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HOUSE ARMED SERVICES COMMITTEE
EMERGING THREATS AND CAPABILITIES SUBCOMMITTEE

STATEMENT OF
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BEFORE THE
EMERGING THREATS AND CAPABILITIES SUBCOMMITTEE
OF THE
HOUSE ARMED SERVICES COMMITTEE
ON
THE FISCAL YEAR 2019 BUDGET REQUEST

MARCH 14, 2018

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Introduction

Thank you for inviting me to speak with you about the investments the Department of the Navy (DoN) is making in Science and Technology (S&T) and to discuss how the President's FY 2019 Budget supports our Sailors and Marines. This critical funding is building the future Fleet and Force in support of our National Defense Strategy. The FY 2019 Budget requests $2.2 billion for Naval and Marine Corps S&T, and represents approximately 1.3 percent of the entire DoN Budget. As the Chief of Naval Research, I am responsible for the operations of the Naval Research Enterprise, which comprises more than 4,000 people in 23 locations, and more than 1,000 partners. This enterprise cannot succeed without strong Congressional support, for which I thank you.

Lessons From History

In 1946, the 79th Congress chartered the Office of Naval Research (ONR) to plan, foster, and encourage scientific research in support of Naval warfighting supremacy as a result of hard lessons learned during World War II. Throughout the ensuing decades, the U.S. Navy and Marine Corps capitalized on enduring and meaningful investments in early scientific research that offered technologically-superior solution space for evolving warfighting capability. While that model continues to provide value, the pace of technology development and global commoditization of advanced technologies necessitate a different response in a highly competitive environment with near peer adversaries. To put it simply, we are in a rapidly accelerating, technology-enabled competition for maritime superiority that we cannot afford to lose.

The New Naval Research Model

As then Secretary of the Navy James Forrestal said in 1947, "It is of the utmost importance to our national security that the Navy prosecute a vigorous and well-rounded program of research and development. To fail to do so in time of peace will surely result in this country entering another war with obsolete weapons and machines of warfare. And the tempo of modern war has reached the point where this Nation will probably never again have an opportunity to arm itself successfully after the start of hostilities…." From the time of ONR's inception through the end of

the Cold War, the vast majority of early research and development investment for our nation came from the federal government. Since the end of the Cold War, we have seen a significant shift in this accounting. Today's research and development ecosystem is global in nature and much more driven by investments in the commercial market. This marketplace is led by companies such as Alphabet, Intel, Tesla and Amazon, but also consists of large, medium and small companies across many sectors, non-profit organizations spanning numerous areas, and academic and government institutions around the world.

In response to these changes in the landscape, we have modified the way we do business to take better advantage of this evolving technology development ecosystem. We have broadened our partnership scope and have streamlined our processes to enable us to deliver capability at relevant speed. Our goals are to:

- Align naval research, development and acquisition to pursue technology-enabled warfighting capability
- Allocate resources to speed priority-aligned results to the warfighter
- Accelerate capability delivery by streamlining business execution and empowering people

Achieving these goals will yield greater lethality for our naval forces, enabled by innovation and speed -- speed in development, speed in decision-making and speed in business execution. Significantly, we realize that technology development unlinked to warfighting concepts and future battlefield environments can be wasted effort. Consequently, we are emphasizing our links to the operating forces through our naval laboratories by conducting more warfighter informed prototyping, experiments and demonstrations. This will assist in ensuring technology supports the warfighter and also help to resolve technical risk earlier in the development cycle.

We are aligned across the U.S. Navy and Marine Corps to be the first to field decisive capabilities such as Electric Weapons, Cross-Platform Networked Electromagnetic Maneuver Warfare, Artificial Intelligence, Swarming technology, and Autonomous Systems. We are also

taking every opportunity to partner with our Joint Force counterparts to learn and develop the cutting edge technologies that will provide our nation advantage.

Conclusion

The FY 2019 President's Budget request will enable us to move toward enhanced naval capabilities, promote more effective partnership between research and acquisition, and strengthen partnerships with the Army, Air Force, DARPA and other DoD research organizations – as well as performers outside the traditional defense research and development ecosystem. I invite you to tour the Naval Research Laboratory, and see firsthand the advances that are being developed right here in our Nation's Capital. I appreciate the opportunity to testify before you today and look forward to your questions on how we continue to maintain the U.S. Navy and Marine Corps' technological advantage.