselors)

Through H-CAP's efforts 143 people are apprenticed in these occupations at the national level, and, to date, a 98 percent on-time completion rate has been achieved. More than 350 people have been apprenticed at the state level.

While the Training and Employment Funds and H-CAP's affiliated organizations administer many training and education programs, registered apprenticeships are the gold standard of workforce development strategies.

The New York Times recently cited two studies, noting an analysis of "11 different workforce training programs in Washington State [that] found . . . registered apprenticeships had by far the largest positive effect on short- and long-term salaries, returning 18 times the cost of the program in lifetime earnings. A 2012 study of 10 states found that registered apprentices earned $240,000 more over a lifetime than similar workers who hadn't gone through such a program."[1]

Both employers and workers benefit from registered apprenticeships.

- For employers, registered apprenticeships fill a labor market gap, augmenting instruction in areas where hands-on learning guided by a mentor provides new competencies that cannot be adequately learned in the classroom. Often didactic—or classroom instruction—does not fully prepare students for the real-life contingencies of a particular job. By combining formal classroom instruction with mentored on-the-job training and a structured learning pathway, through which apprentices acquire and demonstrate skill and knowledge, registered apprenticeships provide a high-quality learning opportunity not replicated in other workforce development strategies.

[1] Kevin Carey, "Trump's Apprentice Plan Seems to Need a Mentor," *New York Times*, September 28, 2017.

- Employers can trust that apprentices demonstrated, in a real-world environment, the skills to perform the job. The journeyman or apprentice certificate earned through registered apprenticeships benefits employers by guaranteeing that the competencies registered with the U.S. Department of Labor have been mastered.
- Participants or apprentices have the ability to earn while they learn, allowing talented workers to master new skills while continuing to support their families.
- Registered apprenticeships have protections for both workers and employers. For workers, as they gradually take on more independent responsibilities, built-in wage progressions ensure they are paid for the work they deliver.
- At the end of the registered apprenticeships, workers have jobs in their chosen field, along with labor market mobility, enabling apprentices who complete the program to obtain employment throughout the industry.
- The industry itself benefits as more workers are available for high-demand occupations.

Registered apprenticeships are unique in that they have protections for workers, such as wage progression, and the registration ensures they are aligned not to a single employer's needs but to industry standards. Other work-based learning strategies may be valuable workforce development tools, but they are categorically not registered apprenticeships. The distinction is important. The term registered apprenticeships denotes a level of quality employers and workers can rely upon, and diluting the meaning or practice of this workforce strategy will undermine a tradition of high-quality outcomes.

To share one example of the value of registered apprenticeships: Coding in hospitals has become more complex. Hospital based coders must understand more than 70,000 codes, have a grasp of anatomy and physiology, and possess strong interpersonal skills to ask questions of care providers. Local colleges were graduating coding students at a rapid rate. Nonetheless, the hospitals we work with in New York reported shortages. They were not hiring recent coding graduates. Instead, they were hiring coders with experience, largely from each other.

The coding registered apprenticeship program provides the ability to combine classroom instruction with hands-on coding of real-time records, under the guidance of an experienced coder—or mentor. Apprentices are paid for their work and, as they are able to code more records on their own, their wages increase. At the end of the apprenticeship, not only does that employer have newly qualified workers but the entire industry's workforce has grown.

The workers earn an associate's degree and now have a credential with value in the labor market. A credential they were only able to obtain through the earn-while-you-learn experience offered by the registered apprenticeship model. Workers in this apprenticeship have increased their wages from minimum wage to $56,000 annually.

> According to the Director of Coding at Care New England, "We used Registered Apprenticeship to first, have a grow-your-own approach to investing in our incumbent coding staff and providing them with needed education and skills, and second, to reach out to other Care New England employees who may have an interest in a coding career. The Current coding staff could advance in their careers, and the Medical Coding department within the Care New England system could benefit from onboarding additional coders in the long term. One of the distinguishing features of identifying and realizing these goals relied on the strong labor/management collaboration supporting the program."[2]

The Training Funds implemented a Community Health Worker apprenticeship in New York City, and a graduate, Destina Garcia, was featured in a September 2017 New York Times article about the advantages of registered apprenticeships in healthcare. Destina's story illustrates the promise and value of registered apprenticeship in industries beyond traditional apprenticeship trades like carpentry and plumbing. She was one of 15 new CHWs who participated in the pilot registered apprenticeship, which began in November 2016.

Destina grew up in the South Bronx, sharing a two-bedroom apartment with her parents, four brothers, a sister, grandmother, and uncle. During her childhood she

[2] Jennifer Couri, Director of Coding, HIM, CDI, and Revenue Integrity, Care New England—Women and Infant's Hospital.

watched family members deal with illnesses that impacted their quality of life. Her father suffered from diabetes. Her mother struggles with Lupus. And she lost her younger sister to a fatal heart attack at just 18. As the eldest child, Destina spent much of her time taking care of the people closest to her. These experiences instilled in her a desire to help others, which is why she feels healthcare is her calling.

Before her apprenticeship, Destina managed to find entry-level work in medical records and earn certificates as a certified nursing assistant and emergency medical technician. However, employers were reluctant to hire her in those occupations because she didn't have relevant work experience. She was hesitant to enroll in a 4-year college program because of the cost and the fact that she would not be guaranteed a job upon graduation.

Then, Destina learned about the groundbreaking CHW registered apprenticeship at BronxCare and was selected to be part of the first cohort of apprentices.

CHWs connect underserved community members with critical medical and social services. They also educate clients about the importance of adopting healthy daily habits to improve their quality of life and reduce healthcare costs.

As part of the registered apprenticeship, Destina took three classes, earning nine college credits, through LaGuardia Community College, CUNY. Classes were conducted onsite at the hospital. During the on-the-job portion of the training, she was supported by a peer mentor with more than 20 years experience, who Destina continues to stay in touch with for advice and guidance even after completing her apprenticeship.

Because registered apprenticeships eliminate the school-to-practice gap by providing both didactic and practical experience, Destina was able to apply the knowledge she learned in the classroom to the work she was performing in close to real time. During the course of the apprenticeship she received two raises, bringing her salary to $42,000 annually. Pay increases based on acquired skills and experience are an integral component of the registered apprentice system.

Destina completed her apprenticeship in June 2017 and has continued working at BronxCare in the Population Health Department as a CHW. The apprenticeship served not only to support Destina in acquiring a family supporting job, and the industry in securing a talented and caring worker, but also as a gateway to future career advancement. Destina plans to transfer the credits earned during her apprenticeship toward a bachelor's in social work program at Lehman College, CUNY.

Registered apprenticeships provide positive results for participants, employers and the entire healthcare industry. For Destina, perhaps the most important of those results was the transition from sporadic, lower-wage employment to a full-time position as a Community Health Worker making $42,000 per year.

For employers and the industry, the value of the registered apprenticeship model lies in the confidence that employees will possess the skills and competencies required to perform their jobs well.

The expansion of registered apprenticeships in healthcare and other industries is an important objective and one that should be encouraged. In fact, through H-CAP's continued efforts to expand apprenticeship, more than 700 healthcare apprentices will be engaged by the fall of this year.

Expanding the registered apprenticeship model has tremendous value. However, it is imperative that any expansion not create a duplicative system that is of lower quality, with less rigorous standards than the registered apprenticeship model. A lower quality system would not adequately train participants, provide for worker protections, nor provide credentials employers and workers can trust.

As we look to the future expansion of registered apprenticeship opportunities, the tradition of quality is the true benefit to workers, communities, employers and industries.

Thank you for your time and for inviting to me testify today.

[SUMMARY STATEMENT OF SANDI VITO]

"Modernizing Apprenticeships to Expand Opportunities."

Chairman Alexander, Ranking Member Murray, and other Members of the Committee, I appreciate the opportunity to testify before you this morning as you consider the important role that registered apprenticeships play in our workforce system.

The 1199SEIU Training and Employment Funds operate as an industry partnership jointly governed by 1199SEIU United Health Care Workers East, the largest healthcare union in the United States and health care employers from New York, Massachusetts, Maryland, Washington, DC and Florida.

The Funds administer education benefits on behalf of more than 250,000 healthcare workers and 450 employers. Each year, more than 35,000 frontline healthcare workers receive workforce development and higher education benefits in allied health programs through the Training Funds. Through our programs we support career pathways for entry level healthcare workers, while meeting the workforce needs of employers.

The 1199SEIU Training and Employment Funds are members of the Health Career Advancement Project (H-CAP), which is a national labor/management cooperation organization of industry partnerships across 16 states plus Washington, DC. This national network encompasses nearly 1,000 employers and more than 600,000 workers from all sectors of healthcare.

Modern healthcare has not traditionally been an industry in which registered apprenticeships are used with any frequency. However, over the last 2 years, through H-CAP support, more than 17 apprenticeship programs have been registered and implemented across the country.

Registered apprenticeships are unique in that they have protections for workers, such as wage progression, and the registration ensures they are aligned not to a single employer's needs but to industry standards. Other work-based learning strategies may be valuable workforce development tools, but they are categorically not registered apprenticeships. The distinction is important. The term registered apprenticeships denotes a level of quality employers and workers can rely upon, and diluting the meaning or practice of this workforce strategy will undermine a tradition of high-quality outcomes.

Expanding the registered apprenticeship model has tremendous value. However, it is imperative that any expansion not create a duplicative system that is of lower quality, with less rigorous standards than the registered apprenticeship model. A lower quality system would not adequately train participants, provide for worker protections, nor provide credentials employers and workers can trust.

As we look to the future expansion of registered apprenticeship opportunities, the tradition of quality is the true benefit to workers, communities, employers and industries.

The CHAIRMAN. Thank you, Ms. Vito.

Mr. Johnson, welcome.

STATEMENT OF GLENN JOHNSON, WORKFORCE DEVELOPMENT LEADER, BASF CORPORATION, HOUSTON, TEXAS

Mr. JOHNSON. Good morning, Chairman Alexander, Ranking Member Murray, and Members of the Committee.

Thank you for the opportunity to appear before the Committee to talk about BASF's approach to workforce development, specifically apprenticeships, and how they fit within the present day and long term workforce development plan for BASF.

I would like to thank you for your leadership in passing the Strengthening Career and Technical Education for the 21st Century Act to reauthorize the Carl D. Perkins Career and Technical Education Act, legislation for which I testified last year before the House Education and the Workforce Committee.

BASF is the second largest producer of chemicals and related products in North America. BASF has more than 15,000 employees in 148 locations across the U.S. At BASF, we create chemistry for a sustainable future. The sustainability includes the economy and the environment, but also people, and that is what I am here to talk about today.

Twenty-two years ago, I was a proud young man living in a trailer park in western Kentucky with only a high school diploma when I began my first manufacturing job. I ran assembly lines, stacked cases of product, and as I worked through the ranks, I began to take advantage of a tuition reimbursement program. I progressed

into leadership roles while continuing to train and educate with the support of my manufacturing employer.

That proud man from the trailer park sits before Congress today to tell you that the manufacturing industry changed my life, and it changes peoples' lives in the same way every day.

Alignment between the education system and the business community is critical to deliver the knowledge and skills necessary for an individual's success. Within the North American Process Technology Alliance, BASF joins 49 colleges, 22 industrial organizations, and 19 vendors where we focus on the Process Technology Associate's Degree, as an example. This organization demonstrates the return on investment achievable within collaborative efforts.

Dr. Robert Bartsch and I published a research paper in "The Journal of Technology, Management, and Applied Engineering" entitled, "Comparing Process Technology Education with Work Experience," that demonstrated strong statistical evidence pointing toward collaborative value.

With this Degree, we found that 1 year of training was approximately equal to 5.3 years of work experience. When industry and education partner together to align curriculum with collective needs, education is experience.

Now, I discuss four apprenticeship models in my written statement, but today I will focus on one we call sequence apprenticeships.

Our plan is to facilitate the development of this program by creating advisory committees within education programs in the community and technical colleges where they will agree on competencies, allocate competencies to education and workplace settings, agree on structured learning agendas, and provide training through a sequence of scholarships and internships.

BASF has assembled parts of our program in Louisiana, Georgia, South Carolina, Pennsylvania, and Alabama. We identified ten educational partnerships in 2017 where we now provide the developmental assistance and curriculum input.

BASF provided onsite experience and job training for 49 future workers in 2017 and 30 in 2018, so far. Within these programs, BASF hired 45 workers in 2017 and 21 in 2018 thus far.

We are in the process now of building enterprise wide programs that are systematic and portable to other priority sites in Tennessee, North Carolina, Kentucky, Colorado, Wisconsin, Virginia, and Minnesota.

Our sequence apprenticeship model supports future workers in the entire degree program, not just the ones we hire. It increases the quality of the degree program as a whole, not just the apprenticeship program, resulting in higher relevance for the school.

It allows flexibility for hiring managers needed to maximize apprenticeship hires and it allows organizations to help fill the pipeline for other industry partners, not just for themselves.

Looking ahead, if we take no action, in the very near future, the jobs gap will ignite a wage war between industry partners. This will result in inflated wages above market and business models, and distressed sites will suffer first as they will not be able to match inflating wages.

We will likely lose productivity, then accounts. Buyers will be forced to look outside the U.S., and the manufacturing sector will decline, and these jobs will be permanently lost.

BASF plans to scale our activities across North America, and we are prepared to openly share our strategy and execution plan for workforce development with everyone.

Thank you.

[The prepared statement of Mr. Johnson follows:]

PREPARED STATEMENT OF GLENN JOHNSON

I. Introduction

Good morning Chairman Alexander, Ranking Member Murray, and Members of the Committee. Thank you for the opportunity to appear before the Committee to talk about BASF's approach to workforce development, specifically apprenticeships and how they fit in with our present-day and long-term workforce development plans.

Before talking about my company and thoughts on apprenticeships, I would like to thank you, Mr. Chairman and Senator Murray for your leadership in passing the *Strengthening Career and Technical Education for the 21st Century Act* to reauthorize the Carl D. Perkins Career and Technical Education Act. I testified last year before the House Committee on Education and Workforce in support of reauthorizing the Perkins Act and am encouraged to see it is progressing through the legislative process.

II. BASF Corporation

BASF Corporation, the North American subsidiary of BASF SE, is the second largest producer of chemicals and related products in North America. In the US, BASF Corporation has more than 15,000 employees across 148 locations, of which 74 are production sites and 18 are research and development facilities. The company has more than 1,700 employees dedicated to research and development in the U.S. and more than 8,500 manufacturing employees. BASF collaborates with approximately 170 top North American universities, research institutions and companies.

At BASF, we create chemistry for a sustainable future. Our customers increasingly expect consistent and innovative solutions that also contribute to a more sustainable future. They believe, as we do, that being environmentally and socially responsible goes hand in hand with running a profitable business. BASF has the broadest portfolio in the chemical industry serving customers in nearly every industry including: chemicals, automotive, agriculture, construction, personal care, health and nutrition, packaging and consumer products.

Sustainably includes the environment and economy, but also PEOPLE; and that is what I am here to talk about today. We strive to attract and develop talent from both internal and external sources. More than one-third of our jobs are filled with internal candidates—which means two-thirds of our jobs are filled with external candidates, which leads to our discussion on apprenticeships. We seek the best talent from all sources—leading universities, business connections, trade associations, national diversity conferences, partnerships to hire veterans, historically black colleges and universities and referrals from our own employees.

III. Filling the Skills Gap

An estimated 3.5 million manufacturing jobs must be filled by 2025 to meet industry needs. Due to gaps in the critical skills needed for these jobs, nearly two million of these jobs will go unfilled. Companies like BASF rely on manufacturing talent to remain competitive, which underscores the need for closer alignment between the education system and the business community. Therefore, we focus our efforts on:

A. Career and Technical Education awareness,

B. Innovative Education partnerships to increase pipeline quality,

C. Aligning academic learning with on-the-job relevance, and

D. Government and industrial partnerships.

BASF's award-winning science education programs and funding for schools across the region stimulate learning in science, technology, engineering and math (STEM) and support workforce development. Since 2010, more than 410,000 schoolchildren

in pre-K through Grade 12 have participated in a variety of our science education programs including: Kids' Lab, Teens' Lab, Science Academy and national sponsorship of the Chemical Education Foundation's *You Be the Chemist®* programs.

IV. Manufacturing Jobs Can Take You Anywhere

Some say jobs in manufacturing are dead-end jobs, but I am here today to testify that manufacturing jobs do not have a ceiling—they provide options. Some of us prefer the exciting hands-on aspects of technology roles, and some seek administrative work. Manufacturing provides opportunities for both, today.

- Ms. Jana Truett
  - Was a cashier in a pharmacy when she decided to get her associate degree in process technology. She began work with BASF as an operator and now trains others in technology.
- Ms. Jalisa King
  - Was a cook when she decided to get her associate degree. She is now an operator in BASF and part of our Ambassador team telling her story to other young women.
- Ms. Tara McMahon
  - Worked in a recreation center. After completing her associate degree, now works at BASF as a Laboratory Technician.
- Glenn Johnson
  - 22 years ago, I was a proud young man living in a trailer park in western Kentucky with only a high school diploma. At that time, I began my first job in manufacturing. I ran assembly lines and stacked cases of product. As I worked through the ranks, I began to take advantage of the tuition reimbursement program. I progressed into leadership roles while continuing to train and educate with the support of my manufacturing employer. That proud man from the trailer park sits before Congress today to tell you that the manufacturing industry changed my life and continues to change people's lives in the same way, every day.

V. A Strategy for Workforce Development

Alignment between the education system and the business community is critical to deliver the knowledge and skills necessary for an individual's success. This includes direct involvement in all stages of workforce preparation and building continuous and meaningful relationships with workforce potentials and organizations. Wherever possible, BASF seeks out and promotes these collaborations, from K–12 through graduate school.

In my experience, well-designed apprenticeship programs typically have requirements that align with three directives. BASF's Workforce Development programs are driven by these three directives:

- Quantity—Drive Career & Technical Education Awareness
- Quality—Cultivate Nested Educational Partnerships
- Synergy—Leverage Government and Industrial Partnerships

A. Quantity of the Workforce

An important function of any apprenticeship program is that it increases worker supply within occupations that have a projected shortage. One of the ways to do this is through outreach to underrepresented populations, veterans, and "retooling adults." An apprenticeship program is one of the best mechanisms to achieve this.

The progressive pay aspect of apprenticeship provides the immediate income necessary for veterans exiting the military and other established workers looking to change careers. These "retooling adults" cannot simply stop receiving a paycheck while they learn new skills. They often have established families they must support while making career changes toward jobs America desperately needs filled.

Organizations can create apprenticeships administered by employee resource groups for underrepresented populations like females in manufacturing. For example, a BASF initiative titled *Female Leaders Advancing Manufacturing Excellence* (FLAME), awards females with education scholarships for use within local community and technical colleges and provides job experience through multiple internships for the awardees. Additionally, the program enables women's advancement by connecting them to a growing vital network of mentors and colleagues.

B. Quality of the Workforce

An important outcome of any apprenticeship is alignment between the curriculum delivered and the knowledge, skills, and abilities organizations require.

- As a member of the North American Process Technology Alliance, BASF joins 49 colleges, 22 industrial organizations, and 19 vendors across America where we focus on curriculum and instructor skills for the Process Technology Associate degree. This organization demonstrates the return on investment achievable within collaborative efforts.
  - Dr. Robert Bartsch and I published a research paper in *The Journal of Technology, Management, and Applied Engineering* titled "Comparing Process Technology Education and Work Experience" that demonstrates strong statistical evidence pointing toward collaborative value.
  - Within this degree we found that 1 year of training is approximately equal to 5.3 years of work experience. This is not to suggest that 1 year of education in general is equal to 5 years of experience. However, when industry and education partner to align curriculum with **collective** needs and assure that learning environments are close simulations of the job with applied performance criteria, Education/Training **IS** Experience.

C. Collaborative Synergy

An important aspect of any apprenticeship model is collaborative synergy between education, industry and government organizations that improves the quantity and quality of the workforce pipeline. To achieve this, foundational efforts within apprenticeship programs must include the creation of collaborative partnerships. In BASF, we seek these partnerships in every opportunity. It is in BASF's best interest to help assure that our industry partners have a sufficient supply of qualified workers. At BASF, we want to do more than develop only the part of the workforce that we hire. We want to help and support our industry partners acquire talent and help all future workers increase their employability for all our industry partners, not just BASF.

VI. Apprenticeship Exploration

BASF feels that apprenticeships, when designed appropriately, can be a valuable tool in workforce development. We took time to study existing efforts before deciding how to move forward. We conducted a comprehensive examination of the different models of apprenticeships and gathered feedback from other organizations and colleagues about the models. We classified our findings into three different apprenticeship categories and later created a fourth.

- German Apprenticeships
  - Educational path for children is identified by academic achievement in the 4th grade. These paths are flexible but highly suggestive.
  - Those on the apprenticeship path (beginning in the 5th grade) complete dual enrollment with high school and vocational training programs, but end secondary education by the 10th grade.
  - This model does not fit culturally within the U.S.
    - Parents in the U.S. may consider students in these types of apprenticeships to be high school dropouts.
    - Parents in the U.S. will likely have strong opposition to the seeming removal of choice by a 4th grade test.
- Traditional American Apprenticeships
  - Progressive (Skills Based) Pay with increases as skills are acquired.
  - Provides mentor based on-the-job training and experience.
  - Traditionally did not have partnerships with college programs.
- Modern American Apprenticeships
  - Career and Tech Ed Awareness programs inform students of career choices.
  - Progressive (Skills Based) Pay with increases as skills are acquired.
  - Provides mentor based on-the-job training and experience.
  - Establish partnerships with Community and Technical college programs.

VII. Registered Apprenticeships

The current "registered apprenticeship" model has a perception within industry as being complicated and heavily burdensome with paperwork and reporting. This has affected the quantity of actively registered apprenticeships in the U.S. Some organizations that need apprenticeships may not seek registration and thus are not eligible for funding assistance because they perceive an insufficient return on investment for what they must do to receive it.

For example, in 2015, BASF planned to train 105 individuals from Texas and Michigan to be Process Operators and Maintenance Technicians through the American Apprenticeship Grant Program. We created a complete two- to three-year registered apprenticeship program as part of a joint effort between BASF and several industry partners—all of which planned to train and hire their own counts of registered apprentices. However, because one document was not completed properly, the program, which had involved much work to develop, was declined and the training was canceled. Since this time, some of the partners have endeavored to conduct the training on their own but with significantly decreased numbers of participants.

Headcount restriction causes hedging of apprenticeship participation by site leaders. Registered apprenticeships are aligned with job availability because they are designed to result in a hire. On the surface this sounds great, but it also decreases interest of some organizations. Site leaders are never 100 percent certain of specific employment needs due to turnover, production capacity expansion, or project completions. This uncertainty, coupled with a very set and inflexible headcount restriction, (a characteristic of many companies), leads to a hesitation to commit to projected hire counts that may be two to three years in the future. If a site leader is required to commit to hire as a part of program participation, as in registered apprenticeships, then they will only do so for a fraction of the count they may need to hire, in order to hedge against unexpected circumstances.

If the purpose of apprenticeships is to develop participants within jobs for which there exists or will exist a critical projected shortage, then apprenticeship programs should encourage development of our full projected hiring counts, not just a part. Therefore, BASF is moving toward what we call Sequence Apprenticeships.

VIII. Sequence Apprenticeships

According to the Department of Labor, registered "Performance Based Apprenticeship programs are premised on attainment of demonstrated, observable and measurable competencies," and identify the "*allocation of the approximate time to be spent in each major process*." BASF's "Sequence Apprenticeships" should fit within this model.

Our plan is to facilitate the creation of these programs by joining/creating advisory committees within the education program where the committee will agree on:

- Defined competencies that are directly related to the job/role through a job/task analysis and allocate which competencies will be achieved in the education setting and which will be achieved in the work-place learning setting
- Structured on-the-job learning agendas/activities for competencies attained within workplace learning that are observable applied performance based measures of competency attainment and that include the approximate time/hours value for attainment of each competency

Our plan is to provide this training and education through a sequence of scholarships and internships (scholarships within the college program and workplace internships that provide the structured on-the-job training within industry site locations). The program also allows:

- Credit to be given for previous experience and competencies demonstrated
- Apprentices to accelerate the rate of competency achievement or take additional time beyond the approximate time of completion

A. BASF's Progress toward Sequence Apprenticeships

BASF has started to assemble parts of the Sequence Apprenticeships through our workforce development strategy with execution activities in Louisiana, Georgia, South Carolina, Pennsylvania and Alabama.

- We identified ten nested educational partnerships in 2017 where we provide development assistance and direct curriculum input.

- BASF provided direct onsite experience and job skill training to 49 future workers in 2017 and 30 in 2018 thus far.
- BASF hired 45 workers in 2017 and 21 in 2018 thus far, from development programs with which we partner and advise on curriculum.
- Within our FLAME program we are providing scholarships and internships for females.

More work must be done to complete the program assembly. We are in the process of building enterprise-wide programs that are systematic and that are portable to other sites locations high in our priority such as Tennessee, North Carolina, Kentucky, Colorado, Wisconsin, Virginia and Minnesota.

Our Sequence Apprenticeships model allows:

- Support of future workers within the entire degree program, not only the ones we hire.
- Increased quality of the education program as a whole—not just the apprenticeship program, resulting in higher relevance for the school.
- Hiring managers to maximize the number of apprenticeship hires because the decision to hire is made at the time of credentialing when the actual situation is clear, not forecasted.
- Organizations to help fill the pipeline for other industry partners, not only for themselves

Based on our experience, the Sequence Apprenticeship model holds much promise. It is a model that can "catch-on" and encourage more participation by industry partners. Sequence Apprenticeships allow the flexibility that hiring managers need to support the maximum number of future workers and hire the maximum number of employees from the program.

B. A Proposal for Distributable Support for Collaborative Workforce Development

Under this model organizations would work together as true partners where multiple partners can share the load to develop future workers. Support to each of the industry partners would be based on their share of workforce development efforts within a collective group of future workers. This would require a support program that is distributable in parts as follows:

- Part 1: Setup of new or restructuring of councils within education programs that involve the school and multiple industry partners from the region
- Part 2: Work to define competencies, learning agendas and schedules, and workplace setting requirements for instruction
- Part 3: Scholarships for program participants
- Part 4: Executed workplace on-the-job learning

IX. Looking Ahead

If we sit on the sidelines and take no action toward development of the workforce need to fill the jobs gap, the "Skills Gap" will become critical within manufacturing in approximately 4 years. Unless something is done to change the status quo, the lack of workers will ignite a wage war between industry partners that will result in inflated wages above market and business models. This wage increase will result in a short—term exchange of the same short supply of workers, and will affect the margins of all producers. Smaller, distressed sites will suffer first as they will not be able to match inflating wages and likely lose productivity, then accounts. Entities with demand for this productivity will be forced to look elsewhere and likely turn to markets outside of the United States. The manufacturing sector in the U.S. will decline and these U.S. jobs will be permanently lost.

Evidence of this has already become visible in manufacturing sites. Manufacturers have experienced employee counts that have reached a level of site open positions where plant operations are being negatively impacted including reduced operating shifts, higher overtime cost, and lost production.

X. Moving Forward

BASF plans to advance and scale the activities mentioned today across North America. We are prepared to openly share the strategy and execution plan for workforce development with industry and government partners. America needs the man-

ufacturing industry to achieve the growth we clearly see coming. Congress can catalyze this growth providing *Distributable Support for Collaborative Workforce Development*.

[SUMMARY STATEMENT OF GLENN JOHNSON]

I. Introduction

(includes a comment about passage of the Perkins Act reauthorization)

II. Overview of BASF Corporation

A. US Employees

B. Sustainability at BASF and how it relates to workforce development

III. Filling the Skills Gap: An estimated 3.5 million manufacturing jobs must be filled by 2025. Nearly two million of these jobs will go unfilled. At BASF, we focus our efforts on:

A. Career and Technical Education awareness,

B. Innovative Education partnerships to increase pipeline quality,

C. Aligning academic learning with on-the-job relevance, and

D. Government and industrial partnerships.

IV. Manufacturing Jobs Provide Career Options (includes Glenn's story)

V. A Strategy for Workforce Development: BASF's Workforce Development programs are driven by these three directives:

A. Quantity—Drive Career & Technical Education Awareness
B. Quality—Cultivate Nested Educational Partnerships
C. Synergy—Leverage Government and Industrial Partnerships

VI. Apprenticeship Exploration: Apprenticeship models explained

VII. Comments and a Story about Registered Apprenticeships

VIII. Sequence Apprenticeships

A. BASF's approach to apprenticeships

B. Progress to date

C. Next Steps: A Proposal for Distributable Support for Collaborative Workforce Development

IX. Looking Ahead: Consequences of Inaction

X. Moving Forward: BASF's Approach

The CHAIRMAN. Thank you, Mr. Johnson.

We will now begin a 5 minute round of questions.

Senator Isakson.

Senator ISAKSON. Mr. Johnson, I am the Chairman of the Veterans Committee in the U.S. Senate. Senator Murray has served in that position as well. I always go through resumes of the people who testify before us, and I am always happy to find a veteran.

I see you are a Gulf War veteran, is that correct?

Mr. JOHNSON. That is correct.

Senator ISAKSON. What branch of the service were you in?

Mr. JOHNSON. Army.

Senator ISAKSON. Army.

Did you do any workforce development in the Army?

Mr. JOHNSON. The major amount of time that I was in the military, I was assigned to a training brigade in Fort Knox, where we developed people in their jobs and in their skills.

Senator ISAKSON. The reason I ask that question, did that start you on what has been a career of workforce development?

Mr. JOHNSON. At the time, I was not aware of it. But yes. It seems as though every employer I had—and that was straight out of high school—every employer I had within a short period of time said, "We want you to train." At some point I said, "Well, I guess I better make this a career."

Senator ISAKSON. The reason I ask that is if all of us had the control that the United States Army has over their soldiers, we could get everybody trained pretty fast because you cannot say no, and you take orders or you get in trouble. That is a good thing to learn.

But I noticed you are a published author on five books on workforce development. You have done a lot of workforce development for companies.

Are most of the companies that you have done workforce development for the employees or those companies that are doing the workforce development?

Mr. JOHNSON. I am sorry. Say that question?

Senator ISAKSON. Are most of the workforce development programs, are they companies that use employees or companies that use independent contractors?

Mr. JOHNSON. There is a blend. Most of the experience has been with employees, but we are very recently looking to try to create a path that begins with our nested contractors.

In our sites, we have what we call nested contractors. These are contract organizations that have employees there and they are there so consistently that oftentimes, our employees do not know they are contractors because they are there all the time.

We are now trying to create a stream that builds off of, what one of my colleagues mentioned earlier, what starts with our contractor organizations and blends over into employees for BASF.

But it is a strategy that we work together to help then get employees in the beginning stages, develop them, and move them through the entire pipeline.

Senator ISAKSON. Well, you are getting me exactly where I need to go with Mr. Holland.

Mr. Holland, I presume from your business and what you do—and being somewhat familiar with your company in Atlanta, Georgia—you use a lot of independent contractors, or do you not?

Mr. HOLLAND. Again, it depends on the segment of the industry. Residentially, multifamily, it is entirely independent contractors. I think when Mr. Johnson and I talk about it, it is different.

When I say "independent," I mean when the craft worker themselves is classified as an independent contractor. We see that as really disturbing and creeping into more and more of the unlicensed trades. In my mind, it is the opposite of a career path discussion.

Senator ISAKSON. Well, you are taking me exactly where I want to go because unlicensed trades are what I want to talk about a little bit.

Are not most of the people that you use in your construction jobs licensed by the states for what they do?

Mr. HOLLAND. There is a wide variety of licensing requirements in the states. Texas, for example, requires the HVAC trades to be licensed. A few others are. So it is quite a range of requirements.

Senator ISAKSON. But plumbing, and electricians, and things like that are not.

Mr. HOLLAND. My understanding is they are pretty broadly licensed and held to a higher standard.

Senator ISAKSON. My experience in Georgia, we had 37 different licenses in the state, and most of them were everything from barbers, to electricians, to sheetrock, and all that type of thing.

When you have independent contractors, the control over what a person learns is basically what they need to do to get the license to do the trade. After that, who they work for depends on the enthusiasm of that employer or the person who hires the independent contractor to get them to move forward in terms of their training. But that is the way you build it one way or another.

I think, Mr. Chairman, one thing we need to focus as we go through this is what we can do through our states, and through some of the programs we have developed in workforce development, and things like that. See to it that the states are bringing about more focus on apprenticeship as a qualification for licensure or as a way to qualify for licensure in a state. Sometimes that is where you breakthrough to get those things included. I think that is very important to do.

The last thing I want to say about apprenticeship, I hate to pick out one company, but in Georgia we have a company called Southwire, which is a major producer of cable in the world. They developed a program called 12 For Life. They bring in children who are off the streets, dropped out of school, do not have a home; they are all homeless.

They give them training through an apprenticeship program, qualify for a G.E.D., which is a substitute high school degree, and then give them a job if they successfully finish the program.

I hope as we go through this focus on apprenticeships, it is being done more and more in a lot of different businesses, we will create more opportunities. To not only being an apprenticeship to learn your trade, but also that would be a gateway for you to get a home, insurance, structure in your life, and a way to become a permanent employee for somebody, and really make a contribution in the community.

I appreciate all of you being here, appreciate what you all do.

Thank you very much, Mr. Chairman, for the time.

The CHAIRMAN. Thank you, Senator Isakson.

Senator Murray.

Senator MURRAY. Thank you very much, Mr. Chairman.

I want to ask unanimous consent to enter a letter from the National Electrical Contractors Association into the record.

The CHAIRMAN. So ordered.

Senator MURRAY. Thank you.

Thank you all for your testimony today. Ms. Vito, let me start with you.

Across the country, there are men and women willing to work hard to make it into the middle class, but they need opportunities. They need opportunities for additional education, job training, skills development.

At the same time, we have a lot of employers who are really struggling to find workers with the skills and competencies they

need. We know that Registered Apprenticeships can really help bridge that divide.

I am frustrated that the Administration seems unwilling to focus on the success of the Registered program. Instead, claiming that it is some how, quote, "burdensome and onerous."

Now, the health care sector is not known for traditionally using the Registered Apprenticeship model.

Share with us, why did the employers you work with choose to participate in a Registered Apprenticeship program?

Ms. VITO. The employers in health care chose specifically because they recognized what we call "the school to practice gap."

There is a gap between what you can learn in the classroom. And so, through structured, on the job instruction with the advantage of a mentor, you gain new skills that you cannot learn in the classroom.

Second, they recognized that even as you are learning, you are delivering services. And so, they were willing to pay the wage progression.

Through a series of conversations, they also understood that the process of registration ensured that the competencies were documented and that multiple employers recognized that credential.

Senator MURRAY. Did any of them express concerns with the burdens associated with that process?

Ms. VITO. I do think the role of the intermediary, our industry partnership, is very useful in helping employers navigate the registration process.

But they did not express a burden. What they understood, and actually valued, was the process of working together with workers from the occupation itself and the employers to document those competencies in order to apply for the registration.

Senator MURRAY. Now, labor unions are often talked about being impediments to expanding industry-focused training programs. Yet, these same unions have actually created and expanded the Registered Apprenticeship program as we know it today.

Labor unions also continue to make major investments, we know, into workforce training and apprenticeships. And as I mentioned in my opening statement, building trades, for example, invest over $1 billion a year in apprenticeships and journey level training.

Instead of attempting to bypass this system, I think we should be complimenting the unions' investments and leveraging their experience in creating high quality programs.

I wanted to ask you, as the Executive Director of a very large labor management workforce intermediary, can you tell us about the important role that you see unions play in creating high quality workforce programs?

Ms. VITO. I think they play a very important role. The first is working through the worker protections.

As I have said, sort of repeatedly, the workers provide a service—in some cases, community health, like working with clients is one example—provide a service and the unions help ensure that the workers are adequately paid for that service. So they are working and learning at the same time.

Senator MURRAY. Not being misused.

Ms. VITO. Then there are not abuses in the system.

The second part that unions provide, which I think is not as well understood, is by bringing in the worker voice, the people who are doing it. The managers do not do carpentry. Managers do not do community health work or medical coding. It is the workers themselves.

In our industry, the union and workers are committed to the quality of care. They bring that collaboration with the employer to understand, "What do you need to do this job well?" Define those competencies, provide the mentors, and provide the worker voice that is so valuable as the on the job learning takes place.

Senator MURRAY. Now, in your written testimony, you cited concerns with expanding the apprenticeship model in a way that would create duplicative programming, lower quality, less rigorous standards than the Registered Apprenticeship program.

You said a lower quality system would not adequately train participants, provide for worker protections, or provide credentials employers and apprentices can trust.

Knowing that Registered Apprenticeships are the gold standard today of training for workers and employers, what would be some of the consequences of diluting the Registered Apprenticeship system and training model?

Ms. VITO. The consequences would be that the employers and workers would not know what they were getting. Work-based learning strategies are valuable, but Registered Apprenticeship, we know what we are getting.

We know also most employers are very honorable, but there are some employers that do abuse systems like this. And so, an unpaid apprenticeship where people are actually delivering a service is not a direction we want to go in.

We want to have the balance between quality and protection for workers. I think calling a Registered Apprenticeship something that it is not will dilute that confidence that people have in the system.

Senator MURRAY. Thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Murray.

Senator Cassidy.

Senator CASSIDY. Thank you, Mr. Chairman.

Mr. King, I enjoyed your models. Good testimony. Even I could follow the LEGO.

Senator Murray just posed a question of Ms. Vito along the lines of Registered Apprenticeships are the gold standard for quality. But you suggested that they are static, constrictive, and actually do a disservice to the apprentice. I am just following up.

Are Registered Apprenticeships the gold standard or do you feel not?

Mr. KING. I think apprenticeship in its basic form is the gold standard, but whether it is registered or not registered that all depends on innovation and the individual designs of the companies.

Apprenticeship in its basic form, yes. But to say registered is the gold standard, I am not so certain of that.

I went through the Registered Apprenticeship system, and it worked for me. It took me out of an extremely poor neighborhood

and it moved me into the middle class. So I have all the love for it. But it has not changed with the innovation that we see today.

Senator CASSIDY. Now, Ms. Vito, you suggested it has not changed. I am from health care and I will say, I technically still teach medical residents, and some are in an apprenticeship program. There is a certain dynamism.

If there is a new procedure that comes along, I will take the young resident and show he or she the new procedure. But I can also accept that there are some things that have been set in a way and do not change.

Is that not true? Is Mr. King's analogy of the LEGO's in place and unable to be moved not sometimes true of a Registered Apprenticeship? Knowing that health care might be different because I do think there is a certain dynamism that is reflected as we teach health care.

Ms. VITO. I think the dynamism of health care is reflected in the registration process, and I also think it is very important to recognize the strides that have been made to improve the administration of the Registered Apprenticeships. It is one of the reasons that we were able to register them in health care.

First, the U.S. Department of Labor has added a competency based model. That is the mechanism under which most of our health care apprenticeships are registered.

Second, the technical assistance that has been offered through the Department of Labor has enriched the process, so that the dynamism and the quality are incorporated into the registration process.

We have not found it rigid, but rather have found real value.

Senator CASSIDY. Outside of health care, though, let me just go to Mr. Johnson, outside of health care, is there rigidity within, as Mr. King suggests, within the Registered Apprenticeship program?

Mr. JOHNSON. I think it stems from a perception of the burdensome aspect of apprenticeships. I am not saying that the different models that are out there and that are available through the D.O.L. I love the performance based model that the D.O.L. has come out with. But there is a general perception, at least by a large amount of the business organizations, that it is burdensome.

Now, whether it is or it is not, that is the perception, and perception is reality in the eye of the beholder until you change that. So it is something you have to overcome in a narrative one way or the other.

Senator CASSIDY. In your written testimony, you seem to suggest it is more than a perception. It is a reality that the burdensome nature of it, or maybe it was Mr. Holland, that if one piece of paper was not completed all this application went for naught, et cetera.

Mr. JOHNSON. Right.

Senator CASSIDY. There is a bureaucratic aspect which works against the employer.

Mr. JOHNSON. There absolutely is and that affected a number of employers, not just BASF, and hundreds of potential trainers that literally got stopped by one piece of paper.

Senator CASSIDY. Let me compliment you, because I am aware that BASF in my State of Louisiana is a pathway, as Mr. King suggested, to the middle class for many folks.

Mr. King, does the IRAP process that you are working on, does that address this bureaucratic, cumbersome, one piece of paper was not filled out, all this effort is wasted, that Mr. Johnson speaks of?

Mr. KING. It is still in the works, but yes, I believe that we are on a pathway to mitigate against those types of restrictions.

Senator CASSIDY. Mr. Johnson, one more thing. You spoke in your testimony about Germany and how they integrate the thing.

Now, I will say that I have been to high schools in Louisiana in which, in the senior year, a young person can take E.M.T. courses and graduate as a certified E.M.T.

In their high school, they can take welding, sponsored by A.B.C., by the way, that bought the equipment and they are taking welding classes and they graduate. Perhaps not as a master welder, but as a welder who can then use that as a platform to put the LEGO's on to go to more training. So it does seem that there is a way to integrate that.

How can we do more of that?

Mr. JOHNSON. I think we already are. Whenever BASF, whenever we dug deeply into the different types of models that are out there, we separated into two different types of American apprenticeships.

What we refer to as the traditional American apprenticeship that did not always, or at least not very often, use community colleges as a foundation for skill building.

The new American apprenticeships, what I call "modern," utilizes that and does all of the things in the performance based apprenticeship model that the D.O.L. has come out with.

I do not want to say, I do not want to let my testimony only say that it was a hard enough hit against Registered Apprenticeships. We are not pursuing it. We absolutely are. We want them to be because we want those national credentials. We want that value to come along with the programs that we develop.

But we are going to design what the workforce needs, what the students need, what the future workers need, what the industries need. Then we are going to take that, which is our next step, literally within the next week or so, we are taking that model to the D.O.L. and saying, "This is what we know to be the answer. Our industry partners have come together and decided what the competencies are."

Senator CASSIDY. Thank you very much. I am way over.

Thank you for your indulgence.

SENATOR MURRAY [presiding]. Thank you, Senator Cassidy.

The Chairman had to step out to another committee hearing for just a few minutes. He will return.

Senator Bennet.

Senator BENNET. Thank you, Madam Chairman.

I want to thank all of you for your testimony, and for your work, and what you are doing. I really believe that this project to mainstream apprenticeships in America is critical if we are going to begin to lift wages again in this country.

If we are going to fill the gaps, as a former school superintendent, fill the gaps between what children are learning in high school and what they need to be able to do to actually perform well in their job and earn a wage that is not this, but it is this; that

is the great promise of what you represent. I just am very grateful that you are working on it, even if you have different points of view and perspectives about it.

Ms. Vito, I wanted to ask you, if you could share a little bit in more detail with the Committee what the role of an intermediary is? How it can help with these apprenticeship programs, help find people, support people in the process of becoming an apprentice.

Ms. VITO. Intermediaries bring people together, employers and worker representatives, in the first instance, to understand the industry need. The role of an apprenticeship, it was a very rich and rigorous process where we went through what the occupation did, essentially, and documented the competencies.

Senator BENNET. Was the occupation within health care?

Ms. VITO. Seventeen occupations, so the one that I facilitated myself was our first one, was community health worker.

We brought people who were moving into using community health workers and community health workers from the field together to go through the process. What did you need to do and learn in order to be able to do that job adequately?

The role of that intermediary and helping write the actual application, I think, is a very important one, and precisely what some of the U.S. Department of Labor contracts to support the expansion support.

It is important to make sure that you are weighing the quality, documenting the assessments, as well as the wage progression, and bringing people together. Also make sure that the competencies align to national industry standards.

Senator BENNET. Can you tell us what you mean by "wage progression"? What does that look like?

Ms. VITO. Built-in to an apprenticeship is the structure that you learn in the classroom. You learn by hands-on. And then you do, which means that you are actually performing work.

As you do more work and gain more skills, and you do more work independently, you get an increase in wages. You start at Wage X and by the end of the apprenticeship, you have a higher wage.

That is a very important structure because it ensures that you are being paid adequately for what you are doing, but also brings people at the end of the apprenticeship into the middle class.

Senator BENNET. To me, that is the whole game here. That is how we should evaluate every cent of Federal money that we spend is whether it is helping people move from being paid a starvation wage or being paid a wage that can actually support their family.

Mr. Johnson, and I will get back to you, Ms. Vito.

Mr. JOHNSON. Yes, the skills-based pay aspect of that is essential if you are going to target retooling adults as I refer to Veterans leaving the military or adults that have been in a career for a while and it is just not working out the way that they expected it to.

Usually retooling adults have established families. They have established lives that they cannot just stop to go to school and not have an income.

Apprenticeships allow for that skills-based progressive pay so that as you learn, you earn more money. It is a perfect connection

between those that want to retool and industry that needs to pay at a progressive level as they learn skills.

Senator BENNET. Ms. Vito, did you have a closing thought?

Ms. VITO. In my testimony, I shared the story of Destina, who became a community health worker through apprenticeship. Before the apprenticeship, she grew up very poor. She was working in sporadic employment, but she ended at a $42,000 a year job. She now has nine credits and she is headed off to social work school.

Apprenticeship should support that movement into the middle class, and a gateway to lifelong learning, and even higher wages.

Senator BENNET. I thank the panel for your testimony.

Thank you, Madam Chairman.

Senator MURRAY. Thank you, Senator Bennet.

Senator Scott.

Senator SCOTT. Thank you very much.

Good morning to the panel. Thank you all for taking the time and making the investment to be here.

One of the challenges that we have with one of the largest economic expansions since 1854, I think we are in the third longest expansion, which is good news. I think we have finally gotten our regulatory environment at a responsible level, which I think is really good news.

When you combine a very strong economy, an appropriate level of regulations, the one pillar—there are three of them—on making sure that our economic expansion continues is the readiness of our workforce.

The necessity of understanding and appreciating ways to recalibrate the workforce for the future is an important ingredient to sustaining the long term success that we have had recently.

In South Carolina, we have been able to come out with a program, Apprenticeship Carolina, that has focused a lot of time and energy on making sure that the workforce needs are met. We have done that through tax credits and in a way to provide employers with the incentive to take sometimes a second look at the workforce that needs to be trained and developed so that they are ready for the future workforce.

We have seen that folks who have participated in the program have about a 97 percent approval. So it is well received.

My question is how can tax credits help to spur apprenticeship expansion, particularly among small businesses?

The good news is that in a bipartisan fashion, rather as Senator Cory Booker and myself working on the LEAP program, which is designed around the South Carolina model of a $1,500 tax credit based on age versus $1,000 tax credit based on a younger age.

Can you all talk about the importance of using tax credits as a way to spur apprenticeship expansion?

Mr. KING. I think tax credits are definitely a way of expanding, but I also come across some of my customers that I work with in developing apprenticeship programs that if you can show enough innovation to save or to be more productive, that sometimes exceeds that credits that are coming out. But credits are good. I mean, it is always attractive to offer the credits.

But I will give you an example with Raytheon's Missile Systems Division where we looked at apprenticeship from an unbiased approach. We just said, "What will work for the company?"

When we came up with a design, we looked to see if we could fit it within a registered model, and it did not. It worked better taking it outside. The innovation and the ROI on the return was greater than any of the funding that would come back if we were registered.

I do agree that tax credits work, but the innovation can actually spur more growth.

Senator SCOTT. One arrow in the quiver is not necessarily a panacea. Thank you.

Thoughts?

Mr. HOLLAND. I think tax credits largely are a strong message of support, but as was said previously, I think at the end of the day, if we could do something to reduce any barriers to quality training, be that existing regulation, then more people would flock.

Employers should be highly motivated to train the workforce. We cannot have the shortage we are talking about and not have motivated employers.

I think there are already some barriers built in place that would be cost effective to remove and make it easier for them to access the solution as, I believe, everyone has talked about here.

At the end of the day, we are talking about the outcome. I think training is way past cost-neutral.

We try to be careful that people do not train because they are going to get a tax credit when, in fact, they should have their own self-interest in mind to do so.

Ms. VITO. Our industry, the employers that we work with are largely nonprofit, so again, an arrow in a quiver.

But one thing that has been considered is a tax credit for the mentors, or the folks who are the journey people, providing the on-the-job instruction. So it would accrue to the people who are taking time out of their lives to mentor people on the job rather than to a nonprofit company.

Senator SCOTT. Thank you.

Mr. JOHNSON. The quick answer is I absolutely think that they can be beneficial to help catalyze an additional movement.

But I think the most important thing that I can say today—of all the things that I have said—is that it is not enough to fund good education programs. We must eliminate the bad ones so that we do not communicate to students about the wrong careers.

If we fund all of the right programs and all of the right apprenticeships that are available, but we also fund degree programs that have no job availability projection; whenever students are making decisions about careers, they see Pell Grants and other types of funding that is also available to them to send them into directions that they are going to wind up with a degree, but they cannot get a job.

It is just as important as funding good programs, we need to be certain that educational dollars are based on job availability projections.

Senator SCOTT. Thank you.

Senator MURRAY. Thank you.

Senator Smith.

Senator SMITH. Thank you, Senator Murray.

Thank you so much to all of our panelists here. I know that everyone on this Committee is very interested in apprenticeships and how we can use them.

In Minnesota, for sure, our biggest limit to economic growth is the gap that we have for people to fill the jobs that are there. This is an opportunity gap, not only for the businesses, but also, of course, for the workers who do not have the opportunity to get the training that they need to fill those jobs that are there. So that is why I am so interested in this conversation.

When I first joined the Senate just a few months ago, I held a whole series of listening sessions around the state to talk about this issue of how we fill this opportunity gap.

Based on that, I have introduced legislation which is focused on how to help get students into the kind of training that they need, and especially how to prioritize partnerships with schools and Registered Apprenticeship programs. Make that linkage work better between schools, sometimes high schools and Registered Apprenticeship programs. The whole goal is to make sure that there is the kind of customized training that works for students and for businesses.

Ms. Vito, could you talk a little bit about that? Can you share your experience in how employers can use Registered Apprenticeships in that way, especially around more customized training?

Ms. VITO. Because of the quality of the instruction more and more, some of the on the job learning can be attributed to prior learning and then attributed to credit.

Also, there is a component of—again because of the quality of the apprenticeship—there is a component of the classroom instruction in our apprenticeships that are almost always credited. In community health work, Destina, the person I talked about, got nine credits to transfer. Our medical coding apprenticeship, you graduate or you end the apprenticeship with an Associate's Degree.

It is, again, because you are able to document those competencies and the quality of the apprenticeship, it is easy to partner and have that count toward college credit if you find the right community college to work with.

Senator SMITH. That kind of contributes to the portability of the credential, not only on the academic side, but also on the professional side.

Ms. VITO. That is right, because in addition to having a portable, high quality credential in that occupation, you can then transfer those credits to become something else.

In Destina's case, it is a social worker. Medical coders can go into higher tech data analytics in health care, which sometimes require a bachelor's degree.

Senator SMITH. Right.

Ms. VITO. Transfer 60 credits into that occupation.

Senator SMITH. It also seems like this can address one of the other Catch–22's that I hear a lot, which is people being frustrated that they cannot get a job because they do not have the experience. But they also do not have the experience, because they cannot get a job.

It is hard to figure out how to break into that in all sorts of fields: in construction, technology, health care, the whole gamut.

Ms. VITO. In the testimony, the written testimony, I talked very specifically about that in medical coding. Our employers were essentially raiding each other's experienced medical coders and not creating new medical coders.

Senator SMITH. It becomes kind of a zero sum.

Ms. VITO. We had so many people graduating from medical coder programs who could not get jobs even though there was this shortage. Filling that gap, what we call the school-to-practice gap is precisely what apprenticeships, particularly Registered Apprenticeships do.

Senator SMITH. It also seems to me, the last thing I want to touch on, is that in a world where we have this shortage of skilled workers in a whole range of trades, building trades, science and technology.

We also have the challenge that a lot of women, especially young women in high school do not see that; they just do not even visualize that as a career. Maybe they do not have robotics in their high school because their high school does not offer that. They just do not have the opportunity to experience that in high school.

I have heard so many young women who have told me that just getting exposed to those opportunities made a big difference to them.

Could you just talk a little bit about how Registered Apprenticeships address that issue for women?

Ms. VITO. Yes, if I can just make two points about that.

As we expand apprenticeships into more industries, we are increasing the diversity. Eighty-eight percent of our apprentices are women.

I think the second point that I would make, though, is if we are moving apprenticeship into other industries that are women and people of color dominated, we have to protect the quality. We do not want to let a lesser system for women and people of color.

Senator SMITH. Thank you very much.

Senator BALDWIN [presiding]. Senator Kaine.

Senator KAINE. Thank you, Senator.

Thanks to the panelists.

I am going to spend some time bragging about a great Virginia apprenticeship program, which you might expect me to do, and then I have a question for Mr. Johnson about something you said that interested me.

In Virginia, the largest industrial employer is Huntington Ingalls shipyard in Newport News; about 20,000 employees.

The centerpiece of the work that is done there is an apprenticeship school that celebrates its centennial next year in 2019. The apprentice school is a Registered Apprenticeship program. The acceptance rate of applications into the Apprenticeship program is more selective than Harvard College undergraduate acceptance rate. It is really the gold standard for apprenticeship programs in the country.

The interesting thing is if you graduate from the basic apprenticeship program that is really hard to get into with this Harvard acceptance rate, we do not count you as a Nation as having a high-

er education degree because it is technical education. I mean, it is just ridiculous. We do not count you as having a higher education degree.

Sixty percent of those who go to this apprenticeship program already have some college or a college degree when they go, but the basic 3-year program, we do not count you in this Nation the way we measure higher education as having a higher education degree. It is nuts.

Students are paid to go to the school. They are paid to go part-time. They work part-time and eventually over the course of the 3-years, they work more and more.

There is a job waiting for them upon graduation; 80 percent retention rate 10 years later after graduation. The average starting salary of a grad is $81,000.

The apprenticeship school is stackable too. So the 3-year degree is sort of a basic degree, but they have advanced apprenticeship programs that go anywhere form five to 8 years and result in an associate's or a bachelor's degrees.

The school always keeps up with technology. In fact, it is part of a commitment by Huntington Ingalls more broadly than just the apprenticeship school.

Huntington Ingalls spends $80 million a year to train employees. They have about 20,000 employees, so that is just $4,000 per year per employee to train, and that includes the apprenticeship, but other programs they do.

They retrain senior workers on new technologies. They rotate employees through different departments in the company to give them leadership opportunities. They partner with pre-K programs because they know that some of the shipbuilders that are going to be building ships are in pre-K right now.

They have an award winning career pathways programs in the Hampton Roads area for children in the 6th to 12th grade. They do teacher internships to bring teachers in because they are worried about our children getting a stigma that manufacturing or career technical is not the same as going to college.

They are bringing teachers in to get excited about this work that is sophisticated. There is nothing built on the planet Earth that is more sophisticated than a nuclear submarine or a nuclear aircraft carrier and it is a patriotic profession. You want to get people excited about it.

They even do pre-hiring training programs in local community colleges in certain disciplines where they will train you in skills, and they put about 400 people through these pre-hiring programs, and then 94 percent of them have been hired.

But I think it is an interesting example of a 100 year old Registered Apprenticeship program, but that has completely kept up with the times, and that has adjusted, and moved along with it and new technologies. And not just for new workers, but training existing workers.

I am very, very proud of them and I think it is a superb model; excited about this centennial.

Mr. Johnson, right at the end of your testimony, I was really excited. You said, "We are designing. We have had this stakeholder session and we are kind of designing what apprenticeships might

look like in the future." You are about to take that to D.O.L. It is like I wish we had the hearing 2 weeks from now, and you would have come in and presented what you just presented.

But talk a little bit about what it is that you are hearing and what it is that you are going to be presenting to the Department.

Mr. JOHNSON. I had a conversation with a member from the D.O.L. a few weeks ago. We were in New Jersey at the Governors Workforce Development Roundtable.

This idea that we have for sequence apprenticeships utilizing a sequence of scholarships and internships, "internships" plural, is a key part of that because then we get a lot more on-the-job training. It begins with a couple of scholarships for our first two semesters when we do an internship and so forth.

The problem with that is in the very beginning of that, it might not be considered a hire until we get closer to the end. Once we get closer to the end, they become a hire, and the progressive, skills-based, performance-based pay that is a part of that role, starts to kick-in.

My worry is—because I do not know every single model that is out there and the number of different pieces of policy that are coming out about it—can we get this thing to be registered? We want it to be.

In the conversations that I had with him on the sidewalk after that meeting was that he feels very confident that can happen. And so, those meetings are coming up.

The bottom line is that we are going to design what we think is valuable, not just to the organization, but to the students themselves. We do not want a credential that is just going to be valuable in BASF. That is not fair to the students or the retooling adults.

We want a model that is going to solve the problem and that we can portably replicate across North America into our different sites. If we can do it in a few small sites like we are now, or at least starting to put in places the pieces to get that done, but if we want to scale this as big as we want across North America and include our industry partners as we have in our first ten pieces, then we are going to need support. We are going to want that to be a registered program.

That is the whole idea is to bring that finished program to the D.O.L. and say, "This is what we need. This is how many industry partners have agreed this is what we need. This is the competency modeling we have already created. This is the school we are working with. Here is the survey that we did to decide what are the critical crafts for that region."

We know the jobs are in need. We know the competencies. We know how we want to teach them. We have industry support behind it. How can we fit this into the model?

Senator KAINE. If I could just, as I close, because I am over time, I am very excited about the way you describe it. Particularly, you do not want it to just be valuable to BASF. You want it to be more than that.

We are going to reauthorize the Higher Education Act. We ought to be focused in that Act on making career and technical education every bit as much valued as a college degree.

We have apprenticeships or other career opportunities that are more just for the employer, but they are not credentialed at a national level that is validated and understood, we will continue to have two class system.

We have to be elevating career impact. Right, Madam Chairman?

Thank you.

Senator BALDWIN. Senator Jones.

Senator JONES. Thank you, Madam Chairman.

Thanks to all of our panelists today for the work you are doing.

Mr. King, I would like to ask you a question. I am still kind of new to the Senate here. One of the things that I have seemed to observe with the Administration—and Senator Murray alluded to the press conferences of the big issues with executive orders—it also seems to me that sometimes the way the Administration also refers to the past. In other words, anything that has been built in the past is not good, that they can do it and build it better in a new one.

I am curious as to whether the taskforce even looked at trying to update and make changes to the Registered Apprentice program. The reason I say that is because I think everybody understands that everything like this is a work in progress. As we change as a society and as a workforce, there are things that we can do better.

But it almost appears to me that you took your models there and I noticed the one that you have representing the apprenticeship program seems pretty solid, but it is also made of LEGO's. Correct? And LEGO's are made to be moved, the pieces moved, to change. You can build on them. You can add to them. You can take them away. You can do the things.

I am curious. Did your taskforce even look or talk to the folks about maybe trying to update, and modernize, and cut down on some of the regulations that, I think, everybody is concerned about including me? As opposed to trying, and taking this, and completely a duplicative process, and a duplicative program, and not trying to work with the gold standard that we have had that has been so successful for 80 years?

Mr. KING. The conception of IRAP, I am not sure exactly what was done prior, but in our sessions, we did focus on what we could do differently.

I will say within the registered system, as you see, it is LEGO's, and it should be able to change. But when you talk about Mr. Johnson, you are coming out with a great model that works, and you have to present it to D.O.L. to say, "This works. Let us make it work." But it is like moving a mountain.

Senator JONES. Well, it is the same Administration, though. If the Administration wants to do it, they can do it. We have seen that happen time and time again. If they want to move the mountain, all they have to do is get Donald Trump to sign an order and that mountain gets moved.

I appreciate the answer, though. I am just concerned that we are taking a program and trying to do something duplicative that is not going to protect the workers. It is not going to get the expansion of the apprenticeship programs, while we could have taken something and done the innovative things that we looked at.

But thank you very much.

Yes, sir. Go ahead.

Mr. JOHNSON. What I would say to that is that you absolutely want a working knowledge of the existing programs that are in place while you try to brainstorm for a repair or a fix.

But too often organizations see a piece of policy or a funding mechanism and think, "How do I design something to fit within that?" and that is the wrong approach. Because you wind up putting pieces of your model together that are based upon alignment and not upon whether or not it is valuable to the system, valuable to the organizational groups, or valuable to the students that are trying to learn.

Yes, a working knowledge of everything that is going on so that you are aware of that, so you know what all of these pieces you come up with are aligned with. But you really do need to start with: what do we need?

Senator JONES. I agree.

Mr. JOHNSON. Come up with that first.

Senator JONES. Yes.

Mr. JOHNSON. Now, let us see, is it aligned? If so, we are good. If not, let us work on getting it aligned.

Senator JONES. Right, and I think that would have been perfect. With the attitude of this Administration, they could have done that easily.

Ms. Vito, let me ask you real quick in the time that I have left. I appreciate the fact that there are so many women that are coming into these programs. There are still some disparities, I think, and we need to get more African Americans in there, more minorities.

I think some of the statistics I have seen, show that there is also a disparity, not in just the numbers, but in also the wages of folks coming out of this.

What can we do better with the Registered Apprenticeship program to make sure that the wages are equal? They are equal for women. They are equal for minorities.

Ms. VITO. Thank you for that question, Senator.

Let me start by saying that 61 percent of the apprentices in the H-CAP health care occupations are people of color.

To go back to the point that you are asking around quality, if we create a lesser system or a side system, and we are moving into new industries at the same time without those wage progression protections, we are guaranteed to create any further wage disparities.

I think that is one of the reasons to protect the quality and the rigorous registration process, which our experience is not an impediment, but forces the joint apprenticeship councils, workers, and employers together to think through the quality initiatives, which overcome the issues of wage disparity.

Thank you for asking that question, Senator Jones.

Senator JONES. Yes, but thank you for your answers; pretty much what I was looking for.

Thank you, Mr. Chairman.

The CHAIRMAN [presiding]. Thank you, Senator Jones.

Senator Hassan.

Senator HASSAN. Well, thank you, Mr. Chairman.

I want to thank you and Ranking Member Murray for holding this hearing.

I also want to thank you for your work along with Senators Casey and Enzi to pass the reauthorization of the Career and Technical Education Act. This Committee continues to be an example of really commonsense, bipartisan leadership.

I am happy to be here at this hearing to discuss the importance of apprenticeships and how we can ensure that these programs meet the needs of program participants and employers, something that, I think, you have all been unified in talking about today.

To Ms. Vito, I want to start with this. One of the rationales that the Administration has provided to create a whole new apprenticeship program alongside the Registered Apprenticeship model is related to the challenges of the Registered Apprenticeship model to serve nontraditional apprenticeship industries like health care and manufacturing.

In New Hampshire, using an Apprenticeship USA State Expansion Grant from the U.S. Department of Labor, the ApprenticeshipNH program has partnered with more than 20 employers to train apprenticeships in a whole range of fields.

In addition, many of these programs offer postsecondary credits that students may use to achieve a more advanced degree going forward ensuring that individuals are on that lifelong career pathway that we all want them to be able to have.

I recently visited one of these employers in Manchester, New Hampshire, Granite State Manufacturing that offers a Registered Apprenticeship program that trains employees to become machinists.

These apprentices take classes for credit at Nashua Community College, receiving 20 credits toward machine tool technology, CNC programming certificate, and/or the Associate of Science Degree in precision manufacturing.

Ms. Vito, I know you have worked with more nontraditional fields yourself, specifically in health care, and you have explained already today how the Registered Apprenticeship model has benefits for employers and apprentices.

Can you just take a minute, though, to talk some more about how you think the model of Registered Apprenticeships can expand to more sectors?

Ms. VITO. Thank you, Senator, for the question.

First, I think we have to acknowledge the changes that have been made that have helped expand it.

The competency-based model was what allowed health care apprentices to be registered and that is a model that has been embraced by the U.S. Department of Labor. Rather than just rewarding seat time, it is the acquisition of skills and demonstrated proficiency.

Second, the multi-state registration has allowed us to register things that scale that you might not have in one location.

Then the technical assistance grants, which you just talked about, have actually provided the opportunity for intermediaries, and employers, and unions to work together to build the capacity.

I want to just note that there was a piece of legislation called the EARNS Act in 2016, bipartisan legislation, introduced by Ranking Member Murray and Senator Hatch. It provided for:

The official establishment of the Office of Apprenticeship;

Competitive grants to build more capacity;

Increasing the awareness of employers; I think it was said earlier, not by me, that there was misconception about how difficult the process is. It may be a rigorous process, but still one open to employers; and,

Effective evaluation and other parts.

The EARNS Act, again, 2 year old legislation would help to expand this to nontraditional industries.

Senator HASSAN. Thank you.

I also just wanted to move to the area of health care for just a minute. You described in your earlier testimony the story of Destina Garcia, who participated in the community health care worker apprenticeship program in New York City. She is on her way to a college degree. She is earning a living wage.

As you know, we are facing a workforce shortage across the health care sector. One of those shortages in one of those sectors that is very personal to me is the shortage of direct support professionals who provide care to our seniors and individuals who experience disabilities.

In New Hampshire, we estimate that 70 to 80 percent of paid hands-on care for older adults and individuals who experience disabilities is provided by direct care workers, including personal care aides, home health aides, and nursing assistants.

The demand for direct care workers is expected to increase 49 percent between now and 2022, further exacerbating a workforce shortage that already exists in many communities across the country.

At the beginning of this year, ApprenticeshipNH launched a pilot home health aide Registered Apprenticeship with senior helpers in Stratham, New Hampshire, in collaboration with Great Bay Community College. Now, there are a total of three of these programs.

I realize I am running out of time, so I just wanted to quickly ask you to comment on how Registered Apprenticeships support participants like Ms. Garcia? And do you believe these programs are an important mechanism to address workforce shortages, particularly for direct support professionals and throughout the health care sector?

Ms. VITO. I know we are out of time, but let me just make two points.

One, home care workers are important sources of recruitment because they are diverse and they have a set of incredible skills, what we call patient centeredness that are important for other occupations. So they are often apprenticed in other occupations, which sometimes keeps them in the health industry longer.

The second, in the actual home care occupation itself, one strategy that we have used in the Registered Apprenticeship, that I think you are discussing, is enhancing the skills of the home health aide to do more of what is needed in health care, like prevent avoidable hospitalizations.

As you use apprenticeships with a mentor, on the job learning, you also can increase the wages of the home health worker in that model and help retain the workers in the industry.

Senator HASSAN. Thank you.

Thank you, Mr. Chairman, for your indulgence.

The CHAIRMAN. Thank you, Senator Hassan.

Senator Baldwin.

Senator BALDWIN. Thank you, Mr. Chairman.

I want to thank the witnesses and I know you have heard a lot of support for apprenticeships among the bipartisan Members of this Committee. Certainly, we have heard a lot from the Administration focusing on expanding apprenticeships.

As I hear the back and forth, I hope that in an effort to resolve the challenges that we are seeing with the skills gap and creating greater opportunities for well paying jobs for our constituents, that we are able to resolve some of the challenges without abandoning or turning our back on Registered Apprenticeships, which many have referred to as the gold standard or in alternative terms. But yet, we want to recognize the real issues that folks on the ground have had in expanding opportunities or creating novel, new apprenticeships.

I think of Wisconsin, we have a lot of small and medium sized businesses that would love to be doing more. We have some really great examples of public-private partnerships that have been created in sectors to make it easier for those businesses to offer apprenticeships.

I have had a chance to meet with a number of them and hear the creative things that they are doing.

One important element is often the intermediary. I know you have already gotten some questions, Ms. Vito, about how the intermediary helps different entities who are key to creation of new apprenticeships or expanding apprenticeships navigate the complexities.

But I would like you to just say how do you support employers, in particular, smaller and medium sized employers in doing so?

Ms. VITO. Intermediaries work to support employers by aggregating knowledge and demand. Some of the apprenticeships that are listed here are with small community-based health organizations.

By working with multiple employers, you can aggregate demand. As I said before, document the competencies, register the apprenticeship. But I think equally important is you can work with two or three people at one employer and two or three people at another employer, thereby aggregating and creating industry standards.

I also think another important role of the intermediaries is supporting the workers to make sure there is completion, which ultimately benefits the employers because they gain the skilled workforce.

Senator BALDWIN. I have introduced a measure called the PARTNERS Act, which I hope as this Committee works moving forward to expand apprenticeships, that we can discuss. It is focused specifically on these sector and industry partnerships to help small and medium sized businesses.

But also the point that you just concluded with, Ms. Vito, of perhaps helping underrepresented groups have these opportunities. And so, it also looks at the possibility of pre-apprenticeships, and child care, and transportation issues to make them as successful an opportunity as possible.

I want to submit a couple of documents for the record, letters, Mr. Chairman. A letter from the Wisconsin Dairy Grazing Apprenticeship and two letters from the Sheet Metal and Air Conditioning Contractors National Association, and the Construction Employers of America, which includes their 15,000 signatory contractors and 1.4 million employees that I would like to submit this for the hearing record.

While asking that unanimous consent, I did want to read one paragraph from the Wisconsin Dairy Grazing Apprenticeship program.

The closing paragraph, written by Executive Director Joseph Tomandl, "As a former vocational agricultural instructor, and current dairy farmer, it would make the most sense to refine any inefficiencies with Registered Apprenticeships rather than create a separate standard of industry recognized apprenticeships. On my farm, I repair and modernize rather than duplicate."

Mr. Chairman, may I submit those for the record?

The CHAIRMAN. So ordered.

Senator BALDWIN. Thank you very much.

The CHAIRMAN. Thank you, Senator Baldwin, and thank you for your courtesy in presiding for a while today while I went to the Appropriations hearing.

Mr. King, Mr. Holland, Ms. Vito, and Mr. Johnson, thank you so much for being here today. You can tell from the large participation by Senators, this is a topic we think is important, and you have helped us as we think about oversight for current programs and legislation that might affect future programs.

The hearing record will remain open for 10 business days. Members may submit additional information and questions to our witnesses for the record within that time, if they would like.

The next meeting of the full Committee will be on next Tuesday, July 31, 2018 at 10 a.m. on, "Reducing Health Care Costs." The subject will be, "Decreasing Administrative Spending."

Thank you for being here today.

The Committee will stand adjourned.

[Whereupon, at 12:32 p.m., the hearing was adjourned.]

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