WORKFORCE DEVELOPMENT: ADVANCING APPRENTICESHIPS FOR SMALL BUSINESS

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CONTENTS

OPENING STATEMENTS

WITNESSES

APPENDIX

WORKFORCE DEVELOPMENT: ADVANCING APPRENTICESHIPS FOR SMALL BUSINESS

TUESDAY, MARCH 20, 2018

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
SUBCOMMITTEE ON CONTRACTING AND WORKFORCE,
Washington, DC.

The Subcommittee met, pursuant to call, at 2:00 p.m., in Room 2360, Rayburn House Office Building. Hon. Steve Knight [chairman of the Subcommittee] presiding.

Present: Representatives Knight, Chabot, Evans, and Murphy.

Chairman KNIGHT. Well, it does say this morning, but since we are not in California we will say good afternoon.

Thank you for being here. Thank you for traveling. I know some traveled a long way. Jeffrey, you can feel sorry for me now for what I go through.

The Small Business Committee has heard many accounts of the skills gap and its detrimental impact on the small businesses and the American economy. To help close the skills gap, America needs an arsenal of workforce development strategies that balance the immediate needs of employers, long-term goals of employees, and the rapid evolution of technology.

Today, we will focus on apprenticeships, a centuries old workforce development practice that combines on-the-job learning with related technical instruction. Registered Apprenticeship (RA) is one of 40 federal workforce development programs spread across 14 agencies. RA has been effective because it enables workers to earn while they learn. It is flexible to meet industry needs and generates evidence-based results.

Last June, President Trump issued Executive Order 13801, which established the Taskforce on Apprenticeship Expansion to identify strategies and proposals to promote apprenticeships, especially in high-growth sectors where apprenticeship programs are underutilized.

I am looking forward to hearing more about these programs from our panelists. Specifically, how can RA programs be customized to combat the skills gap at the community level while still meeting strict national standards. What roles do small businesses play in the apprentice system? What kind of incentives can we offer to encourage greater participation in the RA system? I think we can also add there how do we get more folks to know what there is out there? I think what we talk about here sometimes is getting the message out, whatever we are talking about, for people to under-

stand that there are maybe a program out there or there are things that can help you do what you want to do.

So I really appreciate everyone coming today, and I look forward to hearing what you have to say.

And now I yield to the Ranking Member Murphy for her opening comments.

Ms. MURPHY. Thank you, Mr. Chairman.

While our economy has improved in the past decade, small business owners continue to face challenges finding skilled, qualified workers. By 2020, it is estimated that our economy will have approximately 55 million job vacancies. About 40 percent of these jobs are expected to be new openings, while the remaining 60 percent will be jobs left vacant by workers from the baby boomer generation.

This is a staggering projection. When viewed in combination with the current workforce skills gap, it underscores the importance of enacting policies to ensure that our country produces skilled workers capable of performing the jobs of both the present and the future.

One way we can do this is to expand the use and improve the quality of apprenticeship programs across the country. The apprenticeship model allows individuals to work for employers, earn a salary, and get valuable on-the-job training while also receiving classroom instruction specific to that occupation.

Apprenticeships provide individuals with an opportunity to work towards a credential or certification in their chosen profession. In return for their investment, employers benefit from having employees who can hit the ground running and have the specialized skills necessary to do the job well.

Since 2011, the number of apprenticeship programs in the United States has increased by nearly 30 percent. Nevertheless, apprenticeships are still underutilized and their value is often insufficiently understood, especially by small businesses that may lack the resources or knowledge to take advantage of the opportunities that apprenticeships offer.

The Federal Government is partly to blame, having rolled back investments in, and oversight of, private sector apprenticeship programs and other workforce development initiatives.

Naturally, as technology continues to advance, our workforce needs will continue to evolve. In order to ensure that our economy can remain globally competitive, it is critical that we create incentives for apprenticeship programs that will lead to the creation of good jobs, better wages and salaries, and higher economic productivity. At the same time, we must remain standards of quality assurance so that apprenticeship opportunities are available to all workers, including veterans, women, and minorities.

Today's hearing offers us the opportunity to better understand these challenges and explore solutions to help our nation's job creators prosper. I look forward to hearing from our witnesses on how apprenticeships can help revitalize our workforce and ensure America's small businesses are empowered to move our economy forward.

I thank the witnesses for being here, and I yield back the balance of my time.

Chairman KNIGHT. Okay. Thank you very much.

I wrote down baby boomers because I think that is one of the terms that we are going to use quite a bit. And I think Congresswoman Murphy hit it on the head that we are always looking at the baby boomers as the ones who are retiring out, but I am the next generation. I am 2 years outside of the baby boomers, me, and I have friends that are now looking to retire. So now the next generation, I do not even know what you call us, are starting to think about retirement or thinking to maybe move out of what their career is and maybe do something else. So it is going to be a big, big problem, not just for baby boomers but, you know, it is starting to really affect.

So we have a couple rules. You get 5 minutes to speak. And first, if Committee members have an opening statement prepared, which I do not see any, I ask that they be submitted for the record.

The lights are going to go on. You are going to get green until you get to 4 minutes. And then you are going to go to yellow. And then you are going to go to red. So at the end of 5 minutes, if you see that red, just start to work your way out of the conversation.

Okay. Let's see. We have some long introductions.

We should probably get less qualified people coming in here so we can get smaller bios.

Okay. Now, I would like to formally introduce our witnesses.

Our first witness is Ms. Tammy Simmons, Vice President of Human Resources and Marketing at Machine Specialties, Inc., in Whitsett, North Carolina. Her business runs a Registered Apprenticeship program for skilled manufacturing positions.

Thank you for joining us today.

Let's see. Our second witness is Mr. Jeffrey Forrest, Vice President of Economic and Workforce Development at the College of the Canyons in Santa Clarita, California, right in the heart of my district. He is the cofounder of the Strong Workforce Apprenticeship Group (SWAG), which is also a great acronym.

Thank you, Jeffrey, for being here today.

Our third witness is Jeannine Kunz, the Vice President and Director of Training and Development of Tooling USME in Cleveland. U-SME, is that right? Or U-SME? Okay. Out of Dearborn, Michigan. Very close. Tooling U-SME delivers a customizable competitive-based learning and development solutions to the manufacturing community. Ms. Kunz is an expert in manufacturing and workforce development and serves on the executive committee for America Makes.

Thank you for being here.

And now I am going to yield to Ms. Murphy to introduce our last witness.

Ms. MURPHY. Thank you, Mr. Chairman.

It is my pleasure to introduce Mr. Jeffrey Mazur. Mr. Mazur serves as the Executive Director of LaunchCode, a nonprofit organization that is focused on building a skilled workforce by creating pathways for individuals seeking careers in technology. Mr. Mazur previously served as the Executive Director of the Missouri-Kansas Council of the American Federation of State, County, and Municipal Employees, and prior to that he was a Senior Advisor to Missouri Governor Jay Nixon. He holds an undergraduate degree from

the University of Missouri, and a law degree from Georgetown University, which I might also add has a great graduate program in Foreign Service.

Welcome, Mr. Mazur. Thanks for being here today.

Chairman KNIGHT. Okay. And we will start with Ms. Simmons. You have 5 minutes, and we look forward to your testimony.

STATEMENTS OF TAMMY SIMMONS, VICE PRESIDENT, HUMAN RESOURCES AND MARKETING, MACHINE SPECIALTIES, INC.; JEFFREY FORREST, VICE PRESIDENT, ECONOMIC AND WORKFORCE DEVELOPMENT COLLEGE OF THE CANYONS; JEANNINE KUNZ; VICE PRESIDENT; TOOLING U-SME; JEFF MAZUR, EXECUTIVE DIRECTOR, LAUNCHCODE

STATEMENT OF TAMMY SIMMONS

Ms. SIMMONS. Thank you, and good afternoon. Thanks for having us.

So I am the small business that you talked about that have been struggling. Machine Specialties is going to celebrate 50 years next year, and we have high school positions in welding, C&C setup machinists. We produce parts that go on the F-35, F-15, the B-1B bomber, a lot of helicopter parts. We also serve the medical industry with hip and knee replacement parts, surgical instrumentations, as well as parts on the satellites. So our growth is limited to the amount of skilled employees that we can have to make those very precise parts that are going to be shot up into space or that are going to fly our aircraft.

For years, we have tried to think outside the box and go and recruit more employees. The positions that are the most skilled, and our positions are, like you said, in the baby boomer generation. So what are we going to do now to not only replace the ones that we have that want to retire but also to grow our business and take on new customers?

We first heard about apprenticeships through another business in Charlotte, North Carolina, that had been doing it for 22 years. And they offered a youth apprenticeship model. And when I attended the meeting I was a little bit skeptical. We had never recruited youth into our business. We have about 170 employees, and we looked for the most skilled and the most talented people that we could find that had years of experience to make these parts. But because they had been so successful and they had a really interesting model that by recruiting young talent before they decided to go off maybe and not sure what they did. You know, we all hear the statistics about how many students go to college but then do not finish and try to find their way. They went into the high schools and found students that were very interested in building and creating and making things with their hands that were very successful in the CTE types of programs, and were smart, were good in math. They had some criteria that kind of spoke to us. They looked for an unweighted GPA of 2.5 because the students in the apprenticeship programs also earn a 2-year degree. They look for five absences or less because as employers we have to have employees who attend work every day. So we correlated attendance in high school with attendance in the workforce.

We looked at, like I said, the math grades, because a lot of the positions that we hold require a lot of thinking, logic, and reasoning. So that kind of led to a good, successful candidate. And that they were already taking electives in their school. So that as a business appealed to me that you had some criteria that you set up.

Also, they talked about being in a consortium of other small businesses and medium size businesses or large businesses, but you got some buying power when you did this. So when we went to the school system, it was not just one company like myself knocking on the door at the local high school near me saying can I talk to your drafting students who might be interested in working for me? When we went as a consortium, our consortium no has 26 companies. We had the superintendent of our school board sitting in on meetings with us because she is very interested in growing and promoting this program. So we had buying power with the school system. So we got a chance to talk to the educators and to the kids in the high school that we wanted to recruit.

We also got a little bit of buying power with the community college system. One of the key attributes to the type of program that we have is that our students go to community college to earn their 2-year degree 1 to 2 days a week, and then they are in our facilities the remaining part of the week. So as a business owner, it is very hard to think that you are going to have people coming in all day long. By blocking the classes for us so that maybe they only go to class on Mondays and having them in our facilities from Tuesday to Friday to earn those on-the-job training hours really spoke to me as an employer. I thought that this is something that we could implement and utilize.

So when we first started, we had six advanced manufacturers who wanted to participate in the program in our first year. We recruited 14 years. It was such a success that our president, our vice president of operations came into me one Saturday morning and said this apprenticeship program is a home run. The kids are learning so fast, much faster, more productive than we ever thought they would be at this early stage, and they are willing to learn. You know, we always talk about this younger generation, the work ethic, and what that is going to be like, but studies show, and New America has done a study that shows that apprenticeships have much more loyalty with their employer when they start as a young apprentice. The turnover rate that they quoted is like 90 percent after 3 years of finishing an apprenticeship and that is huge. That is much stronger than anything I can do when I hire outside the door.

Our company has continued to stay in this. We now have 15 and we are looking to recruit 25 more apprentices this year. Also, our consortium has grown. We went from six companies the first year to 11 the next year to 26, and over half of those are small businesses. We have also reached across the state, the county lines, and we have helped other programs just like us launch, get in touch with their school systems, with their community college as the formal education provider, and work it. So it is employer led. The employers are the customer. They are the ones that are going to be hiring these students and training them on the job. So once

you have a partnership like that it kind of spreads the workload around. So that is how that one employer can go out and be part of a consortium, get really good talent into their workforce, have them educated, and kind of share that work burden.

And my time is almost running out.

I have so many stories that I could tell you about not only what it has done for our business. That was the first stage. When we got in the first year, like this is great for us. So then I wanted my other business employers—I am on a manufacturing committee—to know about this. So that was exciting. But then I also became so engaged with the students. I had students the first day of college say I never thought I would have the opportunity to go to school. I never thought that I would have a career. Once they received their letter they said I finally feel like I have a direction in my life.

So then that got me more impassioned trying to help more students get opportunities and in different areas. So our consortium is now not only advanced manufacturers, but it is field service technicians, and those are like electricians and HVAC.

I am finished.

Chairman KNIGHT. Okay. We will go on to Mr. Forrest from the great community college of College of the Canyons.

STATEMENT OF JEFFREY FORREST

Mr. FORREST. Thank you, and good afternoon, Chairman Knight, Ranking Member Murphy, and to the distinguished guests who are here with us today. Thank you for this opportunity to provide testimony today on how the Strong Workforce Apprentice Group supports small business along with recommendations on how to fund and expand apprenticeship to sustain our growing economy.

College of the Canyons is under the leadership of Chancellor Dr. Dianne G. Van Hook, and we are committed to working with employers, students, community stakeholders to develop innovative solutions that promote equity, skills attainment, and economic growth in the region.

Recently, the Bureau of Labor Statistics reported that in the month of February, nonforeign payroll increased by 313,000, while the unemployment rate remained at 4.1 percent. And while these numbers are encouraging, behind these numbers there looms a crisis, and it is the shortage of skilled labor, and it poses one of the greatest threats to our Nation's ability to sustain its economic growth.

And no entity is more impacted by this crisis than our nation's small businesses. They comprise more than 99.7 percent of all businesses in 2016, and they are the backbone of the United States economy. Because of their limited resources, our small businesses are not able to compete with the large companies for talent, and they lack the operational capacity to attract, train, and develop their own workforce.

So what small business needs today is a model of apprenticeship that allows them to: (1) upskill their workforce, and (2) be able to implement easily and efficiently.

In response to that need, the Strong Workforce Apprenticeship Group was formed, referred to as SWAG. The Strong Workforce Apprenticeship Group was founded by myself and Tracy DiFilippis, Apprenticeship Coordinator with Goodwill Southern California. The name SWAG is taken from strong workforce and doing what matters for jobs in the economy, a California community college initiative that was developed by Van Ton- Quinlivan, Executive Vice Chancellor, Workforce Digital Futures for the California Community College Chancellor's Office.

SWAG helps our small businesses by doing the following:

First, we partner with them to recruit, attract, and place individuals into apprenticeships. We also provide instruction to incumbent workers to create a pipeline of talent to fill critical positions.

Second, we handle the administrative heavy lifting associated with managing an apprenticeship, making it a more attractive option for small companies. Bill Boden, General Manager of Repairtech International says this about SWAG: "We could not imagine doing this alone. The high level coordination frees our organization to move in new levels of productivity and efficiency."

Third, SWAG provides curriculum that is relative and up to date through our partnership with Tooling U, a leader in online education in the field of advanced manufacturing. In addition, we are working with the National Institute for Metalworking Skills, known as NIMS, to integrate their certifications into our training model. SWAG is currently funded through the California Apprenticeship Initiative. The goal of this program is to incentivize partnerships between community college employers to develop apprenticeships.

I am proud to say that in the 7 months that SWAG has been launched, we have acquired more than 50 apprentices and over 75 percent of them come from underserved communities, veterans, minorities, women, and other underserved population segments.

And while we are the fastest growing model of apprenticeship in California currently, what we know is this: without access to a consistent funding stream, SWAG, like the many other initiatives that came before it, will end up in the workforce development graveyard.

Which leads us to offer the following suggestions on how we can fund and grow apprenticeships to continue to support our small businesses.

First, we must fix the funding. Tax credits and similar incentives can go a long way in helping small businesses embrace apprenticeship as part of their employment development strategy.

Second, simplify the Workforce Innovation and Opportunity Act. Ladies and gentlemen of the Subcommittee on Contracting and Workforce, meet your 399 pages of single-spaced 10-point font legislation. Hidden somewhere in these pages is funding for Registered Apprenticeship for on-the-job training. Navigating this legislation is tedious at best. We have got to find a way to streamline it. We need to also look at incorporating some provisions of the Prosper Act, such as the 25 percent cap on private sector employment from Federal Work Study Program. Eliminating that along with the provision to access apprenticeship. We need to strengthen the Department of Labor by personnel funding, upgrades to technology, and

helping it in updating its existing work processes so they can continue to provide the critical services needed by the workforce development community.

We must also look at competency-based education and celebrate and support those educational institutions, like College of the Canyons, that are working to integrate it into their educational framework. And then in working with small businesses, dozens of them, what we have learned is this: effective apprenticeship demands strong partnership. Our workforce development system must come together if we are to remain a competitive force in the global economy.

In conclusion, we wish to thank the members of the Subcommittee on Contracting and Workforce for allowing us to share how SWAG supports small business and your leadership and your commitment in creating prosperity for all Americans, and we look forward to addressing any questions you may have.

Thank you.

Chairman KNIGHT. Thank you.

And all the way from Dearborn, Michigan, Ms. Kunz.

STATEMENT OF JEANNINE KUNZ

Ms. KUNZ. Thank you. Thank you. Thank you, Chairman Knight, and Ranking Member Murphy, and the guests, for the opportunity to provide some insight around this important topic of apprenticeships and how small businesses are using apprenticeships to solve the skills gap.

For 85 years, SME has been dedicated to the health and competitiveness of the manufacturing industry. We do that through developing the workforce and promoting advanced technology. And as you have heard from the other witnesses here, it is a very significant threat that the skills gap has on the manufacturing industry right now and we have been doing a study for the last 5 years and it has not changed. It is getting worse. And when we ask manufacturers the question of how difficult it is to find skilled labor, we find that 88 percent are saying I am having a difficulty finding skilled labor to do the work I have in my organization now let alone into the future. When we ask a little more into that research, what is that doing to your business, they are telling us it is affecting their productivity, their innovation, quality, safety, profitability. Right? These are all very key things to running businesses here in manufacturing.

And so when we look at that and we look at the fact that Jeffrey brought up about that 90-some percent of all manufacturing businesses are small, we know that small businesses need to thrive in order for manufacturing to be successful as well.

And small businesses, unlike large businesses, have a little bit added challenge. Right? We all know the CEO is wearing the HR hat, is wearing the custodial hat and the plant manager hat. Small businesses cannot always provide the same kind of benefits and packages that large companies can. So these added challenges really put pressure on the small businesses I think as well articulated by Tammy.

So when we look at how do we help those small businesses, we certainly look at something like apprenticeship. And it is not a "one

size fits all." We certainly know that. There are lots of things, and I think Chairman Knight, you talked about the arsenal of tools that are needed to address the skills gap. But there is no doubt that apprenticeships is a key part, and Jeffrey and Tammy did an excellent job I think articulating that. And what we are seeing is the number of retirees and the baby boomers that you referred to that are exiting the manufacturing industry. Those skilled laborers, those journeymen, those apprentices that have all that knowledge, unfortunately manufacturing historically has not done a good job building up that pipeline. It has not done a good job building structured, sustainable programs. It is a little bit of follow me and watch what I am doing on the job. Well, that does not work. We really need a very strong, structured, sustainable program for onboarding and on-the-job training of which apprenticeship programs very much have.

SME supports the nationwide Department of Labor apprenticeship programs with a competency-based approach. Right? That is the change from the past where it was much more time based, it was more about how much time you put into a program. Now we are able to look at programs much differently, look at the knowledge and skills that are required to perform in the jobs today, and look towards how people can be assessed towards those knowledge and skills so we are more oriented towards a competency-based program versus time, which also reduces the amount of time it takes to get people in the jobs, doing effective things that move the organizations forward.

As Jeffrey articulated, we are a good strong partner here with SWAG, and I think you did an excellent job talking about your program so it is not one I will mention here. But I think, and it was interesting to hear Tammy talk about the consortium. A couple things that we are noticing because we get the opportunity to work across the country, so we get to work with the small, the mid, and the large companies, but we are seeing that these organizations and these consortiums are coming together to really help represent multiple small organizations.

One I would like to mention through our partnership is with a group called MACNY. And it stands for the Manufacturers Association of Central New York. And they basically represent 300 manufacturers. A lot of small to mid-size manufacturers across central and upstate New York. And when they were talking to those members, like we would expect, those members were struggling with, you know, hiring and finding people, finding the right skills. So MACNY went about how do they go and create these partnerships, these collaborations with the schools, organizations, organizations like SME, where we could look at the knowledge and skills and then start to drive towards what is needed 80 percent of the way and then help the companies be able to have the flexibility to drive it to their own particular needs.

One interesting thing that MACNY also did was look at a pre-apprenticeship. So it was working with the high schools, dislocated workers, veterans. So again, now that we are looking at apprenticeships inside these small companies, how do you start to look at again the pipeline of even getting those kinds of people into the system? So a pre-apprenticeship program in the high school. We

have some good examples where some companies are looking at how to take those pre-apprenticeships into an apprenticeship program and then into a career pathway into a college degree program. Many great things are happening in those kinds of examples.

In summary, the health of small businesses is vital to manufacturing success. The largest OEMs in the world are relying on these small businesses, and all too often or not, I cannot even tell you the number of times we hear businesses say that they are having to turn down orders, delay their expansion of their business because they cannot find the right people, just things that we do not want to see continue.

So apprenticeships is a proven and needed piece of a company's workforce development strategies. It helps the businesses build a pipeline, grow internal talent, reduce recruiting costs, and improve productivity.

We thank the Subcommittee on Contracting and Workforce for taking the time to address this very important and clear issue that we have in front of us as a Nation. Thank you.

Chairman KNIGHT. Thank you.

Mr. Mazur, you are up.

STATEMENT OF JEFF MAZUR

Mr. MAZUR. Thank you, Mr. Chairman, Ranking Member Murphy, for the opportunity to appear today.

Again, my name is Jeff Mazur, and I am the executive director of LaunchCode. LaunchCode is a national nonprofit founded a little over 4 years ago, designed to help fill the tech talent gap. There are about 600,000 unfilled tech jobs in the U.S. today according to BLS. The number is going to be about a million by 2020. So there is a lot of gap to fill in the tech industry.

We try and do this in a few different ways. One way that I will not spend a lot of time talking about is by providing free, accessible job-focused training in coding. We teach people to code to a level where they are ready for an entry level role as a developer.

The other pieces that we do that I will spend a little more time talking about today is job placement, in particular, the apprenticeship in the software development space. Over the course of our 4 years of existence, we have helped more than 1,000 people start their careers as junior software developers, computer programmers, and we think that apprenticeship, as with my colleagues at the table, is a really powerful tool in doing that and helping those people start those careers.

And so part of what I wanted to share today was a little bit about what our learnings have been as we have tried to build a program that really utilizes apprenticeship in a space and in industry and in job types that typically it has not been used a lot in.

And so four sort of principles or items that I wanted to point to that we have kind of distilled through our learnings in working with last year more than 124 employers to place entry level junior developers. One of those things is flexibility. It is easy to imagine a job posting and a training program for a welder. We sort of know and understand what a welder's job is and that is kind of probably standard across many different employers in terms of what the core skillset is. And when we think about a job posting for a soft-

ware developer, it could be that there are dozens or hundreds even of different languages or frameworks that may be at play there. And so having an apprenticeship, in our case an apprenticeship with standards of apprenticeship—we serve as an intermediary—we have those standards that are flexible and it can accommodate the many different needs of different sorts of employers is really critical to success and adoption by those employers.

The other piece that we found is essential is integration of apprenticeship into existing processes of hiring and doing business that our employers have. One of the things that is a sure fire way we found for an employer not to want to work with us to use apprenticeship to bring developers into their system is if they have to build substantial new infrastructure in order to accommodate those people. And so having, again, an intermediary-based program where that infrastructure can live outside the walls of their company, outside the walls of their institution and still build people with the sorts of skills they need is really critical for them to adopt and use apprenticeship in bringing new software developers onto their teams.

The third piece, I want to echo what many others have said, is really around the notion of competency-based programs. And I want to particularly identify two key threads here in the way we braid competency-based notions into our program. The first being that people should get "credit" for competencies that they are bringing to the table at the front end. If people have already developed and we have a common way of measuring and understanding what someone's skill is as they come to the table, then they ought to get credit and not have to compete as much in terms of the related technical instruction. And so, again, that is a mechanism both for having these things be based really on the skills that are necessary and also abbreviating the time that one may spend in an apprenticeship before they are ready for work.

The second piece of the competency-based component that we focus on, again, is that rather than having a time-based approach to a time and program as a function of when someone has completed the program and is ready for journeyman status, is instead focusing on competencies. And in our case, we try and build a program that is very focused on making sure that employers themselves, hosting employers are saying that these are the competencies that we need this person to have achieved in order for them to have successfully completed this program, and then with assistance, allowing them to judge when someone has completed the program rather than have it being a rote function of time and program.

And so we found that to be a key thing not just for adoption, not just for building our program but for employers to really feel like this is a process that works for them.

And the final piece that is sort of tied with the competency-based piece is that these things should be accelerated, particularly when technology changes so quickly, the skills that you are learning today may be obsolete 6 to 9 months down the road. And so if it is a 2-year program, you may have people spending lots of time learning something that they are never going to actually get to deploy in the field. And so designing a program that in our case may

have 20 weeks of classroom instruction and 90 to 120 days in an on-the-job focused programming situation is a way that allows us to get those people quickly the skills they need and get them quickly into the workforce because employers in tech need those jobs now if they are going to fill that gap.

I am again grateful for the opportunity to appear today and I am delighted to answer any questions.

Chairman KNIGHT. Well, thank you all.

I know Stephanie and I write a lot of notes up here. Hers are probably way better than mine. But I typically write notes on what you are saying and what I think you are saying. So when I hear "integration," I hear you have got to give me a puzzle piece that fits. So you have got to give me somebody that can come in and can work and I do not have to do something special there. They are just going to come in and work. When I hear competency based, what can you do? Are you ready to do the job? If you are, then I want you. You do not have to have 4 years of schooling if you learned it in 1 year and I can have you in my business and you can be working. And fast is always what small business talks about is how fast can we do something? How fast can we turn the wrench or whatever we need to do because that is how I get paid?

So I am going to go into just a couple questions. You know, the first one I think I alluded, how do we get the info out? How do we get it to small businesses across the country? I am a huge proponent of our community colleges and of trade schools and tech schools as kind of a conduit to do something that maybe you can do fast. I know College of the Canyons or many of the other community colleges across the country, they can move and they can be agile. And so if you need something to work on an F-35 as a supplier, you might go to them and say these are the people, these are the skills that we need. They need to have basic schematic skills. They need to have basic math skills. Then we can move them in to where we need them but they need to have those before I can even look at them.

We have a program in Palmdale that is called the AFAB right now, and Northrup Grumman came to us and so we went to the community college out there and they built an 8-week program. And at the end of 8 weeks, those kids have a 96 percent chance of getting hired. I do not know what the other 4 percent are, but that is what they told me, 96 percent. And they are hired at a good rate. They are hired into a great company and they are on their way to a career.

That was just working with a community college and saying can you do this? They said, yeah, we can do this, and they did it.

So apprenticeships, that is what I see, and that is what I think we are going to have to have over the next 30-40 years. There are going to be these holes that if we do not fill them quickly then we are going to lose those jobs or they are going to be outsourced or something that is not going to be what we want.

So my first question is, about 74 percent of kids that graduate high schools today are not eligible to go into the military. So the military always comes to us and says only about one in four kids can go into the military. For various reasons. There might be a medical reason, there might be something else, but several of the

reasons I push back on and say, you know, you should probably relook at these. But a lot of those kids you are looking at, too. If those 24 percent are now looking at colleges or looking at something else, you are trying to grab them. So I think that is kind of my first question, is how do we reach out to the high school kids?

And then my second question is how do we reach out to the junior high kids and say what do we need to get them into kind of a skilled learning so that they can do the jobs maybe in the community. Maybe it is for automotive manufacturing. Maybe it is for something else. And how do we get them involved at maybe a seventh or eighth grade? And I know we have got VEX and we have got robotics and we have got all kinds of programs to kind of push STEM, but we really have to make sure that kids know that, you know, here are the jobs in the community. How do we get you looking at that? It does not say we do not want you to go to college or it does not say we do not want you to do other things. It just says these are skills based. These is a skill that you can learn and you can look to be hired at some of our jobs here.

And we had the Chairman of the Full Committee on Small Business, Mr. Chabot. Mr. Chabot, are you just going to sit there or do you want to chat?

Mr. CHABOT. I will wait until you are done with your questions and the other side.

Chairman KNIGHT. Okay.

Mr. CHABOT. Yeah. Thank you.

Chairman KNIGHT. Okay. So, anyone, we can go right down the line.

Ms. SIMMONS. So we also think that messaging is a huge problem with I guess the awareness of apprenticeships. We thought that just going into the schools and letting the students hear some of the opportunities would be our biggest avenue, but I feel like we have to reeducate the educators of what a great opportunity these apprenticeships are. And the careers that we are all talking about here, they make well over $55,000, $65,000, $70,000. Some of them will punch a clock and make over six figures. The jobs are in high demand and they are going to be increasing in demand. So the educators have to be aware that these are really good opportunities for all students, not just the ones that they think cannot go to college.

Also, we have to send a message to the parents that these opportunities are out there. I hear parents and they are like, I never knew this was there. Do you have apprenticeships for adults? How can we get in this? So part of the thing I think is a huge marketing campaign on just awareness of what apprenticeships can do and the career values that they have.

And also, apprenticeships are a great stepping stone for a 4-year degree. Our company is looking at in the future only hiring engineers that first go through our apprenticeship program. We think they are going to be much stronger and we are going to help educate them and get the 4-year degree after we pay for their 4-year degree.

And I forgot to mention that our apprenticeship programs are valued at $125,000. The students receive benefits and 401(k), and they are actually paid for the class time that they are sitting in college earning that degree.

When you talked about going into the middle schools, yes, I realized into our second year that by the time we see juniors and seniors, it is almost a little bit too late. Most of the time they do not even know about the career opportunities that are available or what these jobs look like, what area they work in. So we, in our school system, are trying to get middle schoolers out into the different industries that have careers and have jobs available to them when they graduate. But now that I am a third year into it, I am also thinking like the German-style model, we also maybe even need to be planting those seeds in first and second grade. You know, like what does an electrician look like? What kind of tools do they have? Where do they work? Just so that when they get into the middle school they might have been thinking about that.

You know, when you talk to a young schooler, most of the time they say I want to be a teacher. I want to be a doctor. I want to be a vet. I mean, those are the things that they see on TV. But educating them maybe even in the grade schools about other opportunities, especially the ones that we know are going to be in such high demand coming up.

Chairman KNIGHT. And I am going to go on to Ms. Murphy.

I agree. I think that you are seeing a transition right now, especially when we talk about STEM. If you thought that there was going to be a female aeronautical engineer 40 years ago, you would have had to search this country for one. Today, we understand there is a huge push in the last 10 years in college, but we have a lot of that kind of push to get people to understand you can do this. These are the opportunities. The same thing with males in nursing. Forty years ago you probably would have had to search the country. Today males know nursing is an opportunity.

So it is kind of a change, and I think the earlier we can get to kids and we can say, look, you absolutely can do anything. I am glad you did not say politician in what they were looking to be when they grew up. But they absolutely can be anything. Sometimes it is not that they do not believe that they can; it is that they do not know that that opportunity is there. So, okay.

Ms. Murphy, I have taken plenty.

Ms. MURPHY. Thank you, Mr. Chairman.

Ms. Simmons, I found the conversation really interesting because I think what you are pointing out is that there is a social bias against technical careers and apprenticeships and I am interested in hearing some of the other witnesses' suggestions on how we break down some of those social biases that are maybe preventing the number of students going into some of these skills.

One of the interesting things is I have spent a bit of time in my community going to see apprenticeship programs, and certainly, the skillset required for a car mechanic, for example, is no longer the grease monkey kind of thing. It is can you work a computer? Do you know how to program? Some of the things that Mr. Mazur talked about.

And so I would be curious if the witnesses, other witnesses had any thoughts on how to address that, the pipeline, the demand for some of these programs.

Mr. FORREST. Well, one of the things that we are doing in California is we have launched a campaign in which we have taken

CTE, career technical education, and we have rebranded it and called it career education. And we have launched it into the movie theaters in which we show young people in apprenticeships, working in careers such as automotive technology, and then it is a part of the preview of the movie, kind of a commercial, trying to really help change the culture and dynamic and narrative of career education.

Another thing that we do is we host a manufacturing day. We actually go out to all of the junior high schools in our region and we bring the kids to our campus for a full day of understanding what the manufacturing and STEM fields hold for them, and we bring in companies that come in and speak to them. There are company tours. We also bring in a gentleman who is probably one of the most greatest icons in advanced manufacturing, Titan Gilroy. He comes in and speaks to the young people as well, and we generally bring between 300-400 individuals along with their parents. And so that is happening.

But I will say again, I agree with you, Ranking Member Murphy, that one of the greatest challenges is changing the perception of career education in the minds of both the parents and in the minds of the high school and junior high educational institutions because the message has to come from them in order for it to really have that long lasting impact because they are the ones that are going to be with those students in those very formative years. And so that would be the critical component, is getting our educational institutions to realize that our high school and junior high schools, that this is a very, very positive alternative for their students, and that not everyone was meant to go to a 4-year college or university and that it is not a negative thing if they choose a career in a machine shop. Whereas, where I started my career at what was McDonnell Douglas. And so certainly, that is the thing; we have to change the messaging and the perception.

Ms. KUNZ. If I could add a few things to that. And Ranking Member Murphy, you mentioned kind of even getting more minorities and women involved in manufacturing in these career paths. A couple things that SME is doing I will say on the front of—if you have heard of 3D printing, additive manufacturing, we do quite a bit I mentioned as an organization to help manufacturing. We not only develop the workforce, but we try to move technology forward. And we recently launched a new apprenticeship program around 3D printing in collaboration with the Robert C. Byrd Institute, as well as America Makes, one of the Manufacturing USA Institutes. And I bring that up because that is an example where sometimes we think of the traditional, and I think we have covered that pretty well—the welders, the machinists, the maintenance technicians, which is all really important, but we also have these new jobs that are entering the field which will help us change the image and the perceptions of manufacturing around high-tech, high-touch, high-challenging jobs that when we have done some workshops with young men and women we see the women really gravitate to 3D printing, kind of this more design, creative, art side of it. And so I think there are things like that, too, that are a little bit maybe nontraditional, new technologies that will also help shape the perceptions.

Another initiative is also the career counselors. I sit on a National Coalition of Career Counselors, a coalition regarding career counseling, which is really trying to get at the fact that there is not enough funding related to career counselors, the number of career counselors, the ratio to the number of students, and that they are really not able to do career counseling. They are a lot of times dealing with other issues—unrelated behavior, whatever it might be. So that is also impacting I think what is being told to the students. So not only the parents, what is happening in the media, but also the career counselors.

And lastly, I would be remiss if I did not say that I think one of the challenges is what is happening actually in the schools. There are some schools that have tremendous programs that when you go into the school, so now let's say we get these kids to think I want to go pursue a career in something technical. But if they walk into that school and the equipment is 30 years old, the curriculum is old, I am not faulting the school. I am saying the funding side. So we are challenged there, too. So when the students enter a program that is robust and meeting the needs of the manufacturing community today, we are in good shape. When we do not, we kind of fall short. Right? We got them in the pipeline and now all of a sudden they come in and now it is a validation of maybe what they were told before. And so we have to do things there. And our education foundation does quite a bit to work with local employers who really look at the education system as part of their supply chain, one of their critical suppliers of people. And those employers that decide to actually put their money forward, donate it to our education foundation, we go and we work with the administrators, with the community, and with the school hand in hand to look and audit their program. To look at their curriculum. To look at their career consoling. To look if they have a middle school camp that feeds into the high school. And look at the technology. All of the things. And basically then take that money from those corporate donors and make sure it goes towards the kinds of things that builds up the program in those high schools or those career education programs. Thank you.

Ms. MURPHY. Thank you. I see that my time has expired.

Mr. MAZUR. I would weigh in just briefly on that same question. What we face in the tech and software development space is sort of different cultural perception gap, and that is this idea oftentimes people have that people have to be born to code. That there is some, you know, 5 percent of the people out there who have the special coding gene and it is only those people who are going to be software developers. And when, in fact, that is not true. And so we try to be very clear with people that this is an opportunity that anyone who has certain foundational skills can take advantage of. Do you have 10th grade math skills? Do you have basic proficiency and logical reasoning and problem solving? Do you have basic digital literacy? If you have that foundation then, you know, really almost anyone can build the other pieces that will allow them to move on down the road towards a career as a software developer.

And so, you know, in our program, in our experience, in a world and a realm where if you look at software developers and the demographic makeup of those groups, you know, it is by and large

still today white men, oftentimes young. We have been able to build programs. We have a Coder Girl program. We have other programs that are designed to really help people see other people who have gone through this experience. I have shared story with those folks, and so we have seen our education programs, for instance, in 2017, get to a point where even though, you know, probably 17 percent of the software developers in the U.S. working today are women, 47 percent of the people who are enrolled in our programs are women. People of color, again, very underrepresented in the field. About 38 percent of the people who took part in our training and education programs in 2017 were people of color.

So if you can understand, people, what the real challenge is and what the opportunities are there, then I think you can start to break down some of these other kind of cultural concerns and barriers that keep people out.

Ms. MURPHY. Great. Thank you so much.

I yield back.

Chairman KNIGHT. Chairman?

Mr. CHABOT. Thank you very much, Mr. Chairman.

Just a couple questions. I think I would start out with this one.

Could you discuss any resistance that you still see perhaps in some parents because they do not want their kids necessarily to have a job where they are going to get their hands dirty or maybe be in the skills trades or—and I see a lot of heads nodding. So I will start down this end. What can we do about that? Is it an education process? You know, is it kind of like realistically understanding what is in this economy and where the jobs are or just what would you suggest?

Ms. SIMMONS. So most of the parents have a view of some of the jobs that the students could go into in an apprenticeship, the old model. You know, dirt floors, low lighting, and that is not what advanced manufacturing in some of these apprentice programs look like today. So we require any student that is interested to bring a parent or guardian in for a tour to one of the companies that is offering the apprenticeship so that they can see. And a lot of times the students go home excited and saying about this opportunity, they are going to pay for my education. They are going to pay for me to be in school. And the parents are like, it is too good to be true. One thing you learn in life is if it sounds too good to be true, it is. But once they come in and they see that every piece of equipment we have has a computer on it and you could eat off our floors, then they want to know how they can get into a career in this and they want the opportunity.

And one other thing is going back to the CDCs in the school. Jackie Smith is an apprentice of ours, and right before he turned 16, him and his dad bought a car to work on so when he could drive. And he realized that that first time that he loved working with his hands. And he was good at it. He had never been able to take any CTE classes in his high school because he had a 4.4 GPA. He was smart. He was on the track to go to college. And his career counselors said no. You need to be in all these AP courses. He fought his junior year after working on the car with his dad to get into an automotive class. And at that school he had the opportunity—he never even would have had the opportunity to hear

about our apprenticeship program. He had the opportunity to hear about it. He brought his mom and he brought his dad in. And they agreed. And he says, you know, if I would have been in college now, I probably would have been miserable. I may have dropped out. I would have spent a lot of money on it. I am doing something I love and I am going to make just as much money had I gone the 4-year college route and I am getting it all paid for. He is 19 years old. He has a 401(k). He has full benefits, and he is enjoying what he does every single day.

So it is a message to the parents and to these educators that these opportunities are great for them.

Mr. CHABOT. Thank you very much.

Mr. Forrest, I saw you nodding there, too. So if you would——

Mr. FORREST. Sure. The key is always getting the message over to the parents. And one of the ways in which we do that, even at the community college and in some high schools, is through the creation of a makerspace at those particular facilities. And the makerspace provides an environment in which these young people are able to go in and explore these careers that involve hands-on training. We have a makerspace at College of the Canyons, and some of our high schools have makerspaces as well. And so that creates an excellent environment for the children and their parents to get to see what it is like to be in this type of career field first-hand. And so I really recommend that most of our educational institutions, especially at the high school and the junior high level, consider a makerspace relationship, either with one that exists as a private-public relationship or try to integrate one into their own educational setting. The other is that we do whatever we can to make sure that we provide opportunities for these young people to be able to build within their own pursuits of their own careers the opportunity to do something that is related to making something that is part of their curriculum. It has to be integrated in there at some point. And once that happens, even if they are not good with their hands as some people like to say, still giving them that access and that exposure I think is critical to getting them involved and excited.

Mr. CHABOT. Thank you very much.

Do the other witnesses want to weigh in?

Yes, sir?

Mr. MAZUR. Can I say just a few words? We serve probably a slightly different age range than other folks at the table serve. The preponderance of people we served over time are in the 24-to-40 year old age range. And so we have a nontrivial number of people who have gone, they have a 4-year degree, and they got a degree in English or History or Literature and in the couple years since they have been working 18 hours a week at the FedEx, Kinkos, or doing other things, never having had the opportunity to have that educational experience kind of launch them into a career that they found fulfilling. And so they find us then and they build a new skill and we place them into a career in tech and they go off on their way.

I think that experience and the experience of those people may resonate with the parents of someone who is sort of insistent that someone go down the path of a 4-year degree, that there are plenty

of examples of people who go down that path and have a great experience and it is the right thing to do; there are plenty of others who do that and it is not the dream they thought it was and so that may be an instructive lesson for parents and young people out there making this choice.

Mr. CHABOT. Thank you very much.

Mr. Chairman, my time is about to expire, so I will yield back.

Chairman KNIGHT. Thank you, Chairman.

I just have two final questions. One was about schools, and I know Ms. Kunz said, you know, if you walk into a classroom and it has got 30-year-old stuff, it is tougher for the kids to get involved. I know I went into a school recently and a company had given a lot of this stuff that they had been working on and the kids were very, very involved. They were very happy. They knew that they were working on equipment that was of this generation and they were excited about that.

But I have also been in classrooms that you have got the 30-year-old microscope or something and it is a paperweight right now. So I do think the connections to the businesses, if you are working with a business and you are saying, hey, we are going to be your pipeline, you have got to help us, I agree that government should be very involved in this, but the businesses should be very involved. If we are going to give you what your most vital aspect is, and that is skilled labor, then you have got to help us get them skilled.

Ms. KUNZ. Absolutely. I think we certainly are very big advocates for the fact that the corporate industry—and we get the opportunity to work with a lot of companies which is great, but we do make the message very clear that your number one asset is human capital. Every company can go buy the same C&C machine. Everyone can buy the same materials. A lot of those companies have access to the same kinds of technology. What makes an organization unique is the people behind the technology. It is the people programming and the people planning and the people designing, the people maintaining the equipment. And so here it is, this number one, you know, kind of asset and competitive advantage for an organization, but all too often, it is normal, a manufacturer is thinking about supply chain of its components. Where it is coming in, the quality of the parts, and sometimes the human capital side is not thought of. So it certainly is a message we carry forward that we all have a role and the corporate industry certainly has to look, just like it would if they had a supplier who was delivering components that did not have the right quality or met the right specifications, right, to build the plane or to build the car, whatever it might be. If the students are coming out with not the right specifications to meet the needs, you have got to go work with your supplier. And that is an important part and aspect of the community involvement and it is an important part of the development of their own organization strategy going forward. So we really encourage that organizations build that into their strategic business plan is their human capital strategy and how they can work with schools I think is a very critical way of doing that.

Chairman KNIGHT. And Mr. Mazur, you said something, you know, and I think Mr. Forrest will say the same thing. A lot of

these people are not 18 years old. A lot of these folks are 30, 35. If you go to a community college today you do find your 18-year-olds, but you do find a lot of people that look like me, and they are looking to get a new skill or transition or their job was let go and now they need a skill. Those are very, very important aspects, and that is what happens at what you are doing. That is what happens at what apprenticeship programs are doing or community colleges. So, but you hit on one issue—we are voting—coding.

So when I was a senator in California, I went to a small company, Microsoft, and asked them about what they needed for jobs. And they had a program called TEALS. And it was basically to put computer science into high schools that did not have computer science. We actually brought that into our district. It is in five high schools right now and that gives kind of a pipeline into kids going into college or into apprenticeship. And then I talked to them about getting coders. And I said, you know, at a community college we can get you a coder, probably an 18-month certification, maybe less. We can get you coders.

Now, some companies in America want a 4-year degree. I get that. But I do not get the fact that if you have got 6,000 job openings and I can get you them in 12 months or 18 months, why would you not take them? So I think that that is where you are going is, you know, if you have got the aptitude and we can teach you, is that where we are going with what you do with coding?

Mr. MAZUR. Absolutely. And I think it ties into your previous question, too, about sort of the notion of the responsibility of companies and employers to kind of own that process and support it and be advocates for apprenticeship. You know, we have placed hundreds of people in apprenticeship. We have a registered apprenticeship. We have never received a single we owe a dollar in support of our registered apprentice programs. We try to build and design a product and an opportunity that employers want to pay for. And so our apprenticeship, our processes and our program that we have built for apprenticeship is all driven by essentially success fees, placement fees that our employer-partners give to us for providing them someone who has the skill to do what they need to do.

And so, you know, building that product, building that opportunity that scratches the itch that employers have, which is how do I build a sustainable and continuous pool that is growing of junior talent that is going to sustain me as this need continues to grow over time, and at the same time, how do I create that pipeline in a way that gives employers an incentive to actually fund it and make sure that it goes? And so, you know, we have not perfect that but that is what we are trying to do.

I was talking with Mr. Forrest beforehand. You know, last year in 2017, we are nonprofit so we raise money and we get grants and other stuff. In 2017, 54 percent of our total budget came from our own revenue stream from employers, and we expect that in 2018, that is going to be between 70 and 74 percent. So, you know, we are trying to continue on down the road of building something that truly has a market niche that employers want to touch and grab and that that will help make more people successful. It will help make us successful as an organization, and it will help fill this

growing gap. So, a lot of those pieces touch one another. I think it is important we think about all of them.

Chairman KNIGHT. Well, thank you all for coming. We appreciate your testimony today.

Registered Apprenticeship has experienced a resurgence in popularity among policymakers on both sides of the aisle. We look forward to the findings of the Task Force on Apprenticeship Expansion, and we will be eager to hear small business participate in RA programs.

I ask unanimous consent that members have 5 legislative days to submit statements and supporting material for the record.

Without objection, so ordered.

This hearing is adjourned.

[Whereupon, at 3:27 p.m., the Subcommittee was adjourned.]

APPENDIX

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Written Testimony

Committee on Small Business

Subcommittee on Contracting and Workforce

"Small Business participation in apprenticeship programs"

United States House of Representatives

Delivered by Tammy Simmons

Machine Specialties Inc.

Vice President Marketing & Culture

March 20, 2018

Machine Specialties or MSI, is an advanced manufacturing company in Greensboro, NC that makes precision parts for aerospace, satellite, medical, energy and other industries. Celebrating our 50th year in business next year, it is exciting to see how our small business started with one man who was a trained machining apprentice and an immigrant from Argentina has grown to 150 employees.

Similar to other advanced manufacturing companies, MSI employees are highly skilled and many are nearing retirement. We have tried different ways to recruit employees with skills or give current employees up-skill training to maintain a consistent level of highly trained employees and to grow our company. Our company's growth is limited to the amount of skilled employees who have experience, can set up the advanced equipment and make the type of products our customers need.

MSI was introduced to a youth apprenticeship model by several companies in Charlotte, the consortium of companies called Apprenticeship 2000 have been using it for 22 years. Learning the details of this program and how to start one from another business member was extremely helpful. We learned that any size company could do this and use apprenticeships as a way of growing the amount of employees in the highest skilled or trade positions. By joining a group of other businesses we could share the workload, offset some risks and attain some buying power with the schools system and community colleges.

Youth apprenticeship programs have been exploding in NC over the past five years. Currently there are at least ten different consortiums. Each apprenticeship consortium may range from having anywhere from 6- 26 member companies. The size of the companies range from 15 employees at a company up to larger international companies with over 5,000 employees. It is valuable that these programs can be adapted to meet both small business needs as well as mid – large size business needs.

The basics of the model is that we recruit juniors and seniors in high school that have good attendance, a decent GPA, solid math grades and an interest in building creating and fixing. Some have identified a desire to work with their hands or becoming an engineer. The students receive a 100% paid two year degree from a community college, paid on the job training, Journeyperson card from DOL and benefits from the company. The process is about 3 ½ -4 years for them to complete the training /work hours and formal education required. The apprentices are even paid for the hours they are at college earning their 2 year degree. The careers the apprentices are training for all well paying, in great demand and highly skilled. Careers that once students finish the apprenticeship they would be able to find work almost anywhere in the country. Most companies will support the apprentice in completing a 4 year degree if they want to and it is mutually beneficial to the company. Currently our small business, MSI

has 15 apprentices with careers in Tool & Die, Maintenance Technician, Setup CNC Machinist, Welders and Quality Technicians. In the three years since we have started our program we have had great success and plan on growing our business with on- boarding another 20 apprentices this coming year.

The consortium of business partners MSI belongs to is called GAP, which stands for Guilford Apprenticeship Partners. Guilford County is where these businesses are all located. The first year GAP started with 6 companies interested in apprentices, the second year there were 11, and the third year we have 26 business partners. In this third year we started a new track for Field Technicians that includes trade positions for apprentices in HVAC, Electrical and Plumbing. Next year we will be starting a track in Aviation for Apprentices. There has also been interest and discussions with companies who may offer apprenticeships in Healthcare, IT and Automotive & Diesel Technicians. We hope to be able to implement these new tracks in the next 3 years, and some of them may do so with adult apprentices.

The excitement and success of these programs has allowed us to aide other counties and communities in starting their own consortiums and working with the school systems and community colleges. MSI has assisted in starting apprenticeship groups in counties that border Guilford and is an active member of Rockingham County's consortium, RockAtop and recruits apprentices from there also. Good collaboration on these programs sets the businesses and students up for success. A winning outcome for business and a winning outcome for the school systems is a tremendous win for the community as a whole. MSI and GAP are happy to testify so that lawmakers can learn what a great opportunity the programs are and how they support stronger skilled workforces, educate and train students for successful careers. It is our hope that apprenticeships will be implemented in other areas across the country, other sectors and that general awareness of apprenticeships will increase with students, parents, educators, and business owners.

Written Testimony of Jeffrey Forrest
Vice-President, Economic and Workforce Development
College of the Canyons
Before the House Committee on Small Business
The Strong Workforce Apprenticeship Group:
Supporting Small Business through Apprenticeship

March 20, 2018

Chairman Chabot, Ranking Member Velazquez, and Members of the Committee on Small Business, thank you for the opportunity to provide testimony today about how the Strong Workforce Apprenticeship Group (SWAG) supports Small Business, along with offering recommendations on how to fund and grow apprenticeship.

My name is Jeffrey Forrest, and I serve as the Vice President of Economic and Workforce Development for College of the Canyons which is located in Santa Clarita, California. Under the leadership of Chancellor Dr. Dianne G. Van Hook, College of the Canyons is committed to working with employers, students, and community stakeholders to develop innovative solutions that promote equity, skills attainment and economic growth in our region.

The focus on Apprenticeship is greater today than ever before. From the launch of the American Apprenticeship Initiative in 2016, to the Executive Order issued recently under President Donald J. Trump, Registered Apprenticeship has taken center stage as an effective way for companies to develop a pipeline of talent to meet the critical needs of their workforce.

This renewed emphasis presents an unparalleled opportunity to the United States Department of Labor (USDOL), Employers, State Agencies, Workforce Development Boards, Community Colleges, Workforce Intermediaries and other stakeholders to create a model that will meet the demands of industry for qualified labor, close the skills gap, increase student retention/completion, and deliver on the promise of economic prosperity for all.

However, this opportunity has not come without its share of challenges. Despite the attention, there has been little progress towards delivering apprenticeship for non-traditional occupations: Lack of consistent public funding, limited connection between education and employers, and the lack of integration of apprenticeship into workforce systems[1], are three of the major barriers that have stalled the implementation and growth of Registered Apprenticeship.

Compounding these challenges is a recent report issued by Brookings Governance Studies which states, "Federal workforce development policy is highly fragmented, with multiple funding streams for myriad programs spread across many federal agencies.[2]"

No entity is more severely impacted by these dynamics than our nation's small businesses. Comprising more than 99.7% of all businesses in 2016[3], these companies are the backbone of the United States economy. However, they are not able to compete with the large companies for talent, and they lack the operational capacity to attract, train and develop their own workforce. What our small businesses need is a model of apprenticeship that allows them to upskill their workforce, one that is easy to implement, and requires little to no administrative oversight on their part.

In response to this need, the Strong Workforce Apprenticeship Group was formed. Referred to as SWAG, the Strong Workforce Apprenticeship Group, was founded by myself, and co-founder Tracy

DiFilippis, Apprenticeship Coordinator with Goodwill Southern California. The name SWAG is taken from *"Strong Workforce/Doing What Matters for Jobs and the Economy"*, a California Community College initiative that was developed by Van Ton-Quinlivan, Executive Vice Chancellor, Workforce and Digital Futures for the California Community Colleges Chancellor's Office (CCCCO). "The goals of Doing What Matters for Jobs and the Economy are to supply in-demand skills for employers, create relevant career pathways and stackable credentials, promote student success and get Californians into open jobs.[4]"

How SWAG helps Small Business

1) SWAG partners with companies to recruit, attract and place individuals into apprenticeship; we also provide instruction to incumbent workers to create a pipeline of talent to fill critical positions.
2) We handle the administrative heavy lifting associated with managing Registered Apprenticeship, making it a more attractive option for small companies; Bill Boden, General Manager of Repairtech International says this about SWAG: "We could not imagine doing this alone. The high level coordination frees our organization to move in new levels of productivity and efficiency."
3) SWAG provides curriculum that is relevant and up-to-date through our partnership with ToolingU, a leader in online education in the field of advanced manufacturing. In addition, we are working with the National Institute for Metalworking Skills (NIMS) to integrate their certifications into our training model.

SWAG: Our Core Values

- **Equity:** SWAG is committed to reaching all segments of the population in California, with a focus on minorities, women, veterans, formerly incarcerated, GED, and other underserved members of the community. Of the more than 30 apprentices we have registered with the Department of Labor, over 75% of them fit into one of the above categories.
- **Integrity:** SWAG practices open, honest, and clear communication with all of its stakeholders and partners; this way of doing business has enabled us to become the fastest growing apprenticeship model in the State of California.
- **Engagement:** SWAG knows that the key to constructive engagement begins with listening to our sponsors, donors, companies, and apprentices. We are convinced that our success today and in the future will be the result of applying the insights we receive from those we serve.
- **Partnership:** SWAG is powered by partnership. We recognize that the work of transforming lives is a team effort and we seek to foster relationships with entities that are committed to implementing solutions that put people to work.
- **Responsiveness:** SWAG believes that making an impact begins with being responsive to stakeholders. This means responding promptly to requests, and providing information that is meaningful and relevant for decision-making.

SWAG: History and Achievements

Since its launch in August 2017, SWAG has become one of the fastest growing models for non-traditional apprenticeship in the State of California. Below is a list of some of our accomplishments:

- Approved Federal Standards with the USDOL for 10 occupations with 17 employer agreements in Manufacturing, Logistics and Cyber Security;

- Endorsement by the California Division of Apprenticeship Standards (DAS) for State-wide approval;
- SWAG has more than 50 apprentices working with 8 partner companies;
- SWAG has developed the first college-sponsored apprenticeship for the Certified Nursing Assistant in California; the standards have been submitted to the US DOL for approval;
- SWAG is selected to host the Urban Institute of Washington, DC to vet the **first two** competency-based work processes for occupations in Advanced Manufacturing to be approved by the US Department of Labor;
- SWAG was awarded a grant in the amount of $352,000 to operate a Pre-Apprenticeship to provide life skills and jobs training for low-income residents;
- AMS Fulfillment a major logistics and distribution company has just began their On-the-job training and Related Technical Instruction with 22 apprentices for careers in logistics.

How we work with businesses to train apprentices

There are two components to Registered Apprenticeship: On-the-job Training (OJT), and Related Technical Instruction (RTI). The OJT is delivered by the company, and the RTI is typically provided by an educational institution such as College of the Canyons. When Tracy and I began to meet with companies to discuss apprenticeship, they wanted to extend it exclusively to their existing employees. This strategy allows them to mitigate the risk of training a new person who may not work out for the company, while investing in the development of those who showed potential for promotion and growth.

For the educational institution, there are four challenges to delivering RTI to small businesses:

1) Aligning the curriculum with the skills needed for the apprenticeship;
2) Creating classes for small businesses that only have one or two apprentices to train (most Community Colleges will not hold a class if it falls below eleven students);
3) Delivering RTI at a time that works for the company and the apprentice;
4) Finding experienced instructors who could teach the course (s).

To meet these challenges, SWAG developed, Relevant Instruction Skills-based Education (RISE). The RISE model of RTI is flexible, accelerated and aligns with the needs of small business. At the heart of this model is partnership. SWAG has partnered with ToolingU, a leader in online education in Advanced Manufacturing.

Next, we brought the apprentices from our small companies together to create an RTI Cohort. This allowed us to justify the cost of instruction. College of the Canyons is fortunate to have well-qualified instructors who are familiar with the ToolingU platform who provide an enriching educational experience for our apprentices.

Our work in developing RISE, and creating innovative solutions of working with companies to train apprentices has led us to share our experiences with other educational institutions. SWAG is currently developing a blueprint for delivering RTI at the Community College for different apprenticeship modalities. We have identified the following structures for RTI delivery:

1) Front-loaded: The apprentice gets their Associates Degree, ***before*** beginning their On-the-Job training with their partner company;
2) 2/3 Framework: The apprentice attends school twice a week and works at their respective company three days a week. They earn their Associates Degree and go on to transfer to a university or remain an employee with the company;

3) Concurrent: The apprentice works full-time with their company while taking courses at their respective Community College;
4) Hybridized: The Community College works with the employer (s) to schedule the time and location to deliver the RTI. The RTI consist of online, lecture and lab course work.
5) Online: In those cases in which the RTI can be delivered online, the Community College will work with the employer (s) to enroll apprentices for those courses.

Offering different methods of course delivery require a great deal of flexibility and coordination. SWAG recommends that the Community College or any other educational institution determine if it has the capacity to provide RTI in a manner that fits the needs of employers prior to entering into an apprenticeship agreement.

SWAG: The Role of the Workforce Intermediary

On March 21, 2016, the Employment and Training Administration issued Bulletin 2016-26 which expands the definition of an apprenticeship sponsor to include higher education institutions and Community-based organizations (CBOs). It states, "Entities such as employers, industry associations, and joint labor-management organizations have traditionally served as apprenticeship Sponsors; however, there is additional flexibility under the regulations for a wider range of organizations to serve as Sponsors. For example, workforce intermediaries such as Institutions of Higher Education as defined in Sections 101 and 102 of the Higher Education Act (Institutions of Higher Education) (e.g., Community Colleges and 4-year Colleges), community-based organizations (CBOs), and community service organizations could also serve as Apprenticeship Sponsors. With the renewed interest in and focus on apprenticeship today, new organizations and entities are seeking clarification regarding their ability to serve as Sponsors. In determining whether an organization is eligible to serve as a Sponsor, OA will first look to the regulatory requirements. In addition, OA will look for the Registered Apprenticeship Program put forward by the Sponsor to be high quality and employer-driven.[5]"

Goodwill Southern California serves as the Workforce Intermediary for the SWAG model of apprenticeship. Tracy DiFilippis, in addition to being the Apprenticeship Coordinator, also serves as the Sector Strategies Manager for Goodwill with a focus on Advanced Manufacturing. As Workforce Intermediary with SWAG, Goodwill Southern California manages the registration process of occupations with the US Department of Labor, works with employers to insure that forms such as the Employer Acceptance Agreement and Form 671 (Apprenticeship Application) are completed. They also work with legislators, foundations, and other workforce development stakeholders in creating opportunities for alignment and collaboration with the goals of Registered Apprenticeship. Goodwill's contribution to SWAG is invaluable and underscores the need for collaboration between the Community College and Community-based Organizations to provide apprenticeship that is low-risk and low-maintenance to employers.

The Funding Landscape for Apprenticeship

SWAG is currently funded through a grant awarded by the California Apprenticeship Initiative, New and Innovative Grant Program (CAI). The CAI Grant "seeks to create new and innovative apprenticeship opportunities in priority and emerging industry sectors or areas in which apprenticeship training does not currently exist.[6]" In January 2017, College of the Canyons was awarded funding for thirteen apprentices and one company under the CAI grant. We currently work with seventeen companies and more than fifty apprentices. We are in the process of applying for the third and final round of the grant which is scheduled to be awarded in June 2018.

In addition, we recently received funding to provide a pre-apprenticeship program in collaboration with AMS Fulfillment. The program will enable AMS Fulfillment to provide job training, while College of the Canyons will offer instruction to enhance the employability of the pre-apprentice. While we are grateful for the role grant finding has played in the creation and launch of SWAG, we are seeking a long-term, reliable source of funding to continue our work with small businesses.

Funding for workforce development initiatives such as apprenticeship, has been described as "highly fragmented," "unwieldy," and "complicated.[7]" The table below provides an overview of the major sources of funding for apprenticeship.

Funding Source	General Provision
Workforce Innovation and Opportunity Act (WIOA)	Employers may be reimbursed up to 50 percent of the wage rate of an OJT participant. The reimbursement rate for OJT contracts may be up to 75 percent in certain cases. **(WIOA Sections 680.720 and 680.730)**
Federal Work Study (FWS)	A provision of the Higher Education Act, the Federal Work Study (FWS) program provides nearly $2 billion in annual awards to approximately 700,000 low- and moderate income students.
Pell	Apprentices who qualify for Federal Pell Grants can receive funding to cover all or most of the cost of tuition and fees, and books and supplies for the students' enrollment in the technical instruction portion of an apprenticeship if part of an eligible academic program.
GI Bill	Veterans receive a tax-free stipend of 100% for the first six months, and 80% for the second six months of training.
American Apprenticeship Initiative (AAI)	Extends from 2016-2021 and provides $175 million in funding for public-private partnerships to create and implement apprenticeships in industries were it does not currently exist.
Community College Grants	State grants issued by Community College Districts to encourage community colleges to revise curriculum, engage industry and develop new programs.
Apprenticeship State Agencies	State agencies of apprenticeship may issue incentive grants and/or provide reimbursement for Related Technical Instruction.
Other	Funding from sources such as the Employment Training Panel in California reimburses educational institutions for apprenticeship training.

In addition to the funding sources outlined in the table, there are dozens of other funding streams that we call "pop-up" funding; a method of providing funds to jumpstart apprenticeship, without offering a sustainable path for long-term expansion and growth.

The PROSPER Act: Integrating Workforce Development into the Higher Education Act

Recently, a House version to reauthorize the Higher Education Act (HEA) was introduced by Virginia Foxx, Chairwoman of the House and Workforce Committee. One of the most significant provisions of the bill is the introduction of a provision entitled, Promoting Real Opportunity, Success, and Prosperity through Education Reform (PROSPER) Act.

The PROSPER Act calls for significant changes to a variety of components in the existing Higher Education Act legislation. However, it also adds a provision to "Expand access to In-Demand Apprenticeships." This provision would result in the creation of a competitive grant program that would be for apprenticeships that have a term of 1 to 4 years in duration. The grants, amounting to $183,204,000 would require a 50% match from the grantee. In addition, the PROSPER Act calls for lifting the 25% cap on private sector employment under the Federal Work Study Program. This will enable students to obtain employment related to their field of study.

SWAG agrees with the intention of the PROSPER Act to address the critical shortage of qualified workers, while providing jobs that pay a livable wage to students in postsecondary institutions. However, it is important that any legislation that seeks to fund apprenticeship insures that small businesses have equal access to participate, and that the credentials being earned are in demand.[8]

Conclusion: Recommendations for Expansion and Growth

Given the need for collaboration between workforce development stakeholders, and the current landscape around funding workforce development initiatives, SWAG makes the following recommendations for the expansion and growth of apprenticeship for small business:

- **Fix the Funding:** Tax credits and similar incentives can go a long way in helping small business embrace apprenticeship as part of their employment development strategy;
- **Simplify the Workforce Innovation and Opportunity Act (WIOA):** WIOA is 399 pages, of single-spaced, 10-point font legislation. Hidden somewhere in these pages is funding for On-the-job Training for businesses that have apprenticeships. However, navigating this legislation is tedious at best. We must come up with a streamlined approach to administering this program.
- **The PROSPER Act**: Consider provisions that include access to apprenticeship and the elimination of the 25% cap on private sector employment from the Federal Work Study Program.
- **Strengthen the US DOL:** To meet the growing demand for Registered Apprenticeship, the US DOL will require additional support. Funding for personnel, upgrades to technology, and updates to existing work processes is critical for the US DOL to continue to serve the workforce development community.
- **Competency-based education**: This is the most effective way to equip learners with the tools they need to fill today's middle-skill positions. Our educational institutions must find a way to integrate it into their existing academic framework.
- **Collaboration:** In working with dozens of Small Businesses, the most important thing we have learned is that effective apprenticeship demands strong partnership. Our workforce development system must come together if we are to remain a competitive force in the global economy.

To the Committee on Small Business

On behalf of the Strong Workforce Apprenticeship Group (SWAG), thank you for allowing us to share our vision for apprenticeship, and your leadership and commitment in creating prosperity for all Americans.

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SME

MAKING THE FUTURE. TOGETHER.

Written Testimony

Committee on Small Business

Subcommittee on Contracting and Workforce

"How Small Manufacturing Companies Are Utilizing Apprenticeship to Fill the Skills Gap"

United States House of Representatives

Washington, D.C.

Delivered by Jeannine Kunz

Vice President of Tooling U-SME

(training division of SME)

March 20, 2018

Thank you, Chairman Knight and Ranking Member Murphy, for the opportunity to provide some insight into why and how small manufacturing companies are utilizing apprenticeship to fill the skills gap. I am representing SME and its training and development division, Tooling U-SME. For 85 years, SME has dedicated itself to ensuring the health and competitiveness of the manufacturing industry by developing the workforce and promoting advanced technologies. For the past decade and into the foreseeable future, the skills gap threatens the progress of this important sector in our country. According to the 2015 census, small businesses represent 89 percent of manufacturing establishments in the United States, and most don't have the resources capable or dedicated to building strong structured workforce programs from the ground up. These businesses, employing 44 percent of the manufacturing workforce, are often experiencing extreme challenges to the operation and growth of their organizations, which ultimately threatens our economic progress as an industry and nation.

In response, we have worked with manufacturers, educators and workforce organizations throughout the country to build training programs that support workforce learning initiatives and offer a national perspective with localized solutions. Hundreds of thousands of individuals from more than 5,000 companies and 600 educational facilities partner with us to strengthen the knowledge and skills of today and tomorrow's manufacturing workforce. Now more than ever, manufacturing is in critical need of help to combat challenges facing the industry at unprecedented levels.

As many already know, the skills gap is widening due to several factors colliding at once. The retirement of millions of experienced and knowledgeable workers is creating a worrisome vacuum. Other

factors, such as the introduction of new technologies and misperceptions about the image of manufacturing, contribute to a shortage of workers entering the field. In fact, over the next decade, nearly 3.5 million manufacturing jobs will likely need to be filled. Because of the skills gap, 2 million of those jobs are expected to remain unfilled.

Yet, the industry is not prepared. Tooling U-SME's Workforce 2021 Assessment, a five-year study, reveals companies are falling dangerously behind when it comes to addressing the manufacturing skills gap. Nearly nine out of 10, or 88 percent, say that their company is having problems finding skilled workers in manufacturing. And small companies, on average, are more challenged to find skilled workers than larger companies, as they have additional disadvantages when it comes to factors such as health and benefit plans. Small businesses often cite the challenge of hiring and training an employee, only to have the larger company down the street recruit that employee away.

Since the workforce and skills gap challenge runs deep, there is not a one-size-fits-all solution for small businesses. Rather, they need an arsenal of several accessible, interwoven options, so they can address various needs as they arise and evolve.

There is no doubt that the small-business arsenal should include apprenticeship, a positive solution with a measurable return on investment. Small businesses in manufacturing are known for informal, tribal knowledge-driven approaches that do not validate the transfer of skills to new workers. This puts their organizations at significant risk, especially with the retirement of baby boomers. Manufacturers must have formalized programs in place for onboarding and on-the-job training, such as formal competency-based apprenticeship programs.

As manufacturers struggle to find qualified workers, they are tapping into an age-old training approach with a modern twist. Around for generations, apprenticeships—which allow employees to earn while they learn—are seeing a renaissance as the industry addresses the skills gap. By establishing apprenticeship programs around industry-wide standards, U.S. employers who sponsor such programs can more quickly build a pipeline of skilled workers, boost retention, reduce recruiting costs and improve productivity.

We believe that training and professional development is the key to the future success of manufacturing. Additionally, we believe that forward-thinking technical schools and community colleges are our critical partners in this effort. Manufacturers are the keepers of vital knowledge and technologies, but this knowledge will be lost through transition and a retiring workforce unless it is passed on. We have developed an extensive, diverse catalog of manufacturing-specific content and innovative learning tools to help manufacturers bolster their expertise and leverage their people to successfully compete in today's economy.

SME supports nationwide Department of Labor apprenticeship programs with a competency-based approach to traditional apprenticeship models. In the past, apprenticeships have involved completing Related Training Instruction and On-The-Job Training

hours to attain journey worker and journey-level status. However, today's apprenticeships differ from earlier iterations. Informal, time-based programs are being replaced by formal, competency-based programs. SME believes that competency-based learning and development programs are essential to successful learning of specific job roles. Our Apprenticeship Acceleration Framework examines the necessary knowledge and skills that support common apprenticeship job functions. This is especially important for small businesses, as they typically don't have a Human Resources Department or Learning Officers to create these programs from scratch. Instead, they must rely on government and associations to provide a framework, standard or structure to work within.

Through our partnerships, SME has seen how well the apprenticeship model has worked for small businesses. For example, the Manufacturers Association of Central New York, known as MACNY, represents more than 300 manufacturers and business organizations across Central and Upstate New York. These small- to mid-sized companies have the same challenge as bigger companies—a rapidly retiring workforce. But unlike bigger companies, they don't have the resources, time and money to start their own training program and address their workforce needs.

MACNY is part of a bigger organization called the Manufacturers Alliance of New York State, which brings smaller associations together for statewide economy of scale on issues such as working with the government, taxation, workers' compensation, understanding new processes and grant funding. Martha Ponge, Director of Apprenticeships for MACNY, said, "As a group, we realized that not only did we need to raise up the middle skills for manufacturing, but that entry-level positions were in jeopardy. Collaborating to solve the problem gave us positive results and a pathway for expanding our growth."

MACNY partnered with Tooling U-SME to define the standards of apprenticeship for its program, and to deploy training and measurement tools to both develop and assess apprentices. Tooling U-SME facilitated multiple workshops with MACNY stakeholders and representative employers to finalize the knowledge and skill requirements of each occupation.

MACNY is also collaborating with Working Solutions New York, a Workforce Investment Board that serves as a connector between the U.S. Department of Labor and American Job Centers. Working Solutions was awarded American Apprenticeship Initiative grants, and turned to MACNY to provide the Tooling U-SME competency-based outline for apprenticeships in seven occupations. In addition, Tooling U-SME was asked to design a pre-apprenticeship program so Working Solutions could provide companies that were not quite ready for a full apprenticeship with an alternative to begin their workforce education and fill their pipelines. This program is focusing on high school students, dislocated workers and veterans. MACNY is in discussions with leadership to take that pre-apprenticeship program and implement it in the Syracuse Public School system in 2018.

Another superb example of how apprenticeship can positively affect small business is Cox Manufacturing in San Antonio, Texas. For more than 60 years, Cox has been a maker of precision cut metal components. Since 2010, Cox has grown from 70 employees to 140 employees. Sean Althaus, training coordinator for Cox, said,

> "It's difficult to grow in manufacturing without the right people in place. Companies need to have apprenticeship programs in place for the long run. I've been able to see, firsthand, the apprenticeship program grow to a state-of-the-art model that can compete with other businesses and programs across the country. The biggest advantage for a company is related to culture and retention. Turnover has been on a downward trend the last two years. It's an investment in the future."

Sean went on to say that apprenticeships are a risk-free, debt-free way for people to gain skills and education. Apprentices get paid by their companies to perform normal duties and earn while they learn. The key component is that they come out with Department of Labor credentials, which are objective third-party credentials recognized at any facility.

Cox and other small companies are having a lot of success pursuing an apprenticeship strategy that helps build an appealing culture and the talent pipeline. There are cost savings, too. According to the 2014 Accenture Manufacturing Skills and Training Study, the average manufacturer can lose 11 percent of annual earnings due to the skills shortage.

One last example of how small businesses are using apprenticeship to fill the skills gap is the Westside Industrial Retention & Expansion Network, also known as WIRE-Net, based in Cleveland, WIRE-Net, a nonprofit economic development organization, has been supporting local manufacturers since the late '80s. The organization had heard from many manufacturers who were ready to invest in apprenticeship programs in order to grow their talent base, but did not have the time and expertise to implement them.

To address this, WIRE-Net created an apprenticeship program for a consortium of smaller companies, called the Northeast Ohio Manufacturing Apprenticeship Consortium. With this plug-and-play approach, local manufacturers rely on WIRE-Net to handle the administration and logistics of establishing an apprenticeship program, removing a major barrier to implementation. WIRE-Net also negotiates with educational providers on behalf of the consortium, and provides expert, structured, on-the-job training for the apprentice mentors at each company.

The consortium approach translates into buying power. It also helps persuade trainers to be responsive to the needs of consortium members, especially in terms of scheduling technical course work. This ensures apprentices meet standard credentials such as those of the National Institute of Metalworking Skills. WIRE-Net also identifies sources of training dollars to keep training costs affordable for small- and medium-sized manufacturers, working with both local and national partners.

In summary, the health of small businesses is vital to manufacturing's success. The largest OEMs in the world rely on the supply chain of small businesses. All too often, we are hearing of small businesses turning down orders or delaying expansion because they don't have the right talent in place. Apprenticeships are a proven and needed piece of a company's workforce strategy to combat the skills gap. They help small businesses build a pipeline of skilled workers, grow internal talent, retain employees, reduce recruiting costs and improve productivity. Undoubtedly, support of small businesses needs to be at the forefront of our conversations about strong economic and workforce development. We thank the Subcommittee on Contracting and Workforce for taking the time and care to better understand the role apprenticeship plays, and to stress its importance as part of a strategic and multi-pronged attack on the skills gap.

Thank you.

launch code

Written Testimony
Committee on Small Business
Subcommittee on Contracting and Workforce
"Workforce Development: Advancing Apprenticeships for Small Business"

Jeffrey A. Mazur
Executive Director, LaunchCode

Thank you for the opportunity to share insight into the important role apprenticeships play in closing the skills gap and strengthening America's workforce. At LaunchCode, we see the importance of apprenticeship initiatives every day and the impact they have on both our students and our hiring companies.

This conversation is paramount - not only is America facing a serious skills gap and workforce crisis, but at the same time, millions of Americans are unemployed or stuck in cycles of low wage employment. In the tech industry, the numbers paint a more troubling image. Code.org estimates there will be one million more computing jobs than applicants who can fill them by 2020.

It's a complex problem in need of an innovative solution. At LaunchCode, we have leveraged our unique education and apprenticeship program to reinvent the way individuals learn their trade and challenge the way companies hire and retain talent. Apprenticeship programs like LaunchCode's across industries equip our workforce with more accessible training and in turn minimize the skills gap currently threatening our country's economic future.

Limitless Opportunity: The LaunchCode Mission

LaunchCode is a national nonprofit creating pathways to economic opportunity and upward mobility through job-focused education, apprenticeships and job placement in technology. LaunchCode's process is unique in that we specialize in identifying talented, driven individuals who often lack the traditional credentials for a job in technology. In fact, 99% of our students do not possess a degree in Information Technology or Computer Science. We believe opportunity for a career in technology shouldn't be limited to those who can afford a traditional four-year degree program.

Our education programs not only focus on specific programming languages high-demand in the tech industry, they offer job-readiness skills to equip students with the crucial skills needed to succeed in the workplace. LaunchCode then matches individuals with one of our 500 employer partners, ranging from small startups to Fortune 500 companies, for a paid apprenticeship where they are paired with a mentor that invests in the growth and success of the apprentice.

launch code

Revolutionizing Hiring

Founded by Jim McKelvey, co-founder of Square, LaunchCode was established to address the urgent need for economic opportunity and technology talent in the region. When founding Square, McKelvey experienced firsthand the lack of access to technology talent in St. Louis. Companies in the region compete to attract a limited number of programmers, creating a talent deficit that limits opportunity and growth. Employers lack a way to find skilled, new tech talent from all backgrounds and walks of life.

LaunchCode found that in order to solve this problem and widen the pool of qualified individuals, our curriculum needed to go beyond technical skills and focus on preparing individuals to enter the workforce. Through interview preparation, workshops, group projects and individualized coaching, students are given the soft skills to leave LaunchCode job-ready. Our evaluation process ensures that companies who take on an apprentice are getting someone who has been trained to fit their environment and add value to their team.

LaunchCode's apprenticeship model creates an alternative and flexible recruitment pathway to help individuals from diverse backgrounds find employment, and at the same time, de-risks the hiring process for employers. On average, employers only speak with three LaunchCode candidates before finding the apprentice that is the perfect fit for their team. Once matched, companies mentor the apprentices, and, if they determine that the candidate is a good fit, transition them into permanent placement at the end of the program. To date, LaunchCode has used its apprenticeship model more than 1,000 times to place aspiring developers into a first job in a tech career.

The model puts companies in control, allowing them to integrate apprentices into their workspace and mold the apprentice's skills to fit their needs. At the same time, apprentices benefit from earning a livable wage while gaining real-world work experience and the chance to further develop their skills. Our method has proven to be successful on both ends - more than four of our five LaunchCode apprentices are hired on an permanent employees.

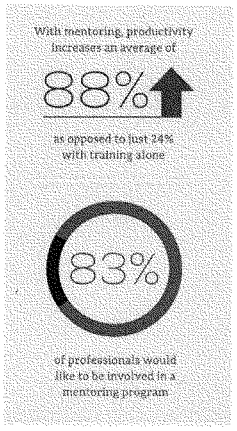
"We recognized an intriguing opportunity to (work with LaunchCode) to match, through our apprenticeship program, second career folks with our need for COBOL programmers. These people have an unmatched enthusiasm for their roles and are filling a gap that was otherwise hard to fill. They are quite productive. It is a powerful win-win situation."

-Neal Sample, COO of Express Scripts

launch_code

Mentorship: The Benefits are Twofold

LaunchCode knows the key to successful apprenticeship initiatives is the relationship between the apprentice and the employer. Mentorship within a company benefits everyone involved. It allows the apprentice to adapt faster and quickly learn the explicit and unspoken rules and norms critical to succeeding in a new environment. They learn how to accept feedback in important areas such as communications, technical skills, change management and leadership skills. Companies with mentorship programs experience lower turnover, improved leadership skills, higher job-satisfaction and engagement rates and better collaboration among teams. The process allows mentors to play an active role in shaping the way knowledge and skills is spread throughout their organization, giving them a sense of ownership over a company's mission and goals.



In a study, Robert Walters Recruiting found that 83% of professionals would like to be involved in a mentoring program, yet only 29% are in workplaces that offer them. Mentorship between a senior employee and an apprentice has been proven to have a positive effect on a company's bottom line, as well. In 2016, the U.S. Department of Labor predicted for every $1 spent on an apprenticeship, employers gain $1.47 in return through increased productivity and greater innovation.

Apprenticeship and the Talent Gap

The U.S. Department of Labor's Employment and Training Administration reports 533,000 total individuals nationwide who participated in an apprenticeship in 2017. This number is dismal, especially when compared to the 13.3 million individuals enrolled in four-year colleges and universities. There is a robust pool of individuals ready and willing to learn the skills needed by employers. Apprenticeship programs provide employers with an untapped source of skilled individuals, many of which may be passed over in a traditional hiring process.

Closing the skills gap, especially in the tech industry, and adding more pathways that lead directly to jobs is imperative to ensure prosperity across our country. At LaunchCode, we believe the answer lies in accessible accelerated training and apprenticeship initiatives supported by mentorship. However, it's not a job one organization can tackle alone. It takes collaboration with workforce agencies, public institutions, and educators to create a sustainable pipeline of talent for a strong and diverse future workforce.

launch code

Expanding and Improving Apprenticeship in Tech

In four years of existence, LaunchCode has sought to increase the adoption of apprenticeship by employers hiring for middle to high skill technology occupations, such as software developer. In 2017, 124 employers used LaunchCode's process to hire new tech talent into their organizations, with the most prolific employer partner bringing on more than 60 apprentices. Through this experience, LaunchCode has identified principles we believe are key in broadening use of apprenticeship, particularly in technology.

Flexibility

Because of the vast and continually growing number of technologies, frameworks and programming languages, different employers hiring for technical roles, even roles with the same nominal job title, are frequently looking for very different skill sets. The traditional model of trades apprenticeship, with its reliance on standards that are often virtually identical across employers in a specific occupation, is not a good fit for tech occupations like programming. Further, the traditional model of employer-sponsored apprenticeship programs creates practical barriers for tech hiring, much of which happens within small entrepreneurial or startup firms that cannot reasonably create and manage their own apprenticeship programs.

These issues can be overcome through use of intermediary-sponsored apprenticeship programs whose standards are flexible enough to accommodate hiring across a range of different specific technologies, and can be used by a firm to bring on only a single apprentice, if that's the scale it can accommodate. LaunchCode's apprenticeship is flexible enough to allow for hiring of developers in well-known competencies like Java, C#, JavaScript or more niche technologies such as Pega, Cobol or ServiceNow. Flexibility allows employers to use the apprenticeship across the range of scale and nature of need.

Integration

Among the most important considerations employers entertain when contemplating use of LaunchCode's apprenticeship program to hire junior tech talent is the ease with which the program can be integrated with the typical hiring process. That calculus often hinges on whether use of apprenticeship will require the employer to create new infrastructure or processes.

Employers are more likely to see apprenticeship as a viable option if it is designed in a manner that meshes with existing hiring and onboarding practices. Can the apprentice be onboarded in largely the same way a typical employee is onboarded? Does the program require drastically different employee review and assessment for apprentices than is typical for employees? Do apprentice wage, benefit and employment status match the employer's existing expectations and processes for how similarly

situated employees are treated? If the employer can answer 'yes' to these questions, the likelihood of their adoption of apprenticeship is substantially greater.

Competency-based

The traditional model of apprenticeship, with its focus on time in program as a key component of completion, can pose a barrier to widespread adoption of apprenticeship. This is particularly true in the field of technology, in which many prospective apprentices come to the process with a substantial existing level of related skill and technical readiness. Under the most common apprenticeship standards, these existing skills are not taken into account at all in determining the length of time which an apprentice must spend in program. The apprentice with existing skill doesn't get "credit" for previously developed skill and competencies.

But under competency-based apprenticeship models like LaunchCode's, competency -- not time in the program -- is the primary determinant of progress and readiness for journeyman status. In LaunchCode's model, an in-depth assessment of existing skill at the outset can demonstrate that the applicant already has a level of technical skill that essentially eliminates the need for classroom-based, related technical instruction. This allows those with the requisite level of skill to skip immediately to a full-time on-the-job experience. The hosting employer is then left to judge when the apprenticeship is successfully completed, based on assessment of competencies defined by the apprenticeship standards.

Accelerated

As much as any field, employment in technology is subject to rapidly changing conditions. Technologies emerge, evolve, fall out of favor, and disappear from use regularly, sometimes in a very rapid cycle. This means that programs intended to provide job readiness in technology are effective o the degree that they can move people through to competency on an accelerated basis and effectively stay ahead of changes in the industry. An apprentice starting a two-year apprenticeship in software development risks seeing much of what she's learned become obsolete by the time she is fully ensconced in the job.

LaunchCode's apprenticeship is designed so that most apprentices see their on-the-job experience last 90 to 120 days. Those that require pre-apprenticeship skilling from LaunchCode complete those programs in 14 to 20 weeks. In almost every instance, a LaunchCode participant's experience will last between 3 months and 12 months, depending on aptitude at the point of entry. This timeline allows people to use apprenticeship to pivot relatively quickly into a high-growth career, and lets employers to use apprenticeship to fill hiring needs on a more expedited basis than is the case through most other pathways.

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March 20, 2018

The Honorable Steve Knight
Chairman
Subcommittee on Contracting and Workforce
The Committee on Small Business

The Honorable Stephanie Murphy
Ranking Member
Subcommittee on Contracting and Workforce
The Committee on Small Business

Dear Chairman Knight and Ranking Member Murphy,

On behalf of Associated Builders and Contractors (ABC), a national construction industry trade association with 70 chapters representing more than 21,000 chapter members, I write in regard to the March 20 hearing titled, "Workforce Development: Advancing Apprenticeships for Small Business." We commend you for calling this hearing to help draw attention to America's skills gap and highlight the positive return on investment that apprenticeships can add to small businesses.

ABC and the construction industry are fueled by small businesses: according to the most recent census data, businesses employing fewer than 100 employees account for 99 percent of all construction firms. In an industry of 7.5 million construction professionals, 89 percent of ABC member companies earn annual revenues of $20 million or less.

ABC chapters offer more than 800 employee training programs across the country, 300 of which are currently registered with the U.S. Department of Labor. Additionally, ABC member companies annually invest $1.1 billion in training construction professionals to ensure that their workforce is safe, skilled and productive. These programs emphasize work-based learning and are aligned with industry-recognized credentials that are nationally portable. ABC and its chapters are doing their part to train construction professionals using innovative and flexible apprenticeship models like just-in-time task training, competency-based progression, work-based learning and government-registered training to build a safe, skilled and productive workforce.

As the Committee on Small Business examines apprenticeship initiatives, specifically the Department of Labor registered apprenticeship program, we urge you to recognize that registered apprenticeships play a role in training, but it is only one option that the construction ecosystem deploys.

For many industries today, training and workforce development occurs outside the parameters of DOL's registered apprenticeship programs, due to their rigidity, burdensome administration requirements and single-craft focus. Private industry has the flexibility and innovative mindset to offer programs that fit all levels of skills based on the ever-evolving demands of the market. Under this model, individual workers can develop competency in multiple crafts or skill areas, thereby becoming an attractive hire on the job market.

We thank the committee again for calling this hearing, and would welcome the opportunity to host any member of Congress at a facility to demonstrate our vast workforce development system.

Sincerely,

Kristen Swearingen
Vice President of Legislative & Political Affairs

House Committee on Small Business

Subcommittee on Contracting and Workforce

"Workforce Development: Advancing Apprenticeship for Small Business"

March 20, 2018

Chairman Knight, Ranking Member Murphy, and distinguished Members of the Committee:

On behalf of the Iowa Brewers Guild, I'd like to express my appreciation for the opportunity to share our experience working with the Registered Apprenticeship system to establish our program.

The Iowa Brewers Guild is the trade organization for the growing craft brewing industry in Iowa, and along with promoting and

protecting Iowa beer, one of our primary goals is to improve the quality of beer brewed in the Hawkeye State. To that end, we offer workshops and an annual technical conference to our members and the general public.

A few years ago, we watched as brewery after brewery opened and expanded across the state, and we became concerned about the skillsets necessary for continued success. On the surface, brewing beer seems a fun occupation—and it is. But it is also dangerous work that requires scientific precision for success. If our breweries were to compete in the broader beer scene, we would need to take steps to have well-trained brewers available in our state.

Enter the Registered Apprenticeship Program.

We were surprised to learn that no apprenticeship standards existed for a professional brewer. As there are very few brewing schools or training programs across the world (and none in Iowa), our Board of Directors elected to pursue an apprenticeship program of our own. Along with members of our Education Committee, I researched the process and appropriate criteria, and engaged the Office of Apprenticeship in Des Moines.

Everyone I encountered in the process was helpful and supportive as we worked to construct our Standards of Apprenticeship, and we were pleased to learn that our plan was approved by the Department of Labor a few months later.

Due to the small size of our Iowa breweries, we've known all along that we would run very few apprentices through our program. (At present, we have only one apprentice in the program at Firetrucker Brewery in Ankeny—the experience is going well for all parties.) However, there is much interest from those looking to become professional brewers, and I have many applications on file (from Iowans, out-of-staters, and as far away as Brazil) ready for a position to open up. Beyond potential apprentices, I've received queries from colleges, brewers guilds, and Workforce Development offices from other states looking into the idea of creating a program of their own.

Iowa has long been known for having a strong educational system, and so regardless of how many apprentices our breweries are able to engage in the coming years, we feel great satisfaction in knowing that the Iowa Brewers Guild forged a path to make Professional Brewer a Department of Labor-approved apprenticeable occupation. We are hopeful that other businesses or organizations will take our framework and apply it to training programs in their own states and communities.

We believe the apprenticeship process is a respectable means to job training and a valuable credential for job seekers to carry, especially in an occupation such as ours. We are proud of our part in designing a program from which others around the country may also benefit, and I am pleased to report that our experience with both the Office of Apprenticeship in Des Moines and the Department of Labor in Washington, DC has been positive and professionally rewarding.

Sincerely,
J. Wilson
Minister of Iowa Beer
Iowa Brewers Guild

LLOYD SMUCKER
16TH DISTRICT, PENNSYLVANIA

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The Committee on Small Business Subcommittee on Contracting and Workforce

"Workforce Development: Advancing Apprenticeships for Small Business"

Congressman Lloyd Smucker

March 20, 2018

Chairman Knight, Ranking Member Murphy, members of the committee, thank you for allowing me to provide testimony for today's hearing on such an important topic. Before coming to Congress, I owned and operated a small construction company. It was there I saw the skills gap firsthand. There were times when we couldn't expand our business and create more jobs because qualified or trained workers were simply unavailable. This taught me that one of the best ways to lift people up and provide more opportunity is to connect them with good-paying, family-sustaining jobs.

One of my priorities – and a priority of this Congress – has been to expand opportunities for work-based learning, and I recently introduced legislation that builds on that effort. **H.R. 5153, the USA Workforce Tax Credit Act** would establish a new federal tax credit that will encourage donations for community-based apprenticeship programs, career and technical education, workforce development, and educational preparedness. The goal of this legislation is to encourage investment in organizations and programs that are preparing individuals for the jobs of today. More jobs today require postsecondary credentials or technical skills to fill these good-paying jobs. There are many different types of students and numerous paths to obtaining a postsecondary degree. I for one took

college courses at night while operating that construction company during the day. We must ensure our education system is preparing the next generation of high-skilled workers to succeed in a 21st-century economy. I believe this legislation helps do just that.

It is my hope that Congress advances this critical piece of legislation. I've seen firsthand how access to these programs have changed lives and families we must be vigilant to help lift people up and support our growing economy. Thank you.

Sincerely,

Lloyd Smucker

Member of Congress

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