



Naval S&T: Delivering Disruptive Technologies with Affordable Asymmetric Advantages

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O F F I C E O F N A V A L R E S E A R C H



**Naval technologies
have always had leap
ahead moments ...**



... but at what cost?



Navy S&T must always consider the total cost of our new technological advances while working within the constraints of the S&T budget

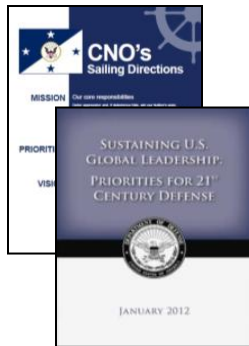
How do we do that?





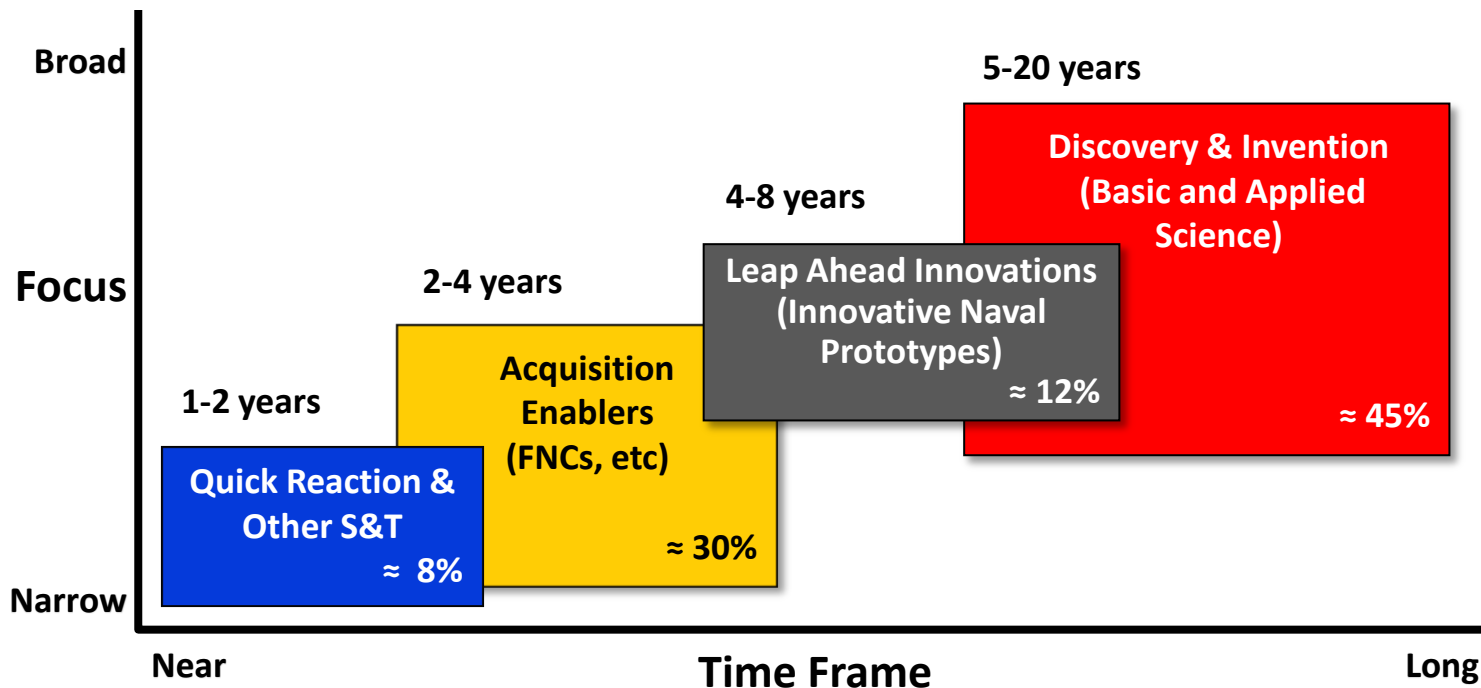
Naval S&T Strategic Plan

All Naval S&T falls under one or more of these nine focus areas:



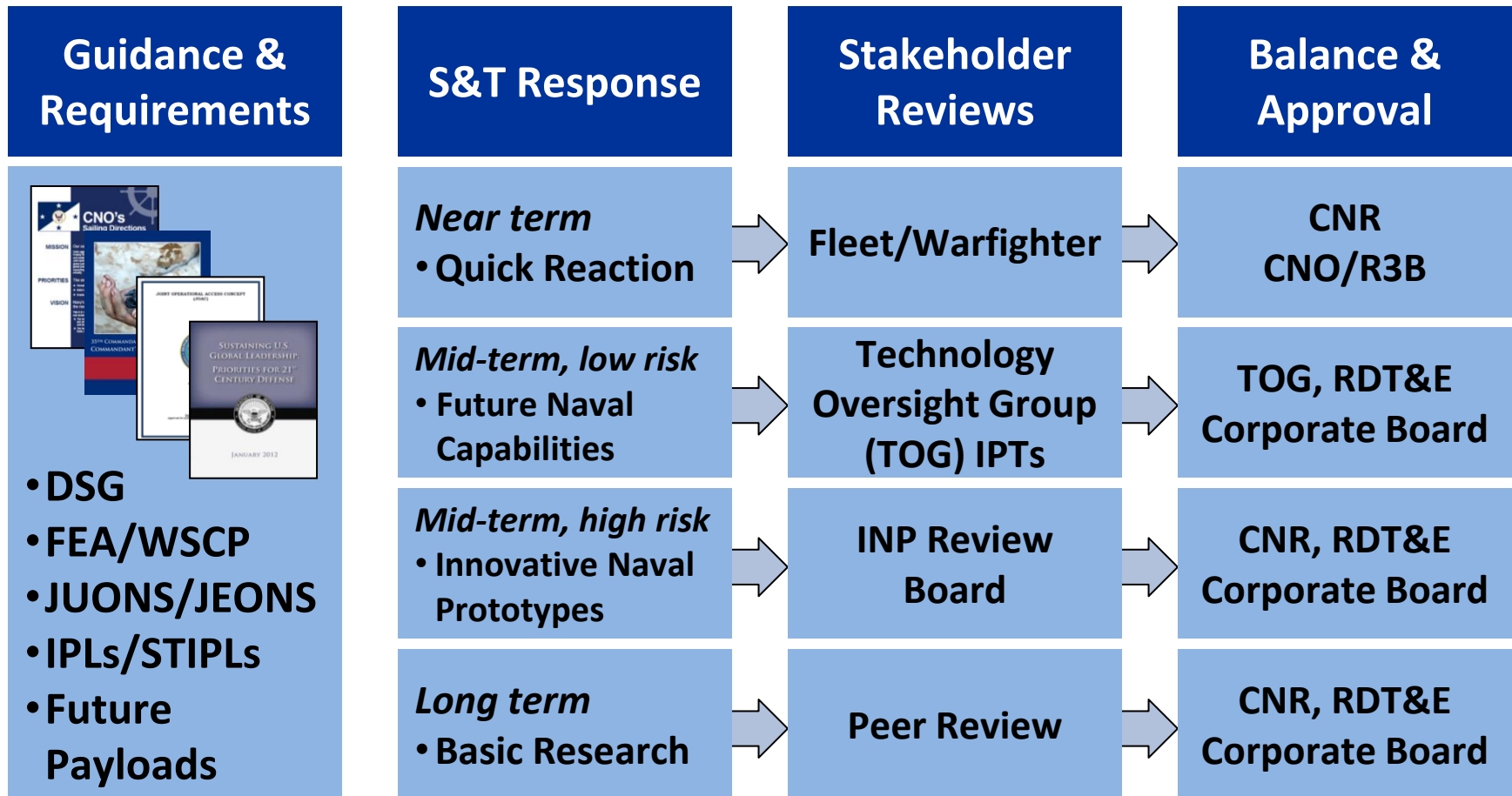
- *Assure Access to Maritime Battlespace*
 - *Autonomy & Unmanned Systems*
 - *Expeditionary & Irregular Warfare*
 - *Power Projection/Integrated Defense*
 - *Information Dominance*
- A2/AD**

- *Power & Energy*
- *Platform Design & Survivability*
- *Total Ownership Cost*
- *Warfighter Performance*





Focus on the needs of the Warfighter and engage with Navy leadership ...



Requirements Driven – Transition Oriented!



... and Maintain a Global Perspective



*Avoid technological surprise,
Leverage advanced technology from wherever we find it*



Affordable Asymmetric Advantages *Not an oxymoron*

EM Railgun

- Multi-use weapon at \$25K per round ...



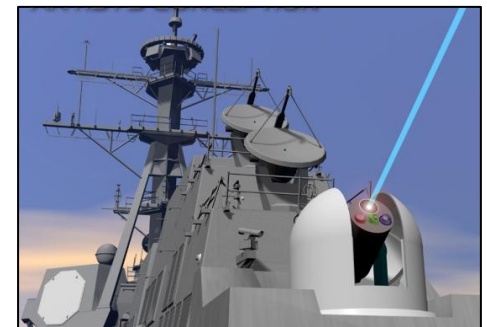
LDUUV

- ISR at a fraction of the cost of an SSN



Solid State Laser

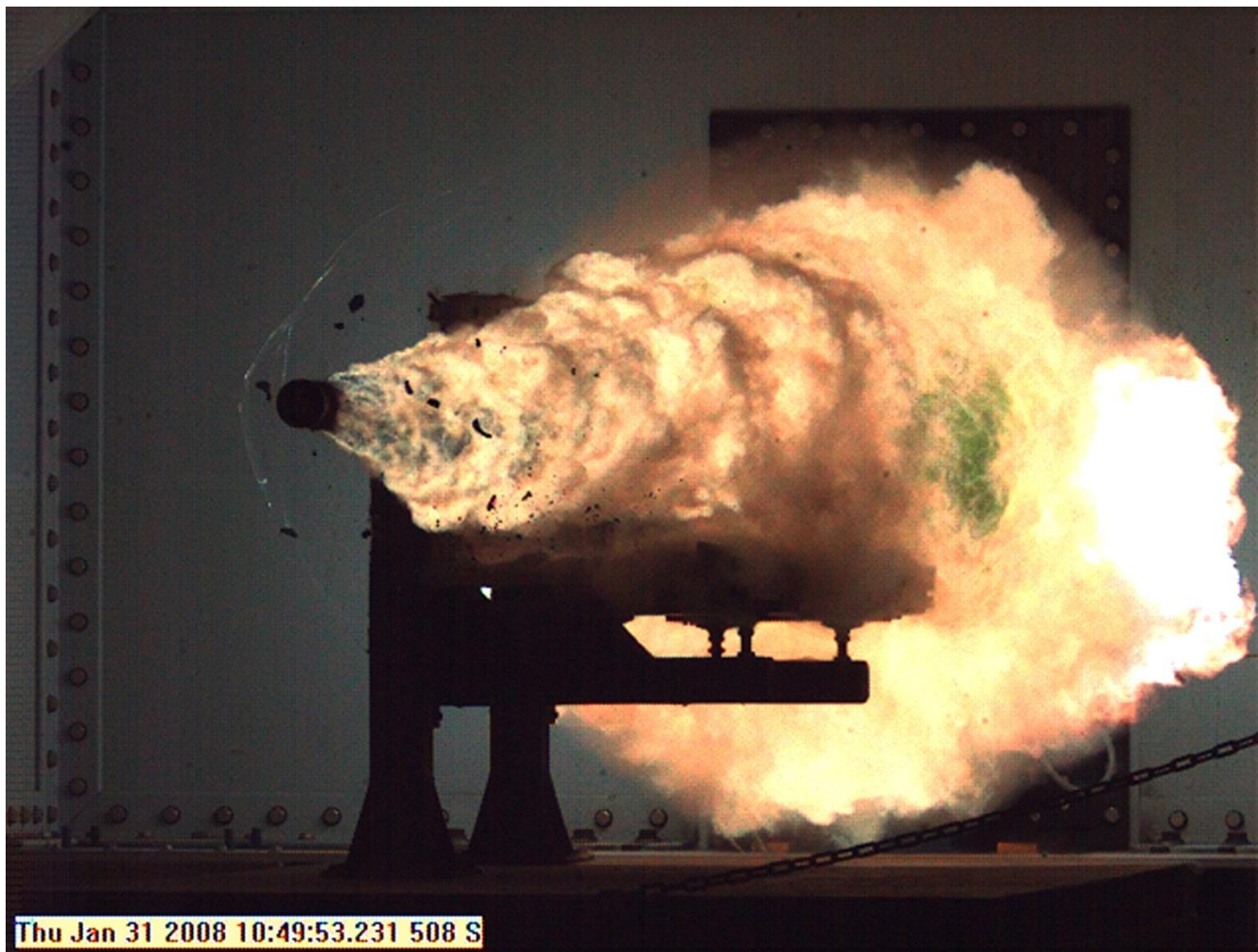
- Less than \$1 per “shot”



EM Railgun ... *Fiction?*



EM Railgun ... *Fact*





Laser Weapon ... at Sea in 2014



“Next year we will deploy a laser system onboard USS PONCE for operational testing in the Arabian Gulf.”

Admiral Greenert, USN
Chief of Naval Operations





ONR's Mission

DISCOVER, DEVELOP and TRANSITION

innovative science and technology
to meet the needs of naval forces for today and
tomorrow ...