

Information Dominance and the U.S. Navy's Cyber Warfare Vision

*VADM Jack Dorsett
DCNO for Information Dominance
April 14, 2010*





Our Dominance Is Being Challenged

- ❑ "Our technological advantage is a key to America's military dominance ... it's now clear that this cyber threat is one of the most serious economic and national security challenges we face as a nation"

- President Obama, May 2009



- ❑ "The U.S. cannot take its current dominance for granted and needs to invest in the programs, platforms, and personnel that will ensure that dominance's persistence" - Secretary of Defense Gates, Jan 2009



Necessity of Change

- ❑ Fresh thinking is vital to reforming military institutions that "*must fundamentally change*"
- ❑ "(Who) will have the strength and the courage to put forth the ideas that truly change the way we act as an institution?"



Admiral Mike Mullen
Chairman Joint Chiefs of Staff
June 6, 2008



CNO's Vision

- ❑ Navy is Prominent and Dominant in the fields of ISR, Cyber Warfare, C2, Information & Knowledge Management
- ❑ Information becomes a Main Battery of U.S. Navy warfighting capability
- ❑ Warfighting Wholeness replaces sub-optimal stovepipes



"We will seek out and embrace game-changers and innovative solutions to current and future challenges, especially at the left end of the kill chain." - CNO in 2009



The Opportunity

- ❑ We are at the threshold of a new era;
Information must no longer be an enabler,
but a core warfighting capability
- ❑ The Navy today has the rare opportunity
to revolutionize its warfighting capability,
similar to when the Navy introduced
dreadnoughts, aircraft carriers, and
nuclear power into the Fleet





Navy's Approach to Information Dominance

❑ Move Boldly:

- From Platform-Centric to Information-Centric processes

- Into Unmanned, machine Autonomous technologies

- Creating a Fully-Integrated Intel, C2, Cyber & Networks Capability

❑ To be successful in 21st century warfare, the U.S. Navy must create a fully-integrated information, intelligence, C2, cyber & networks capability ... and wield it as a weapon



OPNAV N2/N6

Corporate

Total Force



Intelligence



Compliance



Business

Networks



ISR



Cyber & Sensors



Innovation

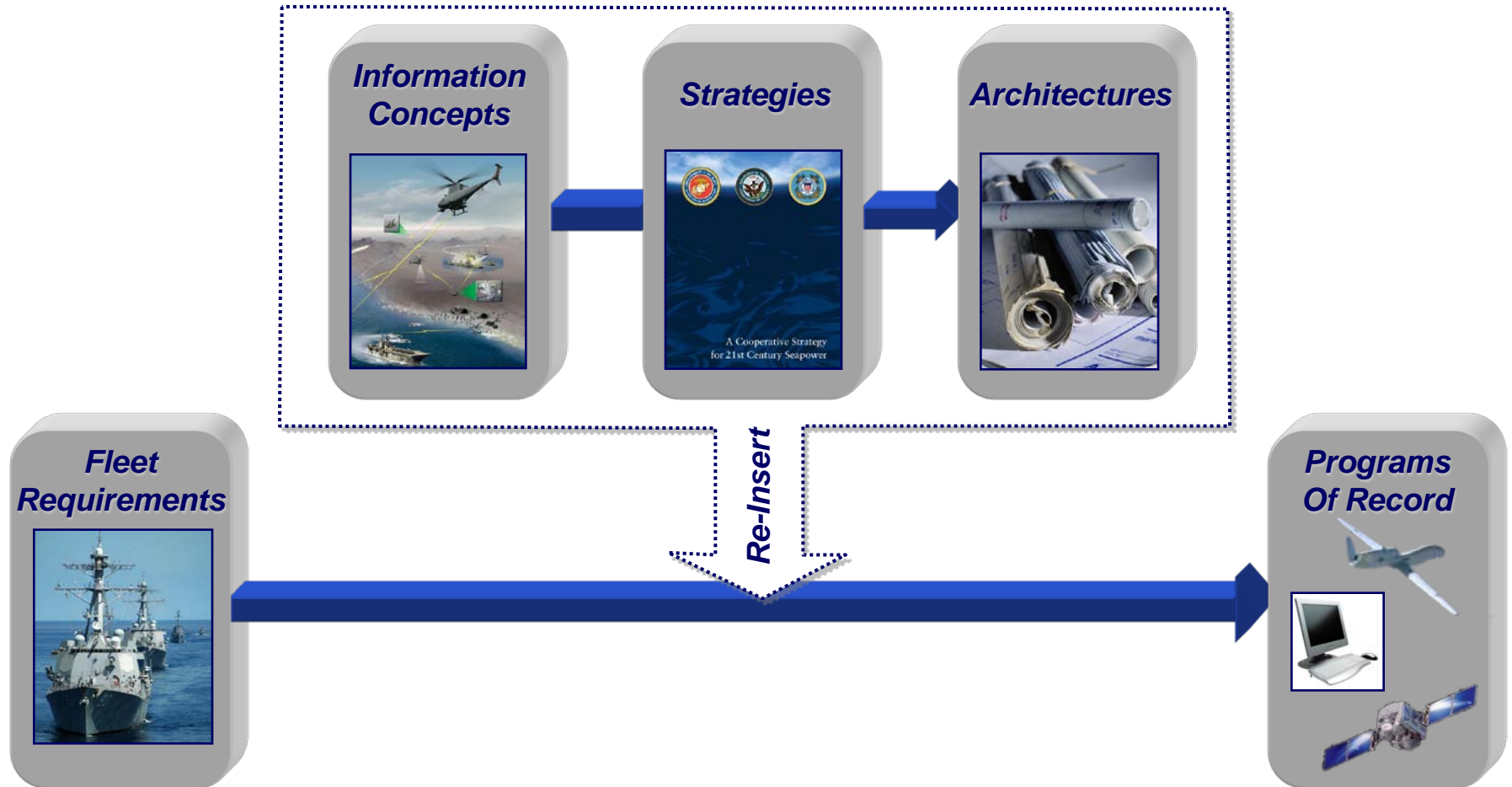


Environment



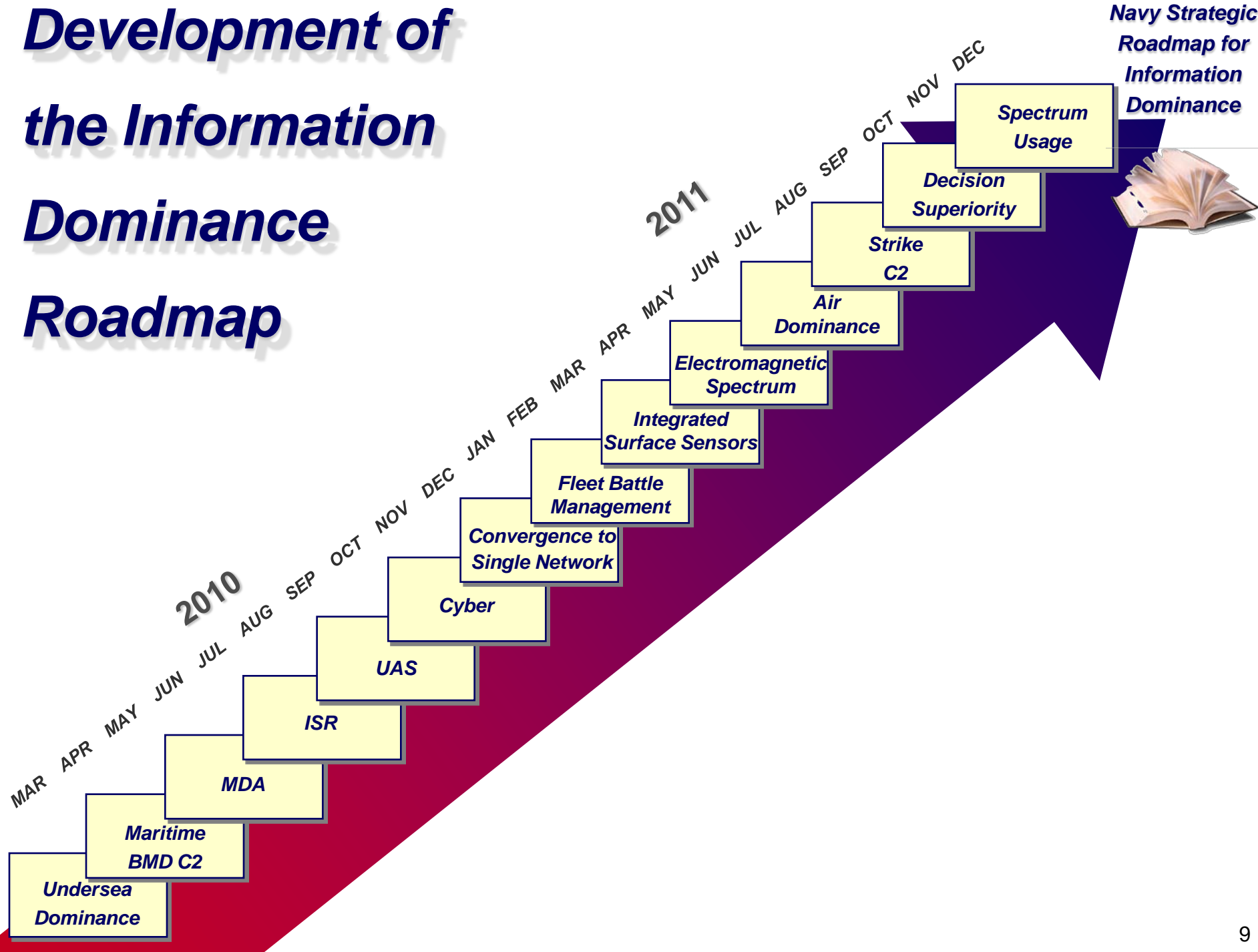


Fixing Information Capability Development



Rapidly Deliver the Right Set of Truly Interoperable Capabilities to the Fleet

Development of the Information Dominance Roadmap





CNO's Unifying Vision and Guiding Principles

Vision - "Pioneer, field and employ game-changing capabilities to ensure Information Dominance over adversaries and Decision Superiority for commanders, operational forces and the nation"

❑ First Principles Include:

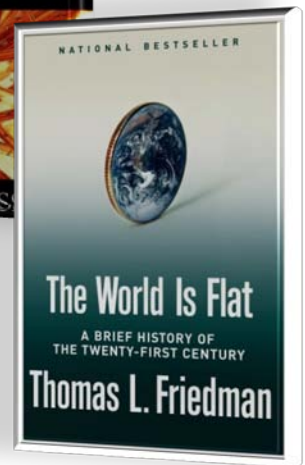
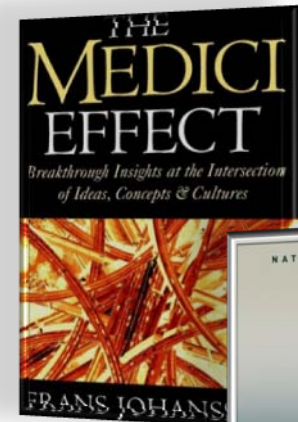
- ✓ Every platform is a sensor
- ✓ Every sensor is networked
- ✓ Build a little; test a lot
- ✓ Spiral development/acquisition
- ✓ Plug-n-play sensor payloads
- ✓ Reduce afloat/airborne manning
- ✓ Transition to remoted, automated
- ✓ Collectors dynamically tasked
- ✓ One operator controls multiple platforms
- ✓ Emphasize UAS and autonomous platforms
- ✓ UAS's increasingly sea-based
- ✓ Data discoverable and accessible
- ✓ Missions drive requirements
- ✓ Commonality in interfaces, data links and control stations
- ✓ Every shooter capable of using target data derived from any sensor



Create an Environment for Navy Innovation

❑ Frans Johansson in *The Medici Effect* says...

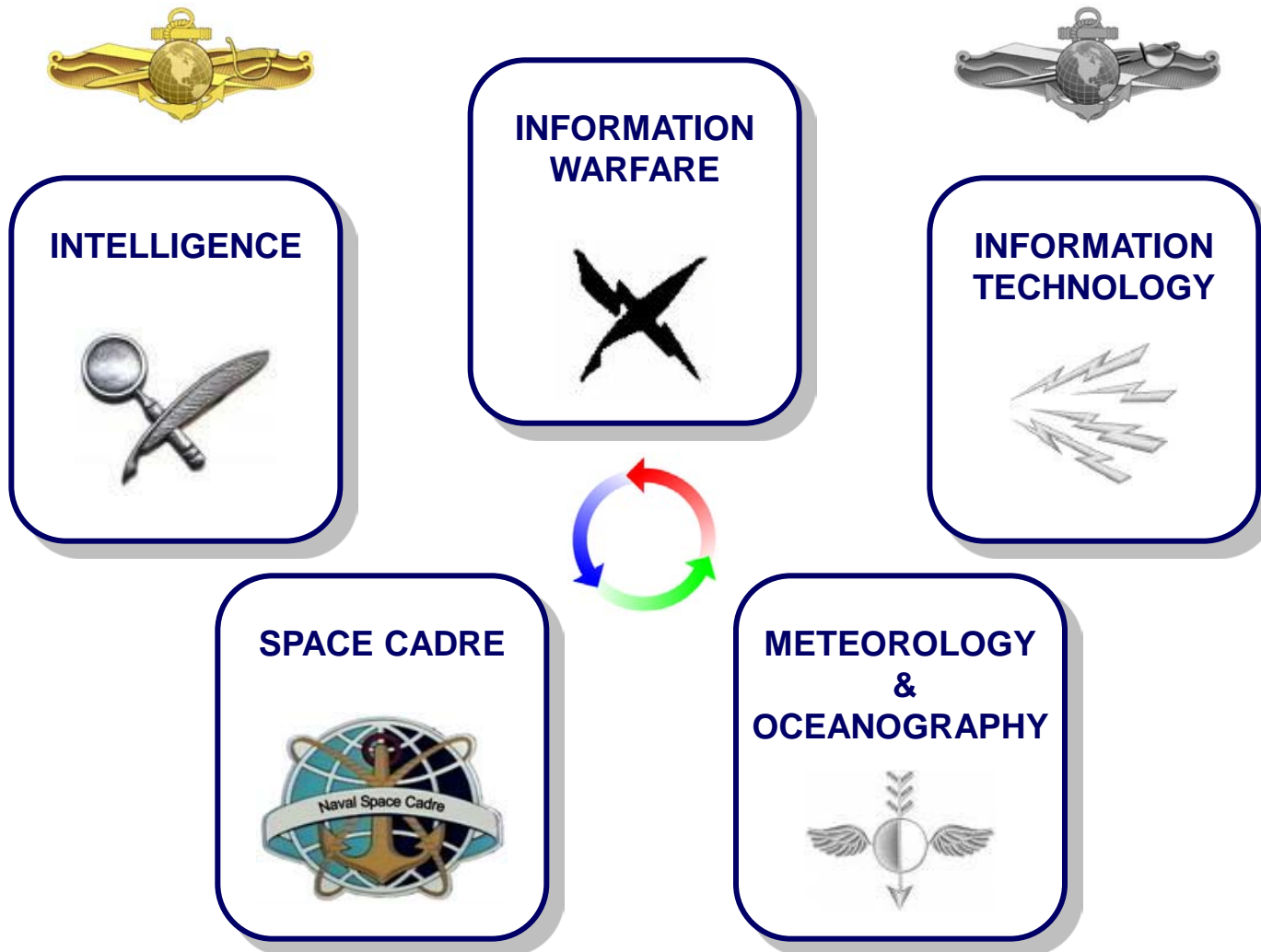
- "(With) the intersection of fields, disciplines, or cultures, you can combine existing concepts into a large number of extraordinary new ideas"
- "Intersectional innovations ... take leaps in new directions and provide the source of innovation "



❑ A strategic planner at IBM was quoted in Thomas Friedman's *The World is Flat*, "What we are seeing ... is that the next layers of innovation involve the intersection of very advanced specialties; To come up with any valuable breakthrough, you have to come up with more and more of these increasingly granular specialties"



Information Dominance Corps



45,000 Professionals in Information-Centric Disciplines



CNO's Direction on Cyber

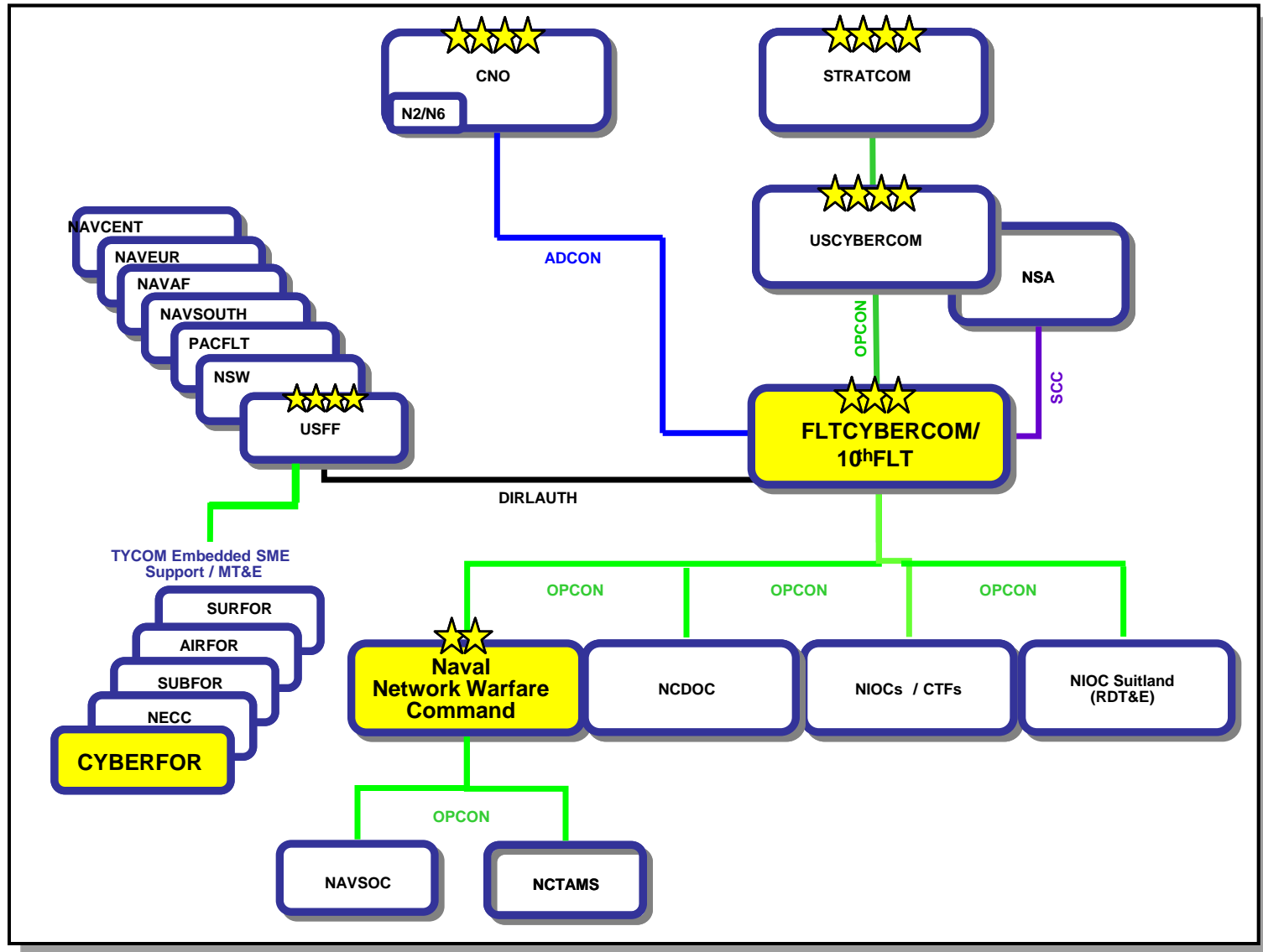
- ❑ Stand-up FLTCYBERCOM / 10th Fleet to provide centralized operational support to USCYBERCOM and Navy commanders in the area of cyber, information and computer network operations, electronic warfare and space
- ❑ Realign NAVNETWARCOM to solely execute network and space operations
- ❑ Establish CYBERFOR to serve as the Type Commander for the Information Dominance Corps to handle manpower, training and equipment issues



Dynamically aligning the Navy's cyber capabilities in a powerful, unified approach



FLTCYBERCOM, NNWC, and CYBERFORCOM





Navy Cyber Workforce Initiatives



Created Information Dominance Corps (IDC)

- ❑ Recruiting & training the best and brightest Cyber Sailors into IDC
- ❑ Developing PQS and approved new Information Dominance Warfare pin
- ❑ Establishing NROTC Cyber Scholarship program
- ❑ USNA establishing Cyber Warfare Center



Established C10F/FLTCYBERCOM

Elevating information to a core Navy warfighting mode and capability set





NAVNETWARCOM CND/NETOPS Initiatives



- ❑ Organizing capabilities that provide visibility into our networks and enable dynamic defense
- ❑ Standardizing afloat and ashore NETOPS capabilities

- ❑ Next Generation Network development





CYBERFOR Initiatives

- ❑ Current size of Navy's Cyber Corps inadequate
- ❑ Continued growth and focused training is required and we are actively pursuing new initiatives.



- ❑ Navy projects significant Cyber growth between PB10 & PB11, \$123.8M (\$11.9M in FY11) / 669 billets across the FYDP
- ❑ This growth is critical to the success of Navy Cyber Security initiatives.



"We've burned the ships ... there is no turning back"
- CNO, Admiral Gary Roughead, October 2009