EMMA COALITION

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON EDUCATION & LABOR
SUBCOMMITTEE ON HIGHER EDUCATION & WORKFORCE INVESTMENT

THE FUTURE OF WORK: ENSURING WORKERS ARE COMPETITIVE IN A RAPIDLY CHANGING ECONOMY

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INTRODUCTION

Chairwoman Davis, Ranking Member Smucker, and Members of the Subcommittee:

Good morning, and thank you for the opportunity to appear before you today. My names is Jim Paretti. I am shareholder in the law firm Littler Mendelson, P.C., and a member of the firm's Workplace Policy Institute. I am also a member of the Board of Directors of the Emma Coalition, and it is in that capacity that I appear before you this morning. As such, my testimony this morning is solely on behalf of the Emma Coalition, and not on behalf of my firm or any of its members or clients.[1]

The Emma Coalition[2] is a non-partisan, non-profit 501(c)(3) corporation dedicated to the preparation of the American workforce for the Technologically-Induced Displacement of Employment, or what we call the Coming Tide™. The Coalition seeks to bring together small and large American businesses; the organizations that represent them; representatives of organized labor; nonprofit, research and academic institutions; and federal, state, and local policymakers to address the challenges—-and opportunities-—presented by the dramatic changes presented by automation, robotics, and artificial intelligence that our workforce is already facing. It is the Emma Coalition's view that with proper preparation, employers and their workers can ride and thrive in TIDE. Conversely, without proper preparation, TIDE will overwhelm them.

The Coalition was co-founded by my law firm and the National Restaurant Association. The National Restaurant Association is the nation's leading business organization for the restaurant and foodservice industry. The restaurant and foodservice industry comprises over one million restaurants and

[1] Significant portions of the research and background supporting my testimony are drawn from a white paper prepared by Littler's Workforce Policy Institute in support of its work on the Emma Coalition, available at https://www.littler.com/files/wpi_ai_report_2.pdf. I am indebted to my co-authors Michael J. Lotito, Matthew U. Scherer, and David C. Gartenberg for their work on that paper and its use in my testimony today. I am also profoundly grateful to Shannon Meade, the Vice President for Public Policy and Legal Advocacy of the National Restaurant Association and Executive Director of the Emma Coalition, for her subject matter expertise and contributions to this testimony.

[2] www.emmacoalition.com

other foodservice outlets, which employ 15.3 million employees—approximately 10 percent of the U.S. workforce. Restaurants are job creators and the nation's second-largest private-sector employer, and 1 in 3 Americans get their first start in the restaurant industry. Most relevant to today's hearing, given those statistics and demographics, restaurants and foodservice are at the beachhead of TIDE, as automation has dramatically begun to reshape the industry. The efforts NRA and its members are making to prepare themselves and their workers are discussed in further detail below.

BACKGROUND: THE COMING TIDE IS HERE

The question of *whether* automation and artificial intelligence will fundamentally reshape our workforce is no longer before policymakers—-those trains have left the station. The questions that *are* now before the Subcommittee, Congress, and other policymakers are, when, how, and to what extent these changes change will come, and, perhaps most important, what can we do to ensure that we are prepared for them. To lay the groundwork for the Emma Coalition's efforts through strategic collaborations and promising policy possibilities, it is first necessary to understand the breadth and depth of TIDE as it rolls across our workforce.

The Staggering Depth of TIDE. There is no sign that TIDE will abate or recede; rather, every indication is that it will continue to accelerate. According to the most recent data from the Robotic Industries Association, in 2018 35,880 robots were shipped to the United States, Canada, and Mexico, a 7% increase over 2017. Almost half of these shipments were to non-automotive companies-—an increase of 41% over the prior year. At the same time, robot purchases in the consumer goods sector rose 50% in 2018. Nationally, in the United States, robot shipments increased by more than 15%. The only sector that saw major falls in robotics purchases was the automotive industry, which saw a 30% decrease in robot shipments in 2018-—hardly a surprising development, given that the manufacturing sector in general, and

the automotive industry in particular, was already more automated than most other sectors before the most recent developments in AI and robotics.[3]

Quantifying the scope of the impact of the rising TIDE, in January of this year, the Brookings Metropolitan Policy Program issued a report entitled "Automation and Artificial Intelligence: How Machines Are Affecting People and Places."[4] Consistent with prior findings by the McKinsey Global Institute, Brookings found that jobs that involve predictable, physical, and cognitive tasks are the most vulnerable to displacement by automation; perhaps not surprisingly, these are most often positions that already pay the lowest wages. In contrast, the jobs Brookings found to be least threatened by automation are those requiring a bachelors' degree and a series of non-routine and "softer" skills:

> Among the most vulnerable jobs are those in office administration, production, transportation, and food preparation. Such jobs are deemed "high risk," with over 70 percent of their tasks potentially automatable, even though they represent only one quarter of all jobs. The remaining, more secure jobs include a broader array of occupations ranging from complex, "creative" professional and technical roles with high educational requirements, to low-paying personal care and domestic service work characterized by non-routine activities or the need for interpersonal social and emotional intelligence.[5]

At the same time, it is important to note that in many instances, the displacement of some jobs by automation will result in the creation of new and different jobs. Those numbers are harder to quantify. Some studies project that 85% of all jobs that will exist in 2040 have not yet been created, which, while striking, seems a reasonable conclusion. After all, could you imagine explaining to someone in 1985 what a social media manager or web designer does for a living?

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[3] Chloe Taylor, *A record number of robots were put to work across North America in 2018, report says*, CNBC, Feb. 28, 2019, available at https://www.cnbc.com/2019/02/28/record-number-of-robots-were-put-to-work-in-north-america-in-2018.html.

[4] Mark Muro, Robert Maxim, & Jacob Whiton, *Automation and Artificial Intelligence: How Machines Are Affecting People and Places, Brookings Metropolitan Policy Program* (January 2019), available at: https://www.brookings.edu/wp-content/uploads/2019/01/2019.01_BrookingsMetro_Automation-AI_Report_MuroMaxim-Whiton-FINAL-version.pdf.

[5] *Id.* at 5.

It is evident that TIDE will disrupt virtually every sector of the economy, and have impacts that will be felt by every participant in the global labor market. But can we predict more accurately where and by whom the impact of TIDE will be felt most deeply?

TIDE Will Impact All, But Not All Equally. The disruption caused by TIDE will affect everyone, regardless of class, race, geography, age, or industry. However, while TIDE may affect everyone in some way, its impact will be felt by some individuals and in certain sectors more heavily than others. Analyzing the who and where of the TIDE's impact provides insight into the broad challenges it presents.

Given the nature of the skills that separate the jobs more vulnerable to automation from those less so, many experts believe that automation risks exacerbating income inequality unless stakeholders can work together with the specific objective of addressing the employment disruptions of automation.[6] In addition to TIDE's likely disparate impacts based on socioeconomic class, the unequal effects of TIDE also implicate issues of race and nationality. Black and Hispanic workers, for example, are over-represented in the occupations most susceptible to automation, raising concern that the use of AI may exacerbate racial inequality.[7]

On the other hand, some expect that the rise of automation and AI will actually narrow at least one facet of economic inequality—-the gender-based wage gap. Insofar as jobs that are expected to be most immune to TIDE are those requiring the "human touch" and emotional intelligence, skills such as self-awareness, self-regulation, empathy, social skills, and creative problem solving will be valued at a premium.[8] Given that women historically have been overrepresented in jobs requiring such skills, some expect that the

[6] *Id.* at 4.
[7] *Id.* at 9.
[8] *See* Lee Rainie & Janna Anderson, *The Future of WorkJobs and Job Training,* at 38 (2017).

rise of AI may actually benefit women at the expense of men. In other words, "it is quite possible the age of AI will belong to women."[9]

The Geography of TIDE. In terms of the geographic areas most prone to automation, the potential impact of TIDE varies (albeit perhaps not dramatically) across regions and states. According to the Brookings Institute, the state estimated to have the highest automation potential, Indiana, at 48.7%, is only marginally more prone to automation than the lowest-ranking state, New York, at 42.4%.[10] That said, it is possible to identify state and regional trends, which may assist in preparing for and responding to these changes.

In the United States, the highest-risk states are largely those in the heartland and Rust Belt, where large percentages of the workforce are employed in labor-intensive manufacturing and transportation industries. In Indiana, Kentucky, and South Dakota, the average automation potential for jobs exceeds 48%. Conversely, Maryland, Massachusetts, and New York have the lowest automation potential, with an average projected automation rate of less than 43.5%.

Moreover, it is possible to predict regionally and even within states where automation and the impact of TIDE may be greatest. A more granular look at the data reveals that the Toledo, Ohio; Greensboro-High Point, North Carolina; and Lakeland-Winter Haven, Florida top the list of U.S. Metropolitan Areas where jobs are most at risk from automation, while Washington DC, New York/New Jersey, and San Jose/Sunnyvale in California are the areas facing the least risk.

Impact by Industry: Not Only Blue Collar. In terms of specific industries, jobs such as cooks, servers and truck-drivers—jobs that consist largely of predictable physical tasks—are exactly the type to face the most disruption. Increasingly, chain restaurants have shifted to self-ordering machines, and others are

[9] Sarah O'Connor, *The robot-proof skills that give women an edge in the age of AI*, Financial Times, Feb. 11, 2019
[10] Automation and Artificial Intelligence, supra, at 90.

experimenting with robot-assisted kitchens to actually prepare and serve food.[11] Autonomous vehicles can replace short-haul delivery drivers, and major retailers are preparing to open cashier-less stores in the near future (does your grocery store or pharmacy not have self-checkout lanes?). But the impact on the blue-collar workforce does not tell the whole story. While it is tempting to assume that only traditionally low-wage or blue-collar occupations will be impacted by TIDE, developments in AI increasingly suggest that this will not be the case. White-collar jobs will also face disruption.

Across the globe, the banking industry is grappling with the AI revolution and what it means for their workers and their customers. In Spain's second-largest bank, only 10% of its last 10 billion interactions with human customers were human-to-human; the remaining 90% were human-to-machine. In the accounting industry, the Big Four are focusing on increasing the technology skills of accounting professionals, including courses on robotics process automation, advanced data analytics, and machine learning. Professional associations in the industry, like the American Institute of CPAs and the Institute of Management Accountants, are likewise offering training and certification to help accountants navigate the increased role of AI and technology in the modern accounting practice.[12]

In the healthcare industry, the role of artificial intelligence continues to be hotly debated. Will its primary effect be to replace human workers? Or will AI instead complement them, making their skills more effective and their use of time more efficient? The former camp notes that at least one study found that artificial intelligence systems that analyzed the medical records of 600,000 hospital patients were, in some cases, able to diagnose their conditions as accurately as doctors did.[13] Already today, "smart" hospital beds automatically monitor health statistics, and transmit information to nursing stations. Autonomous robotic carts are capable of delivering meals, surgical equipment, and supplies to the hospital floor.

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[11] Matt O'Brien, *Chefs and Drivers Beware: AI Is Coming For Your Jobs,* U.S. News, Jan. 24, 2019.
[12] Amanda Iacone, *Bots, Data and AI—All Part of Retraining the Big Four's Workplace*, Bloomberg Government, Feb. 14, 2019.
[13] Cade Metz, *A.I. Shows Promise Assisting Physicians*, N.Y. Times, Feb. 11, 2019.

At the same time, many point to the healthcare industry as the paradigm of AI enhancing workers' skills, freeing up their time for more complex duties or for tasks that require personal, human-to-human interactions. Robots assist surgeons in the operating room—not eliminating the need for surgeons, but instead allowing them to perform delicate surgery more safely and effectively. Automated pill boxes can detect whether they have been opened, and whether pills have been taken—alerting patients, and ultimately, their caregivers, when patients appear to have missed their medication. In each instance, AI does not simply replace a human worker, but rather requires a different set of skills.

The Positive Impact of TIDE. It is critical to recognize that while the prospect of disruption caused by automation and AI may be unsettling, it does not need to be wholly negative. Many economists find that automation will likely have an overall positive effect on the labor market, leading to economic growth, reduced prices, and increased demand. In the long run, automation may also lead to the replacement of labor-intensive, low-paying jobs with better jobs—assuming steps are taken to ensure that potential employees are prepared for these jobs. Employers appear to be getting this message, but progress has been gradual. Employers are not yet confronting these issues with the urgency they demand, as we enter an era where the need to continue a focus on retraining and "upskilling" could not be greater.

Some companies have managed to adopt automation without reducing—and sometimes even while expanding—the size of their workforce. For example, Axon, which manufactures and sells cartridges for Tasers, started transitioning to using robots to assemble the cartridges ten years ago. This factory automation was wildly successful, and the company has nearly doubled in value, and at the same time nearly tripled its workforce. Axon is an example both of the benefits to employees of automation, and also of the premium in taking strategic, early action to prepare for TIDE and implement automation and AI appropriately.

As discussed further below, the need to examine and replicate successful case studies such as Axon's will be of critical importance in preparing for TIDE. Exploring and fostering these innovative solutions, and bringing together businesses, workers, policymakers, regulators, educators, and everyone else with a stake at the table is central to the mission of the Emma Coalition.

THE EMMA COALITION

Launched in the fall of 2017, and incorporated as a non-profit, non-partisan 501(c)(3) corporation earlier this year, the Emma Coalition is an employer-focused, non-partisan group dedicated to educating the employer community and policymakers about the issues surrounding the TIDE, and maximizing the economic and social benefits of the TIDE for America's companies and workers while minimizing its disruptive costs for workers and companies. The Coalition is directly engaging policymakers, educating them on the importance of confronting TIDE and attempting to shape policy through thought leadership and advocacy. In addition, the Coalition is engaging with employers themselves to establish recommended practices and create training programs designed to provide employers with workers possessing the skills needed to compete in the post-TIDE economy. Our hope is to begin with an industry-wide model, and from that develop a scalable "template" for addressing TIDE's impact on every worker and every employer.

The Emma Coalition is here to partner with public and private stakeholders to coordinate the best response to TIDE, whether it involves educating a politician about the importance of TIDE, planning and implementing for a reskilling or upskilling program, or negotiating a public-private partnership. At the Emma Coalition, we believe that collective action is the only way to effectively tackle this issue.

Who is Emma? Emma is the 8-year-old granddaughter of Michael Lotito, one of the co-founders of the Coalition. For Emma—and for the millions of children she represents—our goal is to face TIDE head-on. Each of us has an Emma. For all of the Emmas of the world, it is our job to forge new and innovative ways of ensuring a skilled and prepared workforce, so as to ensure the next generation will be

ready throughout their lives to meet the challenges such awesome technology will bring. Only in that way can we ensure a prosperous, long-term future for all Americans.

Efforts of the Emma Coalition to Address TIDE. In its first year of formal existence, the Emma Coalition has been actively exploring a range of possible solutions for the issues presented by TIDE, and has worked in tandem with others seeking to ensure that students, workers and workforces are able to adapt to this paradigm shift.

Washington State Task Force on the Future of Work. Foremost, the Emma Coalition is excited to participate here this morning alongside the Washington State Task Force on the Future of Work. Over the last year we have had the opportunity to work closely with the Task Force and its staff on a number of initiatives relating to increasing workforce opportunity, and welcomed the release of its landmark report earlier this month. While I will leave discussion of the substance of that report to my distinguished colleague from the Task Force, we do believe that the steps taken to get to there—namely, a recognition by the state legislature that the time for preparation is now, and action in pursuit of that goal—should serve as a model for other states and localities in facing the challenges of TIDE. The Task Force pulled together public and private partners to engage in an exhaustive analysis of the state's economy, workforce, and current systems, so as to be able to deliver concrete recommendations for worker training, the use of advanced technology, innovative career and credentialing pathways, and statewide, robust economic development. The Coalition endorses Washington State's forward-thinking call to action,[14] and encourages other states to follow suit. In the weeks to come, the Emma Coalition will be using its resources to disseminate the Task Force's work to federal, state, and local leaders around the country.

America Succeeds. I would also take this opportunity to bring to the Subcommittee's attention another group with which the Emma Coalition is exploring strategic partnerships, America Succeeds.

[14] Emma's endorsement of the Task Force's report may be found at: https://www.emmacoalition.com/news/.

America Succeeds is founded on the belief that businesses have the obligation, opportunity, and capacity to foster greater student achievement, build an educated workforce pipeline, and protect future economic vitality. America Succeeds seeks to engage business leaders as education champions. As the Emma Coalition does, American Succeeds believes that as employers, innovators, and investors in the future, business leaders have a vested interest in improving schools: companies rely on talented employees and thoughtful customers to achieve success. Leveraging their knowledge, resources, and unique influence, business leaders can help to drive forward ambitious, aggressive, and comprehensive education reforms. America Succeeds supports a national network of non-partisan, business-led policy and advocacy organizations committed to improving public education, including six state affiliates as well as a variety of partners committed to amplifying the business voice across the country. In its recent report entitled the "Age of Agility,"[15] America Succeeds issues a call to action to business leaders, educators, students, and workers to invest and adopt new ways to ensure that a culture of lifelong learning is established in the earliest years of education, and continued throughout. In the 21st century workplace, it is no longer the "three Rs" that count—we must also make sure our students are mastering the "four Cs" of critical thinking, creativity, communication, and collaboration. On February 25, 2020, America Succeeds will host a forum on education innovation in Seattle, Washington, focusing on the next phase of its initiative, the fostering of "Agile Educators." The Emma Coalition looks forward to engaging with America Succeeds in bringing the success of its state-based model to states across the country.

State, Local, Regional Partnerships. The Emma Coalition recognizes that the challenges for workforce development are different depending on the region, state, and in some instances, the municipality. For that reason, the Coalition has focused heavily on cultivating relationships and seeking solutions at the state and local levels of government. In the state of Arizona, for instance, we are in

[15] Available at: https://ageofagility.org/report.

discussion with a nationally recognized research and teaching university to determine how best to partner toward our shared goals of workforce skill development. We are having these same discussions with the state governor's office.

Similarly, in southwest Oregon, we have recently begun to explore the possibility of a pilot project in conjunction with business, the local Workforce Development Board, and a community college to develop a model for identifying skills necessary to upskill or retool, and an effective local model for delivering the training necessary to these skills.

In each instance, it is our hope that these partnerships will be the most effective in tailoring and piloting solutions to TIDE geared to the specific needs of the state or region, its workforce, and its industry profile. In addition to these initiatives, the Emma Coalition is examining—and urges the Subcommittee to examine—promising policy solutions, in both the private and public sectors.

Workforce Data Analytics. The Emma Coalition is convinced that workforce data and data analytics will be crucial in responding to TIDE. To that end, we are exploring partnerships with firms that collect and analyze workforce and labor force data. Our mission: to determine how we can use data analytics to identify at a granular level—by industry segment, geography, experience, and otherwise—which jobs are most susceptible to automation or displacement by AI; what are the jobs likely to replace those positions; what are the skills necessary for success in the displaced position as compared to a newly-created position what is that delta, and what sort of upskilling is needed to close the gap; and finally, how do we effectively deliver the skills training and education necessary to enable workers to move from displaced positions to new ones. The Coalition is actively exploring a number of joint ventures toward piloting such a data- and evidence-driven program.

Economic Incentives for Lifelong Learning. While there are many areas of uncertainty surrounding TIDE, one message seems increasingly clear: Already now, and increasingly in the future, we must change

the paradigm of how we educate students and workers. In too many instances and industries, gone are the days where a terminal degree or certification would ensure that an individual is provided with the skills they need to ensure continued opportunity throughout their working lifetime. Rather, the need for workers throughout their careers to be dynamic—or agile, as our colleagues at America Succeeds would say—is paramount. The willingness, and hopefully, eagerness, to evolve, adapt, and upskill will be critical. For many, economic barriers and access to resources will inhibit that progress. In addition to the WIOA-based solutions discussed by others here today, we encourage policymakers to consider simple, individualized, and accessible solutions. One area we believe shows promise is in the concept of financial incentives for lifelong learning. In the House and in the Senate, numerous proposals have been floated around the idea of "Lifelong Learning Accounts" or "LiLAs." While proposals may differ in the details, the fundamental underpinning of each is to use the Internal Revenue Code to provide for tax-favored means of putting aside resources for education, training, and development. Currently, we provide tax-favored ways to set aside monies at the end of our careers through 401ks and IRAs, and at the start of our careers through tax-deferred options to save for college. The Emma Coalition endorses the principle that we should explore the effectiveness of providing similar benefits for workers *throughout* their careers.

A/I Preparedness. The United States is woefully behind in developing a strategy to address the complex and interrelated issues raised by artificial intelligence and TIDE. Indeed, many have viewed our lack of engagement not only as a matter of economic security, but as one of national security. Other nations—most notably, China, Japan, and Germany—have invested billions of public dollar in initiatives to ensure that they are on the vanguard of the AI revolution. To date in the United States, our efforts have been lagging at best.

There is cause for optimism, however. Because TIDE represents a nationwide and distinctly nonpartisan challenge, there is some hope that even in the current fractured political climate, the importance of meeting the TIDE head-on will bring legislators from both sides of the aisle together to forge a path

toward a solution. A promising start may be found in H.R. 827, the "Artificial Intelligence Job Opportunities and Background Summary Act of 2019" (the "AI JOBS Act"). Enjoying broad bipartisan support, the AI JOBS Act would direct the Secretary of Labor, in conjunction with stakeholders, educational institutions and other agencies, to report to Congress on:

- The specific data necessary to properly analyze the impact and growth of artificial intelligence (and the availability of such data).
- Those industries that are projected to have the most growth in artificial intelligence use, and whether the technology will result in the enhancement of workers' capabilities or their replacement.
- The expertise and education (including computer science literacy) needed to develop, operate, or work alongside artificial intelligence over the next two decades.
- Which demographics (including ethnic, gender, economic, age, and regional) may experience expanded career opportunities—and conversely, which may be vulnerable to career displacement—due to AI.
- Recommendations to alleviate workforce displacement, and to prepare future workforce members for the artificial-intelligence economy.

I would also take this opportunity to highlight bipartisan legislation introduced by Senators Martin Heinrich (D-NM), Rob Portman (R-OH), and Brian Schatz (D-HI) in the Senate, that seeks to focus on ensuring American competitiveness with respect to AI—the Artificial Intelligence Initiative Act ("AI-IA"). So as to ensure that American employers and workers can compete in the global economy as it is transformed by AI, this legislation would support the development of a workforce pipeline for science and technology with respect to artificial intelligence by making strategic investments to:

- Expand the number of researchers, educators, and students with training in science and technology related to artificial intelligence;
- Increase the number of skilled and trained workers from underrepresented communities who can contribute to the development of artificial intelligence and artificial intelligence technology, diversify the artificial intelligence workforce, and expand the artificial intelligence workforce pipeline;

- Promote the development and inclusion of multidisciplinary curricula and research opportunities for science and engineering with respect to artificial intelligence, including advanced technological education, during the primary, secondary, undergraduate, graduate, postdoctoral, adult learning, and career retraining stages of education; and

- Equip workers with the knowledge and skill sets required to operate effectively in occupations and workplaces that will be increasingly influenced by artificial intelligence.

To achieve these goals, the AI-IA proposes establishing three new bodies with interlocking missions to help advance the Initiative's objectives: an Interagency Committee on Artificial Intelligence; a National Artificial Intelligence Advisory Committee; and a National Artificial Intelligence Coordination Office. These are but two pieces of legislation we would highlight today; there are numerous others, and we expect more to come. After a long period of stagnancy, it is heartening to see that our highest levels of government are at last engaging on these issues. To that end, the Emma Coalition endorses the recent creation in the House of the bipartisan Congressional Future of Work Caucus, led by co-chairs Lisa Blunt Rochester (D-DE) and Bryan Steil (R-WI), which complements both the House and Senate's existing bipartisan AI Caucuses. We urge member of all of these caucuses to work together, particularly with respect to the immediate and coming workforce challenges raised by TIDE and the use of AI.

INDUSTRY AND EMPLOYER CASE STUDIES

It is tempting to view AI as simply a measure for employers to reduce labor costs, and it is axiomatic that economics will always play a role in workplace analysis. That said, given the strength of the economy, and the fact that more than seven million jobs go unfilled today because employers are not able to find workers with the skills they need to fill them, we submit that there is a strong business case for employers to invest resources to ensure a skilled and adaptable workforce, and highlight some examples of how responses to TIDE are being met head-on in the private sector.

The Restaurant and Foodservice Industry. As I mentioned earlier, the restaurant and foodservice industry is at the vanguard of preparing its workforce for the changes TIDE will bring. As its

national trade association, the NRA is a leader in industry-wide efforts to ensure education, skills training, and opportunity for new and existing workers in the foodservice industry.

Through its Educational Foundation, the NRA's Prostart program is deployed to empower the next generation of restaurant and food service employees. Prostart is a nationally recognized career and technical education program with 150,000 high school students enrolled annually in 1,900 schools in all 50 states. NRA's Restaurant Ready program puts underserved youth on a path to employment and independence. NRA's Educational Foundation partners with community-based organizations and local hospitality employers to provide opportunity for youth ages 16-24 disengaged from work and school.

At the same time, to enable foodservice industry workers toward a career in management, NRA's apprenticeship program combines on-the-job training with classroom instruction. It currently services over 2,000 apprentices nationwide, with highly successful results. Finally, NRA fosters advancement through continued education, providing more than $850K awarded annually to teachers, students and adults. It also devotes considerable resources to transition military service members to restaurant careers—today, 250,000 veterans work in the restaurant industry.

Cargill Incorporated. Cargill Incorporated, the largest privately held corporation in the United States by revenue, offers a TIDE public-private partnership success story that others might model. In 2015, Cargill determined to upgrade a meat-operating plant in Columbus, Nebraska, which would lead to the loss of 160 of the plant's 240 employees. However, rather than just eliminating these positions permanently, Cargill found it in the best interests of both the community and the company itself to reskill these displaced employees—-no small feat, given that many of the employees lacked English language and literacy skills. Cargill partnered with Columbus' Central Community College and eventually developed a multi-stakeholder coalition with local and state labor officials, the Nebraska Department of Education, and other private and public institutions to develop the reskilling plan.

Ultimately, every single employee affected by the plant shutdown was given the option to enroll in 36 weeks of classes. Thus, this program benefited both employees who stayed on—who gained skills, making them more productive employees—and even those whose employment was terminated. When the plant reopened after the upgrades, 90% of those who were laid off returned to the new plant in higher-skilled positions. On the whole, the number of employees at the plant more than doubled, and almost all new positions paid better.[16]

While it is clear that there will be no "one-size-fits-all" approach to government's partnering with businesses to meet the TIDE, Cargill's engagement with government, workers, and the community, offers a model and a means for thinking outsize the zero-sum box that too often limits meaningful discussions of the disruptive effects of automation.

CONCLUSION

At the end of the day, it is clear that automation, robotics, AI, and continued technological innovation will continue to dramatically reform our workforce at an exponentially increasing rate. The challenges ahead are great—but the Emma Coalition firmly believes that equally so are the opportunities. With strategic partners and others willing to meet this challenge head-on, we stand ready to ensure that businesses and workers are prepared to meet the coming TIDE, and are able to thrive in it.

To that end, we leave with the Subcommittee and others in Congress this call to action. While many of the goals I have outlined in my text today fall primarily on the shoulders of other stakeholders, the Emma Coalition maintains that the federal government has a strong role to play in addressing the challenges of TIDE. As lawmakers you have the opportunity to ensure that we as a nation will deal with TIDE, and forge a national strategy for addressing the policy and legal issues raised by automation, AI, and job displacement,

[16] For a fuller discussion of the Cargill case study, *see* World Economic Forum, Centre for New Economy and Society Insight Report, *Towards a Reskilling Revolution: Industry-Led Action for the Future of Work*, at 22-23.

so that our workforce is second to none in the world. You have the ability to make sure we devote proper resources to these efforts, to empower and engage all stakeholders, and make sure that our K-12, vocational, and secondary education systems, as well as our workforce development strategies and delivery systems, are equipped for these tasks. We believe we at the Emma Coalition and you in Congress share the responsibility to rise to this challenge, and to ensure that the 21st is the next American Century. We stand ready to work with you to achieve that goal..

Thank you again for the opportunity to appear before you today to discuss what we believe is among the most critical matters of labor and economic policy we will face in this century. I welcome any questions you may have.