ONR Global Command Brief

Date

Presenter Name

ACCELERATING TO THE NAVY & MARINE CORPS AFTER NEXT

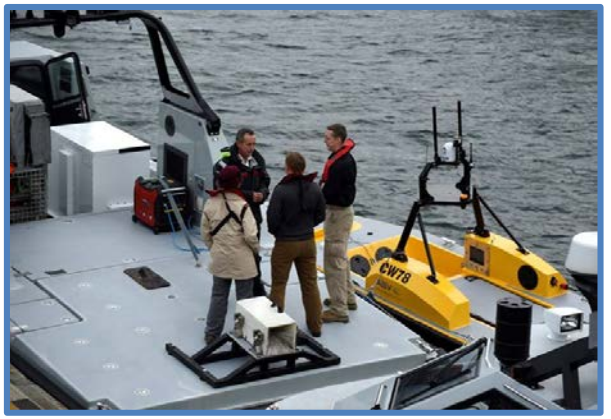
Updated: June 2018

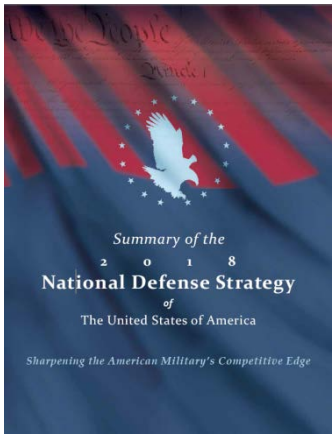
ONR Global Overview

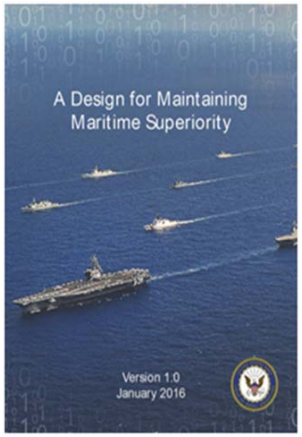
ONR Global Mission

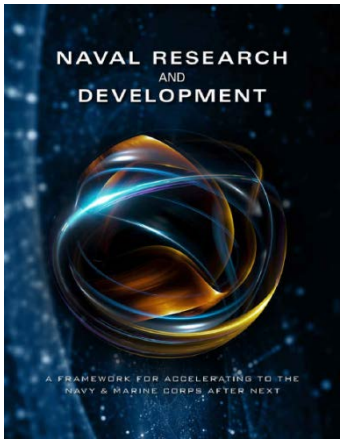
To serve as the preeminent external network facilitator for the Naval Research Enterprise (NRE) by ensuring:

- Quality/relevant connections between the international research and development community, naval fleet/forces, Naval capability development, and our international partners.
- To remain always focused on the current and future needs of our Sailors, Marines, and international partners.

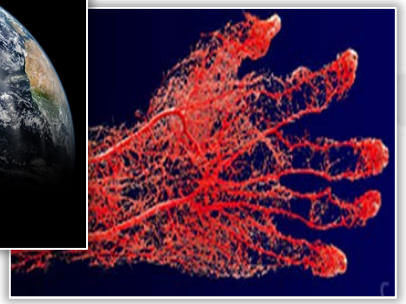




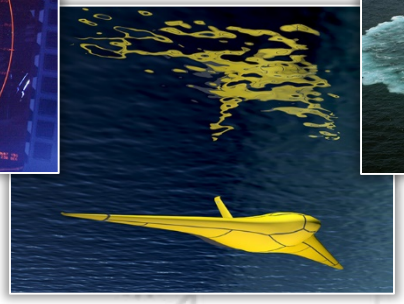




The Naval Research Enterprise





4,000+ People
23 Locations
$2.1B / year
>1,000 Partners

ONR HQ

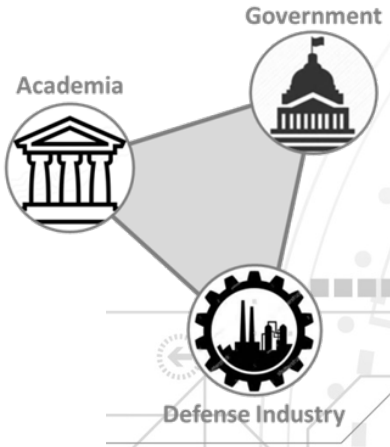
U.S. NAVAL RESEARCH LABORATORY
NRL

ONR Global

The Research Ecosystem

2018 - Global Commercial Market Driven

Post WW2 Model



Business as Usual is No Longer an Option

Naval Research Response

ALIGN

ALLOCATE

ACCELERATE

Office of Naval Research GLOBAL Science & Technology

Mission: To serve as the preeminent external network facilitator for the Naval Research Enterprise

Fleet and Force

"...plan, foster and encourage scientific research in recognition of its paramount importance as related to the maintenance of future naval power, and the preservation of national security..."

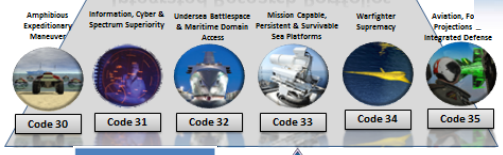
Science Advisors

TechSolutions

Capability Development

NRE

Integrated Research Portfolios



U.S. NAVAL RESEARCH LABORATORY

Experimentation/Analysis

Foreign Comparative Testing

Science Directors

International Research Community

International Engagement

International Naval Partnerships

ONR Global History

1946 – **ONR London Office** created to survey, assess, and report on European S&T

1974 – **ONR Tokyo Office** opened to liaise and assess Asian S&T activities

1977 – London and Tokyo combine to form the ONR **International Field Office** (IFO) to implement integrated DoN S&T strategy for fostering international collaboration

2000 – Tokyo Office expands its presence with a **Singapore** detachment

2002 – IFO opens **Santiago Office**

2003 – Naval Fleet/Force Technology Innovation Office and IFO merged to form **Office of Naval Research Global**

2006 – ONRG opens **Singapore Office**

2009 – DNS designates ONRG an **Echelon II Command** reporting to CNR

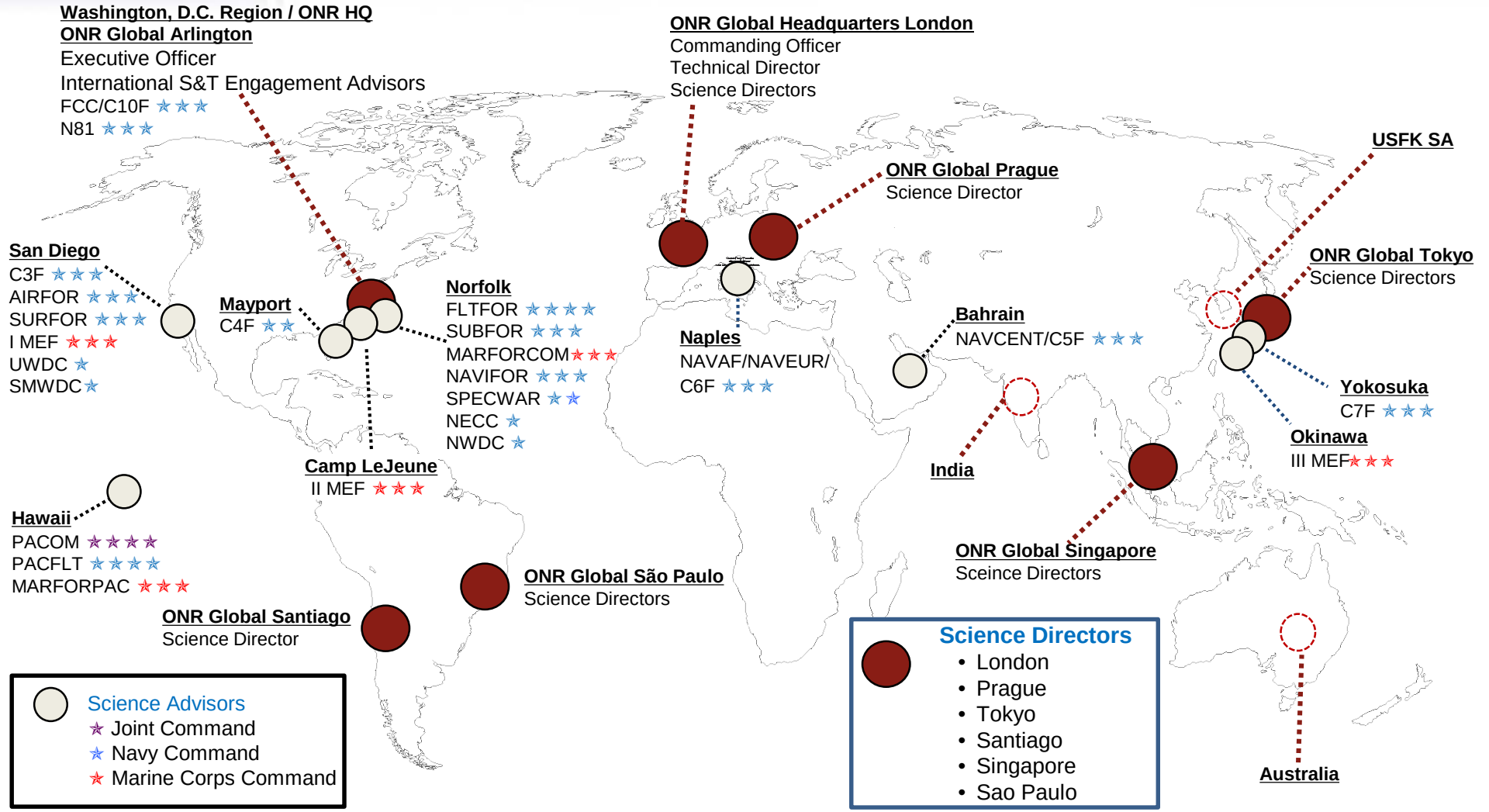
2010 – ONR Global Prague opens

2015 – **ONR Global São Paulo** opens

2018 –Experimentation/Analysis, TechSolutions, Senior National Representative (Navy) and Foreign Comparative Testing are aligned under ONR Global

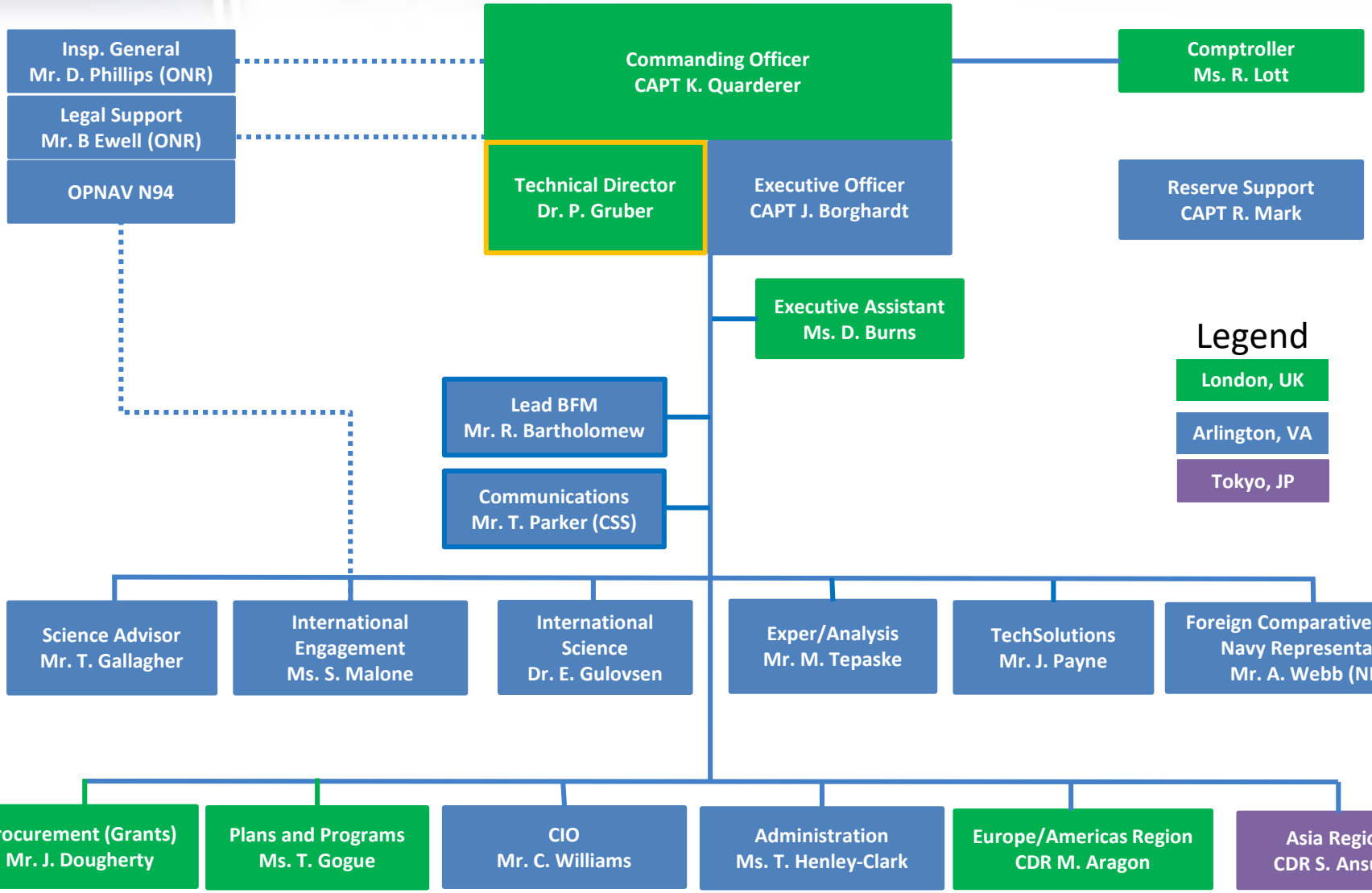
ONR Global's Network

Accelerating S&T Partnerships



NRE's Bridge to the International S&T Community and Naval Fleet / Force; R&D Engagements Globally

ONRG Top Level Organization



ONR Global Objectives

Enable the technology advantage of the Naval warfighter through external facilitation

- **Provide connection to the Fleet and Forces** to respond to needs, align NRE investments and create technology pull
- **Accelerate the delivery of capability** and drive down risk by developing and demonstrating prototype technologies
- **Facilitate dynamic, productive agreements** between international partners and the NR&DE
- **Preserve Naval Power** by fostering and leveraging promising science and monitoring emerging technology trends

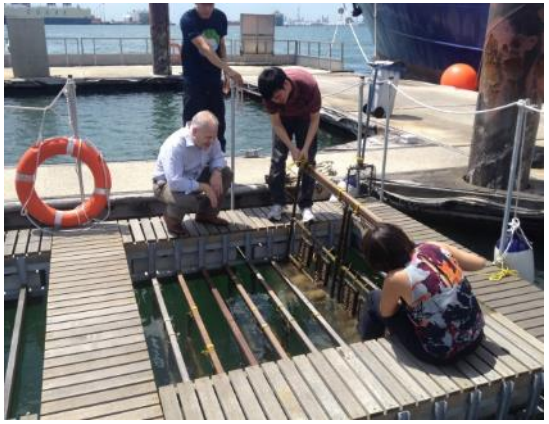
ONR Global Technical Functions

Science Advisors

Embedded in Navy and Marine Corps staffs to connect the warfighter and the Naval Research & Development Establishment

Science Directors

Finding and connecting the best science back to the Naval Research Enterprise from six offices worldwide



International Engagement

Developing and maintaining Naval military to military research & development relationships

ONR Global Technical Functions

Experimentation/ Ops Analysis

Provides the opportunity to explore new technology capability limitations, develop operational concept possibilities and analyze science and technology applications in support of the Fleet/Force.

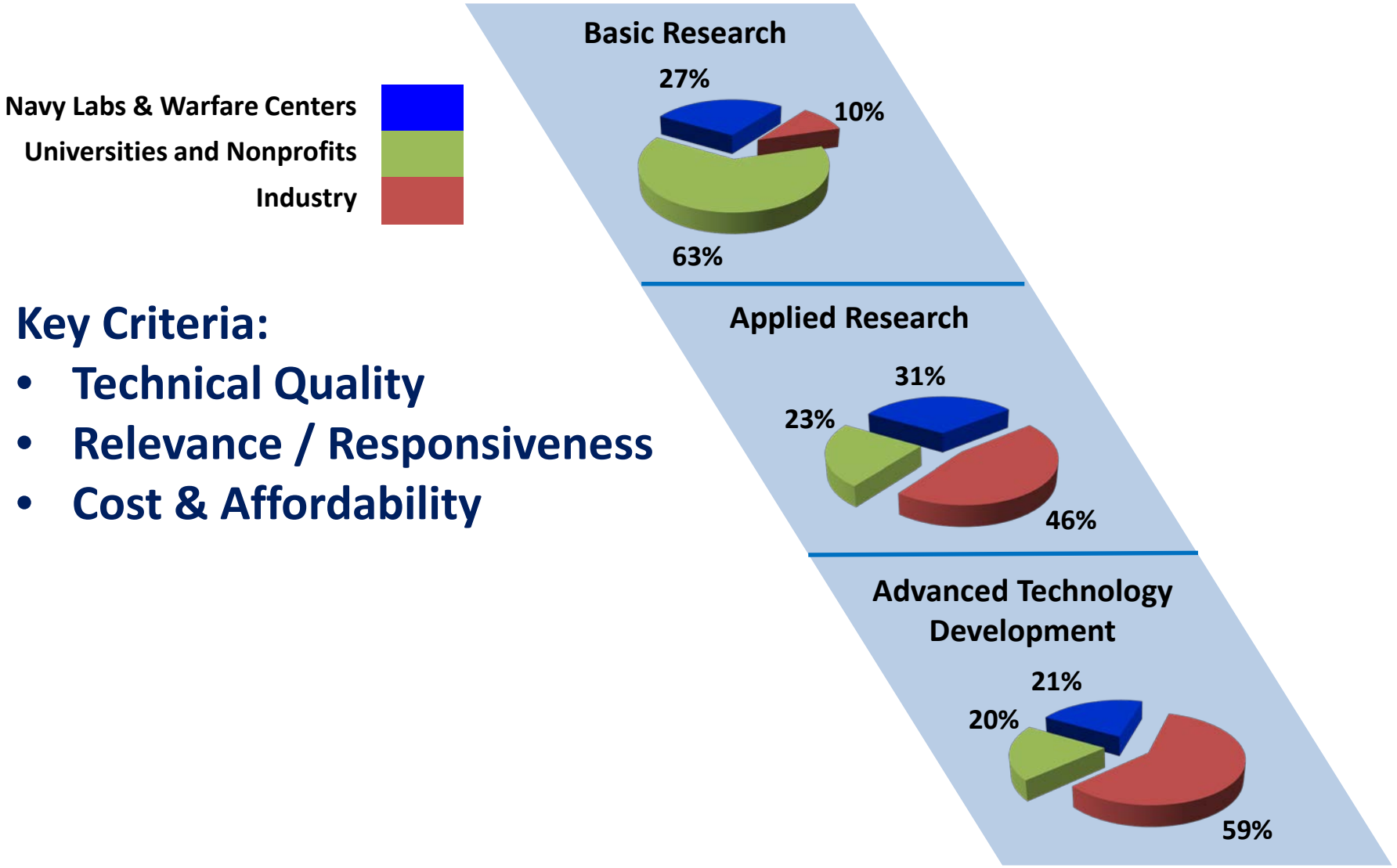
TechSolutions

TechSolutions develops and delivers prototype technology based on needs submitted directly by Sailors and Marines by linking the warfighters with the Naval Research and Development Establishment for rapid response prototyping.

Foreign Comparative Testing

Identification and testing of foreign developed defense capabilities and technologies to provide enhanced platform, systems and warfighter lethality, effectiveness, readiness/sustainment and protection.

ONR Partners with the Best Performers



Key Criteria:

- Technical Quality
- Relevance / Responsiveness
- Cost & Affordability

Science Directors

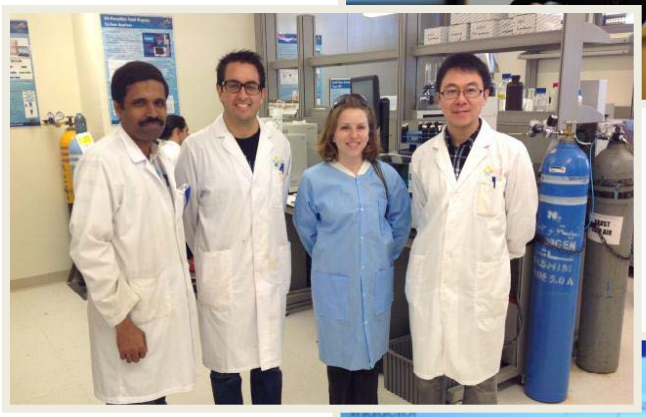
Act as a tech broker linking ONR, NRL, and the NRE with International S&T

Identify disruptive S&T in order to avoid Naval technical surprise

Gain enhanced awareness of S&T through direct, regular contact with international colleagues

Initiate and manage grants to provide tangible links between foreign scientists and their US Naval counterparts

Provide ONR forward presence with global innovators and technologists



Naval Research Enterprise's Global S&T Scouts!

International Science Tools

Liaison Visits

- ONRG technical staff attend international events and visit international institutions to develop access and discover cutting edge S&T

Grant tools

Visiting Scientist Program (VSP)

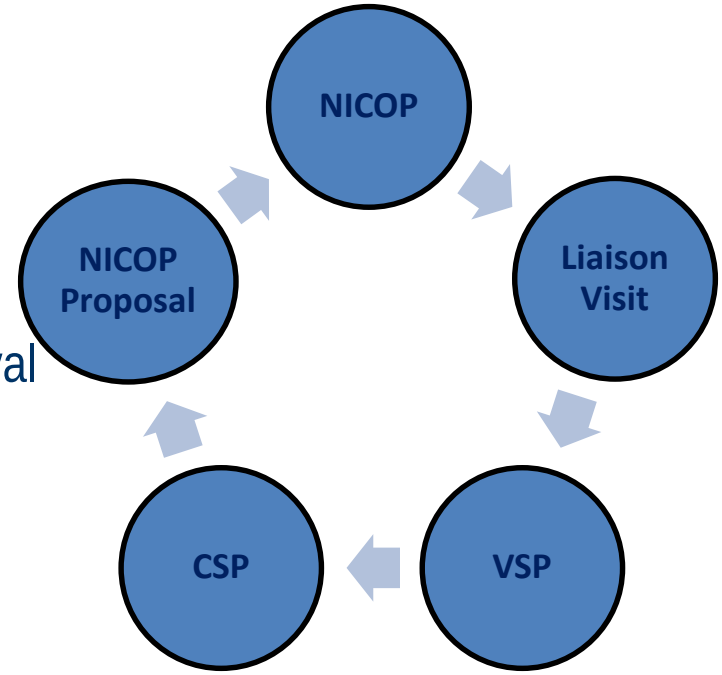
- Support travel of foreign scientists to the US to socialize new S&T ideas or findings with the Naval Research Enterprise

Collaborative Science Program (CSP)

- Support foreign or international workshops and conferences of Naval interest

Naval International Cooperative Opportunities Programs (NICOP)

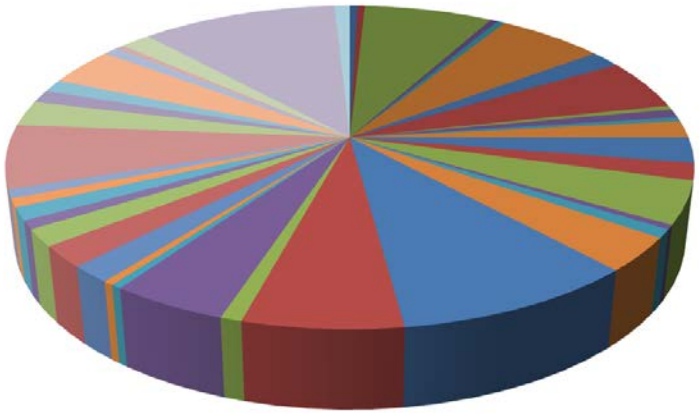
- Support connection of innovative, international S&T to ONR programs and US PIs



Small early investments can lead to significant results

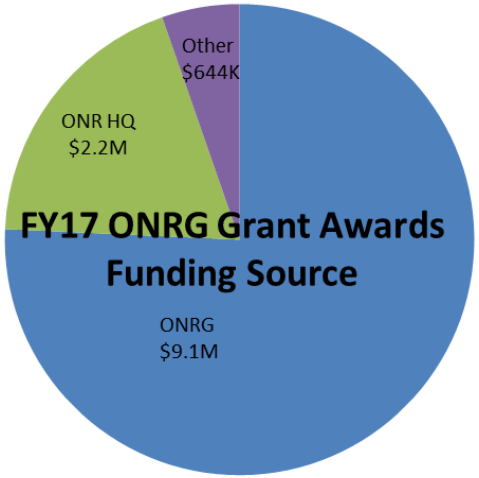
FY17 International Science Tools

Globally Dispersed



FY17 Grants (236 total)

Grant Collaboration



FY17 Grant Tools Metrics

- Total Funding	$12M ($9.1M ONR Global)
- Total Countries	41
- Grants (Conference + Research)	236
- Visiting Scientist Program	47
- Total	283

Scientist to Sea program

- The Scientist to Sea program exists as an opportunity to provide scientists and engineers from across the NR&DE, UARCs, and research labs in and outside of DOD, a first-hand perspective of end-user requirements and the challenging operating environment that our Sailors and Marines are exposed to on a daily basis.
- While most S2S participants are pulled from traditional Naval research centers, C3F continues to expand these unique opportunities outside DON, to include scientists from NASA Ames Research Lab, DIU, DARPA, JHU APL, Lawrence Livermore National Lab, and Scripps Institution of Oceanography.
- Recent examples of research projects specifically aligned to S2S opportunities include: NRL Monterey in development of Smart Voyager Planning Decision Aid (SVPDA) tool for ship/subs and the fleet weather centers; NSWCDD in development and support of Hypervelocity Projectile demonstration; JHPAPL in support of Ship Self Defense System (SSDS).

Science Advisors

Articulate Fleet Force S&T needs and requirements to ONR, NRL, NR&DE

Communicate Command issues to CNR, ONR leadership and Program Officers

Serve as ONR on site rep during Fleet Force exercises and demonstrations

Lead S&T planning & experimentation processes to focus on meeting critical needs, then assist in transition of key technologies to the Warfighter

Aligning Naval Research Enterprise to the Fleet/Force!

TechSolutions

Requests input directly from Sailors on the deckplate and Marines in the field

Links warfighters with the Naval Research & Development Establishment (NR&DE) for prototype development

Pulls S&T ideas from the fleet and force for development, rather than pushing technology

Rapidly develops a prototype and demonstrates the solution in an operational context

Fleet/Force's Conduit to the Naval Research Enterprise!

Experimentation and Ops Analysis

Requests derived from ONR Program Officers, validated by SME's, ONRG Science Advisors and Science Directors

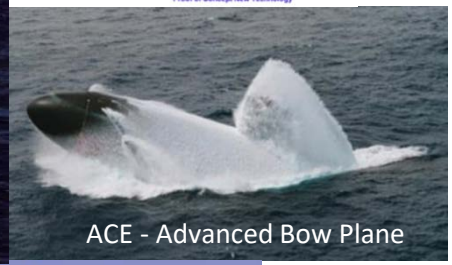
Experiments validate hypothesis and provide information back to technology development

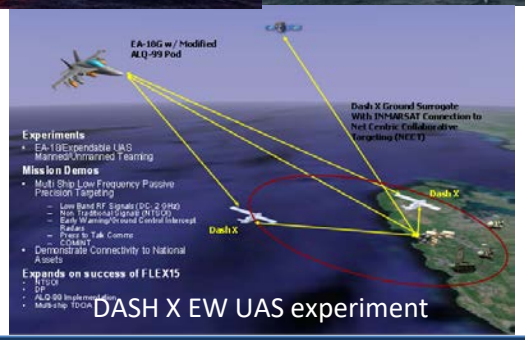
S&T ideas from the fleet and force can be leveraged to bring capability at scale to an advanced development program

Operational Analysis looks at alternatives and options to develop or apply to S&T projects

Topside Corrosion Control Experiment


SINKEX


ACE - Advanced Bow Plane



DASH X EW UAS experiment

Accelerating Naval Research Enterprise's Capability Development!

Foreign Comparative Testing

Supports the warfighter by leveraging non-developing items of allied and friendly nations to satisfy U.S. defense requirements more quickly and economically

Connects Foreign Technologies to Department of the Navy Development and Acquisition Programs

Increases U.S. Warfighting capabilities, while providing significant cost savings resulting in positive ROI

Accelerates fielding technologies an Average of 2 - 4 Years vice starting a new US defense R&D program

Provides friends and allies an opportunity to market their defense products to the U.S., while improving Cooperation and the “2-Way Street”

Accelerating Naval Research Enterprise’s Capability Development!

International Engagement

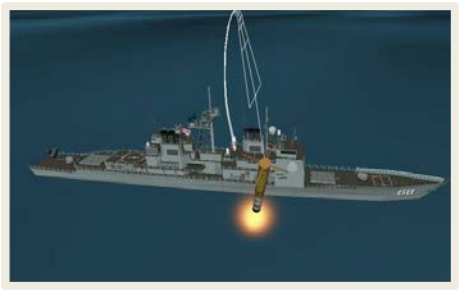
Serve as the action officer to coordinate & manage government to government S&T partnerships

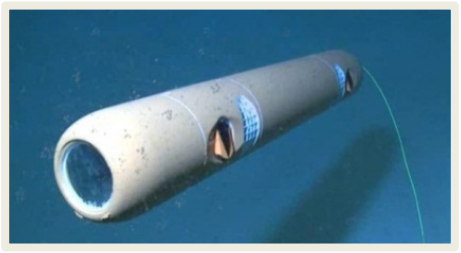
Engage with US Program Officers and foreign defense organizations to identify & develop collaborative projects that solve Naval capability gaps

Interface throughout ONR & NRL; NR&DE

Gain exposure across the S&T portfolio

Connect across USG (OPNAV, NIPO, AF/Army/DARPA, OSD, DOS, OSTP, etc)





Naval Research Enterprise's International Partnership Builders!

Questions?

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