

The White House Supply Chain Innovation Roundtable
Private Sector Actions to Strengthen U.S. Small Businesses

Today's White House Supply Chain Roundtable highlights the important steps that leaders in manufacturing are taking to strengthen U.S. small businesses in their supply chain, making America more competitive as a whole for manufacturing jobs and investment.

- **Volvo Trucks of North America** has partnered with over 20 suppliers—identified and sourced locally through Manufacturing Extension Partnership centers—to reduce transportation and logistics costs, through its Supply Chain Optimization Race to Excellence (SCORE) program. By facilitating engineering and operations staff, Volvo helped small and medium-sized manufacturers actualize real-world cost savings by reducing process redundancies, coaching them on ways to eliminate waste and shorten lead-times. Volvo has also developed and provided a mobile simulation tool, *S4Lean*, to highlight the potential gains and market dynamics of a company's logistics chain, lending key insights to the workforce and leadership of small suppliers. This mobile tool, which has been made available to Volvo's supply base, can be utilized on-site at the supplier, engaging both leadership and workforce. For example, Volvo partnered with its wheel-end component supplier Accuride to develop a sophisticated and efficient pull system for its standard-equipment Gunitite brake drums. This system reduced inventory, working-capital, and logistics costs while improving on-time delivery.

- **Boeing** is announcing the permanent expansion of a Supplier Development program that utilizes Manufacturing Critical-Path Time (MCT) analysis to expand business opportunities. Previously a two-year proof of concept pilot, where participants team with Boeing advisors to use MCT data to target investments in new equipment or technology, the program offers support and strategies designed to help small suppliers achieve the highest impact business improvements for innovation, competitiveness and manufacturing efficiency via MCT reduction. Participants achieve 10-50% growth in sales volume, from Boeing and other customers, and the scale-up of the MCT program will enable small suppliers to realize greater flexibility, accuracy to demand, and cost savings within 12 months.

- **Pratt & Whitney**, in an effort to double engine production over the next five years, has leveraged its Supplier Gold Program to position suppliers for success by teaching them lean principles and continuous improvement skills. Nearly 90 percent of Pratt & Whitney's manufacturing spend is in the U.S. and more than 80 percent of its sales to air framers is overseas. By helping domestic suppliers improve productivity, on-time delivery and quality across their operations, suppliers achieving Gold status average 27 percent better on-time delivery than other underperforming suppliers. Gold suppliers also produce conforming parts 99.99 percent of the time, ultimately making them more competitive. Pratt & Whitney has also deployed about 200 engineers to work directly with suppliers to build capacity, bolster their quality and improve on-time delivery. By

awarding more than \$20 billion in long-term agreements to suppliers who have embraced these process improvements and capacity upgrades, this approach has empowered small firms to invest in new capital equipment and technologies by providing the predictability in volume small firms need to confidently invest in new manufacturing processes.

- **Medtronic** has launched a Supplier Relationship Management (SRM) program for maximizing the value of supplier relationships in its Minimally Invasive Therapies Group. SRM offers a robust platform to facilitate an on-going, enterprise-wide, interaction between suppliers and internal personnel, to address questions of technologies, production quality, or cost. SRM also defines formal mechanisms for targeting and driving proactive value generation, while managing challenges and gaps. SRM enhances Medtronic's supply base performance goals: to exceed safety, quality, innovation, compliance, and service requirements while managing costs.
- **Walmart Stores, Inc.** earlier this week hosted over 2,000 suppliers, potential suppliers, government officials and other stakeholders at its "Made In USA" U.S. Manufacturing Summit. At the summit, Wal-Mart worked to connect suppliers with each other and to the resources to bring back more manufacturing jobs and investment to the United States. By mentoring its U.S. suppliers and investing in products that support American jobs, Walmart is able to bring new high-quality products to its shelves and online. Wal-Mart has committed to bringing back \$250 billion in manufacturing to the United States over five years. Roughly two and half years in, Walmart's domestic manufacturing initiative is making an impact in communities around the country and helping put people back to work.
- **Newport News Shipbuilding (NNS), a Division of Huntington Ingalls Industries**, has developed and implemented a Supplier Development and Continuous Improvement (SDCI) Program. The SDCI Program was developed in concert with the Gendedge Manufacturing Extension Partnership. The program utilizes the Manufacturing Extension Partnership across the country to help Newport News' suppliers improve performance in lead time, lean manufacturing, operations management, and project management. Suppliers that have participated in the program have seen an average of three-year contract extensions with their customers. NNS is the sole designer, builder and re-fueler of U. S. Navy aircraft carriers and one of the two providers of the U. S. Navy submarines. NNS is the largest industrial employer in Virginia and the largest shipbuilding company in the United States.
- **Global Foundries** is partnering with a range of stakeholders and suppliers in its manufacturing ecosystem to develop a Manufacturing Technology Education Center (MTEC) in New York. The collaborative model—supported by Rensselaer Polytechnic Institute, the State University of NY system, First Robotics, a range of K-12 public schools, trade unions, and several adult and veteran workforce training programs—boasts an unrivaled experiential learning environment for small and midsized manufacturers. By 2017, the MTEC facility will help these small businesses access skill development modules to upgrade the capacity of a

firm's workforce, and also access shared tools and services to increase technology adoption within the manufacturing supply chain. Global Foundries is also working with the Department of Labor, and the State University of NY system, to incubate and train 200 apprentices annually at the MTEC facility, connecting the apprentices 21st century tools and know-how to navigate advanced manufacturing opportunities.

- **Lockheed Martin** is engaging a diverse network of its suppliers in developing shared technology road maps through workshops across the country. These road maps help suppliers spot around-the-corner technologies, identify opportunities for Lockheed to share co-located facilities with its suppliers, and use some of Lockheed's tools to further generate supplier savings. Lockheed will also use these workshops to more transparently forecast seasonal needs from its suppliers, empowering small manufacturing firms to allocate resources more efficiently, freeing up costs for long term R&D investments.
- **Rolls-Royce** aims to foster a world-class supply chain and is committed to supply chain excellence. Today 70%-80% of Rolls-Royce engine components are sourced through an integrated supply chain. To ensure the highest levels of technology, quality and performance, continued engagement and collaboration with our supply chain – Rolls-Royce supplier development programs aim to improve the overall operational capability of suppliers and provide assistance to new suppliers – is key to the ongoing success of Rolls-Royce business, our suppliers and our customers
- **IBM** is deploying the Supplier Development Academy as part of their Supplier Connection initiative, by building standardized curricula delivered regionally—initially across networks in Connecticut, North Carolina, and New York—to advise small firms on the standards, expectations, and requirements necessary to do business with larger manufacturing firms across the United States. By ratcheting up the understanding small suppliers have about issues such as financial, manufacturing, operational and marketing expectations of larger clients, the Academy will better prepare them to compete, win and establish long lasting relationships with a diverse number of customers. In 2016 IBM plans additional partnerships with federal Manufacturing Extension Partnership (MEP) centers to expand the Academy to additional states.
- **Whirlpool Corporation** is increasing its delivery of consumer-focused innovation across its product portfolio through its Open Innovation program, which partners with several incubators and business accelerators throughout the United States to support early stage manufacturers and entrepreneurs. By tapping into expansive startup portfolios, Whirlpool is identifying small businesses with the technology, design, and engineering expertise that can advance the company's product line. Whirlpool's partnership with these incubators not only helps accelerate the growth of these small firms by connecting them with commercialization opportunities—but also by integrating new tools and processes throughout Whirlpool's supply chain, the company is ensuring its workforce and supply chain are at the forefront of innovation.

- **Siemens U.S.** has located more than 75 manufacturing sites in the United States, sourcing 20% of its annual purchasing volume with Small Business Enterprises. By utilizing a broad swath of supplier engagement initiatives to grow the pool of qualified, competitive sources, Siemens' rail business has developed a robust supply chain using manufacturers, suppliers and distributors to provide components and parts for locomotives it's building for Amtrak. Additionally, Siemens is focused on 'Supplier Innovation' and the company is actively working to remove barriers so that expert engineers can work more closely with Siemens' suppliers to collaborate, further drive innovation and achieve greater cost effectiveness.
- **Toyota** is empowering its suppliers to overcome operational challenges by collaborating with them through their Supplier Engineering Development (SED) Division. Toyota's SED Division provides dedicated engineering resources to suppliers from advanced stages of development through mass production. This collaboration provides opportunities to adopt new technologies, address process improvements, and detect and avoid technical issues resulting in efficient and issue free product launches. Post product launches, SED and suppliers problem solve together to reduce and eliminate potential supply risks. Roughly 80% of Toyota's suppliers have already benefitted from this type of ongoing collaboration, and works with approximately 500 suppliers in North America annually.
- **GM** is scaling up a new financial model fit for small manufacturing firms itching to invest in new or nascent technologies. The program known as *GM Ventures*, rewards suppliers who are in the development stages of nascent innovations, with access to capital and accelerator tools, in an effort to help grow the early stage suppliers. For example, GM Ventures partnered with supplier *Powermat* to develop and deploy an in-vehicle charging technology, and also worked with *Nanosteel* to develop automotive applications of high-strength steel. Additionally, GM's Supplier Diversity Program continues to train small and minority suppliers on key financial and technical strategies. Through its work with supplier Chemico Systems, the Supplier Diversity Program helped augment sales growth and position the once upon a time one-contract firm into a Tier 1 facility generating millions in revenue. Through strategic partnerships in new technologies, and supplier collaboration like these, GM continues to strengthen the supply chain which services its vehicles with over 2 billion components a month.
- **Zady**, a clothing brand harnessing the power of technology to grow its suppliers, is pursuing four strategic focus areas to enhance the efficiency and productivity of its supply chain through the application of technology. First, through a soon-to-launch exclusive partnership, Zady will increase supply chain transparency and visibility by pioneering the use of live video streaming in the farms, textile mills, gins, and factories of the company's supply chain. Second, Zady has mapped and shared its entire supply chain with both consumers and the industry broadly. As a next step, Zady will unveil a new open-source tool,

sharing information about production methods and farms and manufacturers, for use by the entire fashion industry to collectively improve and work towards a new standard for responsible production. Third, Zady is championing textile innovation by seeking the best-performing textiles for its brand, and maintaining an agile supply chain that is capable of readily adopting new textiles and textile production practices. Finally, as a venture-backed startup uniquely positioned at the intersection of apparel, technology, textile manufacturing, and retail, Zady is supporting the application of big data analytics to address the connectivity, efficiency, and productivity challenges faced by the small and medium sized manufacturers in its supply chain.