

**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,

A handwritten signature in black ink, reading "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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List of Task Force Members

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

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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 subdivided into the following four subcommittees that developed the requested strategies and recommendations to promote apprenticeships in America:

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

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

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: Join 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

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 apprenticeships²¹ 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

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_1fcb04421-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.

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.

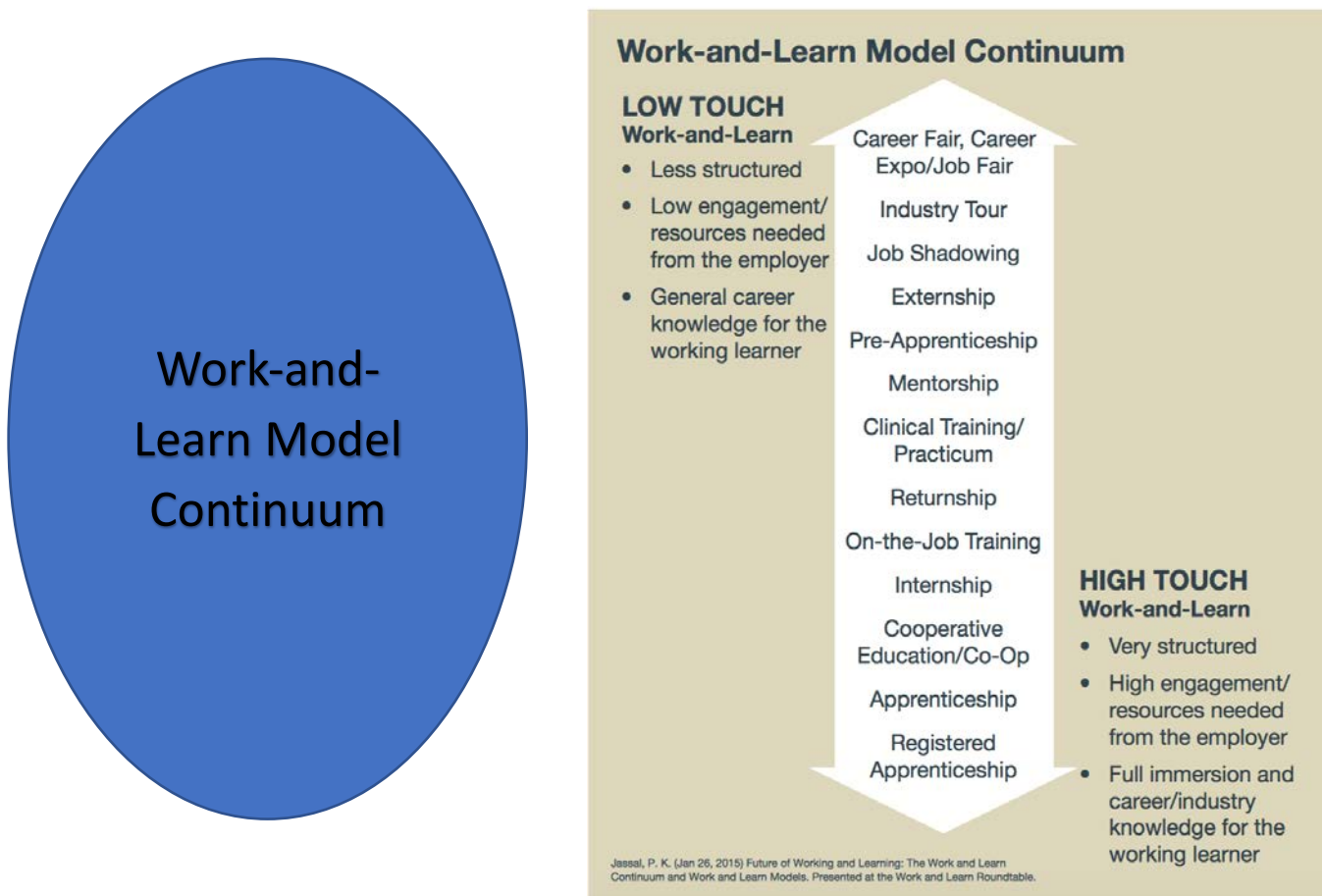
Recommendation 1: Expansion of Traditional Work-and-Learn Models

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.

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

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.

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 Playbook³⁴;
- B. The Benefits & Costs of Apprenticeship: A Business Perspective³⁵;
- 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.

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](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.

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 learner 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.

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.