Office of Naval Research Global

International Scientific Outreach and Partnership Building

Martina Siwek, PhD
Science Director
Central and Eastern Europe
U.S. Embassy Prague

ACCELERATING TO THE NAVY & MARINE CORPS AFTER NEXT
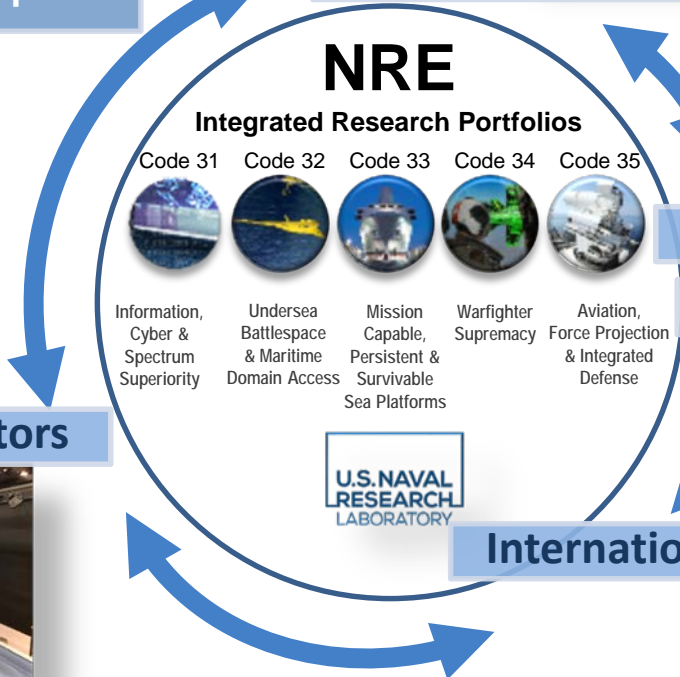
Naval Research Enterprise

ONR Global is 6 technical departments connecting: international research and technology, capability development, international military partners, and the US Navy and Marine Corps.

Fleet and Force

Science Advisors

TechSolutions

NRE

Integrated Research Portfolios

Code 31	Code 32	Code 33	Code 34	Code 35
Information, Cyber & Spectrum Superiority	Undersea Battlespace & Maritime Domain Access	Mission Capable, Persistent & Survivable Sea Platforms	Warfighter Supremacy	Aviation, Force Projection & Integrated Defense

U.S. NAVAL RESEARCH LABORATORY

Experimentation/Analysis

Foreign Comparative Test

Capability Development

Science Directors

International Engagement

International Research

International Naval Partnerships
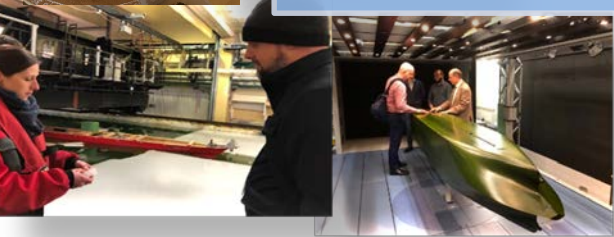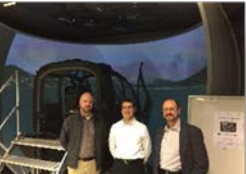
ONRG **- The partner of choice for science and technology leaders**

Investing in Trusted Partnerships

Washington, D.C. Region / ONR HQ
ONR Global Arlington
Executive Officer
FCC/C10F ★★★

ONR Global Headquarters London
Commanding Officer
Technical Director
Science Directors

Pyeongtaek
USFK ★★★★

San Diego
C3F ★★★
AIRFOR ★★★
SURFOR ★★★
I MEF ★★★
UWDC ★
SMWDC ★

Camp Lejeune
II MEF ★★★

Fallon
NAWDC ★

Groton
UWDC ★★

Norfolk
FLTFOR ★★★★
SUBFOR ★★★
MARFORCOM ★★★
NAVIFOR ★★★
SPECWAR ★★
NECC ★
NWDC ★

Prague
Science Director

ONR Global Tokyo
Science Directors

Bahrain
NAVCENT/C5F ★★★

Naples
NAVEUR/NAVAF ★★★★
C6F ★★★

Mayport
C4F ★★

Yokosuka
C7F ★★★

Hawaii
PACOM ★★★★
PACFLT ★★★★
MARFORPAC ★★★

Okinawa
III MEF ★★★

Singapore
Science Directors

São Paulo
Science Directors

Santiago
Science Director

Melbourne
Science Director

Locations
- Headquarters
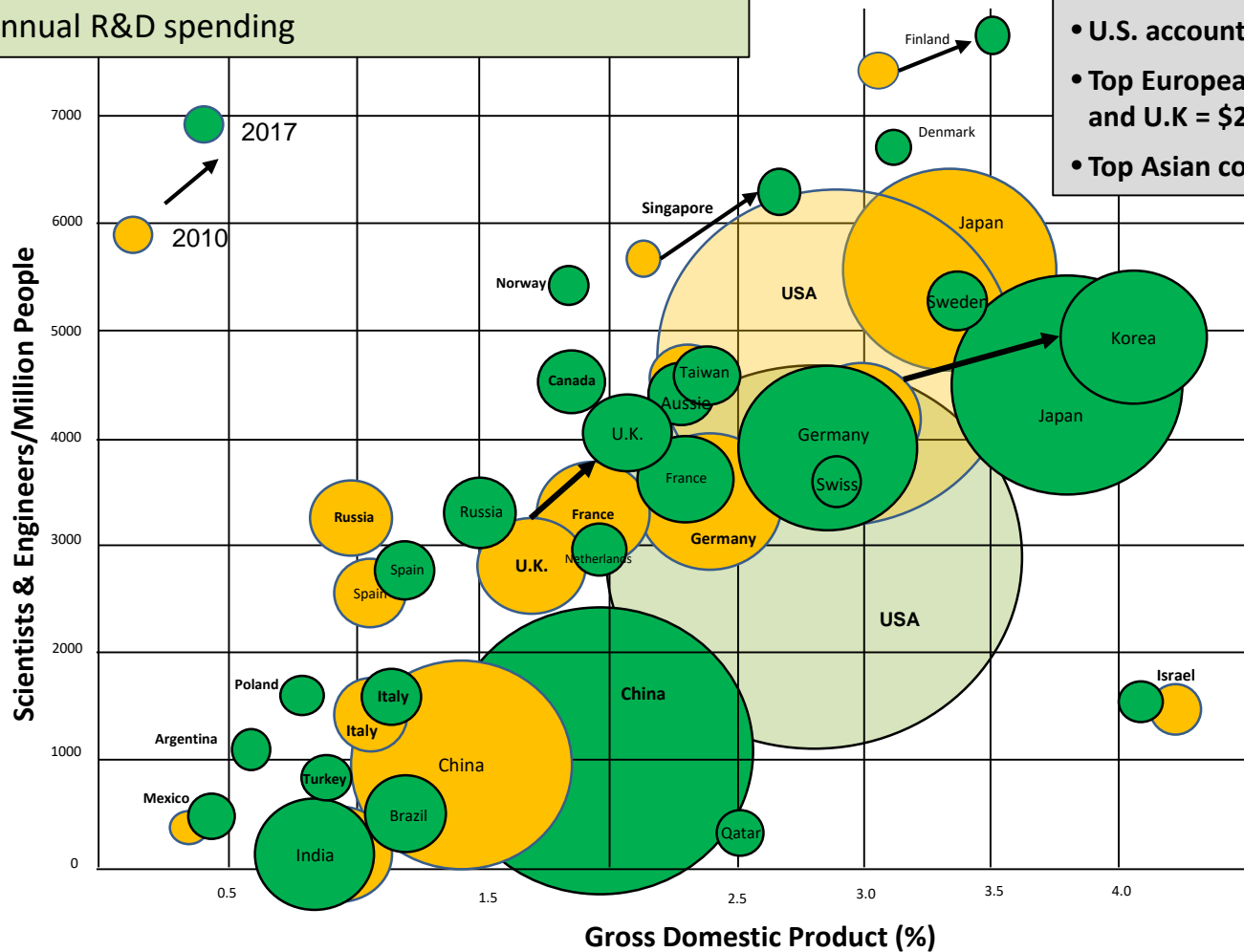- Office
- **Deployment site**

Science Advisors
★ Joint Command
★ Navy Command
★ Marine Corps Command

Focus: International research & partnerships, connecting S&T to fleet/force, global technical awareness

Why International Science?
International S&T is Outpacing the US

Size of the circles reflects the relative amount of annual R&D spending

- **80% of world's researchers are outside of the U.S**
- U.S. accounts for $497B (25.5%) in R&D funding
- Top European funding countries Germany, France and U.K = $220B
- Top Asian countries China, Japan, Korea = $613B

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Collaboration Opportunities

Research Grants

- Cooperative Agreements and/or Grants
- Relevant to BAA technical focus areas

$25-$150k/year
6 mon - 3 yrs

Visiting Science Program

- Travel grant
- Travel to a US Navy Lab or Center to collaborate/plan

$1-3k
Single trip

Collaborative Science Program

- Small, scientifically focused
- Workshops, seminars, conferences

$3-5k
Single event

Small early investments can lead to significant results

For detailed information about our current research interests and our grant programs, please look at our websites:
www.onr.navy.mil/global (describes ONR Global, including grant programs)

Proposal Process

Initial Contact
- Visit
- Virtual

White Paper
- Researcher Submits
- 2-5 pages

Initial Review
- Determine Program Interest
- Adjust proposal/focus

Full Proposal
- Requested
- Submit on Grants.gov

Full Review
- Technical / Academic
- Financial

Conduct Research
- Collaboration
- Interim reports

Publish Results
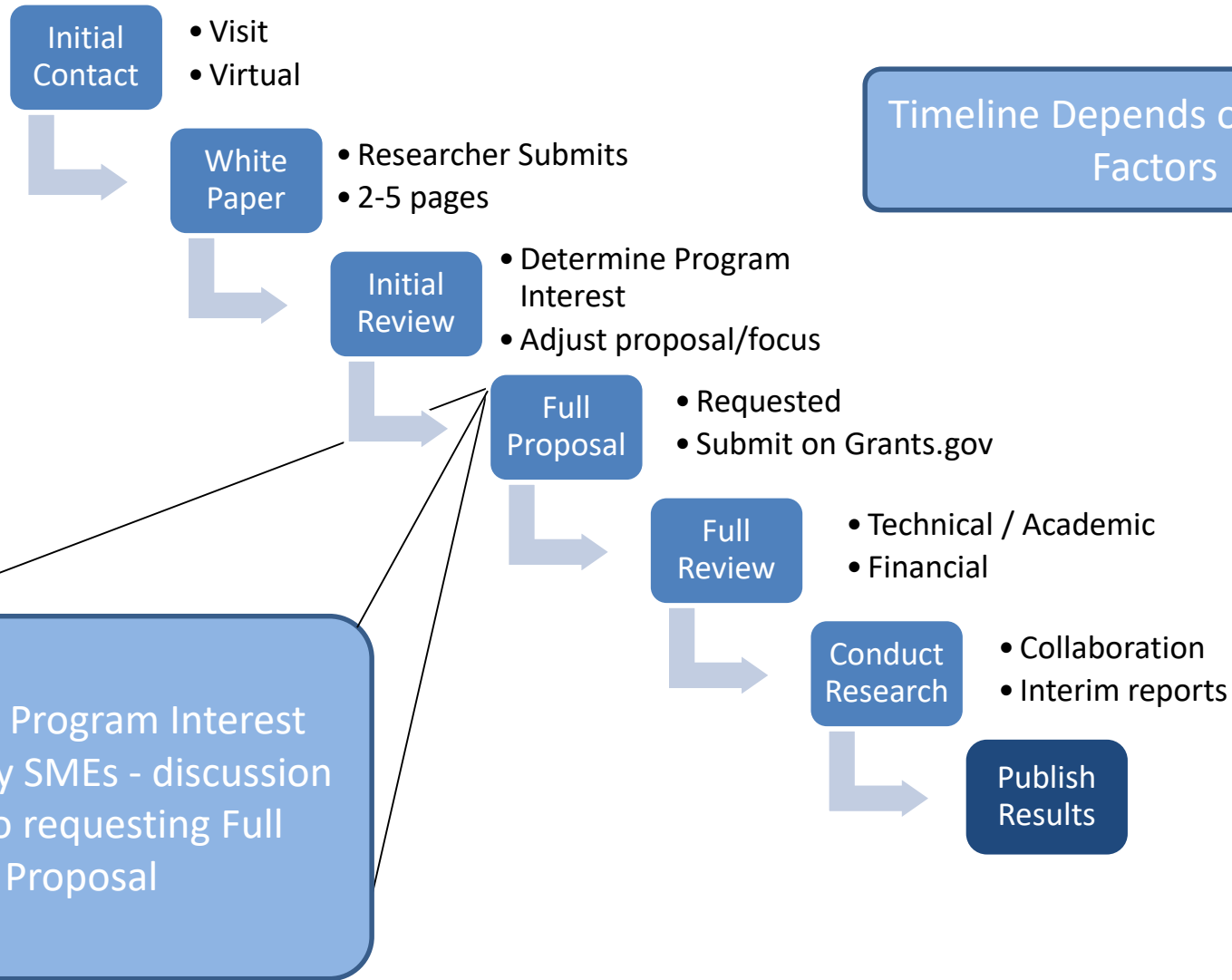
Timeline Depends on Multiple Factors

Pending Program Interest from Navy SMEs - discussion prior to requesting Full Proposal

Engagement Opportunities

- **Intellectual property remains** with the Principal Investigator
  - Government Purpose Rights (non-exclusive/non-commercial use of the IP)
- Funding goes to **non-U.S. based** Principal Investigators and institutions
- Government organizations not eligible
- We **encourage openly** publishing results/outcomes
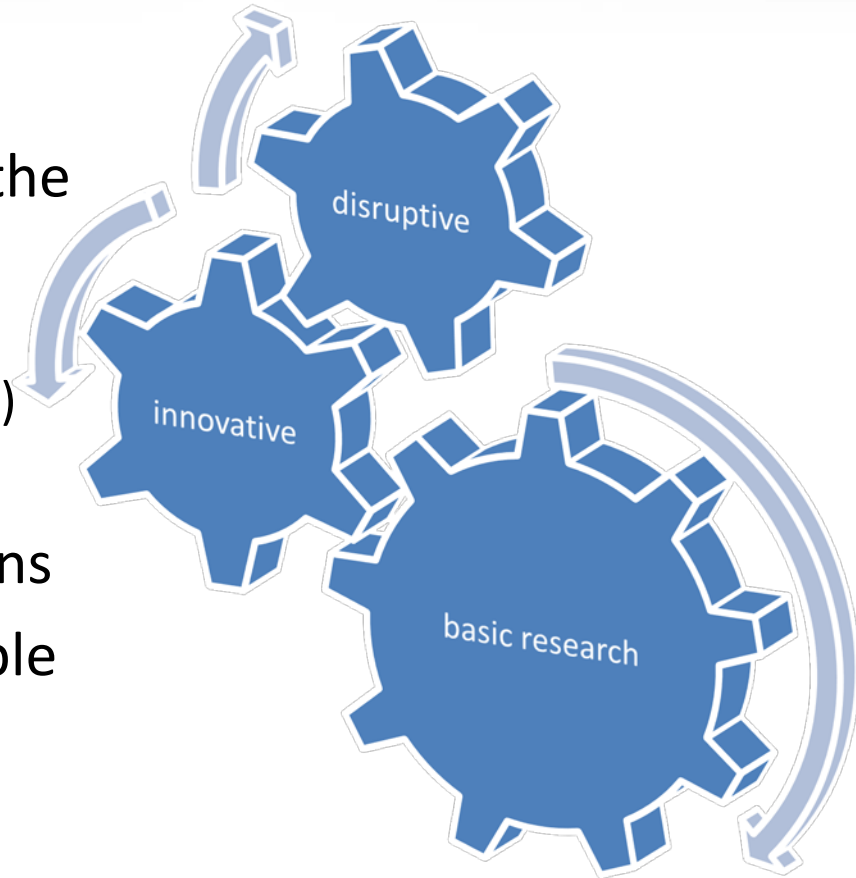
Our Goal: New relationships with top researchers in key areas

Current Czech Projects

- ## The Cocktail Party Problem
  - Technical University of Liberec

- ## Early Warning for Heart Stress
  - Brno University of Technology

- ## Navigating Without Satellites
  - West Bohemia University (Plzen)
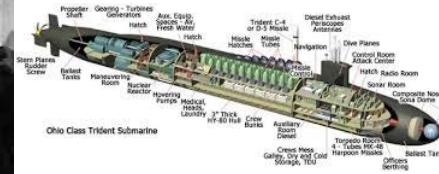
Czech Research Institutes Supported by Navy and Army

Current Engagements

Fields Currently Funded by ONR

https://www.onr.navy.mil/our-research/technology-areas

This website lists technology areas we currently fund

If your topic fits one of these technology areas, that is great …

but we are open to new ideas too!

Addressing Current Challenges

International seminar on Post-COVID illness in adults and children

- COVID-19: ONR Global (US Embassy Prague Office) and the British Embassy Prague co-hosted an international workshop to facilitate cross-collaboration and novel approaches
  - Participants included COVID-19 experts from the US, UK, Czech Republic, Slovakia, Poland, Slovenia, Serbia, Hungary, Bulgaria, and Turkey
  - Discussions revealed insights about national strategies for genomic sequencing, unique challenges, best practices, and applications of novel technologies and approaches

- Bi-lateral exchange on COVID mitigation strategies in schools with Czech Ministries of Health and Education
  - Result: Czech advisory committee to the Ministry of Health recommended mandatory masking

Mission Prague Initiative: Equal Opportunity

CZECH WOMEN IN AI (CWAI)

The US Embassy and the US Office of Naval Research (ONR) Global are proud to have hosted the inaugural reception for the Czech Women in AI (CWAI) professional network on 14 October 2020.

ONR Global Science Director Dr. Stephen O'Regan opened the reception and Deputy Chief of Mission Ms. Jennifer Bachus delivered the keynote address. Following remarks by the Steering Committee, a select group of American women called in from abroad to share their networking experiences as women working in science and technology fields.

The 26+ strong CWAI group shared their aspirations for the network during a lively brainstorming discussion guided by the CWAI Steering Committee, coalescing around six topics to drive future activities:
1. Networking
2. Events, Talent Search & Recruitment
3. Studies, Research, Projects
4. Promoting Women in AI, diversity and inclusion
5. Education and outreach
6. Deeper insight into AI field, knowledge sharing

The 4-member Steering Committee, like the CWAI members, draws from business, academia, and government:

- Alžběta Krausová, Czech Academy of Sciences, Institute of State and Law
- Zlata Straková, The Office of the Government of the Czech Republic, European Digital Agenda Unit
- Kateřina Anna Magnna, Microsoft -- Government Affairs Czech Republic & Slovakia
- Milena Jabůrková, IBM and Vice President Confederation of CZ Industry for Digital Economy and Education

For more information about CWAI, please contact Kateřina Anna Magnna by email Katerina.magnna@microsoft.com or by SMS 00420 702 041 709

ONR led the US Embassy initiative to promote the benefits of equal opportunity to the Czech AI community

https://www.youtube.com/watch?v=3i_buRDqUGY

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Where to Find Us Online

www.onr.navy.mil/Science-Technology/ONR-Global

Final Note

We succeed only when YOU succeed.
Let us work together!

Please contact me by email: ONRG.Prague@mail.mil

*Email me white papers with your
relevant concepts*

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Thank You!

Martina Siwek, PhD
Science Director for Central and Eastern Europe
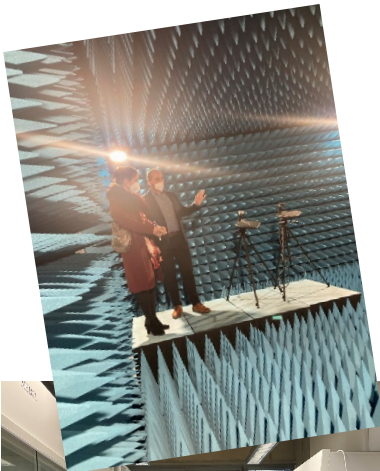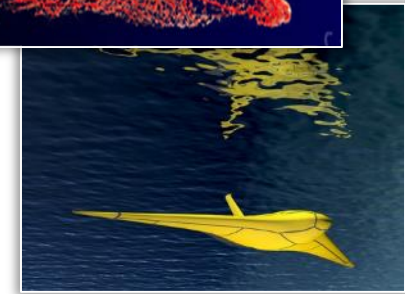Office of Naval Research Global
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martina.m.siwek.civ@mail.mil
http://www.onr.navy.mil/Science-Technology/ONR-Global.aspx
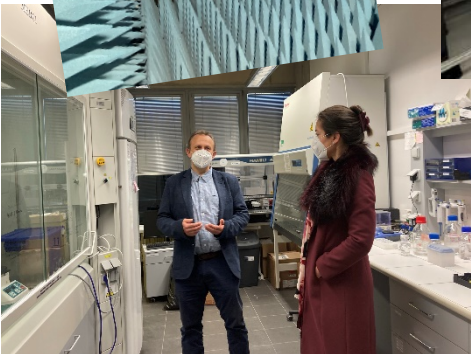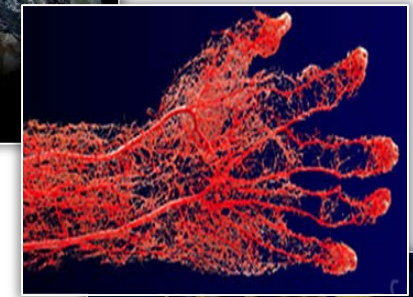
Back-up Slides

ONR Focus Areas

Chief of Naval Research

ONR HQ

Office of Naval Research Global (ONRG)

Code 31	Information, Cyber and Spectrum Superiority
Code 32	Ocean Battlespace and Expeditionary Access
Code 33	Mission Capable, Persistent and Survivable Naval Platforms
Code 34	Warfighter Performance
Code 35	Aviation, Force Projection and Integrated Defense
Code 36	Naval X

Naval Research Enterprise Addendum to the
NAVAL RESEARCH AND DEVELOPMENT FRAMEWORK

MARITIME SUPERIORITY

Focus Areas:

- Assure Access to Maritime Battlespace
- Autonomy and Unmanned Systems
- Electromagnetic Maneuver Warfare
- Expeditionary and Irregular Warfare
- Information Dominance - Cyber
- Platform Design and Survivability
- Power and Energy
- Power Projection and Integrated Defense
- Warfighter Performance

Enduring Research Responsibilities

Amphibious Expeditionary Maneuver

Expeditionary fires and lethality
Expeditionary C4ISR
Hybrid threat defeat
Human performance and protection
Amphibious mobility
Logistics, sustainment and maintenance
Expeditionary power and energy
Lightening the load
Accelerated learning/decision making
Information environment operations

Aviation, Force Projection & Integrated Defense

Directed Energy (DE) & Counter DE
Aerodynamics
Flight dynamics & control
Propulsion
Structures and materials
Energetic materials
Hypersonics
Autonomy

Warfighter Supremacy

Undersea medicine
Biological sciences
Biorobotics
Capable manpower
Command decision making
Force health protection
Human-robot interaction
Noise-induced hearing loss
Training and simulation
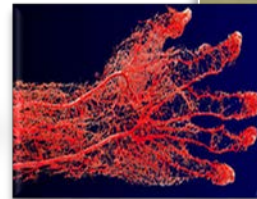
Information Cyber and Spectrum Superiority

Advanced RF electronics & materials
Communications and networking
Computational methods for decision making
Data science and analytics
Electronic warfare
Sensors and sensor processing
Machine learning, reasoning and intelligence
Resource optimization
Precision navigation & timekeeping

Undersea Battlespace and Maritime Domain Access

Arctic and global prediction
Littoral geosciences and optics
Marine mammals and biology
Marine meteorology
Maritime sensing
Ocean acoustics
Ocean engineering & marine systems
Physical oceanography
Research facilities
Space environment
Undersea signal processing
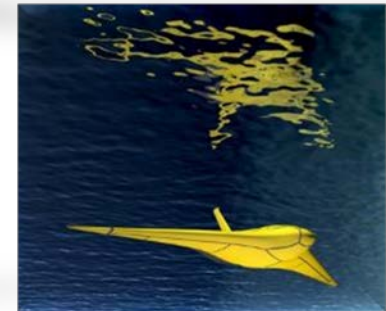
GUIDELINES FOR PROPOSAL WRITING

Proposal Submission Guidance

- ➢ Most current BAA can be found on www.onr.navy.mil
- ➢ Submit proposal using http://grants.gov

  - ➢ Offeror shall use the Grants.gov form Standard Form SF424(r & R), the Research And Related Other Project Information, the Research & Related Budget, and Project Abstract forms from the application package template associated with the BAA on the Grants.gov web site. Assume that performance will start no earlier than three (3) months after the date the cost proposal is submitted.

Grant proposals submitted to ONRG should be in response to Broad Agency Announcement (BAA) of long-range ONR scientific projects

Register on Grants.gov

- Acquire DUNS (Data Universal Numbering System) number

    http://fedgov.dnb.com/webform

- Acquire NCAGE Code (NATO Commercial and Government Entity Code)

    https://eportal.nspa.nato.int/AC135Public/default.aspx

- Register in SAM (System for Award Management)

    https://www.sam.gov

Proposals must be submitted through the Grants.gov

(Only Some of the) Guidelines for Writing Full Proposals

For VSP (travel) grants

- You must have a US Navy-approved researcher agree to host your visit
- The visit should be 1-5 consecutive business days.
- If you already are planning to go to the US for other reasons (for example, a conference), then the travel grant should only be to cover expenses between that US location to the US naval facility.
- Can you add personal days? Yes, at your own expense and not for more days than you would be at the US Navy research facility.

For CSP (conference) grants

- We expect (and encourage) you to have other sponsors.
- Conferences cost approximately 10-50 thousand USD. Your request from ONR Global should be 5-10 thousand USD. The approval rate decreases with the amount (~75% for 5000 USD, ~25% for 10000 USD).
- Allowable expenses for ONR Global funding
  - Venue rental & staffing
  - Publications (including website creation and managing)
  - Labor for planning (allowable but complicated)
  - Almost nothing else (but you can ask us, just in case)
- Expenses often requested and always rejected
  - Food, drink, transportation, lodging, registration fees, student stipends, and prizes
  - There are more expenses that ONR grants cannot cover
- You will need to provide cost quotes
- ONR Global requests registration fee waivers for up to 5 US government employees chosen by ONR Global

For Research project grants

- You should structure your project in annual stages
- The total duration can be 1, 2, or 3 years
- 90% of research grants have annual budgets between 40-80 thousand USD.
- Most of the funding must be for labor
- Keep your project team small (2-5 people) with 1-2 senior staff and a few graduate students or post-docs.
- Indirect costs cannot exceed 10% of the direct costs (labor + material + travel)
- Material cannot include equipment
- We expect very little travel in the first year. Typically, one conference in Europe for 1-2 people.
- Products: 1) annual report; 2) published articles in high-caliber scientific, peer-reviewed journals.
- Intellectual property: it belongs to your organization with one exception: the US government has the right to apply the intellectual property for its own internal uses free of charge.
- We will often seek other USG sponsors to share the cost.
- We are happy to have you find additional sponsors to share the cost too.
- We expect this project to be related to other projects performed in your department, even performed by you, but we also expect this project to be significantly different. We will ask you to estimate the overlap between this project and all your other projects. For example, if projects A and B have 10 and 20 tasks, respectively, and 3 of these tasks are the same ('measure X using equipment Y at date/time Z'), then B has 30% overlap with A and A has 15% overlap with B. Tasks serving different projects must have their costs shared accordingly.