

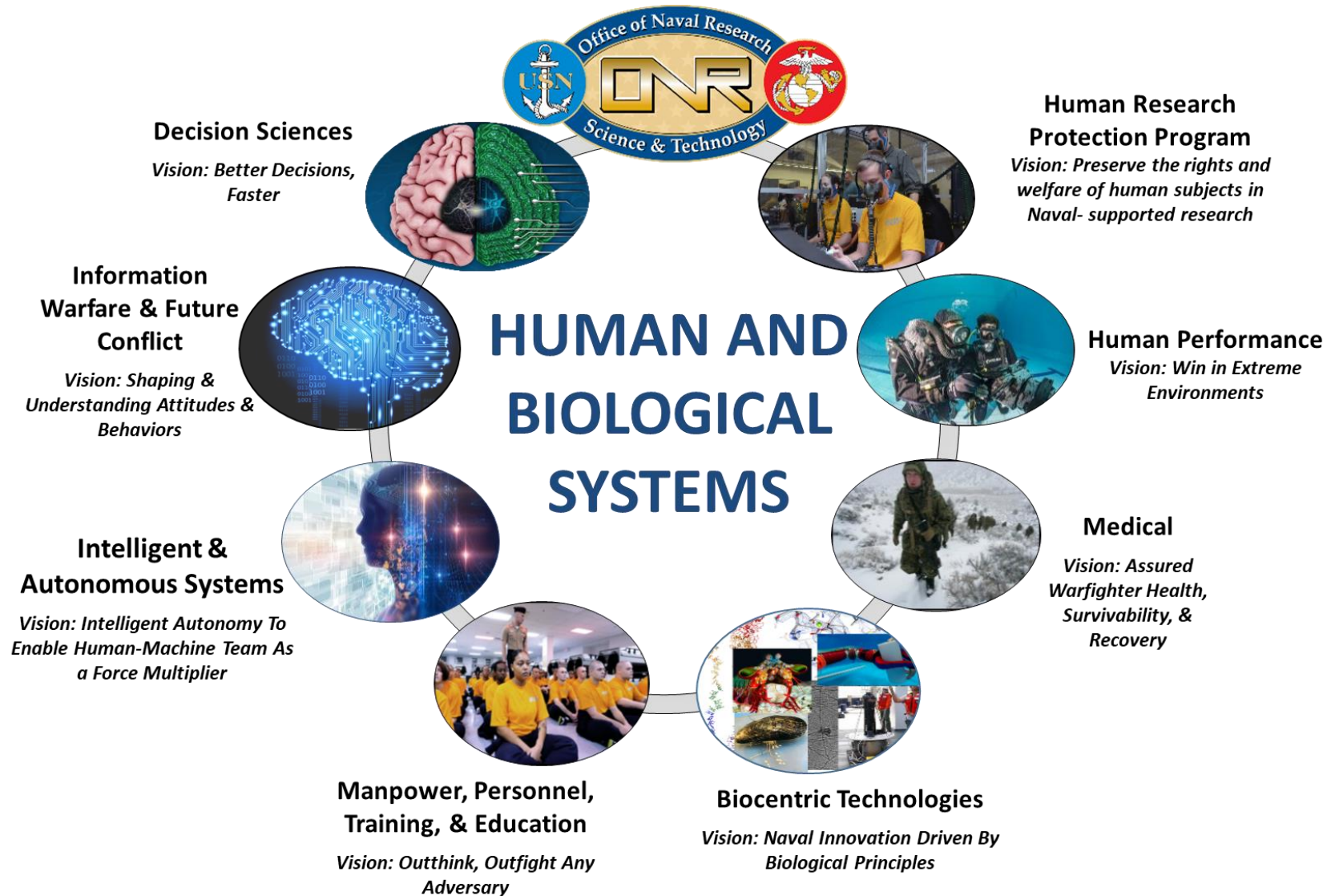


Warfighter Performance Department, ONR Code 34
NASEM Naval Undersea Medicine
21 March 2024

Dr. Michael LaFiandra
Division Director (341/342)



Warfighter Performance Department: Code 34



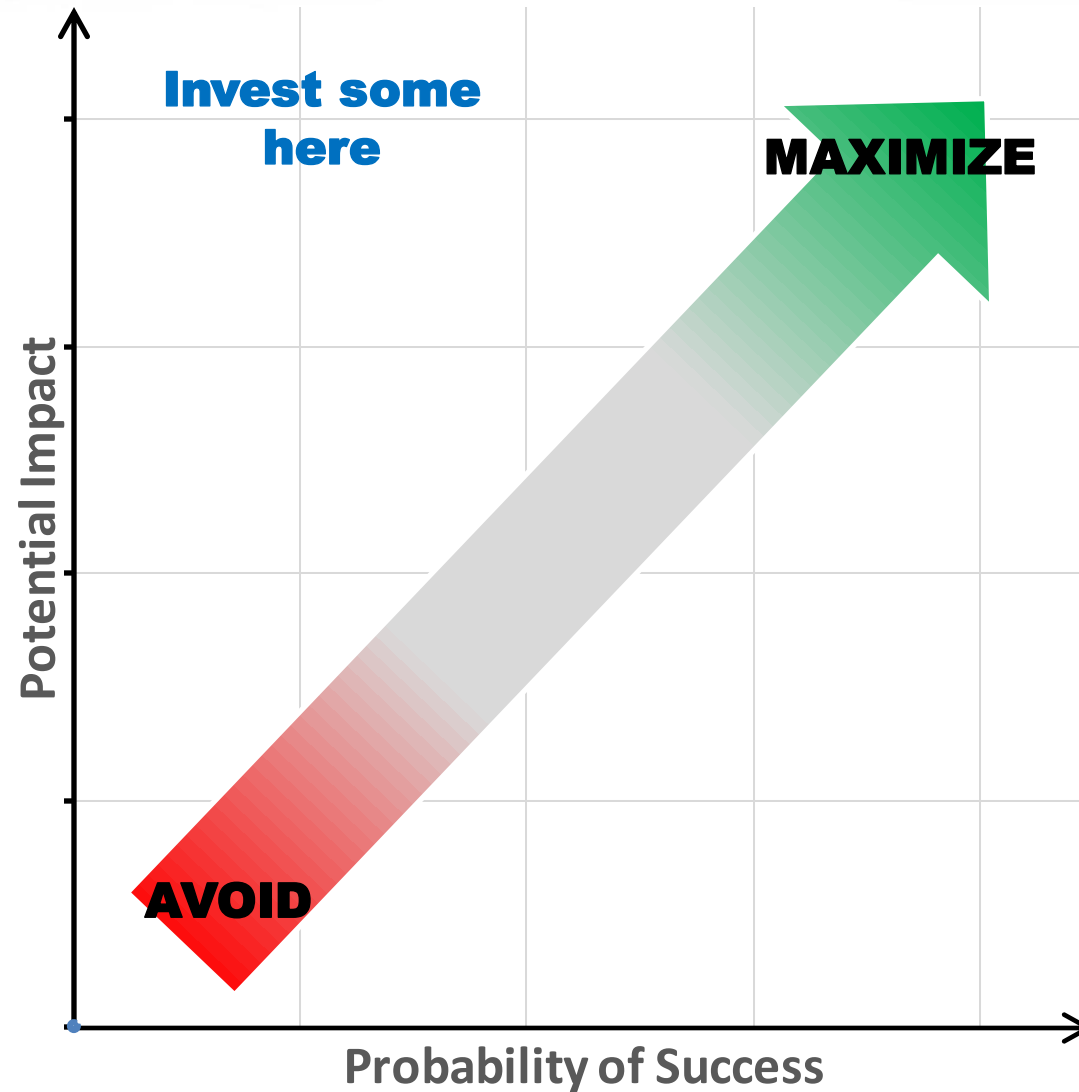


How we conceptualize potential impact





Some of the ways we balance our portfolio



Avoid funding the projects that have a low impact.

Maximize the number of projects we fund that have a high probability of success and a high potential impact.



Warfighter Performance (Code 34)

Undersea Medicine and Performance Research Program

Program Goal: Develop novel approaches to undersea biomedical issues to **operate deeper, longer, safer, and cheaper** in the undersea environment.

Diving Medicine

Understand physiology of gas dynamics in an environment with high and variable pressure

Research Areas / Thrusts

Decompression Sickness

BioEnergetics / Oxygen Toxicity

Environmental Hazards
(e.g. cold, contaminated water)

Diver Support Technologies

Develop technologies to augment diver in a restrictive environment

Research Areas / Thrusts

GILS
(on-demand Oxygen)

Next-Generation Dive Suit

Robot-Diver Teaming

Auditory / Communication
(ending)

Note: Funding is not equally divided among thrusts.

Funding levels shift between thrusts to balance needs / opportunities while maintaining a stable and enduring foundation of research.



Charge to the Committee

Given our limited budget, we must be highly selective on what we fund and are seeking input to help us do that:

1. Determine the highest priority of research to fund for the Navy in the area of undersea medicine and performance.
2. Identify knowledge gaps and potential payoff for filling which gaps first. What level of investment would be needed?
3. Are there “low hanging fruit” that we’re missing?
 - Where can we make a short-term investment and get a big return quickly?

Funding considerations

1. Potential impact to the Navy
2. Stakeholder driven need; supporting requirements
3. Current and future S&T gaps
4. Collaborations / external investments
5. Balanced portfolio composition
 - Revolutionary, high-risk S&T that may not payoff vs. incremental, low-risk advancements likely to make an impact
 - Near vs. long-term impact and ROI
 - Opportunities to lead, leverage, enable RDT&E