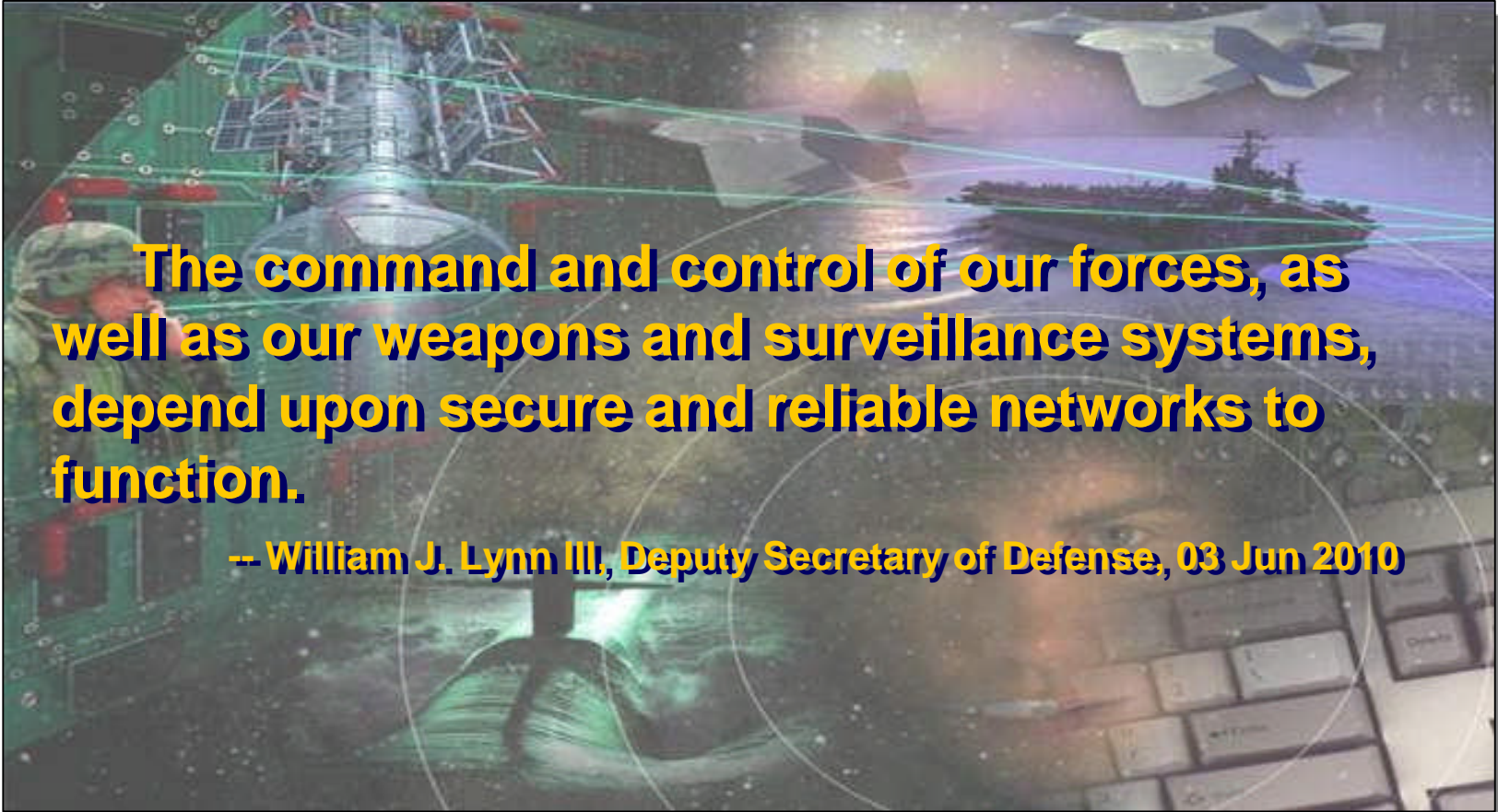




# **Convergence to a Single Network Roadmap**

*Information Dominance  
Industry Day  
22 June 2010*





**The command and control of our forces, as well as our weapons and surveillance systems, depend upon secure and reliable networks to function.**

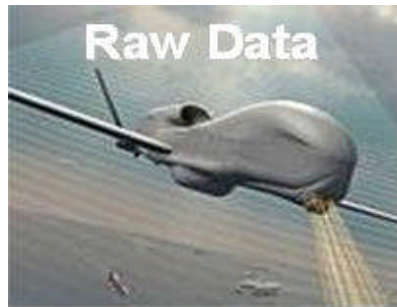
**-- William J. Lynn III, Deputy Secretary of Defense, 03 Jun 2010**

*Warfare is ultimately an information contest*



# Challenges to Information Dominance...

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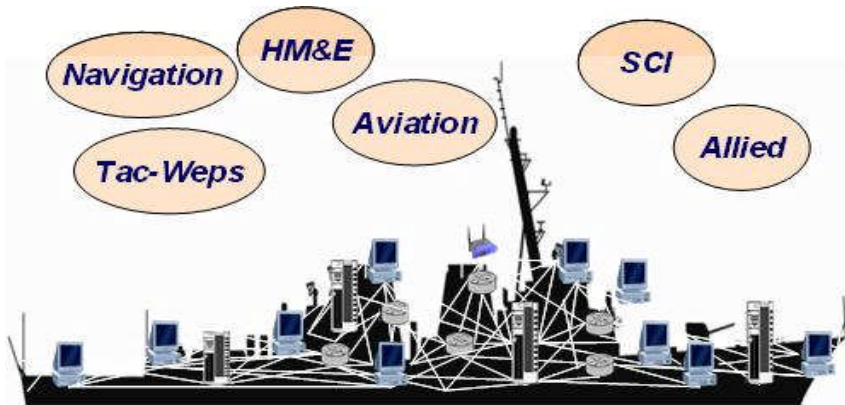


## *Networks Today:*

- ❑ ..lack information and services that are visible, accessible, discoverable and understandable
- ❑ ..are information “silos”– requiring manual intervention to move information from one stove-piped system to another
- ❑ ..are unresponsive to today’s dynamic environment; interfaces are “hard-wired” vice flexible and adaptable
- ❑ .. are unable to quickly leverage the latest information technology solutions



# Afloat Network Environment



## Average Networks Per

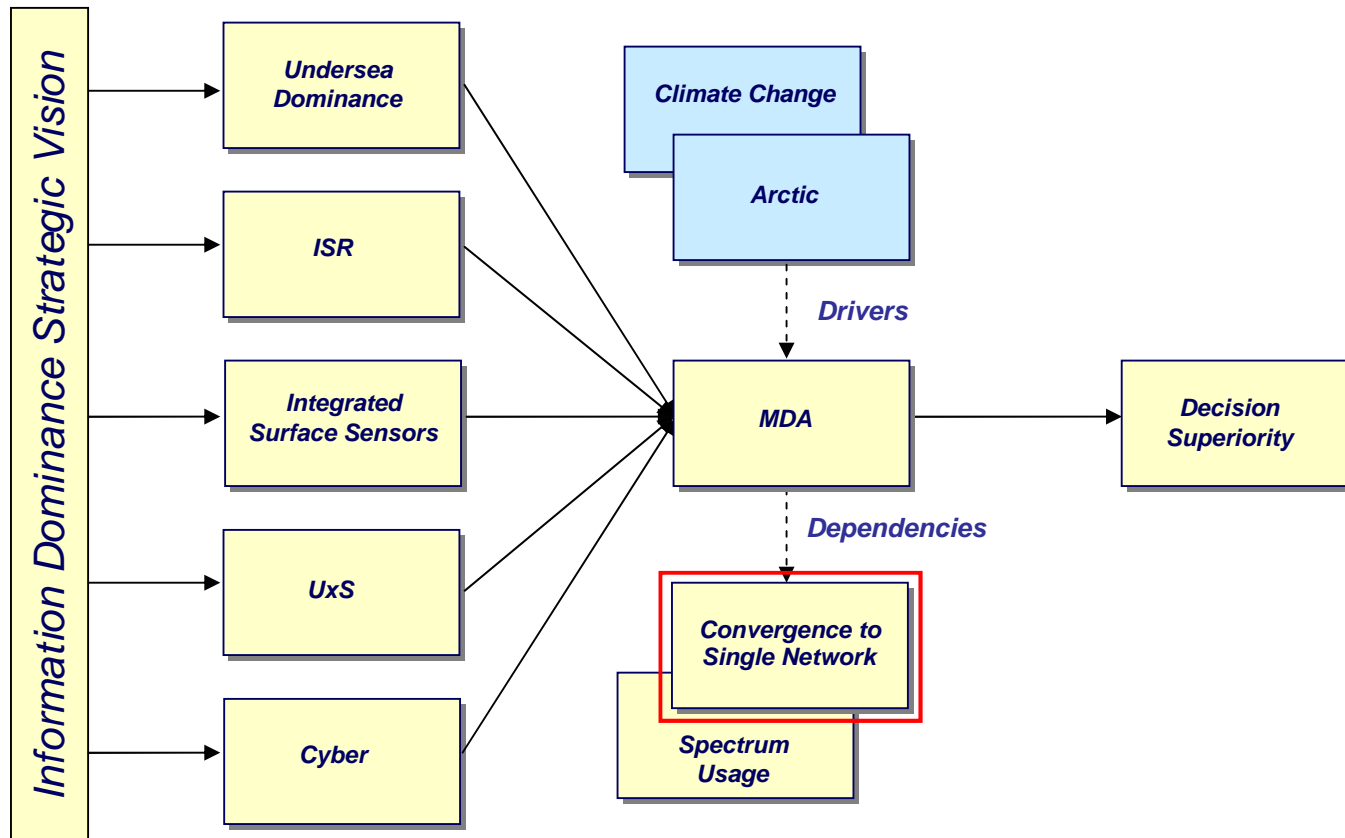
- Carrier 15
- Amphib 10
- Cruiser/Destroyer 7

## Challenges

- Security
- Compatibility
- Platform-centric acquisition
- Program alignment
- Install timelines (+8 Yrs)
- Environment
- Training
- Finite manpower/Infinite demands
- Bandwidth saturation
- Life cycle costs



# Roadmap Relationships



*Network Roadmap supports other Information Dominance Roadmaps*



# CSN Roadmap Scope

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*Convergence to a Single Network Roadmap – Actions to achieve an integrated network and communications environment that enables Navy users to:*

- ❑ seamlessly access and share classified and unclassified information globally in performing their missions*
- ❑ operate in all environments, supported by common services, standard interfaces and authoritative governance*
- ❑ readily share data and information with other DoD, Federal, Coalition and NGO partners.*
- ❑ Leverage automation and consolidation to achieve efficiencies*

*Iterative roadmap development will directly impact investments, technical and programmatic decisions*



# Guiding Principles

- ❑ Global Access
- ❑ Information Sharing
- ❑ Interoperability
- ❑ Unified Capability
- ❑ Unique Identity
- ❑ Enterprise Attributes
- ❑ Resilience
- ❑ Adaptive Reconfiguration
- ❑ Robust NETOPS
- ❑ Affordability





# Roadmap Development

WBS Deliverables	Timeline											
	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
<b>IPR Reviews</b>		▲			▲		▲		▲		▲	
Roadmap Timeline						▲ V1	▲ V2		▲ V3		▲ Final	
Roadmap Report					Preliminary Product Review	▲	▲ Rev 1 Final Product Review		▲ Integration with other RM inputs	▲ Final Product Review		
Mission Capability Gap Analysis	Final Report											
DOTMLPF Analysis	Final DOTMLPF Analysis											
Total Ownership Cost (TOC) Analysis	Final TOC Analysis (POM-12)											
Roadmap Architecture	Final Architecture Products											
Roadmap Brief					Draft ▲		▲ Rev 1		▲ Draft		▲ Final	
<b>Related Milestones</b>		▲ Information Dominance Instruction			▲ NNE CBA	▲ GIG 2.0 TBD	▲ NNE ICD					

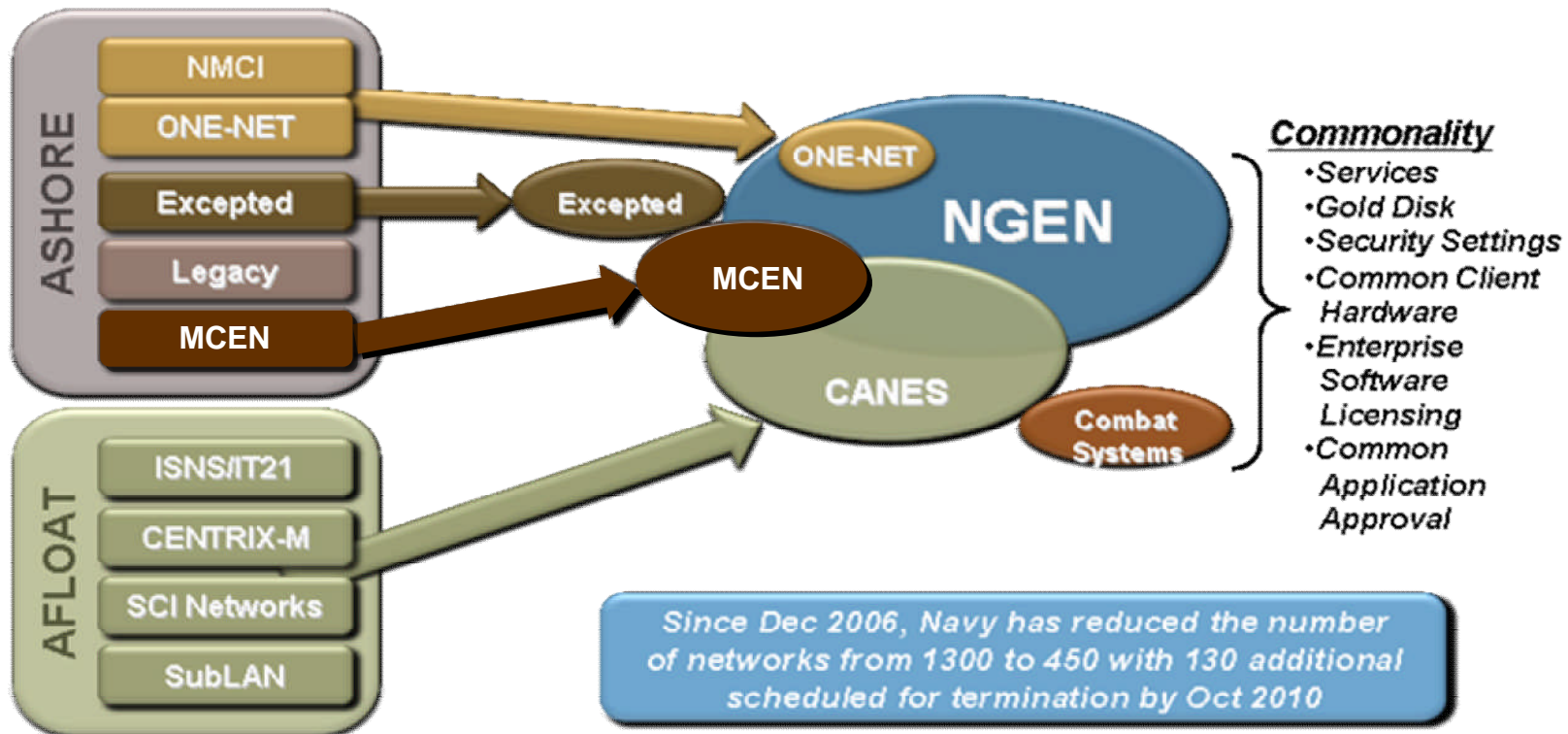
CBA - Capability Based Assessment  
 GIG - Global Information Grid  
 ICD - Initial Capabilities Document  
 IPR - In-Process Review  
 MOC - Maritime Operations Center  
 NNE - Navy Network Environment



# NNE Vision

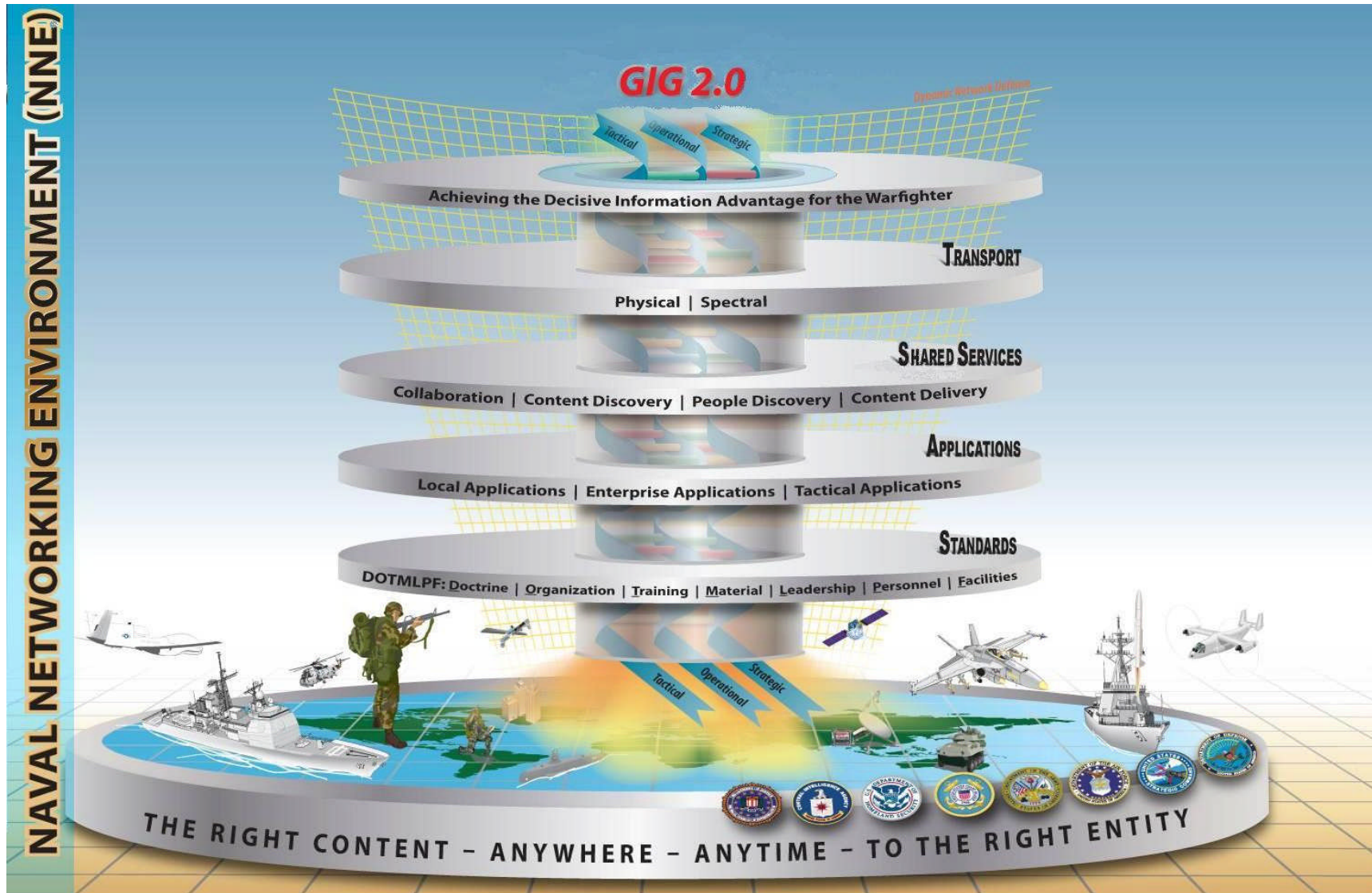
*Decentralized control with decentralized execution*  
**Existing Networks**

*Government controlled standardized Architecture & managed (Engineered) Interfaces*  
**Naval Networking Environment (NNE)**





# Naval Networking Environment





# Where Industry Can Help

## Challenging Operational Environment

- ❑ Characterized by low bandwidth and/or high latency data links
- ❑ Disaggregated forces
- ❑ Exponential growth in cyber threat
- ❑ Recruiting/retaining skilled IDC workforce



## Opportunities for Success

- ❑ Improve Security, Integration, and Interoperability
- ❑ Standards-based data interfaces and links
- ❑ Automation
- ❑ Plug and Play Modularization
- ❑ Minimize long-term reliance on single source

*Overcoming challenges to achieve Mission Assurance*



# Invite Industry Ideas

- ❑ Network Anomaly Detection
- ❑ Tools to effectively monitor, manage and maintain network
- ❑ Integrated Network Common Operational Picture
- ❑ Operating in a degraded / denied SATCOM environment
- ❑ Data strategy -- storage and replication to the tactical edge
- ❑ Innovative technology reuse





# Questions?



**Bombs & Bullets**

FROM ——— TO



**Bits & Bytes**

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