



Ensuring American Manufacturing Leadership Through Next-Generation Supply Chains

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A new MForesight study examines a fundamental question for the future of American manufacturing: the evolution of the supply chain. Robust supply chains are essential to U.S. manufacturing competitiveness. In many sectors, suppliers add well over half of the final product value. Pervasive technology changes in areas such as information systems, sensors, intelligent controls, materials, and production processes increasingly affect business practices, skill requirements, and research needs across supply chains. The combination of new technologies and business practices will enable manufacturers to be more flexible, respond rapidly to changing customer demand, allow for cost-effective customization, and increase the value added and distributed across the entire supply chain. This promise can only be fulfilled with effective policies and investments. The manufacturing community emphasizes the following:

Manufacturing Policy Recommendations

1. Support **Manufacturing Extension Partnership (MEP)** focus of promoting healthy supply chains and **regional ecosystems**. Encourage **Manufacturing USA institutes** to create strategies for developing **domestic** supply chains.
2. Create and fund **public-private partnerships** to extend SMEs' access to high-cost manufacturing equipment and engineering expertise in **shared facilities** and **high performance computing** applications.
3. Support efforts to **emphasize total cost of ownership** over unit price in purchasing decisions.

Education and Research Recommendations

1. **Ensure skill availability** by encouraging educational institutions to **replicate and scale** promising practices in skill development, extend opportunities for engineering and business students to **work with smaller manufacturers**, and engage Manufacturing USA institutes to design and **train with new technologies**.
2. Support **translational research** in developing and commercializing advanced manufacturing technologies, **multidisciplinary** research to support widespread implementation of data-driven technologies, and **research in business and management practices** that promote collaboration and innovation in supply chains.
3. Ensure policy reflects the actual **needs of manufacturers** at all levels and is informed by **economic research** to minimize negative supply chain disruption.

MForesight: Alliance for Manufacturing Foresight is a federally-funded national consortium focused on enhancing U.S. manufacturing competitiveness by providing insights to decision-makers on emerging technology trends and related priorities to inform policy and investments in advanced manufacturing.