DEPARTMENT OF THE NAVY
INNOVATION
VISION

"CHALLENGE THE FORCE...
CHANGE THE GAME"

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As I travel across the globe to meet our talented Sailors, Marines, and Navy Civilians, I am constantly impressed by their intellectual curiosity, boundless energy, and ingenuity. It is clear that we are the world's greatest Naval Force thanks to the talented people in our ranks today and the innovative spirit of those who have gone before them. As an institution, we have a responsibility to put their innovative ideas to work solving the demanding challenges that lie ahead of us.

Sixty days ago, I challenged my staff to develop an innovation agenda for the Department. It is clear that innovation is not just about buying a new platform or weapon system; rather it is about changing the way we think, challenging outdated assumptions, and removing bureaucratic processes that prevent great ideas from becoming reality. Innovation, and ultimately the success of our naval mission, is based on three fundamental things: People, Information, and Ideas.

The global rate of change continues to accelerate, creating a complex future filled with uncertainty. Yet the Navy and Marine Corps must remain America's first line of defense, deployed worldwide ready for any challenge that may come over the horizon. I am confident that by fully using our talented workforce we will remain the world's preeminent naval force.

I want the entire workforce, from the most senior Admirals, Generals, and Civilian Executives to recruits and officer candidates striving to earn the title of United States Navy Sailor or Marine, to look for ways to improve their organizations and accomplish their missions today, as well as, push to develop capabilities and concepts that make us more agile and resilient regardless of challenges on our horizon. Leaders across the department must be open to new ideas and unafraid if they all do not succeed.

Throughout our history the Navy and Marine Corps have been agile, innovative, and adaptable, ensuring global stability and American prosperity. With increasing complexity and shrinking budgets, now is the time to remove barriers and foster a culture of innovation that unleashes the ingenuity intrinsic in our people. Innovation has been our tradition and it must also be our future.

Ray Mabus

U.S. Secretary of the Navy

WHY NOW

"The world is experiencing some deeply disturbing technical, economic, and geopolitical shifts that pose potential threats to US preeminence and stability." - *Arati Prabhakar, DARPA*

Because our Navy and Marine Corps team maintain global presence, we are vital in maintaining world-wide stability and ensuring freedom of access to the maritime commons. However, changes in the global environment demand that the Department of Navy (DON) reshape its practices to remain the flexible adaptive force it has always been and at the cutting edge of emerging technology and advanced concepts. A dynamic security environment and tightening fiscal constraints demand that the DON change to shape its future. Failing to do so now adds unnecessary risk to our operating forces and ultimately the nation.

Advances in technology, information systems, and the sciences all offer remarkable new opportunities which will change every aspect of how we operate in the future. The accelerated rate of change challenges the responsiveness of our bureaucratic processes and pushes against DON cultural norms. Task Force Innovation was a catalyst to identify and connect the pockets of innovation occurring across the naval enterprise, share best practices, and remove administrative barriers that prevent innovation from thriving.

Innovation combines the ideas, insights, and resources of our Sailors, Marines and civilians in new ways to benefit the naval services.

The Department of Navy must take advantage of the current energy stemming from innovation and use this once-in-a-generation opportunity, where leaders from the White House to the Secretary of the Navy, to the Commandant of the Marine Corps and the Chief of Naval Operations have made a commitment to innovation. Innovation not only improves the way we operate each day but offers the Navy and Marine Corps a competitive advantage over potential adversaries.

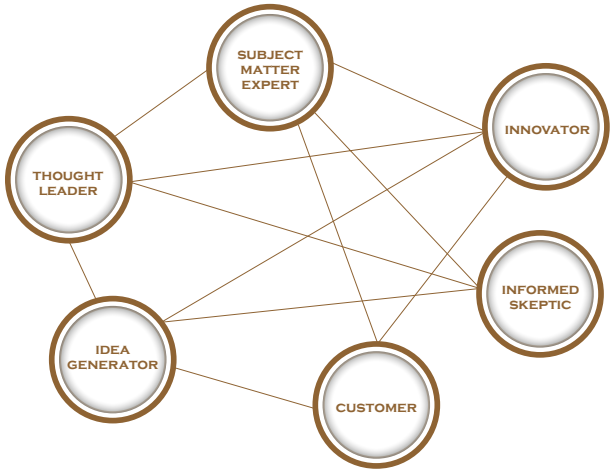
To stimulate innovation within the DON, the Secretary of the Navy has identified these five essential elements for innovation:

INNOVATION ELEMENT 1: BUILD THE NAVAL INNOVATION NETWORK

The DON has a multitude of virtual and physical resources to support innovators. We must improve how we connect these resources to aspiring innovators and innovative organizations. The Naval Innovation Network (NIN) will serve as the backbone of this endeavor, creating a virtual environment to connect innovators from across the DON enterprise. It will provide a forum to connect and exchange best practices, share information, develop ideas through an ideation platform, and scale successful local programs. A mature and functional NIN captures the essence of innovation within the DON – People, Ideas, and Information.

The best innovative organizations rely upon the talents of their workforce to solve important problems and to identify opportunities. We must challenge the DON workforce and empower it to strengthen the naval services of the future by sharing ideas and insights, and creating an environment which accepts and rewards prudent risk. By working together, we can build a responsive innovation engine to power our naval forces through the rough seas of an uncertain future.

To ensure the success of the NIN, the DON will develop new incentives to reward innovators and their leaders across the department. To support them, we must provide greater access to the tools, training, and technology that will shape the 21st century. This includes boosting workforce interaction with emerging technologies, such as 3D printers and software development, and engaging other innovators. This will both provide greater access to aspiring innovators at existing naval facilities and support the development premiere facilities in Fleet concentration areas.



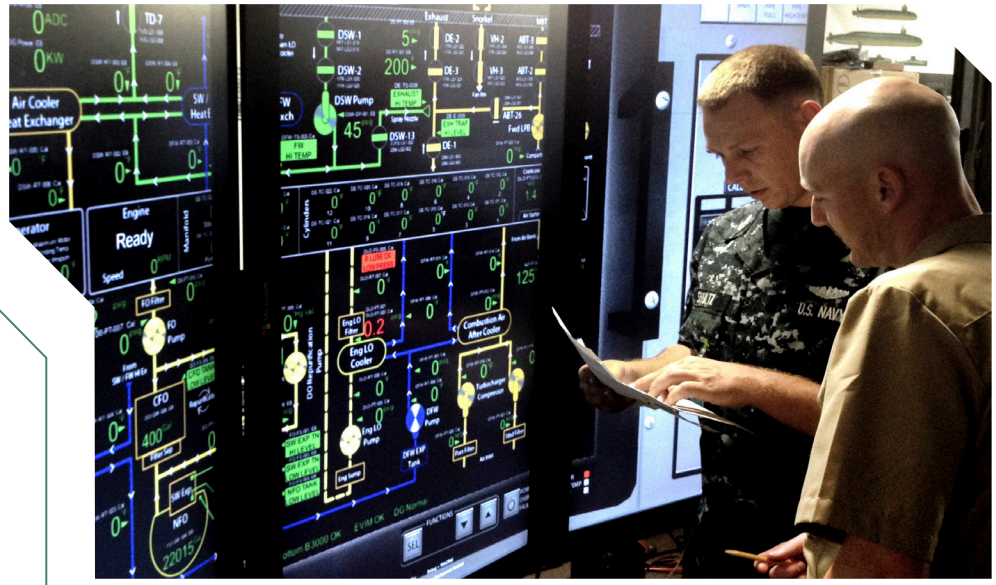
The Innovation Network connects across organizational and functional stovepipes.

KEY OBJECTIVES:

- Crowdsource the DON and Enable the Ideation Process
- Incentivize and Assess Innovation
- Support Innovators Locally
- Create an Environment that Institutionalizes Innovation

"Right now, there are examples of innovation occurring in pockets all over the Fleet. We owe all our Sailors, Marines and civilians a platform by which their ideas can reach the decision makers." - *Secretary Mabus*

INNOVATION ELEMENT 2: MANAGE THE TALENT OF THE DON WORKFORCE



The Department of Navy has a diverse and talented workforce; however, no single individual can bring a great idea to operational reality alone. This requires an innovation culture built upon foundations of trust, mutual respect, and the embracement of diverse thoughts. We must create an environment that seeks out, appreciates, and supports the creativity, expertise and insights of our Sailors, Marines and Civilians to solve the difficult challenges which lie ahead of us.

Managing the workforce must evolve from industrial age practices aimed at simply filling vacancies to ensuring personal career interests, professional development needs and mission demands are all considered throughout the various phases of a naval career. To accomplish this challenge, the civilian and military personnel systems must leverage data analytics to inform career paths, offer transparent career options and provide the workforce with greater flexibility. Crucial changes to DON workforce practices include knowing what skills and training our people possess. With that information in hand, we can take good ideas for solving problems and match creative people to solve them.

KEY OBJECTIVES:

- Modernize the Personnel Systems in the DON
- Implement Ready, Relevant Learning Programs
- Enrich the Culture
- Improve the Accession, Hiring and Promotion Processes
- Further Develop Critical Thinking Skills

"When our team draws on the talent, dedication and skills of all our Sailors we will remain the finest Navy in the world." - *Admiral Greenert, CNO*

INNOVATION ELEMENT 3: TRANSFORM HOW THE DON USES INFORMATION

The Department of the Navy collects more data each day than the total amount stored in the Library of Congress. Yet, the DON is organized and funded around systems and hardware and lacks the tools to ensure the information is used to its full potential. DON organizations dedicate time and resources to turn their data into useful information, then face institutional bottlenecks in sharing that information, vastly restricting its value.

The DON recognizes that information is a strategic asset which empowers people to make informed decisions. Sharing information across organizational boundaries enables innovation to thrive. The DON will integrate technology and learn from other organizations' best practices to maximize the value of our existing information and become a learning organization by mastering the information cycle.

"Someday, on the corporate balance sheet, there will be an entry which reads, 'Information'; for in most cases, the information is more valuable than the hardware which processes it." - *Rear Admiral Grace Hopper*

KEY OBJECTIVES:

- Become a Data-Centric DON
- Develop an Advanced Analytics Agenda
- Increase Agility in Training and Acquisition Processes
- Build Analytics Expertise and Certification Pathways
- Reduce the Burden Associated with Sharing Information

INNOVATION ELEMENT 4: ACCELERATE NEW CAPABILITIES TO THE FLEET

The development of new technology or repurposing existing resources gives rise to innovative operational capabilities for the Fleet. By their nature, many of the new capabilities challenge bureaucratic processes developed for a different era, but cyber/information technology, unmanned systems and advanced manufacturing must not be placed in the same developmental process as is used to buy ships or aircraft. Allowing outdated practices to hinder the building of operational capabilities permits potential adversaries to gain a competitive advantage.

Advanced manufacturing, for example, has the potential to revolutionize our logistics, supply-chain and acquisition systems. For the DON to realize advanced manufacturing's full potential, we must aggressively test and evaluate new capabilities in an operational environment and reform processes that are designed for legacy systems.

The DON must create test beds for emerging operational capabilities to accelerate their delivery to the Warfighter. This involves identifying and removing barriers to new capabilities, distinguishing between manned and unmanned systems, and defining operational risk tolerance in emerging fields to keep pace with the rapid evolution of technology. Promoting a culture that tolerates and recognizes the value of risk includes a more robust experimentation process where risk can be better understood and mitigated.

KEY OBJECTIVES:

- Create an Effective Organizational Model for Fielding Unmanned Systems
- Test, Evaluate, and Utilize Advanced Manufacturing
- Identify Changes in Legacy Practices Across the DOTMLPF Spectrum
- Increase Experimentation and Test & Fail Rapidly as Part of the Learning Cycle
- Accelerate Speed to Fleet by Scaling Best Practices and Identifying Barriers to Rapid Execution

"Too many new assets are mired in outdated bureaucratic practices that were developed for another era. As we enter the age of cyber, unmanned systems and advanced manufacturing, we cannot allow these overly complex, form-over-substance, often useless, and too often harmful, practices to slow or prevent development of some game changers, while simultaneously giving our potential adversaries the competitive advantage." - *Secretary Mabus*

INNOVATION ELEMENT 5: DEVELOP GAME-CHANGING WARFIGHTING CONCEPTS

Considering the complex and uncertain future global security environment, there is no single approach to warfighting or projecting naval influence which is suited for all scenarios. Therefore, it is critical that we develop a variety of concepts to give joint force commanders and national policy makers effective options to consider during all phases of military operations and to continually challenge our adversaries' assumptions.

Changes in the future operating environment, the maturation of technology available to us (as well as to our potential adversaries), and operational capabilities currently under development must be redirected to new warfighting concepts to maintain our naval preeminence for the foreseeable future. We cannot afford to shoe-horn innovative concepts into outdated warfighting paradigms.

In recent years, the naval services have made great strides developing new warfighting concepts: adaptive force packaging, electromagnetic maneuver warfare, and unmanned swarming all offer great potential but are not fully integrated into operational plans. We must continue to use our naval ingenuity, and deliberately dedicate time and resources to develop, test, and implement new warfighting concepts in our operating forces.

KEY OBJECTIVES:

- Increase the Frequency and Breadth of DON Wargaming and Connect Outcomes to the Planning, Programming, Budgeting, and Execution System (PPBES)
- Develop Effective Forecasting, Red Teaming, and Scenario Planning Competencies
- Create Challenges to Identify Diverse Solutions to Operational Problems
- Develop Integrated Naval Capabilities

"We will aggressively develop concepts of employment for alternative platforms that are consistent with mission requirements and platform capabilities."
- General Dunford, CMC

INNOVATION MUST ENDURE

Task Force Innovation was intended to be short-term, to jump-start innovation across the DON enterprise. Innovation, with its continuous cycle of self-assessment, future scanning and adaptation, must endure over the long term to ensure the success of our naval forces. Above all, we must remember that innovation is a means, or a process, not an end in itself. Just as we cannot dictate the direction or intensity of the wind at sea, neither can we simply demand innovation to occur in the Navy and Marine Corps. Innovation must be viewed as a continuous cycle as represented by the graphic below.

A department-level forum is necessary to assist, accelerate and enable innovation to thrive across the DON and to bring the influence of senior leaders to bear in providing resources, streamlining policy, and removing other bureaucratic roadblocks that prevent innovation from occurring within the Fleet. This forum will also ensure the innovation elements for the enterprise are implemented but, more importantly, the DON continues to improve its innovative culture and processes for the foreseeable future. Additional information will be provided as this concept matures.

Next in this series is a focus on the remarkable and innovative history of the Department of the Navy.

This document was created by DON Strategy and Innovation. To provide feedback or to submit a great idea email: TFI_SP@navy.mil