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
- Russia’s A-50
- U.S. F-35
- U.S. E-3C
- U.S. HUMVEE
- China’s Yilóng-1
- China’s Dongfeng EQ2050

April 11, 2016
This group will create the charter and scope of the CFAM JWG, and will support other teams as needed.

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<th>Term</th>
<th>Name</th>
<th>Organization/Role</th>
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<td>Dawn Beyer</td>
<td>Lockheed Martin Corporation</td>
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<td>Chris Peters</td>
<td>The Lucrum Group</td>
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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?
Work is Underway

• 49 participants: 15 Government, 9 from membership or academic organizations, 24 company representatives and 1 FFRDC

• 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

April 11, 2016
Goals for This Meeting

By the end of our meeting today, we would like to have:

• An understanding of the cyber physical risks specific to defense
• An understanding of work being done at DHS that can inform our teams’ analyses
• An understanding of each team’s progress with connecting issues identified
• Agreement on the manufacturing environment boundaries for this activity
• An understanding of the plan going forward

April 11, 2016
Steps Forward

- Terms of reference have been developed and agreed upon...briefing to senior OSD leadership expected this quarter
- Each working group has defined their deliverables...subject matter experts being are identified to contribute to the work
- Website launched on NDIA portal...found under Industrial Working Groups
- Outreach plan being developed to share progress...workshops have been suggested as a way to engage others and test working thesis
- Goal is to issue report by December 2016...will then be coordinated within DoD and other government agencies as appropriate
CFAM JWG Members
As of April 1st, 2016

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Concurrent Technologies Corp.

Scott Frost
ANSER

Larry John
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James Poplin
Defined Business Solutions

Sarah Stern
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Martha Charles-Vickers
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SPAWAR

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Frank Serna
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Irv Varkonyi
SCOPE

David Chesebrough
AFEI

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Sandia National Laboratories

David Huggins
Georgia Tech Research Institute

Catherine Ortiz
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Joe Spruill
Lockheed Martin

Melinda Woods
AT&L MIBP

49 TOTAL
15 Government
24 Companies
4 Member Organizations
5 Academia
1 FFRDC

Chris Fall
OSTP

April 11, 2016

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