

NDIA and DoD Joint Working Group

Cybersecurity for Advanced Manufacturing (CFAM)

NDIA Systems Engineering Meeting
February 17th, 2015

CFAM JWG Objective

- **Government and industry members of the CFAM JWG collaborate to build on recommendations in the 2014 NDIA white paper, *Cybersecurity for Advanced Manufacturing***
 - Identify cybersecurity vulnerabilities in the manufacturing environment and mitigations . . . *types and boundaries, highest impact near-term actions, culture changes*
 - Identify ways to incentivize and assist manufacturers to improve cybersecurity in manufacturing systems . . . *policies and contract requirements, security practices, workforce cybersecurity training*
 - Develop implementation plans . . . *coordinated with government and industry groups*

Why This is Important



These are Not Cooperative R&D Efforts



From Brian
Hughes'
presentation at
2015 NDIA
Systems
Engineering
Conference



China's J-31

U.S. F-35



Russia's A-50

U.S. E-3C



U.S. HUMVEE



China's
Dongfeng EQ2050



U.S. Reaper



China's Yilong-1

Work is Underway

- 44 participants: 14 Government, 7 from membership or academic organizations, 23 company representatives
- Engaging discussion between Government and NDIA participants . . . *current situation, desired outcomes, barriers, opportunities*
- Subtopics identified . . . *teams formed*
 - ~~Terms of Reference Team~~– Now “Integration Team”
 - Policy Planning and Impacts Team
 - Technology Solutions Team
 - Manufacturing Environment Team
- Encouraging level of interest and participation

Preliminary Questions to be Addressed

- **Boundaries . . .**
 - What defines a manufacturing environment?
 - What use cases are important across the life cycle of the manufacturing environment?
- **Mitigations . . .**
 - What actions and activities can improve cybersecurity in the manufacturing environment?
 - What types of education, training and cultural changes are required?
- **Development . . .**
 - What technical solutions can increase cybersecurity in the manufacturing environment?
- **Resources . . .**
 - What existing policies regulations, and standards are applicable and what needs to be augmented, and by whom?
 - What activities implemented outside the Department of Defense can be leveraged?

Steps Forward

- **Terms of reference have been developed and agreed upon . . .** *briefing to senior OSD leadership will be scheduled*
- **Each working group has elected a team leader and are developing their deliverables . . .** *deliverables descriptions are due on March 30th*
- **Team members may be added and subject matter experts being are identified to contribute to the work . . .** *opportunities to get involved*
- **Full working group meetings to share progress . . .** *plan to meet again in April*
- **Goal is to issue report by December 2016 . . .** *will then be coordinated within DoD*

Terms of Reference and Integration Team

- This group will create the charter and scope of the CFAM JWG, and will support other teams as needed.
- **Team Lead: Catherine Ortiz, Defined Business Solutions, LLC**

Dawn Beyer
Lockheed Martin Corporation

Larry John
ANSER

Catherine Ortiz
Defined Business Solutions

Donald Davidson
Office of the DoD CIO

Michael McGrath
McGrath Analytics LLC

Chris Peters
The Lucrum Group

James Godwin
BriteWerx, Inc

Michele Moss
Booz Allen Hamilton

James Poplin
Defined Business Solutions

Policy Planning & Impacts Team

- This group will assess existing policies and regulations for applicability to CFAM; will determine additional administrative actions that could strengthen manufacturing cybersecurity, and will assess breach reporting and communication processes for improvements.
- **Team Lead: Sarah Stern, Boeing BCA Network Cyber Security**

Megan Brewster
OSTP

Daryl Haegley
OASD (EI&E) IE

Joseph Spruill
Lockheed Martin Corporation

Martha Charles-Vickers
Sandia National Laboratories

Thomas McDermott
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Bill Trautmann
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Jason Gorey
Six O'Clock Ops

Melinda Reed
ODASD(SE)

Melinda Woods
AT&L MIBP

Technology Solutions Team

- This group will assess existing technical solutions available or under development to impact cybersecurity in the manufacturing environment, and will recommend new technology development activities.
- **Team Lead: Heather Moyer, Concurrent Technologies Corporation**

Vicki Barbur

Concurrent Technologies Corp.

Dawn Beyer

Lockheed Martin Corporation

Heather Moyer

Concurrent Technologies Corp.

Craig Rieger

Idaho National Laboratory

Frank Serna

Draper

Devu Shila

United Technologies Research Center

Tim Shinbara

The Association for
Manufacturing Technology

Janet Twomey

Wichita State University

Manufacturing Environment Team

- This group will identify actions and activities that can have the greatest impact to improve cybersecurity in the manufacturing environment, and will recommend implementation processes.
- **Team Lead: Dr. Marilyn Gaska, Lockheed Martin Corporation**

Dean Bartles

Digital Manufacturing and Design
Innovation Institute

Aman Gahoonia

DMEA

Marilyn Gaska

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Nat'l Center for Mfg. Sciences

Irv Varkonyi

SCOPE

Mary Williams

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CFAM JWG Members

As of February 11th, 2016

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Digital Manufacturing and Design Innovation Institute

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Raytheon

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Red: Government Black: Industry Green: Academia Blue: Member Organization

February 17, 2016

NDIA Division Representation

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