

ASNE

Combat Systems Symposium

New Technologies and Capabilities



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Fundamental Principals

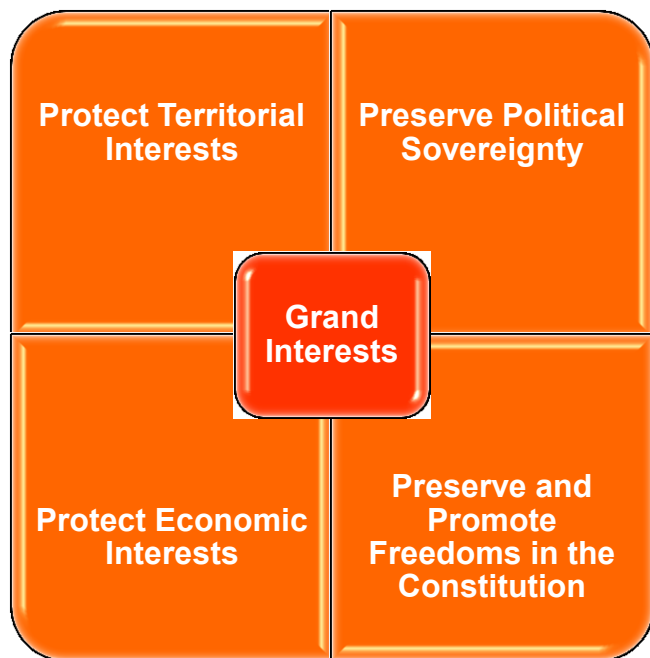
- ◆ **Capability**
 - The ability to perform actions or missions
- ◆ **Capacity**
 - The actual or potential ability to successfully perform a capability
- ◆ **Technological Investments**
 - Focus on technology to simultaneously increase both capability and capacity
- ◆ **Key technologies bring forth capabilities**
- ◆ **Capabilities as capacity enhancers**



Investments in the right technologies will increase both capability and capacity despite shrinking budgets



Defending Grand Interests in A New World Order

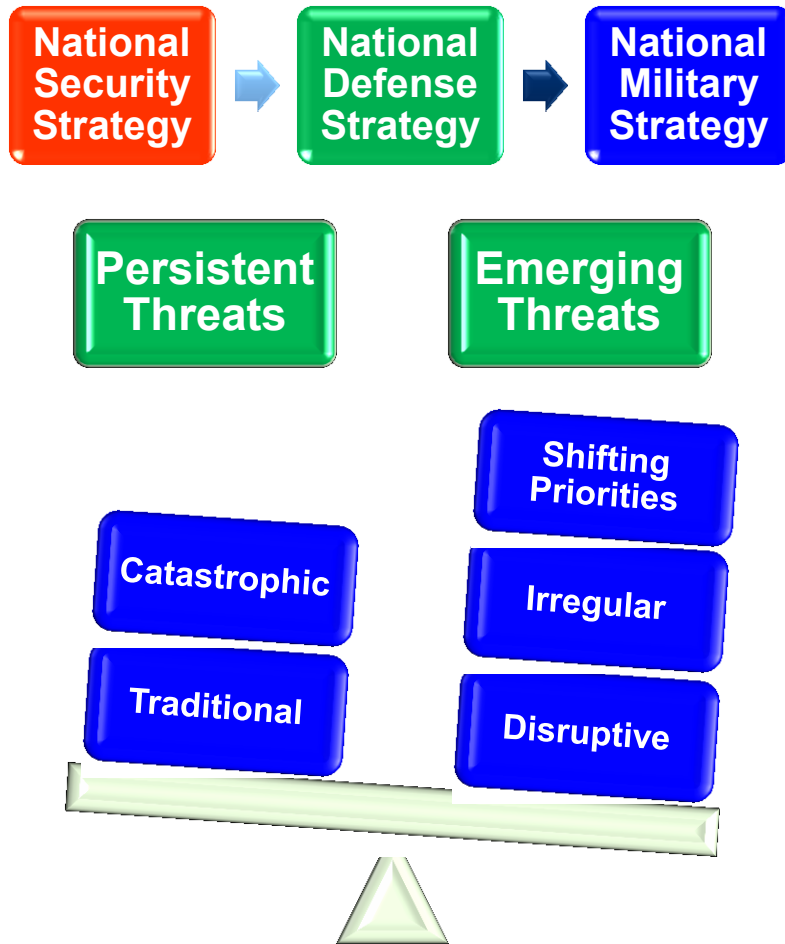


- ◆ **New Dynamic World**
 - Globalized economy
 - Effortless communication
 - Increased media influences
- ◆ **New Challenges**
 - Rising Peer Competitors
 - Non-State threats
 - Increased technological proliferation

Our grand interests are timeless and our Navy must be properly tooled to defend against the new challenges



Ten Years of Shifting Priorities

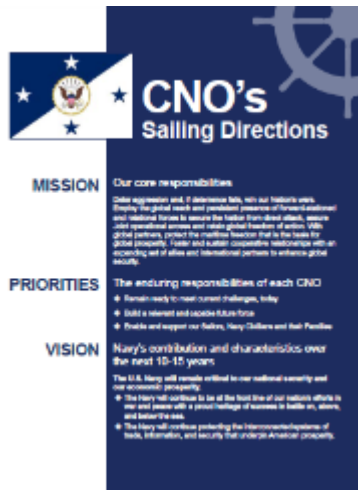


- ◆ **Current environment**
 - Increased cost to develop capability
 - Increased cost to maintain capability
 - Increasing numbers of threats
 - Hyper budget constrained
- ◆ **Results**
 - Difficult to maintain the strategic, operational and tactical edge
 - The cost curve is skewed!
 - Currently unable to address all threats

We must prioritize our investments to defeat both persistent and emerging threats while flattening the cost curve



CNO's Sailing Directions



- ◆ Warfighting First
- ◆ Operate Forward
- ◆ Be Ready

“We will **deliver credible capability** for deterrence, sea control, and power projection to deter or contain conflict and fight and win wars.”

“Build a **relevant and capable** future force”

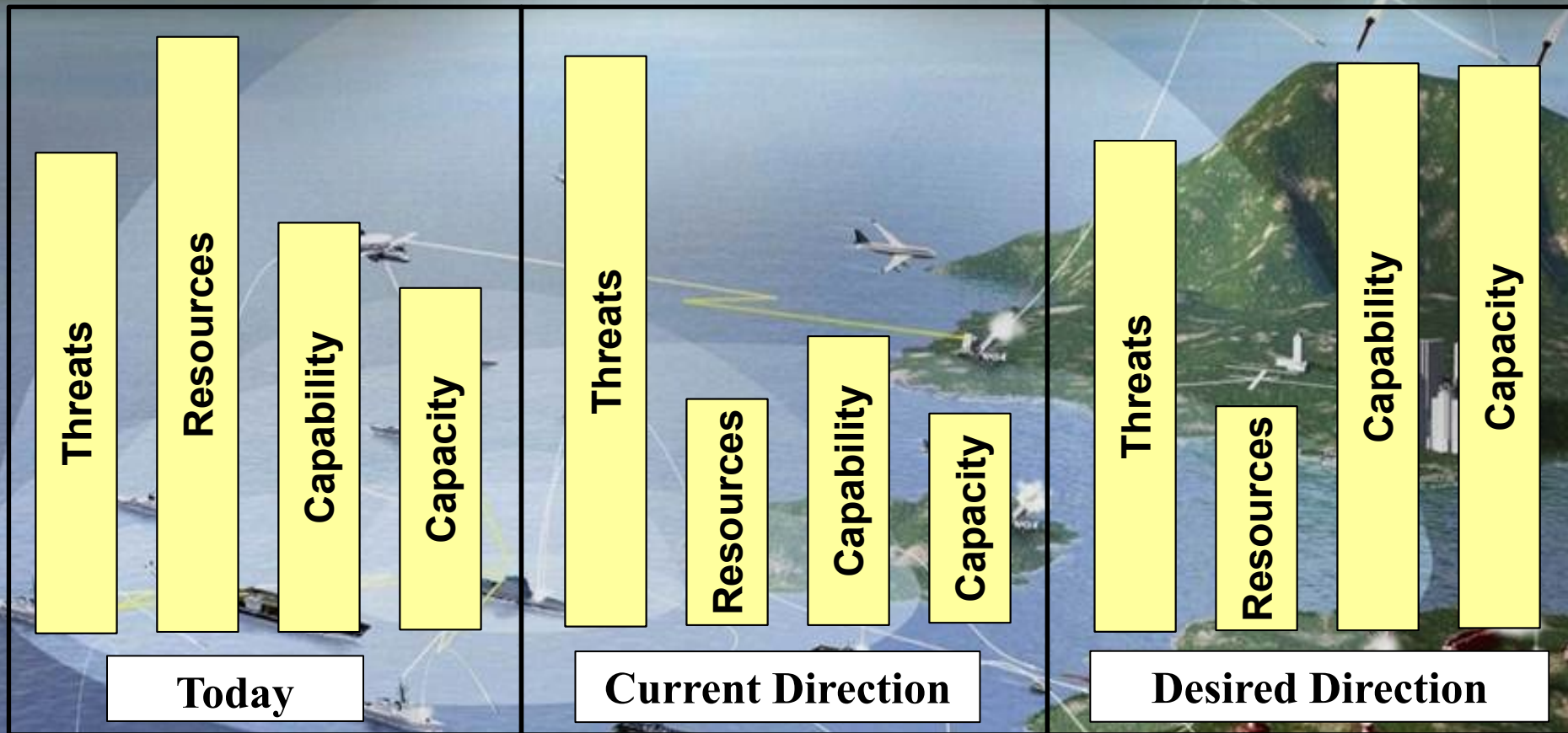
“We will address economic change by being **effective and efficient**. We will **innovate** to use **new technologies** and operating concepts to sharpen our warfighting advantage **against evolving threats**...”

“The **reach and effectiveness** of ships and aircraft will be greatly expanded through new and **updated weapons, unmanned systems, sensors, and increased power**.”

“Be ready to fight and win today, while building the ability to win tomorrow.”



A GAP between Capability and Capacity



Our goal must be to minimize our resources while maximizing effects!



Identifying Capabilities Which Will Increase Capacity

Maximize Coverage

Counter Access Denial

- Time to engage
 - PK₀ distance (precision & low collateral damage)
- The Asymmetric Challenge**

Extend Operational Endurance

Operate in Contested Battlespace

Enabling Persistent C2

Changing the Economic Curve

Maximize the mission attributes that technological investments cut across



Introductions



Captain Jon Hill

- IWS 1.0 MPM
- PD 452 MPM
- CNO SSG
- DASN IWS
- ED SCHOOL XO
- PHD Air Department
- PEO TSC
- NSWCCD



Captain Mike Smith

- NSWCCD CO
- DDG 1000
- OPNAV N86
- NATOSea Sparrow
- TD PEO Ships
- AEGIS Test Officer
- PEP - Canada



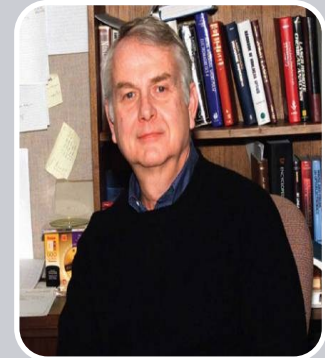
Captain Mike Ziv

- PMS-405 MPM
- SEA 05P
- N43
- INSURV
- SUPSHIP



Captain D.J. Legoff

- MPM PMW 160
- DPM PMW 150
- SPAWAR 05
- OPNAV N6
- APM CVN-21



Dr. Phillip Sprangle

- Chief Scientist for Directed Energy NRL
- Professor UMCP
- Fred E. Saalfeld Award (2012)
- Navy Meritorious Civilian Service Award (2011)
- 15 Patents
- 2 Pending Patents



VADM (Ret) Pete Nanos



- ◆ Managing Executive of the New Force Projection Department at JHPL
- ◆ Defense Threat Reduction Agency (DTRA)
 - Founded the billion dollar Research and Development Enterprise
 - Associate Director for Operations
- ◆ Former Director, Los Alamos National Laboratory, New Mexico
- ◆ Former COMNAVSEA
- ◆ Former Technical Director, Strategic System Programs
- ◆ Pioneered the application of systems engineering at the battle group level rather than just at the individual ship level
- ◆ 1967 - USNA Graduate and Trident Scholar
- ◆ 1974 - PhD in physics from Princeton University

