Cyber Security for Manufacturers
Creating the Secure Factory

Cyber-attacks pose a growing threat not only to national security but also to U.S. economic competitiveness. Manufacturers received the greatest volume (20%) of targeted cyber-attacks across all industries globally in 2014.

In March 2017, MForesight: Alliance for Manufacturing Foresight and CCC (Computing Community Consortium) hosted a "joint visioning" workshop to identify actionable recommendations to government and industry on how to improve cyber security for U.S. manufacturing firms. More than forty seasoned experts from industry, academia, and government engaged in robust discussions to identify emerging threats and solutions.

The expert panels discussed challenges specific to the manufacturing domain. While new security technologies and standards are emerging, the manufacturing sector will continue to face unique and serious challenges related to legacy systems, highly heterogeneous operational and data systems, and interoperability across long supply chains, to name only a few.

The workshop participants identified priority areas to drive manufacturing-specific cyber security needs including: (a) System level security & cyber-resilience; (b) Integrity of manufacturing goods from design to the factory floor; (c) Machine-to-machine security; (d) Security across the supply chain; and (e) Cyber intelligence.

The experts also identified immediate actions including but not limited to: (a) establishing an anonymous, fault-free sharing of incidents, threats, best practices and solutions; (b) developing a national quality assurance program including cyber security certification; (c) establishing taxonomy, guidelines, standards and automated tools for risk assessment, detection, part validation, etc.; and (d) a cyber range for testing hardware and software components and systems, including workforce training.

A comprehensive final report will be released in July 2017. Stay tuned!

MForesight: Alliance for Manufacturing Foresight is a federally funded national consortium focused on enhancing U.S. manufacturing competitiveness. MForesight aligns R&D priorities with national interests and provides insights to business and government decision-makers on emerging technology trends and related priorities to inform policy and investments in advanced manufacturing.

The Computing Community Consortium (CCC) works to catalyze the computing research community and enable the pursuit of innovative, high-impact research. CCC conducts activities that strengthen the research community, articulate compelling research visions, and align those visions with pressing national and global challenges.