

# Enterprise Information Environment Mission Area (EIEMA) Panel

## Computing Infrastructure Domain Overview

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# Topics

- **The Computing Infrastructure Domain (CID)**
  - Establishment
  - Tasking
  - Vision and Goals
  - Scope and Definition
- **Challenges and Way Ahead**
  - NDIA Community Involvement



# CID Establishment

- **DoD CIO Memo 14 July 2004, Subject: EIEMA Domain Owner Designations**
  - Established EIEMA as DoD Portfolio of programs, projects and systems that deliver and assure the enterprise information environment
  - Four Domains established: Information Assurance (IA), Core Enterprise Services (CES), Communications (Comms), and Computing Infrastructure (CI)
  - Director, Architecture & Interoperability, DASD(DepCIO) assigned as CID Owner



# CID Tasking from DoD CIO

- Develop and manage the CID Portfolio
- Use existing JCIDS, PPBES, and DAS
- Use integrated architectures, engineering analysis, and transition plans
- Support establishment of Computing COIs
- Facilitate information sharing
- Establish and maintain CID governance process
- Ensure representation of Service components and other appropriate bodies



# CID Vision

Through the use of computing policy, direction, and by influencing DoD capabilities/requirements, resourcing, and acquisition processes\* . . .

. . . We envision a Computing Infrastructure supporting the Global Information Grid (GIG) Enterprise and its Mission Areas in the conduct of Net-Centric Operations and Warfare and enabling people throughout a trusted, dependable and ubiquitous network to be empowered by their ability to access data and information.

\*JCIDS, PPBES, DAS



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## Essential Net-Centric Elements

- Networked Force
- Information Sharing
- Agility
- Collaboration
- Sensemaking
- Self-Synchronization

- The Force:
- Sensors
  - Decision Makers
  - Weapons

Shared Awareness & Increased Awareness

### Desired Information Attributes:

- Assured
- Available
- Accurate
- Complete
- Reliable
- Timely

## Power To The Edge Principles

- Post in Parallel (PiP)
- OHIO (only handle information once)
- Smart Pull (not smart push)
- Data Centric (not application)
- Packets (not circuits)
- Dynamic Allocation of Access
- Quality of Service
- Networks that are:
  - End-to-End
  - Encrypted edge-to-edge
  - Minimum Essential Capability

- Agility Attributes:
- Robustness
  - Resilience
  - Responsiveness
  - Flexibility
  - Innovative
  - Adaptability

## INTEROPERABILITY

## Information Age Tenets

- Robustly Networked Force Improves Information Sharing
- Information Sharing and Collaboration Enhances Quality of Information and Shared Situational Awareness
- Shared Situational Awareness Reduces Operations Cycle Time and Enables Self-Synchronization

All Dramatically Increase **Mission Effectiveness**

- Greater Lethality
- Greater Survivability

# CID Definition and Scope

- Defining CID is a challenge
- No definition previously existed
- CID definition is an evolving concept
- Inherent complexities
- EIEMA Domains
  - Some overlap
  - Many instances of “shades of gray”

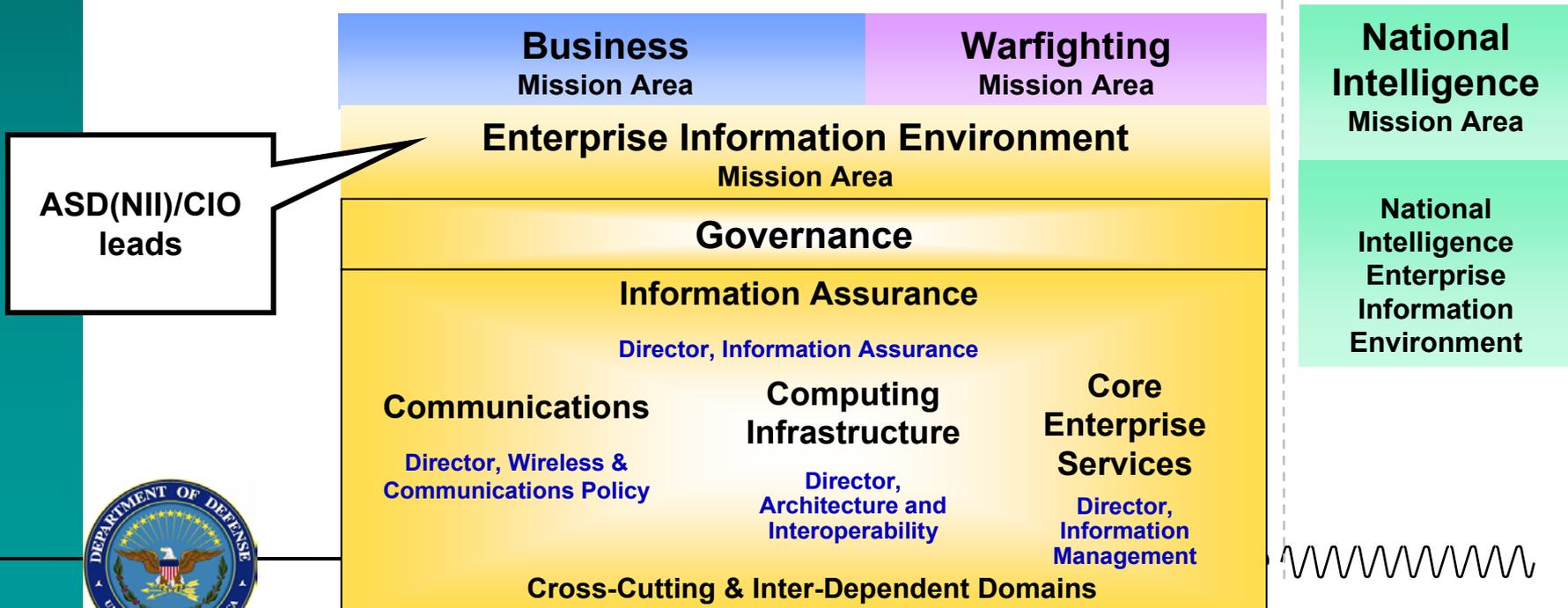


# Complexity of the GIG Enterprise

- Four inter-dependent Mission Areas
- Each Mission Area with its own intra-dependent and inter-dependent Domains

**AND**, adding to the complexity, EIEMA has:

- Four intra-dependent and inter-dependent EIEMA Domains



# Information Technology

## OMB Circular No. A-11 Definition of IT:

“Equipment or interconnected system or subsystem of equipment that is used in the automatic . . .

*acquisition*

*storage*

*manipulation*

*management*

movement

*control*

*display*

switching

interchange (transmission)

or reception

. . . of data or information.”

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# Information Technology

OMB Circular No. A-11 states:

**“Information Technology includes . . .**

- computers
- ancillary equipment
- software
- firmware
- and similar procedures
- and services
- including support services
- and related resources”



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# CID Is More Than IT

CID must also address:

*Computing related* **DOTMLPF**

- Doctrine
- Organization
- Training
- Materiel
- Leadership/Management
- Personnel
- Facilities



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# CID Definition

With the exception of programs, systems, applications, and activities that are developed for specific mission area domains and/or primarily involve the transmission and transport of data or information . . .

**The Computing Infrastructure Domain shall consider under its purview any remaining automated system, computer related program or activity, and associated DOTMLPF, that is used in the automatic acquisition, storage, manipulation, management, control, and display of data or information in support of the DoD Mission, with a primary emphasis on hardware, software operating systems, and hardware/software operating systems support.**



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# Activities To Date

- Developed preliminary CID definition and scope
- Appointed government CID technical agent (DISA Computing Services)
- Obtained funding for FY 05 contract support (BAH)
- Identified initial candidate programs and systems for inclusion in the CID Portfolio
- Developing CID governance structure and processes



# Emerging CID Challenges

- Domain Definition: Evolving
- Cross-Mission Area, Cross-Domain Area Issues
- Establishing the CID COI
- Acceptance of governance structure and processes
- Portfolio Management – Analysis, Selection, Evaluation
- Impacting JCIDS, PPBES, DAS
- Developing the CID Strategy and Roadmap
- Developing DoD Computing Policy

