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**Testimony before the U.S. House of Representatives Committee on
Science, Space, and Technology Subcommittee on Research and
Technology**

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Summary

The U.S. manufacturing sector is a key engine of innovation, wealth generation, job growth and national security. America cannot retain its position of leadership in the global marketplace without a robust and vibrant industrial base.

Although America remains the world's top producer, our nation has surrendered important manufacturing sectors. They were not all lost in the pursuit of cheaper labor, or as a result of products becoming low-margin commodities. We have lost production of cutting-edge innovations developed in America because of tax, regulatory, skill, finance and infrastructure limitations that make production elsewhere more competitive.

The challenges U.S. manufacturers now face are too complex and varied to be solved with the isolated policy approaches of the past. Instead, as a nation, we must develop and implement a comprehensive strategy that addresses the myriad barriers confronting our

manufacturers. The following testimony will address several of these barriers, and speak to the critical need for a comprehensive national manufacturing strategy in greater depth.

Introduction

Thank you, Chairman Bucshon, Ranking Member Lipinski, and Members of the Subcommittee for inviting me to discuss H.R. 2447, the American Manufacturing Competitiveness Act of 2013, introduced by Congressman Lipinski.

My name is Deborah Wince-Smith and I am the President and CEO of the Council on Competitiveness. The Council is a non-profit, non-partisan organization composed of CEOs, labor leaders, university presidents, and national laboratory directors working to ensure U.S. prosperity. Before I turn to discuss Representative Lipinski's bill, I would like to take a moment to contextualize my remarks.

The Council on Competitiveness and Manufacturing

In December of 2011, the Council released *MAKE: An American Manufacturing Movement* – a comprehensive national manufacturing strategy. *MAKE* represents the culmination of more than 18 months of exhaustive research that began with the launch of the Council's flagship U.S. Manufacturing Competitiveness Initiative (USMCI). Led by Samuel R. Allen, Chairman and CEO, Deere & Company; Chairman, Council on Competitiveness, the USMCI is a multi-year effort that is beginning a new dialogue on the policies and practices necessary to ensure the long-term success of American manufacturing. Since its inception, the USMCI has convened a dynamic cross-section of

America's top private sector leaders, representing the entire manufacturing value chain, to develop comprehensive policy solutions that will make the United States the most fertile and attractive environment for high-value manufacturing.

The USMCI builds on the heritage of two landmark Council efforts of the past decade. The 2004 National Innovation Initiative, which identified advanced manufacturing as an over-the-horizon issue to be addressed in order to preserve U.S. innovation capacity, and the 2009 Energy Security, Innovation and Sustainability Initiative, that yielded important insights about securing the future of U.S. manufacturing.

The Road to *MAKE*

Concurrent with the launch of the USMCI in 2010, the Council and Deloitte Touche Tohmatsu Limited (DTTL) Global Manufacturing Industry group released the *2010 Global Manufacturing Competitiveness Index*, a survey of 400 C-suite manufacturing executives worldwide on manufacturing competitiveness today, and global competitiveness over the next five years. The *Index* is a groundbreaking analysis of the decision-making process in the manufacturing sector, and has been a strategic tool to advance the Council's work since its release.

Building on the findings in the *2010 Index*, the Council and Deloitte again teamed to develop the *Ignite* report series: a multi-part, interview-driven project that captured insights from diverse leadership groups across the American manufacturing landscape.

The first report, *Ignite 1.0 – Voice of American CEOs on Manufacturing Competitiveness*, was released in February of 2011, and recorded the input of nearly 40 CEOs on the measures necessary to advance U.S. manufacturing. Many of you may recall my testimony before this subcommittee in March of 2011 about this important report. The second, *Ignite 2.0 – Voices of American University Presidents and National Lab Directors on Manufacturing Competitiveness* was released in August of 2011, and highlighted the perspectives of over 30 leaders in higher education and advanced research on the role education, research and discovery play in ensuring America’s manufacturing future. Released in December 2011, *Ignite 3.0 – Voice of American Labor Leaders on Manufacturing Competitiveness*, the third and final *Ignite* report, featured the insights of more than a dozen of America’s top labor leaders on the measures needed to reinvigorate the domestic economy and encourage growth of well-paying, high-skills jobs in the United States.

Another major thrust for the USMCI is the ongoing “Out-of-the-Blue” dialogue series, through which Council members across the country host dynamic manufacturing discussions. These strategic conversations have brought together over two hundred experts and practitioners from the Council’s broader network – including CEOs from multinationals and start-ups, research university and community college presidents, national lab directors, labor leaders and others. Dialogue topics range from Accelerating Commercialization and Deploying Advanced Materials to Increasing Access to Risk Capital and Building a World-class Workforce. Participants challenged themselves and

the nation to re-think what can and should be done to achieve America's full manufacturing potential, and their collaboration revealed many unexpected solutions. These efforts, in conjunction with ongoing research by Council staff, were distilled to form the Council's *MAKE* report, and the recommendations it puts forth.

Last year at the Council's inaugural National Competitiveness Forum, the Council and Deloitte Touche Tohmatsu Limited (DTTL) Global Manufacturing Industry group released the 2013 Global Manufacturing Competitiveness Index (GMCI). This report includes more than 550 survey responses from senior manufacturing executives around the world with 39.7 percent from North America, 28.5 percent from Asia, 21.0 percent from Europe, 5.4 percent from South America and 5.4 percent from Australia. Consistent with the 2010 GMCI, of the 38 countries ranked by executives China was again ranked the most competitive manufacturing nation in the world today and five years from now. In addition, talent-driven innovation was deemed the most important driver of a nation's competitiveness. Within talent-driven innovation, the quality and availability of scientists, researchers and engineers and the quality and availability of skilled production workers are ranked as the first and second most important of the 40 individual sub-components of competitiveness drivers. Catapulting into the second most important driver position is the economic, trade, financial and tax system of a nation, moving up from fourth place in the 2010 GMCI. Trade, financial, and tax policies have now supplanted labor and materials costs, supplier networks, infrastructure, energy costs, and everything else as a

more important driver of a nation's competitiveness, demonstrating executives' recognition of government leaders' increasing efforts to use public policy as an enabler of economic development.

Which is why we are here today, and it is my honor to speak to you today to help inform the development of a strong manufacturing strategy for the good of our nation.

The Importance of a National Manufacturing Strategy

Manufacturing is a cornerstone of American independence, innovation, economic prosperity and national security. Manufacturing is deeply integrated with services and has a higher multiplier effect on the economy than at any time in history. Manufacturing includes research, development, production, sales, distribution, logistics, customer service, marketing and support. It extends from the making of physical products to the delivery of services. Understanding the breadth and depth of today's manufacturing is essential to develop policies that ensure the United States will be competitive in the long-term.

Today, there are enormous opportunities to increase U.S. production and grow exports. The digital, biotechnology and nanotechnology revolutions are unleashing vast potential for innovation, manufacturing and services. They will enable new business formation, product development and job creation. In some cases they will serve as platforms for new industries and markets, but strategic government support is essential to fully realize these opportunities.

Supporting American manufacturing does not mean an industrial policy of selecting favored sectors or firms, subsidizing decaying industries, or protection from fair competition. These tactics, while used at times, rarely prove effective over the long-term. Instead, the government should focus on creating the right conditions for manufacturing to thrive, especially given the changing dynamic of global competition and the steady rise of state-supported capitalism.

We applaud the increased public and political attention given to manufacturing. America's economic portfolio requires a healthy and growing manufacturing sector to tackle the grand macro-economic problems facing the country, like job creation, debt reduction and infrastructure investments. To that end, we urge Congress and the President to develop and implement a national manufacturing strategy to maximize America's manufacturing potential. And we are pleased that The American Manufacturing Competitiveness Act of 2013 is under consideration today by the Subcommittee, and we hope that it continues to make its way through both the House and the Senate.

The Council's *MAKE* report highlights many of the challenges outlined in The American Manufacturing Competitiveness Act of 2013, and calls for a comprehensive and integrated set of actions to support American manufacturing excellence. Of the key recommendations, *MAKE* emphasizes the following:

1. We need to enact fiscal reform, transform tax laws and reduce regulatory and other structural costs to fuel the innovation and production economy from start-up to scale-up. These policies must improve the rule of law, reduce uncertainty in the business climate, encourage risk-taking and ease access to investment capital.
2. We must utilize multilateral forums, forge new agreements, advance intellectual property protection, standards and export control regimes to grow high-value investment, expand exports, reduce the trade deficit, increase market access and aggressively respond to foreign governments protecting domestic producers.
3. We need to prepare the next generation of innovators, researchers and skilled workers at every level to harness the power and potential of American talent to win the future skills race. Production work today is knowledge work.
4. We must create national advanced manufacturing clusters, networks and partnerships, prioritize R&D investments, deploy new tools, technologies and facilities, and accelerate commercialization of novel products and services to achieving next-generation productivity through smart innovation and manufacturing.
5. And we need to develop and deploy smart, sustainable, secure and resilient energy, transportation, production and cyber infrastructures to create competitive advantage through next generation supply networks and advanced logistics and systems.

The adoption of comprehensive, pre-competitive policies – i.e. policies that do not provide undue advantage or disadvantage to a particular industry or sector – are of great importance to the long-term strength of our nation’s manufacturing base. The recommendations above address some of the most pressing challenges facing U.S. manufacturers today, and while useful if implemented individually, would have a far greater impact if implemented as a suite of solutions, geared to support organic growth of the American industrial base while strengthening and deepening critical domestic supply networks. Bills like The American Manufacturing Competitiveness Act of 2013 are important steps on the path towards a national manufacturing strategy; the tool through which to integrate otherwise disparate manufacturing policies into a comprehensive agenda that empowers America’s entrepreneurs, spurs economic growth and ensures our national defense.

Manufacturing is central to the life-cycle process that brings solutions to customers. This involves cutting- edge science and technology, design, modeling and simulation through advanced computing, systems engineering, testing and verification and the contributions of complex supply networks. It also involves a wide range of services and transactions, transportation, maintenance and energy, plus the talent of many occupations—all of which are in addition to “bending metal.” Firms that commercialize new technologies and scale production grow faster, are more profitable and create more jobs than do other firms.

Unfortunately, government policies and programs tend to focus almost exclusively on product R&D, technology transfer and, in some ways, early stage commercialization. These phases are all critically important, but manufacturing at scale and manufacturing technologies are often not considered a part of the innovation ecosystem. In fact, they are often discounted, creating a negative ripple throughout the manufacturing value chain. A broad array of government policies, both foreign and domestic, have important impacts on the innovation and production process, from research funding to taxes to market access. Presently, U.S. policies are not aligned with the full life-cycle perspective of innovation that includes production at scale.

Without strong public and private support for the complete life-cycle innovation and production process, the United States cannot maximize the return on its innovation investments—a return measured in jobs, growth and tax revenue. Today, foreign investors—especially through sovereign wealth funds—acquire production of U.S.-developed technologies and innovations. Even domestic investors typically condition their investment in new technologies on a business plan that directs manufacturing abroad.

The policies, programs, strategies and business models that worked in the past are inadequate to secure America's future. Government, business, labor and academic leaders must rethink and retool the nation's business environment to seize emerging

opportunities and address several shortcomings. These goals are best met through a national manufacturing strategy.

Conclusion

Our global economic competitors aren't waiting. They are aggressively developing, implementing and succeeding with their own national manufacturing strategies. It's time to act in our self-interest.

Americans have always been pioneers, risk-takers and makers. Our task is to set those impulses free and embrace production once more. We must create a business environment that fosters breakthrough innovations, rapid commercialization and manufacturing at scale. Americans have proven adept at rising to the economic challenge of their time. Such a time is now for manufacturing. The Council has embraced manufacturing as well with our National Digital Engineering and Manufacturing Consortium connecting small and medium sized manufacturers with high performance modeling and simulation and our most recent endeavor – the American Energy & Manufacturing Competitiveness Partnership with the Department of Energy Office of Energy Efficiency and Renewable Energy to increase US competitiveness in the production of clean energy products and to increase US manufacturing competitiveness across the board by increasing energy productivity.

Beyond these programs, the Council on Competitiveness stands ready to work with you to set in place the policies needed to ignite a new era of competitive and sustainable manufacturing.

Thank you.