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House Ways and Means Human Resources Sub-Committee

**Testimony by
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Chairman Brady, Subcommittee Chairman Smith, Subcommittee Ranking Member Davis, and members of the subcommittee, it's a privilege to provide testimony before this distinguished body on today's issue—Jobs and Opportunity: Local Perspectives on the Jobs Gap. I suspect that some of what I offer is well-known by many of you. Still, I hope these notes add some value to this important discussion.

I work for the DVIRC—a regional economic development organization with a public purpose: to support the profitable growth of small and mid-sized U.S. manufacturers. Our **mission** is to strengthen regional manufacturing companies by helping them continuously improve their competitiveness and profitable growth. We are affiliated with the national [Manufacturing Extension Partnership](#) (MEP) program supported by the U.S. Department of Commerce and the Commonwealth of Pennsylvania. The MEP program is a national network of organizations such as DVIRC that provide a wide range of technical resources, consulting, and training and education to small and medium-sized manufacturers (SMMs). In most instances companies pay for these services; in some instances they are offered through a cost-share model.

Our center supports manufacturers through three practice areas: **customized consulting** (business management, operational excellence, and top line growth), **training and education**, and **executive network groups**. Our clients are independently surveyed to assess our performance and value-added impact. Since 1988 we have served more than 2,000 manufacturers and generated over \$2 Billion in client impact. I have been with the company for almost 30 years.

In this brief I offer some of the research I've come across, a local perspective, and some observations based on working directly with the workforce system and schools to increase the talent pool and engage targeted populations.

The Greater Philadelphia region is one of the densest manufacturing regions in the country. The regional tri-state market has over 14,000 manufacturing businesses and over 16,000 manufacturing-related businesses within a 50 mile radius of Center City Philadelphia. Many of these manufacturers are DVIRC clients and finding the right talent has been their top concern for over the past 20 years. We've been tracking regional on-line job postings for manufacturing for over two years and there have been



over 2,500 openings every month; last month there were over 3,000 openings.¹ These openings represent positions in all parts of the company: production, management, finance and accounting, IT, sales, etc. And those 3,000+ openings are only for the five counties of Southeastern Pennsylvania!

We also hear from our clients some of the **challenges associated with recruiting and hiring**. Too often we hear about applicants failing drug tests, or companies testing dozens of applicants only to find a few with the 10th grade reading and math levels they need to go through training and orientation. Too often, applicants that don't make the grade here and channeled to lower paying career paths instead of being offered remedial education that could get them up to speed fairly quickly. And with the emergence of new advanced technologies the bar for entry will only get higher. The importance of manufacturing to regional economies has been well documented and cannot be overstated.

In its 2015 report *The Skills Gap in Manufacturing*, the Manufacturing Institute reports that "(e)very dollar spent in manufacturing adds \$1.37 to the U.S. economy, and every 100 jobs in a manufacturing facility creates an additional 250 jobs in other sectors."²

In the same report, the authors note that: "Over the next decade nearly 3 ½ million manufacturing jobs likely need to be filled. The skills gap is expected to result in 2 million of those jobs going unfilled."³

While there are outstanding programs being developed and offered through state and federal programs, resources, and agencies, I'm hard pressed to find a national strategy that deals with the multiple dimensions of the problem. Through the Department of Labor, the Workforce Investment Act has made some strides in creating training programs that are "employer-driven", and many Workforce Investment Boards are doing some innovative and effective things. Still, the education system in our region (which is substantial) always seems to be "catching up".

According to the Employment and Training Administration, the President's FY 2018 budget request was submitted to Congress. ETA's request for FY 2018 totals \$7.66 billion."⁴ The investment is still

¹ Data is from from The Conference Board *Help Wanted OnLine*TM data set, courtesy PA Department of Labor & Industry.

² <http://www.themanufacturinginstitute.org/Research/Skills-Gap-in-Manufacturing/Skills-Gap-in-Manufacturing.aspx>

³ Ibid

⁴ The public workforce investment system is a network of federal, state, and local entities that support economic expansion and develop the talent of our nation's workforce. Businesses and job seekers primarily access services through nearly 3000 federally-funded One-Stop Career Centers. Required One-Stop partners include the Adult, Dislocated Worker, and Youth programs, Adult Education, and Post Secondary Vocational Training under the Workforce Investment Act of 1998, Wagner-Peyser-funded employment services, Unemployment Insurance, Trade Adjustment Assistance programs and benefits, and other employment and training programs such as the Senior Community Services Employment Program, Jobs for Veterans State Grant programs, the Indian and Native American Program, the National Farmworker Jobs Program, Community Services Block Grants, Employment and training activities by the Department of Housing and Urban Development, and Job Corps. Additional human



substantial, though down about \$2 billion over the past five years. Part of the challenge for local WIBs is that state and federal resources are typically tied to special populations, instead of being offered as block grants.

A new report⁵ from the [Information Technology and Innovation Foundation](#) suggests that it is time to revise workforce development and education policy. The author argues that new **advanced technologies** such as Artificial Intelligence, Robots, and Automation “**will provide a tremendous boost to society and their development should not therefore be slowed down** to protect a relatively small number of workers. Instead, much more should be done to help those people adapt.” (Emphasis added)

One key point Dr. Atkinson makes is that a “major risk to the global economy is not too much disruption, but too little. In other words, the risk is that productivity will grow too slowly. Therefore, it is critical that policies not hinder technology-led creative disruption.”

The report—*How to Reform Worker-Training and Adjustment Policies for an Era of Technological Change*—goes into depth on three principles for effectively managing this new transition:

1. Embrace the next technological wave
2. Support a full-employment economy
3. Focus on helping dislocated workers make speedy and successful transitions

The report offers insight into the implications of the disruptions that come with the 4th Industrial Revolution. For the complete report, [click here](#).

Following below are a few “headwinds” and “tailwinds” that are blowing on the issue.

HEADWINDS

The headwinds are strong, including a **20+ year disinvestment in technical education**. We’ve seen the erosion of Career and Technical Education (CTE), particularly manufacturing-related CTE programs, throughout our region. A recent (February 2018) report by [Advance CTE](#), documents the decline of federal funding for the federal Perkins appropriation, which funds CTE nationwide: “Between 2004 and 2017, Perkins funding declined by over \$116 million dollars, the equivalent of 427 million inflation-adjusted dollars.”⁶

resources program partners include transportation, Temporary Assistance for Needy Families (TANF), and USDA Supplemental Nutrition Assistance Program (SNAP) Employment and Training Programs.

<https://www.doleta.gov/budget/>

⁵ See http://www2.itif.org/2018-innovation-employment-workforce-policies.pdf?_ga=2.83536534.1609185863.1519373644-2139559703.1519373644

⁶ https://cte.careertech.org/sites/default/files/Funding_CTE_American_Imperative_2018.pdf



While progress has been made, **CTE still suffers from the stigma that it is “something less”** than a 4-year college degree. And while most 4-year college degrees are good, they have been over-valued at the expense of other alternatives, never mind the resulting student loan debt crisis...perhaps a topic for another subcommittee.

Much has been written about the **misperception of manufacturing** and manufacturing careers—the so-called image problem. The Manufacturing Institute/Deloitte 2017 Report⁷ on the Public Perception of Manufacturing documents some of the progress that has been made over the past several years...but the problem persists. Another useful report by the Institute, prepared in partnership with [Skills USA](#) and the [Student Research Foundation](#), is *Attracting the Next Generation of Students—The Role of Career & Technical Education*.⁸ This is worth a close look since there’s not much we can do about the generation we lost.

One of the most recent headwinds is the acceleration of new, **advanced manufacturing technologies**—3D Printing, Robotics, Data Analytics, The Internet of Things, Advanced Materials, etc. These, and others, have created challenges for both schools and employers, both of which are trying to fashion programs and approaches to articulating and developing the cross-functional skill sets required by industry to put these new technologies to work.

Program Sustainability. This has been and continues to be a challenge. Federal resources have contributed to building some successful manufacturing education and training programs, and outreach and awareness dollars have been built into the budgets to recruit individuals into those programs. Often, however, after the completion of a grant period (2-3 years in most cases) there are no residual dollars to continue the **“hand-to-hand combat” recruiting** required to continue to fill those classes.

TAILWINDS

Luminaries. Stars such as [Mike Rowe](#) (numerous videos and articles) and [John Ratzenberger](#) (Made in America series for the Travel Channel) are having a positive effect on changing the image of manufacturing and manufacturing careers. More must be done.

Apprenticeships. One federal bright spot is funding in the Department of Labor’s Office of Apprenticeships: the President’s 2019 budget calls for \$200 million for apprenticeships. Manufacturing will get its share but still, these take time to develop and put in place. And they’re expensive and a challenge to install, especially for smaller firms.

⁷ <http://www.themanufacturinginstitute.org/Research/Public-Perception-of-Manufacturing/Public-Perception-of-Manufacturing.aspx>

⁸ http://www.themanufacturinginstitute.org/Research/Other-Institute-Reports/~/_media/24ECD17A43324F7696BF758A9A116B6F.ashx



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Manufacturing Day. Nationally, [Manufacturing Day](#) is gaining more momentum every year since its inception in 2012. The number of Manufacturing Day events has grown 1000% since then. In 2016, Manufacturing Day affected 595,341 participants, including 267,607 students.”

“Manufacturing Day is an annual celebration of modern manufacturing during which manufacturers invite their communities — including students, educators, businesspeople, media, and politicians — to their facilities in a collective effort to educate visitors about manufacturing career opportunities and improve public perceptions of manufacturing.” You can read about some of the success stories [here](#).

Manufacturing Summit. As part of our annual Summit we bring **students from middle schools, high schools, and universities** to see and hear from manufacturing leaders who speak on a variety of topics important to the manufacturing community. These “out of school” enrichment opportunities are few and far between but are extremely effective in broadening students’ perspectives and their academic and career options.

Dream it Do It. In 2005, the Manufacturing Institute launched the [“Dream It Do It”](#) initiative to begin to change to perception of manufacturing. By 2015, the initiative reached some 426,000 students.

What’s So Cool About Manufacturing? In Pennsylvania, [What’s So Cool About Manufacturing](#) is an annual video contest designed to excite students across Pennsylvania to explore cool manufacturing careers and produce profiles of companies. Each contest features an online vote for its Viewers Choice Award. Started in the Lehigh Valley, the contest has taken root in a dozen other regions in Pennsylvania involving hundreds of schools. The contest format also has been adopted in [11 additional states](#).

Industry Partnerships. The Pennsylvania Department of Labor has been funding [Industry Partnerships](#) for about a decade. They bring together multiple employers, educators, economic development organizations, and workers or worker representatives when appropriate, in the same industry cluster to address common or overlapping human capital needs. While helping employers largely with incumbent worker training, many of these partnerships are now trying to influence the educational pipeline to create more human capital with the skills their companies need. In Southeastern Pennsylvania, the Philadelphia Workforce Investment Board (Philly Works) has been managing a successful Industry Partnership for nearly a decade, helping manufacturers with incumbent worker training and, recently, developing a “Manufacturing Boot Camp” to prepare people for entry level manufacturing positions.

National Science Foundation Advanced Technological Education program. This is a strong program worthy of aggressive investment. “With an emphasis on two-year colleges, the [Advanced Technological Education \(ATE\) program](#) focuses on the education of technicians for the high-technology fields that drive our nation's economy. The program involves partnerships between academic institutions and industry to promote improvement in the education of science and engineering technicians at the undergraduate and secondary school levels. The ATE program supports curriculum development;



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professional development of college faculty and secondary school teachers; career pathways; and other activities. The program invites research proposals that advance the knowledge base related to technician education. It is expected that projects be faculty driven and that courses and programs are credit bearing although materials developed may also be used for incumbent worker education.”

I would be glad to participate in a broader discussion about these issues and to contribute to a root cause analysis exercise that leads toward a strategic approach that gets individuals ready for these jobs and helps companies find the human capital they so desperately need.

I hope these notes are useful and I thank you for this opportunity.