## **DoD Microelectronics Overview**

ANSI Workshop on Global Supply Chain Security for Microelectronics Standardization

Dr. Dev Shenoy, Principal Director for Microelectronics, Director, Defense Microelectronics Cross Functional Team OUSD (R&E) - Critical Technologies



October 26, 2022

DISTRIBUTION STATEMENT A. Approved for Public Release



## Microelectronics a "must-win" technology for DoD

BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH

100-Day Reviews under Executive Order 14017

June 2021

Saladay Kosta ( Department of D Department of B Department of D

#### INTERIM NATIONAL SECURITY STRATEGIC GUIDANCE

US. Department of Defense

status undiant

The Delivery reporting, on

Kinnis, Imag, and violant attitument organic

langh, not surver paidly from floration

Fact Short: 2022 National Defense Strategy

the Nucleus Person Review (NPR) and Mixelle Defense Review (MDR) in the NDE - mousing tight independent terrors are money and our resources. The unit-solided NDS will be for the oming

Defaulting the locational proced to the proving analysic-bosons theat posed by the PRC.
Decoming manyois criticle squares the Union Storm, Allon, and percent
Decoming approval, while being perpendic to perced in analysis whereas the Starbo Percel, due to the transmission proceedings to the babit percent, the to the transmission and percent

4. Dubling a resilient Joint Porce and Arlinese ecosystem:

Conviction with the Periodent's Internet National Security Startups Condense, the elevational NDS sets on Save the Department of Ordinase will contribute to advancing und subgranding visial U.S. subsets internet prototing the Association property, expending Association property, and reddening and Advancing over

> ment will not arguetly to sortion and complian determined, with the Pacyle's Republics of I so our most consequential strength competitor and the pacing chellenge for the Departs

Renze prom note facets, or directored by its bread and supervision directories of Unitan. We will editional with one SNTO Adden and pactants to mindiane robust diversities in the face of Hamisten generates. The Department will recent a capable of memping other pervises: thereis, including down from Newt

Changes in global channer and order designees transformatory factors, including pathetics, and maintening the constrain in which the Department opportune. In we will adopt to have similaringes, which manusingly place previous on the Justit Fores and the systems fast respect a Recogniting growing tracking and man kiterist forms in the United States. Insufand form on every approprints, the Department with the research systems residence on earlier to which approprints.

Toley, the Department of Definest manuatized to Congress the eleverihed 2022 National De-

----



"Semiconductors are essential to national security. . . . They are fundamental to the operation of virtually every military system, including communications and navigations systems and complex weapons systems such as those found in the F-35 Joint Strike Fighter."

"Semiconductors are key to the "must-win" technologies of the future, including artificial intelligence and 5G, which will be essential to achieving the goal of a "dynamic, inclusive and innovative national economy" identified as a critical American advantage in the March 2021 Interim National Security Strategic Guidance.

"Building enduring advantages . . . getting the technology we need more quickly, and making investments in the extraordinary people of the Department, who remain our most valuable resource."

## DoD Microelectronics Vision

Vision Statement:

Guaranteed, long-term Access to Measurably Secure Microelectronics

enabling Overmatch Performance

and increasing Military Operational Availability and Warfighter Combat Readiness



Ensure timely access to measurably secure and affordable ME technology



Motivate programs and their primes to modernize and exploit the most capable ME



Leverage tools, policies and enforcement to reduce or eliminate costly sustainment issues



Centralize knowledge in a DoD "front door" organization to augment decentralized execution



Increase ME discovery and innovation, and accelerate transition into DoD systems



Contribute to and influence interagency and national efforts to grow ME capabilities to meet national security needs



Cultivate a right-sized workforce with the right skills at the right place and the right time

DISTRIBUTION STATEMENT A. Approved for Public Release



# Microelectronics Supply Chain Visibility



#### Securing Defense-Critical Supply Chains

An action plan developed in response to President Biden's Executive Order 14017

February 2022



"Supply Chain Visibility: DoD is still building visibility into the sub-tiers of the microelectronics supply chain; until there is greater visibility, it will be difficult to identify certain supply chain threats, vulnerabilities, and risks. Visibility is further eroded by system-level (next-level assembly comprised of multiple microelectronics components) manufacturers who simply seek the lowest cost producers and are source agnostic."



#### Market for Secure Microelectronics: National & Economic Infrastructure





#### Access to Measurably Secure ME will serve this critical infrastructure market

- S Domestically designed, manufactured, packaged and tested parts that meet U.S. security and safety standards
- S Ensure access to a forecasted aggregated demand of SOTP and Legacy Technologies (designs remain robust over a 10+ year PoP)

A "whole of nation" approach to access Measurably Secure ME