NDIA Trusted Microelectronics
Joint Working Group

Team 2:
Trustable Leading
Edge Technology Access

Presented by
Mr. Ezra Hall, GLOBALFOUNDRIES
at NDIA's 7th
trusted Microelectronics Workshop
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(1) What are the potential consequences of the Chinese Government's substantial global semiconductor investments to the U.S. commercial and defense microelectronics industrial base?

(2) What are the economic and national security implications of losing access to reliable U.S. and non-U.S. foundries, manufactured components, equipment, intellectual property, and know how, for both commercial and Trusted handling levels?

(3) What actions (Industry and USG) could be taken to stabilize and sustain the U.S. defense microelectronics industrial base?
JWG2 Approach

- Process enables broad exploration with focus on highest value items
- Re-occurring meetings and face to face working session(s)
- Guest speakers and conference attendance to dive deeper on topics

End to end semiconductor workflow (E2E)
DELIVERABLES (BACKUP)
(1) What are the potential consequences of the Chinese Government's substantial global semiconductor investments to the U.S. commercial and defense microelectronics industrial base?

- Document the end to end semiconductor workflow (E2E)
- Outline worldwide commercial landscape “foundation” upon which China’s investments influence
- Outline China’s strategy (investment and influence) across E2E workflow elements
- Identify likely impacts of China’s strategy upon this commercial E2E framework
(2) What are the economic and national security implications of losing access to reliable U.S. and non-U.S. foundries, manufactured components, equipment, intellectual property, and know how, for both commercial and Trusted handling levels?

- Determine focus litho generations: 90nm and smaller? 32nm and smaller?
- Summarize technologies available to fabless semiconductor companies, and associated business models
- Forecast anticipated results from China’s distortion of the marketplace
  - Commercial availability and business models
  - Macro economic implications
- Forecast likely results for defense microelectronics industrial base
  - “Availability” from potential suppliers in US
  - Present DoD “Access”, including levels of “Trust”
  - Likely solution space post China distortion
- Security implications matrix across E2E workflow
(3) What actions (Industry and USG) could be taken to stabilize and sustain the U.S. defense microelectronics industrial base?

- Tactical actions
  - Near term actions to increase USG “Access” to available technologies
  - Policy and procurement

- Macro economic actions
  - How could the US address the imbalance China’s strategy would create?
  - How could the US influence commercial availability and access?
  - Given the growth markets are in China, India,... is there a US play that could counter the “fabs overseas” direction?
  - What urgency is there for implementation of these actions?