Network Centric Operations Industry Consortium

Overview Briefing

March 2, 2005

Marshall "Tip" Slater
Executive Advisor

Consortium Vision and Mission

- **Vision:**

Industry working together with our customers to provide a network centric environment where all classes of information systems interoperate by integrating existing and emerging open standards into a common evolving global framework that employs a common set of principles and processes.

- **Mission:**

  To help accelerate the achievement of increased levels of interoperability within, and amongst, all levels of government of the United States and its allies involved in Joint, Interagency and Multinational (JIM) operations.

Velocity Can be Achieved Through an Industry Approach

Increased Demand for NCO

- NCO is the underlying foundation of "Force Transformation" at the DoD and throughout the armed forces of our allies.

- Force Transformation is a new strategic context
  - New Theory of War based on Information Age principles and phenomena

- New relationship between operations abroad & homeland security dealing with a considerably broadened threat context:
  - State/Non-State
  - Nodal/Non-nodal
  - Symmetric/Asymmetric

Increased Mission Effectiveness for DoD, DHS, NATO, MoDs and others

Why the NCOIC?

- A Forum for Subject Matter Experts to Collaborate on NCO Initiatives:
  - Better Understand Customer's NCO Vision, Goals, and Objectives
  - Exchange strategies and proven approaches to enhance system delivery

- An Organization Committed to Establishing Open, Interoperable Systems using Common Best Practices and Systems Engineering Techniques:
  - Facilitates Consistency Across Industry
  - Advocates for Open and Interoperable Systems Design

- Companies Committed to Meeting the Government More Than Half-Way:
  - Understanding Industry's Responsibilities and Acting
  - Addressing the Problem, Taking Initiative, Understanding the Requirement
  - Seeking close collaboration with Government and the rest of industry.

Industry is Uniquely Qualified to Bring Forth the Best Technology

Consortium Value Proposition
Consortium Efforts Will…

- **Increase interoperability** within and among systems involved in Joint, Interagency and Multinational operations

- **Lower development costs** and increase commonality of design in future systems – tailored standards and best practices

- **Improve force readiness** through more rapid fielding of network centric systems – leverage technical "lessons learned"

- **Reduce systems cost and sustainability** through re-use and commonality – facilitate ease of integration, upgrade, and support

- **Reduce Development Risk** by Identifying common components needed for the network centric environment – Develop them where none exist

- **Improve Force Effectiveness** through new, more focused development on domain specific capabilities for the Warfighter

NCOIC Participation Brings Value to Customer and Provider

Consortium Technical Approach

Five "Parallel" Strategies - Helping our customers to:

- Complete a thorough and rigorous **analysis** of pertinent **government agency architectures**
  - Customer Requirements Team
- Develop a secure information management overarching **architectural framework /reference model** to identify open standards and their patterns of use
  - Architectures and Standards Analyses Team
- Identify the widest possible community of **open standards-based product types**
  - Building Blocks Team
- Develop a program for **education for NCO**
  - Education and Outreach Team
- To plan and implement strategies to **develop effective collaborative engineering environments**
  - Engineering Processes Team

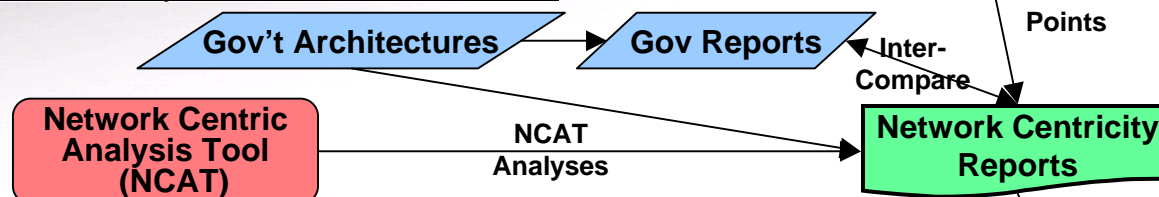The Products of the NCOIC are Open and Available to All

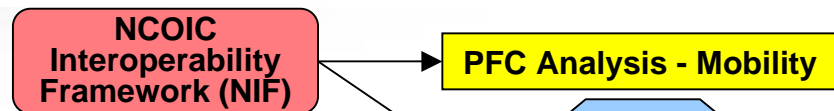# NCOIC Technical Roadmap

Initial Analyses

9 Gov't Initiatives → *Quicklook Analyses* → **Quicklook Reports**
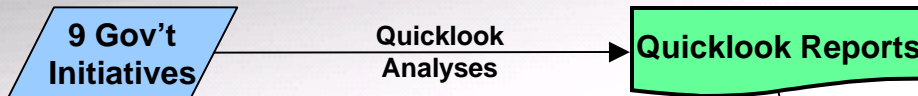
- Common General Understanding
- Initiative Touch Points

Detailed Analyses & Standards Identification

Gov't Architectures → **Gov Reports**

Touch Points

Inter-Compare

Network Centric Analysis Tool (NCAT) → *NCAT Analyses* → **Network Centricity Reports**

NCOIC Tools

- Common Detailed Understanding
- Network Centricity Analysis Tool
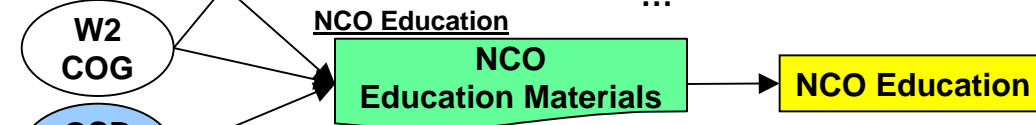- Measures of Network Centricity
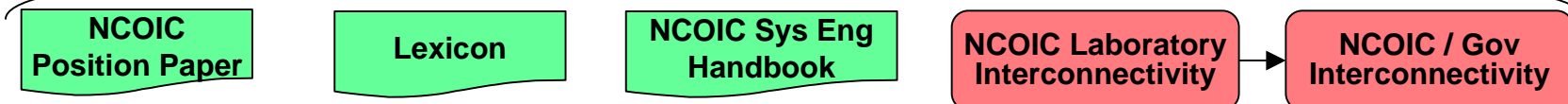- Architecture Synergies, Overlaps, Gaps

NCOIC Interoperability Framework (NIF) → **PFC Analysis - Mobility**

Use Cases

Other PFC Analyses

Overlaps, Gaps

Open Standards

- Interoperability Framework
- Agreed Open Standards
- Patterns of Standards

Initial Strategic Relationship Development

US DoD

NATO ACT

W2 COG

OSD OFT

Mission Threads
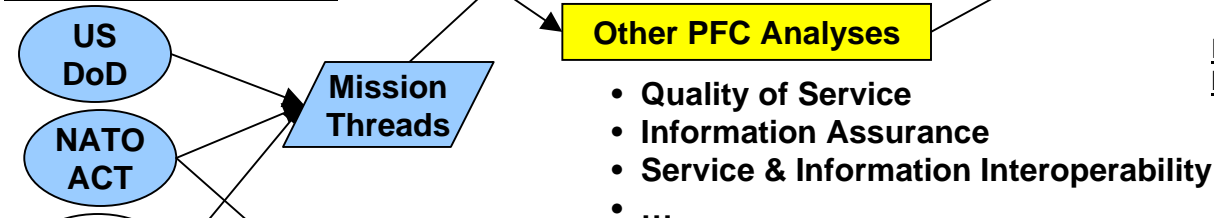
- Quality of Service
- Information Assurance
- Service & Information Interoperability
- …

Building Block Identification

Product Identification

NCO Education

NCO Education Materials → **NCO Education**

Off-The-Shelf Database

Supporting Infrastructure Development

NCOIC Position Paper

Lexicon

NCOIC Sys Eng Handbook

NCOIC Laboratory Interconnectivity → **NCOIC / Gov Interconnectivity**
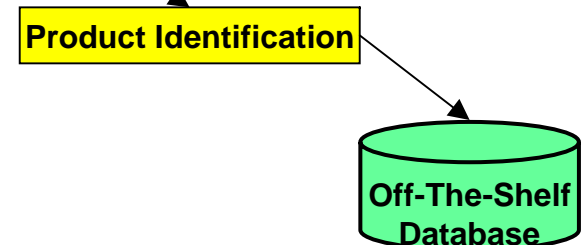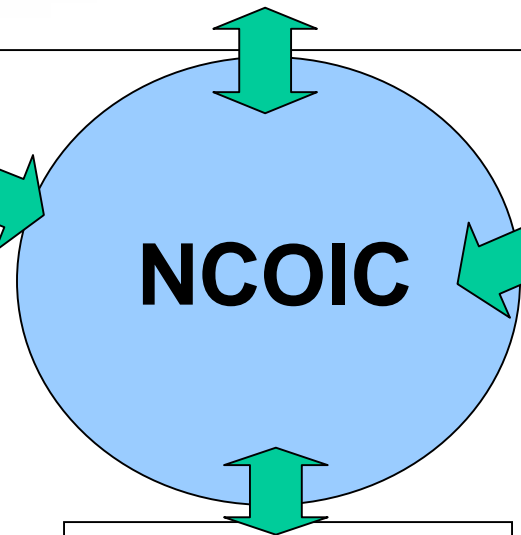
NCOIC Operations

NCO Fellows Council

- Provide skilled and experienced resources to technical and business teams at the working group levels in executing their respective agendas
- Provide insight and innovation into NCO/NCW operations from all stakeholder activity levels
- Leverage stakeholder resources as needed to assist to further the Consortium technical and business activities

Advisory Council

- Advise Consortium leadership on government stakeholder NCO/NCW issues, needs, requirements and direction
- Provide thought leadership to the Consortium
- Encourage Consortium participation in NCO/NCW
- Encourage and leverage openness of communication
- Membership by invitation only
- Three to four meetings per year

NCOIC

Affiliates Council

- Overall program manager for individual and/or collective affiliates
- Works with the Advisory Council to devise and execute integration strategies for affiliate organizations
- Currently working alliances with AFEI, W2COG, ACT, OFT, and NIAG

Conferences

- Keynote Speakers
- Guests / Observers
- Technical Panels

NCOIC Organization

- Organization:
  - Executive Council
  - Technical Council and Teams
  - Business Council and Teams
  - Advisory Council
  - Affiliations Council
- Operation:
  - Open to all interested parties
  - One Company – One Vote
- Technical Focus:
  - Recommended Open Standards
  - Common Reference Model
  - Best Practices and Processes
  - Education and Outreach
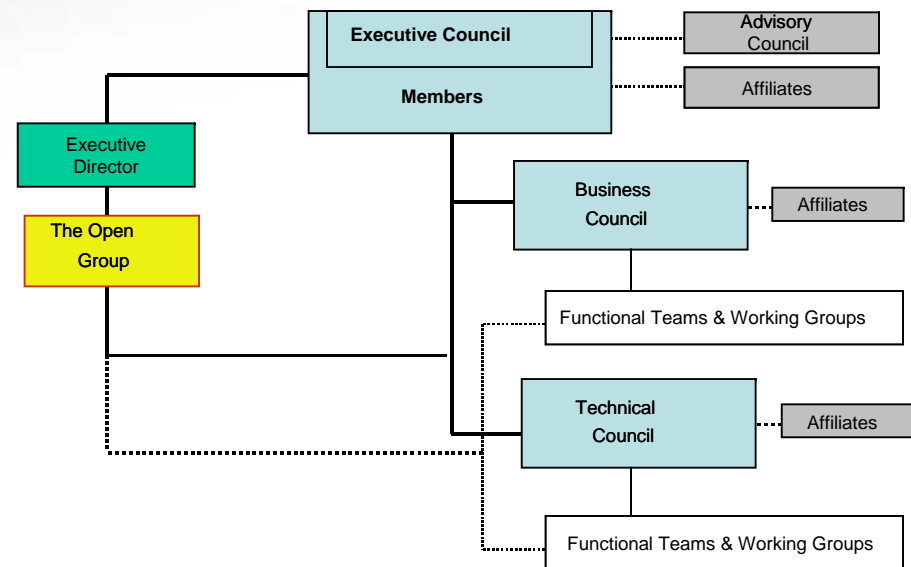
The NCOIC Is Organized to Ensure Equality, Consistency, Utility

Advisory Council

- Chairman – Dr. Paul Kaminski, former US Undersecretary of Defense for Acquisition and Technology

- Mr. Arthur Money, former Assistant Secretary of Defense for C3I and former DoD Chief Information Officer

- Dr. Vitalij Garber, Director, Systems and Mission Integration, Defense Systems, Acquisition, Technology, and Logistics, OSD

- Gen (USAF, Ret) James P. McCarthy, ARDI Professor of National Security, U.S. Air Force Academy

- VADM (USN Ret) Arthur K. Cebrowski, Director, Force Transformation, OSD

- VADM James D. McArthur, Jr., USN, Commander, Naval Network Warfare Command

- Major General, Ruud van Dam, Netherlands Air Force, Allied Command Transformation C41

- Ms. Priscilla E. Guthrie, Deputy Chief Information Officer, OSD Networks and Information Integration

- Lt. Gen. Robert M. Shea, USMC, Director for C4 Systems, Joint Staff (J-6)

- Mr. Staffan Näsström (Maj. Gen. Ret.), Chief of Operations, Swedish Defence Materiel Administration

- Lt. Gen. Harry D. Raduege, Jr., Director, DISA; Commander, Joint Task Force-Global Network Operations

- Lt. Gen. Tom Hobbins, Deputy Chief of Staff for Warfighting Integration, U.S. Air Force

- LTG Steven W. Boutelle, Director / CIO, Office of the Chief Information Officer / G6 U.S. Army

- Lt Gen James R. Clapper, Jr. USAF (Ret.), Director, National Geospatial Intelligence Agency

- LTG Robert W. Wagner, USA, Deputy Commander, United States Joint Forces Command

- Mr. Lee Holcomb, Chief Technology Officer, Department of Homeland Security

- Mr. William F. Dawson, Director, Community Interoperability and Information Sharing Office, Intelligence Community Chief Information Officer

> "We look forward to supporting the NCOIC in working towards a world in which individual governments and coalition forces use advanced networking to better conduct peacekeeping operations and respond to humanitarian crises or natural disasters *with fewer lives lost.*"   ----*Paul Kaminski*

Affiliates Council

- Established as the "portal" for all non-member organizations who desire to work with or affiliate with the NCOIC
  - Affiliates enhance our ability to achieve our mission by providing access and resources to the NCOIC in carrying out our objectives
- Chaired by Dave Chesebrough, President, Association for Enterprise Integration (AFEI)
- Overall program manager for individual and/or collective affiliates
- Works with the Advisory Council to devise and execute integration strategies for affiliate organizations
- Ensures NCOIC and affiliate organization tasking is commensurate with overall technical and business roadmap
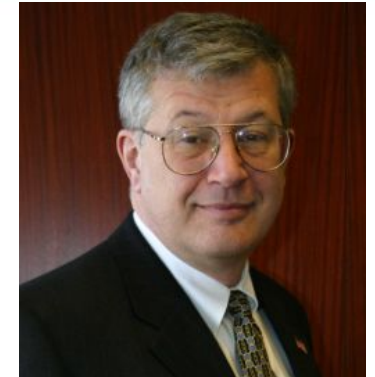
The NCOIC is Complementary to Other NCO Initiatives

58 NCOIC Members - February 23, 2005

Tier 1 Members (23)

- BAE Systems North America
- Boeing
- CACI
- Cisco Systems
- EADS
- EMC
- Factiva
- General Dynamics
- Harris Corporation
- Hewlett-Packard
- IBM
- ITT Industries
- L-3 Communications Integrated Systems
- Lockheed Martin
- Northrop Grumman
- Oracle
- Raytheon
- Rockwell Collins
- Saab
- SAIC
- Sun Microsystems
- Thales
- Themis Computer

Tier 2 Members (2)

- Alcatel Government Solutions
- Israel Aircraft Industries

Tier 3 Members (33)

- Aeroenvironment Inc
- Argon ST
- Ball Solutions Group
- Bay Microsystems Inc
- Camber Corporation
- CB Technologies
- Ciena Government Solutions
- Cryptek, Inc
- Engenio Information Technologies
- Ericsson
- Finmeccanica
- Flight Safety International
- Honeywell
- Innerwall
- Innovative Concepts, Inc
- Johns Hopkins U. Applied Physics Lab
- Marconi Communications Federal Inc
- MBL International, Ltd.
- McDonald Bradley, Inc
- Microsoft
- MITRE
- Motorola
- PTC
- Real-Time Innovations, Inc
- RUAG Electronics
- Sikorsky Aircraft
- Smiths Aerospace
- Software Engineering Institute/Carnegie Mellon University
- SPARTA, Inc
- SuprTEK
- Wakelight Technologies, Inc
- West Virginia High Tech. Consortium Foundation
- Wind River Systems

Summary

- Industry working together with our customers to achieve interoperability

- Open participation across industry

- Advisory and Affiliates Councils are key contributors

- Engineers working together to enable interoperability

Industry, Working Together, Will Accelerate the Delivery of NCO Solutions