

Strategic Plan



2020 - 2030

U.S. Navy Explosive Ordnance Disposal

"It is the function of the Navy to carry the war to the enemy so that it is not fought on U.S. soil."

--Admiral Chester W. Nimitz



“

Those who do not
create the future
they want, must
endure the future
they get.

”

Rear Adm. Draper Kauffman
Father of U.S. Navy EOD

Foreword

This plan presents the necessary initiatives for the Navy Explosive Ordnance Disposal (EOD) Force of 2030 to fight and win in an era of Great Power Competition (GPC). As the premier U.S. EOD force, Navy EOD recognizes that our role as the Joint Service EOD Executive Agent is critical to deliver on these initiatives. Further, our strategy must comprise a whole-of-government approach that leverages investments in both government and commercial technology to accelerate the attainment of our strategic objectives.

Our objectives strive to deliver a combat-credible, lethal, resilient, and sustainable Navy EOD force that can be applied in contingency and crisis. Our force will have impacts in the physical and information environments, and will plan and execute operations independently and jointly to enhance, protect, and advance U.S. interests. The daily application of our unique force will provide Fleet and Combatant Commanders an unmatched return on investment in deterring our adversaries and supporting multinational partners.

Our nation's peer and near-peer competitors choose to exploit the free and open rules-based paradigm that the U.S. champions and seek to reshape the international order in their favor. Peer competitors are expanding and diversifying their capabilities through holistic approaches, spanning the spectrum from economics and information dominance to military and technological supremacy, with aims for parity or primacy across multiple domains. Their development of advanced weapons systems, novel capabilities focused on U.S. weaknesses, and use of regional proxy forces present variables that complicate day-to-day competition. These challenges threaten global stability and now require an unprecedented unity of effort from the Joint Force, nested in sound, forward-looking strategies.

To counter these threats, the National Defense Strategy, National Military Strategy, and CNO's Guidance necessitate freedom of maneuver, sound alliances, and sea control to maintain the international reach critical to peaceful interactions in the global commons. Navy EOD is uniquely capable of mitigating or eliminating our adversaries' threats in all environmental domains, significantly contributing to the lethality, survivability, and sustainability of the Integrated Naval and Joint Force. Additionally, our support to Special Operations Forces (SOF), specifically in countering weapons of mass destruction (CWMD), will continue to disrupt the objectives of our adversaries. Finally, optionality to reveal or conceal our contribution in overcoming denied environments provides our leaders opportunities and decision space during conflict. This solidifies our nation's position on the leading edge of the fight, and forces our adversaries to react while we dictate the tempo of operations.

Our strategic plan is achievable through five objectives:

Develop and design the force to win against peer competitors and empowered non-state actors.

This objective is about our warfighting and our warfighters. Our people are our weapons systems and our asymmetric advantage. We will enhance our Navy EOD training to counter the most current and anticipated future explosive threats, their design theory, and their tactics, techniques, and procedures (TTPs) in every environment. Under this objective, we will consider our nexus with our nation's information, cyber, and space operations as they mature, and incorporate the requirements of these domains into our planning as we seek to maximize the intellectual talent we recruit. Finally, we will enlist, train, and develop the best talent available, and create the most lethal and capable Navy EOD force to date, while ensuring the physical, moral, and mental wellness of every Sailor in our force.

Expand our crucial advantage against competitors' undersea threats.

We will capitalize on the success of our expeditionary mine countermeasures (ExMCM) capability, which provides a highly adaptive MCM capability, deployable from any platform. We will use this unit of action as our foundation to improve man-machine teaming at sea and to provide capacity and agility to the Navy's strategic undersea advantage. To do so, Navy EOD will acquire the most technologically advanced equipment and optimize training to expand and extend our competitive advantage on and under the sea.



This objective maximizes our penchant for problem-solving that is the bedrock of Navy EOD culture, with hyper-enabled sensing, analysis, and decision support. This objective will cascade beyond seabed warfare into our missions in the littoral, land, information, cyber, and space domains as we consider all aspects of classified and unclassified data to understand the pattern of our adversaries and inject anomalies to disrupt them.

Capitalize on our unique ability to counter weapons of mass destruction.

In an attempt to unseat our democratic rules-based order, peer competitors, rogue regimes, and terrorist organizations continue to develop weapons of mass destruction and proliferate delivery system design information and advanced technologies. Navy EOD's ability to understand these complex weapons systems, and adversary pathways to acquiring new or improved

proficiency, are crucial to mitigating competition and accomplishing deterrence. This objective requires the utmost sensitivity and necessitates that the Navy EOD community nest within the whole-of-government response.

Maintaining capabilities across the operational environment and maturing the cross-domain capacity in the competition and armed conflict space will ensure that Navy EOD can employ the best tool – be it energetic or cyber - to deny the advancement of our adversaries' WMD programs, and respond in the unfortunate event a WMD is employed.

Grow our expertise in the exploitation of next-generation weapon systems.

Nation-states and advanced non-state actors continue to harness technological advancements to modernize weapons stockpiles and create next-generation systems. The skills we have honed in exploiting enemy Improvised Explosive Devices (IEDs) and conventional ordnance serve as a foundation for us to collect, process, exploit, and analyze enemy ordnance and delivery platforms.

Tactical and operational commanders must leverage this critical technical intelligence in near-real time, assist in attribution for strategic leaders, and inform the intelligence community.

The information we illuminate will enable critical aspects of cyber operations, and our operators must recognize the value of this information across all domains.

Embolden our allies' and partners' capabilities.

Our allies and partners have complementary capabilities, access, regional relationships, and knowledge we cannot replicate. Defending mutual interests and the rules-based international order is only achievable when our partnerships are built on respect, trust, and mutual accountability. Navy EOD will pursue deeper interoperability by seeking new high-end mission training opportunities with our allies through bilateral and multinational exercises and information sharing. We will also work with our partners to understand the most impactful messaging, target audiences, and ways to assess how our efforts are reinforcing U.S. commitments

The Navy EOD community envisions a Navy and Nation that is undeterred by explosive threats.



Rear Adm. J. A. DiGuardo Jr.

Commander, Navy Expeditionary Combat Command

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Mission

We eliminate explosive threats so the Fleet and Nation can fight and win - whenever, wherever, and however It chooses.



Vision

We envision a Nation undeterred by explosive threats.



Who We Are

The U.S. Navy Explosive Ordnance Disposal (EOD) community is an elite cadre of professional warfighters who provide access to denied areas for our nation's special operations and conventional forces through the elimination of explosive, chemical, nuclear, and biological threats. As one of the Navy's five unrestricted line warfare communities, the Navy EOD community is a group of quiet professionals who rely upon individuals with strong character and unwavering courage in the most demanding and threatening environments. The Navy EOD culture, reflected in our ethos, reinforces not only our individual integrity but charges us all, both enlisted and officer, to hold each other to the highest standards, every day.

The Navy EOD community was founded in 1941 by Lt. Cmdr. Draper Kauffman, an American who sought out service in the Royal Navy Volunteer Reserve as a bomb disposal expert. Kauffman was home in the U.S. on leave when Japan bombed Pearl Harbor. Recognizing the need to develop an explosive ordnance disposal capability within the U.S. military, the Navy awarded Kauffman a commission, and he traveled to Hawaii to disarm a Japanese bomb dropped next to a magazine at Fort Schofield. He rendered the weapon safe, disassembled it, and shipped it to Washington, D.C., for further analysis. The expertise he demonstrated led to his second mission—establishing a school for mine and bomb disposal.

The school, established in 1941, is the direct precursor of today's Naval School Explosive Ordnance Disposal or "EOD School" in Eglin, Florida, where EOD operators from across the Department of Defense undergo rigorous training to locate, identify, render safe, recover, analyze, and dispose of all ordnance types. In building this new community, Kauffman needed people. One of his strongest arguments for recruiting the right type of individual was stating that this line of work saved lives rather than destroyed them. Kauffman was not looking for daredevils, but those individuals who had ingenuity and courage, or as he was taught—self-confidence, self-discipline, and self-reliance.





The Navy EOD community has evolved through the years to face new and troubling threats as they emerged - magnetic influence mines in World War II serving as coastal defenses or strategic deterrents; sea mines blocking the Wonsan Harbor from an amphibious landing during the Korean War; land and sea mines dotting Vietnam, preventing full maneuverability of American forces; Iranian-emplaced limpet and sea mines targeting both naval and commercial ships in the Arabian Gulf; WMDs throughout the Cold War and into today; non-state actors, violent extremist organizations, and domestic threats having easier access to information for creating and employing improvised explosive devices or chemical, biological, or nuclear weapons.

Our community of operators internalized eighty years of knowledge and sacrifice in order to honor the legacy of those who have come before us as well as to develop and prepare future generations of the Navy EOD community.

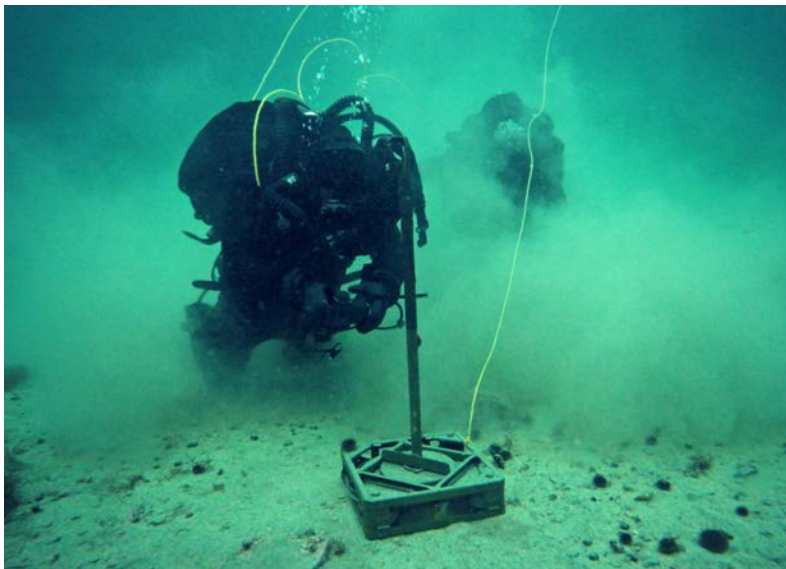


In our ninth decade of service to the U.S., the Navy EOD community is looking beyond the horizon and charting our future course in order to remain the world's premier combat force for eliminating explosive threats.

Planning Context

The Navy EOD community is responding to a changing world. Several threats and factors have emerged that provide context for this Strategic Plan. The rise of competition to the U.S. for global power resulted in increased global disorder, characterized by a decline in the long-standing rules-based international order. This created a security environment more complex and volatile than any we have faced in recent memory. Interstate strategic competition, not terrorism, is now the primary concern for U.S. national security. Long-term strategic competition with China and Russia are the principal priorities of the DoD while the nation

sustained efforts to deter and counter rogue regimes, such as North Korea and Iran, as well as violent extremist organizations that threaten the U.S. and its partners. Second, maritime commerce continues to grow with the expansion and interconnectedness of the global economy. Maritime traffic over traditional sea lanes is increasing, new trade routes are opening in the Arctic, and new technologies are making undersea resources more accessible. Mass and uncontrolled migration across the maritime domain is also growing, making it easier for the illicit shipment of material and people. As a result, the maritime system is becoming more



heavily used, stressed, and contested than ever before. Navy EOD is unique in its ability to understand the nuances and complexities of this environment. This knowledge, coupled with our ability to access, operate within, and clear underwater hazards makes our community absolutely crucial in a future fight for sea control and the defense of global economies that depend upon maritime trade.

Third, the pursuit of WMDs, delivery systems, and their potential use by rogue regimes, such as Iran and North Korea, pose a threat to U.S. national security and global peace and stability. Adversaries may use WMDs to threaten or carry out attacks on the U.S., our forces abroad, or our allies and partners. Our political will and military capability to provide security, resist coercion, and defeat aggression must not be undermined by the threat of WMDs if we are to maintain global security and stability. We believe Navy EOD can uniquely contribute to the high-end capabilities necessary to dissuade, prevent, and deter state adversaries and non-state actors from acquiring, proliferating, or using WMDs due to our unique aptitude for creative problem-solving in complex environments.

Finally, the global security environment is affected by rapid technological advancements and the changing nature of warfare. In the public and private sectors, the drive to develop new technologies is relentless, and access is accelerating and expanding to more actors with lower barriers of entry. New technologies that affect the way Navy EOD will conduct future warfighting include advanced computing, big data analytics, artificial intelligence, autonomy, robotics, directed energy, and bio- or nanotechnology. As this technology becomes increasingly advanced and

competitive, we must capitalize on our culture and expertise and invest in man-machine teaming underwater, on the surface, and in the air, to maintain our competitive advantage against our adversaries in all domains.



Objective One: Develop the Force to Win Against Near-Peer Competitors and Empowered Non-State Actors

In an uncertain and continually evolving national security environment, we cannot approach talent management and professional development as naturally occurring processes. To develop a Navy EOD force capable of fighting and defeating adversaries in 2030 and beyond, we must develop our talent management systems and programs deliberately and proactively to anticipate and meet the projected demands of the future.

In the Navy EOD community, our people are our weapons systems and adaptability is our greatest advantage. To maintain this competitive edge, we must refocus our efforts aggressively to recruit the necessary talent, bolster retention measures, increase incentives whenever possible, and offer training and development opportunities that compete with industry.

Simultaneously, we must continually develop the character and competence of leaders charged with guiding future generations of Navy EOD warfighters. We will use a standards-based assessment that evaluates the merits of character and values over tenure, while we focus on enhancing coaching and individual development for our force.

A renewed emphasis on the leadership development of our officers, enlisted, and civilian employees is critical to maintaining

and growing our competitive advantage. As our force emerges from eighteen years of combat and repositions itself for GPC, we will foster a holistic approach to human wellness and resilience by developing programs designed to strengthen the force in mind, body, and spirit and preserve our warfighting effectiveness.

Key Strategic Initiative 1.1

Grow the Navy EOD force's capability and capacity.

Though the Navy EOD enlisted force has grown over the past two decades, our current enlisted recruiting capabilities and throughput do not meet the community's required end strength. Navy EOD





operators are highly intelligent, adaptable, and capable people. They maintain high degrees of physical fitness and possess an unparalleled ability to manage stressful situations in highly complex environments. Navy EOD personnel work equally well in teams and independently while displaying high degrees of personal competence and excellent judgement.

They come from highly diverse backgrounds and naturally assimilate into any environment by drawing on their personal and professional experiences. As such, the measure of effectiveness for identifying suitable candidates proves challenging, but remains paramount to the success of both the individual and the mission. To achieve the goal of identifying and assessing the required talent successfully, the community will take a renewed approach, tailored towards our future needs, by evolving legacy methodologies. Enhancing our recruiting efforts, developing new models optimized for digital natives, establishing Warrior Challenge Program

Manager billets, and permanently assigning Navy EOD representation to support outreach and recruiting are critical to reaching the next generation of Navy EOD operators. We must reinvigorate retention and recruitment efforts with an eye towards Fleet conversion programs and new accessions from outside the service. Development of non-monetary retention programs, such as advanced education and career intermission opportunities as well as tours with industry, will further efforts to reward, retain, and develop the force of tomorrow. Finally, we will explore modernizing Navy Enlisted Classification (NEC) Codes, decoupling re-enlistment quotas from CWAY, increasing annual pay, and increasing critical skills retention bonuses with a goal of maintaining force health and talent in the future.

The Navy EOD officer assessment and selection process continues to mature and will expand to encompass all officer sources, including the U.S. Naval Academy, Reserve Officer Training Corps, Officer Candidate School, and lateral transfers. Ensuring our officer candidates meet the requisite moral, cognitive, and physical attributes prior to selection panel evaluation will allow us to target and attract competent future leaders. For officers who earn a position within the Navy EOD force, we will offer retention bonuses, education opportunities, and billet assignments to support retention and reward performance. Utilizing this opportunity and merit-based methodology, we will ensure the personal and professional growth of our most talented officers as they progress through key retention gates and milestones and are developed for future leadership roles. Finally, we must routinely and analytically revisit how we attract and retain talent to ensure the force evolves in stride with future demands.

Key Strategic Initiative 1.2

Develop competent leaders of character.

Good leaders greatly impact retention across any organization. Navy EOD officers should be well-educated, intelligent, experienced, self-aware, and servant-leadership focused to inspire future generations of the Navy EOD force. To improve our value proposition and stand out among other communities, we must engage in a concerted effort to develop these qualities and not rely on raw talent alone. We must focus on addressing leadership shortfalls, reward those with innate talent and desired qualities, and create superior leadership development programs to raise our leadership standards.



To increase development of current and future leaders, we must create a new model that capitalizes on situational leadership theory, includes Navy Leadership Development Framework tenets, incorporates on-the-job training, and supports continued learning and development through a network of schools and education resources. We will utilize executive level educational opportunities to expose our force to multi-modal communications skill sets, along with emotional intelligence training and assessments, to create leadership teams whose strategic concepts align with operational actions.

Finally, by standardizing and integrating this training paradigm across the force, we will develop a comprehensive corporate framework and culture that supports enduring leader development.

Key Strategic Initiative 1.3

Build a resilient force for the future.

In an era of GPC where uncertainty is the hallmark of the operating environment, adaptability and resilience will be our competitive advantages. Protecting the Navy EOD force of the future against less obvious noncombat-related threats is just as important as our defense against those on the battlefield. To address these challenges, the Navy EOD and Diving communities are implementing initiatives to increase functional performance, resiliency, and cognitive capability while decreasing injury and accelerating the physical recovery of Navy EOD operators and divers. Legacy human performance programs relied on the limited knowledge bases organic to individuals within the community. By conducting extensive analysis with academia and the sports industry, our STRIKE EOD Force Resiliency Program will

provide a starting point for the instruction, development, and evaluation of our people across the human performance spectrum. The four key pillars of this program--mindset, nutrition, movement, and recovery--optimize human performance and injury prevention. As the program develops, we will leverage real-time performance data tracking to tailor and adjust individual techniques and provide feedback to our people. These efforts will become an enduring and career-long focus for the community, with the program evolving in scope and depth as Sailors, technology, and science mature.

Performance data aggregated under STRIKE will serve as the foundation for the Navy EOD Force's resiliency program, designed to protect our Sailors from debilitating stressors through adaptability, recovery, and growth across the personal, social, cognitive and physical domains. Both EOD Group One and EOD Group Two must aggressively expand staff and facilities to address our warfighters' current and future needs. The addition of professional athletic trainers, human performance specialists, physical therapists, embedded mental health professionals, and nurse care managers will vastly increase the community's ability to care for and sustain our force holistically and ensure our people are prepared for tomorrow's fight.

Key Strategic Initiative 1.4 **Empower the force through technology.**

To maximize our force's potential, Navy EOD will invest in technologies that enhance individual capabilities. Capitalizing on opportunities to expose personnel to cutting edge technology and influence future designs based on real-time experience will foundationally improve the force's capabilities and operational

outcomes. The pursuit of innovative processes and technologies which increase our force's adaptability and effectiveness are key to Navy EOD's success in future high-end warfare. In anticipation of the next decade's likely challenges, we will incorporate machine learning to automate processes and increase production, leverage academic and crowdsourcing strategies to find solutions, and harness the power of artificial intelligence to expedite decision processes in the operational environment. Future efforts, involving the establishment of innovation cells at Fleet concentration areas to learn from experimental failures in controlled environments, will ensure iterative design processes successfully implement the latest tactical techniques and ensure synchronization of technology development and warfighter needs.

Key Strategic Initiative 1.5 **Integrate the force into the Cyber domain.**

Building upon existing capabilities, and leveraging experience



gained from years of tactical employment of unmanned systems.

Navy EOD will develop and employ small unmanned systems (UxS) with communications relay and transmission capabilities that insert themselves into enemy networks, not to destroy individual network nodes, but to discover, probe, map, and manipulate the adversary network.

The information obtained will be transmitted to friendly forces who can mount more sophisticated cyberattacks on those networks in order to disrupt, delay, or destroy the WMD or conventional weapon pathways.



Key Strategic Initiative 1.6

Integrate with the government and private space industry.

Navy EOD will partner with NASA, as well as the private and commercial space industry, as part of NASA's Response Team in recovering space capsules, rocket motors, and other sensitive or proprietary technologies. Additionally, we will collaborate R&D efforts with NASA and across the space industry for next generation life support systems; robotics, to include humanoid and other next-generation robotic applications; and battery power technologies, such as radioactive thermoelectric generators, in order to apply space technology to support deep sea exploration and Expeditionary Undersea Warfare (ExUSW).

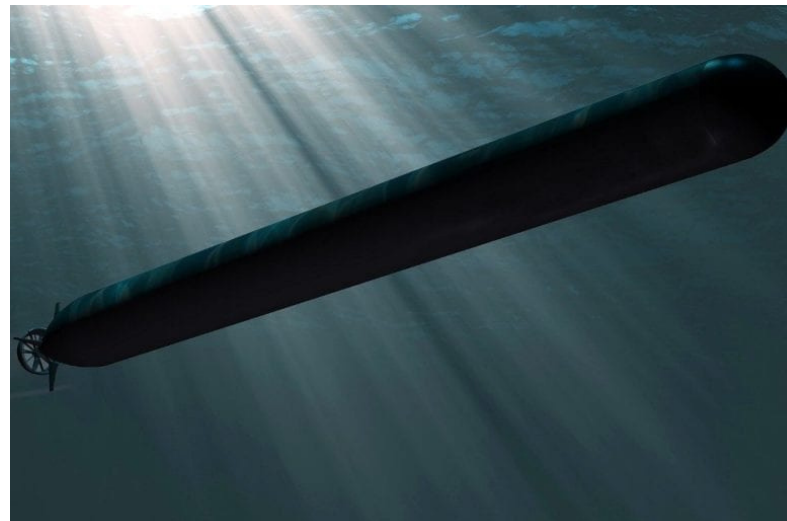


Objective Two: Expand Our Advantage Against Competitors' Undersea Threats

Great power competitors use all instruments of national power to dominate the maritime domain. To meet future undersea threats, the Navy EOD community must continue to develop its current ExMCM capability to counter adversaries that challenge U.S. national objectives. These threats are high-end, mobile, dynamic, and reside across multiple domains with multiple threat vectors. Over the next few decades, Navy EOD must become the undersea warfare force that provides an expeditionary undersea advantage throughout the full spectrum of conflict.

From day-to-day competition to total war, our community will be the light, fast, and precise undersea capability that can be deployed to advance U.S. national interests and ensure the Joint Force can achieve its objectives.

We must revisit traditional views of Navy EOD roles, not only with respect to the mine countermeasures (MCM) mission, but on all Joint Force capability gaps against which our maritime capabilities might be applied. We are in a fortunate position to capitalize on our significant previous investments in our undersea portfolio, and we must leverage that investment to build the capability the nation requires. Navy EOD assets create tactical advantages with strategic implications. Our capabilities exist today and are employed by Combatant Commanders in an MCM and reconnaissance construct.



Our effectiveness relies on our ability to analyze threats, operate sophisticated unmanned capabilities, and combine these two skills across multiple mission sets and environments. Though we are using these capabilities today in an MCM construct, these same capabilities can apply to signals intelligence, precision target designation, chemical, biological, radiological, explosive (CBRNE) reconnaissance, intelligence preparation of the operational environment (IPOE), communications and data relay, and kinetic and non-kinetic effects. With the Navy's largest portfolio of unmanned undersea systems and its most important weapons platform-- its people--Navy EOD provides a unique



value that is prized across the services. Increasing the sophistication and use of our unmanned systems provides options and visibility of the undersea battlespace to our Navy leaders, which will be absolutely vital to counter future threats.

In today and tomorrow's era of GPC, countering the threat in the undersea domain is an all-hands effort across the Joint Force, interagency, and our allies. Navy EOD cannot do this alone and our close collaboration with other maritime special operations forces and submarine forces will be required to ensure dominance at sea.

Key Strategic Initiative 2.1

Man, train and equip expeditionary mine countermeasure (ExMCM) companies to meet evolving requirements in a dynamic Great Power Competition environment.

To operationalize the ExMCM capability fully, we must build it upon qualified, competent personnel capable of executing highly

complex tasks in high risk environments with strategic implications. The operational size of the unit executing these tasks will be tailorable based on the target and technological and operational requirements for each mission, thus necessitating an adaptable and modular force.

In our support of advanced capability development, we must leverage accelerated acquisitions processes that provide warfighters the ability to counter future threats in a timely manner to keep pace with our adversaries. Personal combat equipment, survival systems, communications equipment, unmanned systems, and weapons systems will all be predicated by threat intelligence to inform the evolution of our material solutions. The lack of technology and material solutions are rarely insurmountable problems; whereas the challenge of designing capabilities with the end-user in mind, funding availability, acquisition processes, development timelines, and proper equipment inventory routinely hinder progress. To address these core challenges, we must apply manpower and effort effectively to accelerate the acquisition process and ensure that the authorities and policies necessary for maximum flexibility are available to achieve the needed solutions.

Key Strategic Initiative 2.2

Increase our ability to operate in a global joint environment.

Geographic combatant commanders (GCCs) are force employers who require a range of capabilities to apply military power across the full spectrum of conflict. To provide them with the capabilities required, ExMCM development should focus on threat challenges to the entire Joint Force executed through Maritime Component Commanders.

In so doing, GCCs can leverage ExMCM capabilities during U.S. and multinational exercises to enhance Deterrence by Denial initiatives against peer and near-peer competitors. GCC needs are inherently Joint, and the man, train, and equip process functions should reflect those needs. Joint exercises should become a priority for ExMCM, with a goal of increased coordination, resourcing, and experimentation. We must develop forcing functions such as policy, exercises, deployments, and experimentation events to drive this collaboration and ensure our national strategies are achievable.

Key Strategic Initiative 2.3

Develop expeditionary mine countermeasures as a prototype and test-bed unit for new technologies.

Our Navy EOD operators working at the technical and tactical level have the best understanding of the challenges faced and are best suited to develop the solutions required to achieve success. A common challenge in acquisitions is failing to gather feedback on emerging capabilities early in the design process, and leaving feedback loops open until late in the development stages, resulting in design and engineering setbacks. To counter this, evaluating new prototype designs in-stride with end-users, which is critical for rapid learning and iterating on emerging capabilities, must become the standard methodology for capability development.

Innovation without implementation, fielding, funding, and support only solves a fraction of the problem. Identifying how successful prototypes are funded, mass produced, and fielded through rapid-acquisition pathways is critical to ensuring that the ExMCM capability remains at the forefront of innovation.

Concurrent policy and requirements development to meet U.S. government (USG) statutory regulations must maintain pace with the innovation and acquisition pathway curves to mitigate the technical debt accrued by technology advancing at exponential rates. Navy EOD must continually horizon scan across the DoD to avoid duplication of efforts and financial expenditures. Identification of other resources within DoD is not only cost-effective, but timesaving, and provides rapid testing opportunities for the community's end-users.

Adjacent entities may have already completed many of the acquisition hurdles regarding documentation and authorization for military use. Navy EOD can capitalize on these lessons learned to reduce timelines for implementation of solutions that may meet warfighter needs. We must ensure commonality among system controls, communications, data products, and data links of technology and equipment in support of ExMCM missions. We must acquire new technology with an eye towards interoperability and communication, both within the ExMCM unit of action and externally to Joint Forces.

The future of Joint Force warfare is unmanned systems, and the ability to transfer command and control of those systems, pull and push data across domains, and link these systems throughout the internet of things/battlefield of things is crucial to the U.S. maintaining a superior advantage over its adversaries. The ExMCM concept may evolve to encompass both sensors and offensive weapons, and these systems must be able to adapt, evolve, process commander's guidance and intent, and deploy capabilities without human input to ensure our forces can dictate the pace of the conflict.

Objective Three: Capitalize on Our Unique Ability to Counter Weapons of Mass Destruction



Countering the development and employment of WMDs requires a holistic approach and unified effort across the USG. This mission also spans a broad spectrum of activities that require the utmost sensitivity. Peer competitors, nation-states, rogue regimes, and terrorist organizations of nearly every size routinely use the ability to employ these weapons, be it nuclear, chemical, or biological, to gain political or military power.

Simultaneously, these organizations leverage rapid advancements in technology to increase the lethality of their systems, obscure the transfer of materials and information to nefarious actors, and

proliferate knowledge regarding the creation of WMDs, or their delivery platforms, to the masses. To ensure the American way of life prevails, promote freedom and democracy, and support continued economic growth and prosperity, we cannot let malign leaders, who seek power through fear, obtain WMDs in any form. We cannot let individuals with evil intent harness the power of science to inflict harm to the masses through physical, emotional, or economic means. The mere threat of a chemical, biological, or nuclear weapon can instill enough fear to control a population or deny the use of critical infrastructure. Additionally, our adversaries' pursuit of WMDs, delivery systems, and related CBRN technologies threatens U.S. hegemony, the stability of our partner democratic nations, and the freedom of international organizations to provide stability and relief to those in need.

The evolution of the WMD threat has created new challenges for the USG beyond dealing with adversarial employment of a device. The proliferation of WMD knowledge is a transregional problem that routinely crosses the GCCs' geographic boundaries. The primary challenges facing the Joint Force Commander encompass:

1. The diversity of threat actors--an expansion from traditional state actors down to the possibility of a lone actor with no particular affiliation.

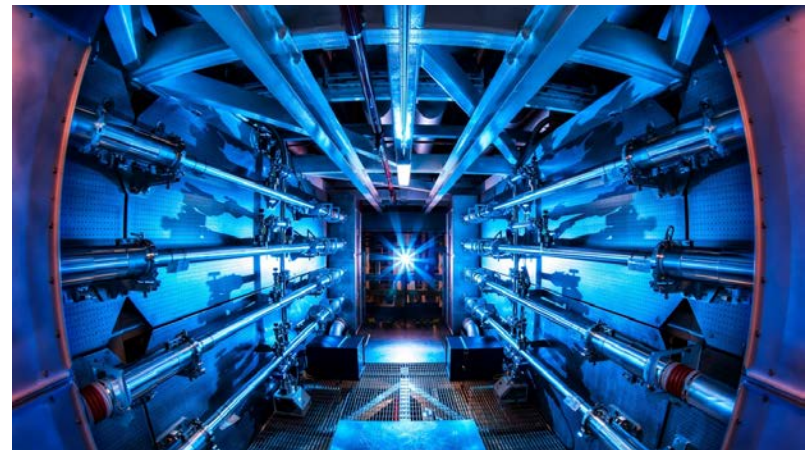
2. The emergence of novel WMD threats, i.e. nontraditional agents (NTAs).
3. The dual-use nature of the related technology and expertise.
4. The increasing complexity of the WMD continuum and number of proliferation and procurement networks.

The scope and speed associated with WMD development activities juxtaposed with the dispersed nature of CWMD activities across the USG requires the Joint Force to coordinate with interagency partners to enable their activities, while leveraging partner nation capabilities. CWMD requires a strong partnership between the U.S., its allies, and other partner nations to combine their CWMD capabilities and to dissuade, deter, deny, or defeat WMD adversaries and threats.

WMD actors of concern pose a threat of developing, acquiring, proliferating, or employing WMDs; related expertise; materials; technologies; and means of delivery. These actors may also perceive the destructive capabilities of WMDs as a highly desirable means to counter more technologically advanced nations and alliances. States may view WMD possession as a source of strategic leverage, international prestige, regional dominance, or deterrence. This may be accomplished through the threat or actual use of WMD. The WMD acquisition and development efforts of non-state actors differ from traditional state programs in their organization, scale, and resourcing. Many chemical and biological production facilities used by a non-state actor, such as clandestine

laboratories, can operate within a limited space, such as a one-car garage, using common, dual-use, or improvised equipment. Detecting and disrupting non-state actor networks and small-scale production facilities is a significant challenge for the Joint Force. Non-state actors can operate independently, with state actor support, or in tandem as enablers or as proxies of state actors. Non-state actors are likely to employ WMDs in an unconventional manner as an improvised threat.

Navy EOD has succeeded and will continue to succeed in the CWMD mission due to a culture of leadership and innovation founded at the tactical level but exemplified up to the strategic level. From the EOD supervisor to the EOD flag officer, Navy EOD expertise in CWMD is recognized by leadership across the DoD and within the USG. Whether the need is the exquisite technical skill to take action on a WMD or developing an integrated approach of campaigning to counter WMD, Navy EOD



operators lead the way. This reputation is not new; generations of Navy EOD operators have historically excelled in tackling one of the nation's most difficult problems. From the days of Parachute Insertion Capable (PIC) detachments prepared to jump into any environment and render safe Russian weapons during the Cold War to the present, Navy EOD has always been the force of choice to achieve the nation's CWMD objectives.

Key Strategic Initiative 3.1

Cultivate CWMD expertise across the Navy EOD enterprise through investment in our people, education, relationships, and advanced technologies.

Navy EOD recognizes that the human is our best weapon system and is more important than any piece of hardware. The Navy EOD force will continue to invest in its people and be intentional in the billets that Navy EOD operators and officers fill. Given the expanse of topics and complexity of the CWMD mission area,



Navy EOD must increase the baseline and advanced technical training, that includes weapons technology, delivery platforms, systems utilized in the proliferation of information, and the exploitation of adversarial weapons systems. We must ensure we optimize the manning, training, and equipping of our Navy EOD platoons to enable their value and employment across the CWMD mission.

This includes investment in what may appear to be tangential or divergent technologies are areas of study but we must seek out novel ideas, embed within existing networks, or create new opportunities that will be valuable to the whole.

We must also expose our force to the advanced technical capabilities of the information warfare, cyber, and space domains to better leverage our understanding of the CWMD mission, and apply those tools and techniques to deter adversarial pursuit of WMDs through denial of their ability to achieve success.

CWMD-related professional military and civilian education also develops expertise for enlisted and officers alike. Navy EOD must recognize the role of CWMD within the Navy and Joint Force, and the role of the Navy and Joint Force within the CWMD mission. We must develop relationships and leverage the existing EOD enterprise to influence the decisions across the tactical, operational, strategic, and policy levels. We must continually reflect and refine our internal processes to remain oriented towards our objectives. We must also harness the value of the relationships we will create, and unlock this connective tissue to expand the reach of the Navy EOD force.

Key Strategic Initiative 3.2

Leverage the entire Navy EOD force structure in the mission to CWMD through strategic agility.

The goal of the CWMD mission is to deter our adversaries from pursuing and/or advancing their WMD programs, denying their ability to employ WMDs, and being prepared to respond in the event that a WMD is utilized. To be effective, we must deny our adversaries any perceived benefit from obtaining the knowledge, materials, capabilities, and expertise necessary to employ them. We achieve this by developing expertise across the CWMD mission area and gaining an understanding of the DoD, inter-agency, and intelligence community interactions to ensure we are mutually supportive within the CWMD mission set.

Navy EOD forces must enhance their awareness of CWMD concepts of operations and mission planning across all areas of responsibility to counter competitors and rogue regimes, and enable the deployed force's ability to provide the GCC and the Joint Force with a credible, proven capability. Each Navy EOD operator must be educated on the basic CWMD operations, activities, and investments that are identified in the Functional, Global, and Theater Campaign Plans.

To ensure that Navy EOD continues to provide its unique capability to the CWMD mission area, key positions within the CWMD ecosystem must be identified and codified to ensure there is adequate influence to strategic- and policy-level decision making. This will allow the force to leverage access to specialized equipment and resources that enhance the GCC's awareness of threats with an increased ability to respond within their area of



responsibility (AOR), making every Navy EOD operator a critical asset to the GCC or supported commander when it comes to the CWMD mission set. Upon educating our force per KSI 3.1, we must ensure Navy EOD is intentional regarding the placement of our officers and senior enlisted, ensuring their billet is within the correct organization and/or office code for maximum effectiveness. A well-educated force, given the proper support, placement, and access, will ensure that Navy EOD can execute this strategic plan and make a meaningful contribution to the holistic CWMD mission.

Key Strategic Initiative 3.3

Integrate the force into the Information and Cyber domains to incorporate advanced technologies and intelligence practices into our operations.

Leveraging technological advancements in robotics, processing and refinement facilities, and across the information and cyber domains, coupled with a deep knowledge of the CWMD mission space, Navy

EOD will develop, provide the access and placement, and employ specialized tools and technologies to analyze and exploit WMD programs. These tools will deny the advancement of adversarial WMD capabilities and prevent the proliferation of credible WMD knowledge. The information obtained through execution of these operations will enable future cyber attacks on those networks in order to disrupt, delay, or destroy the WMD or conventional weapon pathways. The advancement of our nation's and adversaries' information and cyber warfare capabilities necessitates that Navy EOD leverages the unique capabilities available, be it via the conventional force or special access programs (SAPs) and sensitive technological operations (STOs).

The increasing network connectivity of sensors and systems--commercial and military--will create new challenges for the Navy EOD operator that we cannot fully anticipate. The advent of new WMD material production facilities and delivery platforms that benefit from artificial intelligence and wireless automation will complicate the EOD operator's mission. We must expect to encounter laboratories and weapons that are more difficult to detect and locate, more dangerous to render safe and recover, more complicated to exploit. The internet of things--the network of physical devices embedded with electronics, software, sensors, and network connectivity that enables them to collect and exchange data--will allow nefarious actors a wider range and sophistication of employment options previously unavailable.

This threat is compounded by other emerging technologies such as additive manufacturing, unmanned systems, and nanotechnology. Meeting the challenge of networked munitions, interconnected

sensors, and programmable electronics that can be controlled from anywhere in the world via the internet will require new EOD skills, equipment, and procedures all supported by an expansive technical network of cross-domain expertise.

Key Strategic Initiative 3.4

Lead the DoD EOD Force in integration of CWMD expertise with the Joint Force and partner nations and allies.

Navy EOD's unique ability to integrate across the DoD's general purpose forces GPF and SOF make it the best and most capable force for supporting the strategic messaging campaign necessary to deny the perceived benefit of WMD programs through unilateral and multinational engagements, exercises, and information-sharing opportunities.

This is executed not only across the DoD EOD network, but also within the U.S.'s allied and partner nation GPF and SOF. Additionally, we must leverage Navy EOD's natural placement and access to better understand the operational environment, including our allies' and partner nations' capabilities to prevent, mitigate, and respond to a WMD or CBRN event. This will enable the holistic USG CWMD effort to effectively and efficiently apply the critical resources necessary to ensure the U.S. maintains a vital WMD pathway defeat and response capability.

It will also result in decreased risk for the GCC or supported commander by increasing the indications and warnings through subject matter expertise exchanges, partner nation training, and foreign CBRN site assessments to support CWMD national objectives.

Objective Four: Grow Expertise in the Exploitation of Next-Generation Weapons Systems

Navy EOD must build exploitation capabilities across the force to stay ahead of emerging technologies employed by our strategic competitors, their proxies, and violent extremists.

Based on the current threat environment, the force has seen commercial dual-use technologies and improvised conventional weapons systems used against U.S. and allied nations' defense forces and critical infrastructure. Senior policymakers within the DoD and National Security Council recognize the threat these technologies pose to U.S. national security. Officials are developing guidance to coordinate efforts across combatant commands.

Based on our recent experiences from the counter-IED fight in Afghanistan and Iraq and a newly commissioned Echelon V exploitation command, Navy EOD has the resident expertise to grow collection, exploitation, and analysis capabilities within the force and align technical intelligence (TECHINT) efforts with the National Defense Strategy. In January of 2020, Expeditionary Exploitation Unit ONE (EXU-1) conducted an operational planning team (OPT) exercise with contributions from various organizations across Navy EOD and the Joint Force.

The OPT focused on key initiatives to grow exploitation capabilities across the EOD force and key areas impacted



including doctrine and policy, operations, personnel, training, materiel, and intelligence.

Key Strategic Initiative 4.1

Create policy and doctrine for exploitation in the maritime environment.

Joint Service EOD (JSEOD) lacks doctrine for TECHINT, site exploitation, and exploitation in the maritime environment. Over the past decade, Navy EOD focused on rebuilding its undersea

warfare capability. However, little doctrine currently exists to integrate exploitation with undersea warfare. To support this strategic objective, the community must recognize that the two are interconnected. The community must also integrate the two capabilities to provide real-time TECHINT for tactical operators, operational commanders, and strategic decision makers. Exploitation at the Task Element, Unit, and Group levels must be integrated into existing operational plans to equip the JSEOD force with sufficient knowledge on current and future hazards, avoid technical surprise in joint warfare, and enable attribution to fulfill national security requirements.

These significant injections can be accomplished in a similar manner as the EOD annexes that are already created to support this priority into 2030. Navy EOD staff officers must work with EXU-1 to develop exploitation doctrine where relevant or where TECHINT gaps are emerging.



Currently, policy exists for the DoD's Foreign Materiel Program (FMP) at the strategic level with the Joint Staff initiative on United Exploitation (UE) for Captured Exploitable Material (CEM), but we need to further integrate exploitation in plans where maritime exploitation could support undersea mine countermeasure and ExUSW initiatives.

Key Strategic Initiative 4.2

Integrate exploitation training and education throughout a career.

To grow our exploitation expertise fully, we must ensure exploitation training is available to all joint service EOD students as they enter the Naval School Explosive Ordnance Disposal (NAVSCOLEOD). Higher levels of collection, exploitation, and analysis will still reside at EXU-1, but this paradigm shift will prepare even our junior EOD operators to exploit conventional and improvised weapons and emerging technologies.

Currently, little formal exploitation training exists at NAVSCOLEOD and the Navy EOD Groups, and the expeditionary exploitation mission is absent from the EOD Leadership Continuum (EODLC), the curriculum at the service war colleges, and the command and staff courses.

To further this priority for our EOD operators, we must first determine the appropriate levels of training and identify additional pathways to achieve the exploitation specialist expertise and credit through a subsequent Navy Enlisted Classification (NEC) code. In the near term, closer integration between EXU-1 and EOD Mobile Units can initiate the exploitation knowledge diffusion process at the

individual level with opportunistic training periods for experienced EOD technicians, and at the unit level with battalion training events and exercises.

These efforts are under development with the Exploitation Cross Functional Team as EXU-1 works with the enterprise to establish and implement the strategy of diffusing appropriate skill sets and equipment to Navy and Joint EOD entities.

Key Strategic Initiative 4.3

Develop intelligence that drives and influences EOD operations.

The Navy EOD force assists in building an intelligence enterprise capable of driving and influencing EOD operations, similar to that of the special operations find, fix, finish, exploit, analyze, disseminate cycle.

Currently, Navy EOD, much less the larger TECHINT community, has limited organic Weapons Technical Intelligence and Exploitation (WTI/WTE) expertise. Because of the variability, unpredictability, and diffusion of improvised threats we must develop an intelligence capability equally flexible and responsive.

Training Navy EOD operators and Intelligence Specialists on existing reporting systems like the EOD Information Management System (EODIMS), improving Navy EOD's network connectivity with consistent JWICS/SIPR access, disseminating intelligence more effectively to the JSEOD and the IC, increasing understanding of theater and service intelligence center requirements, and stressing the importance of the joint service EOD force as consumers, producers, and drivers of intelligence will fill intelligence and capability gaps.

Key Strategic Initiative 4.4

Identify key capabilities and develop the requisite network to incorporate information and cyber activities to disrupt, degrade, and deny the enemy's use of advanced weapons systems.

With the advancement of our Nation's and adversaries' information and cyber warfare capabilities, Navy EOD must learn to leverage the unique capabilities available, albeit via the conventional force or via special access programs (SAPs) and sensitive technological operations (STOs).

The increasing network connectivity of sensors and systems--commercial and military--will create new challenges for the EOD operator that we cannot fully anticipate. The advent of new munitions that benefit from artificial intelligence and wireless automation will complicate the EOD operator's mission to identify, recover, render safe, and exploit unexploded ordnance.

We can expect to encounter weapons that are more difficult to detect and locate, more dangerous to render safe and recover, more complicated to exploit, and for which we have no EOD technical manuals. The internet of things--the network of physical devices embedded with electronics, software, sensors, and network connectivity that enables them to collect and exchange data--will allow a wider range of actors to acquire sophisticated capabilities that were previously available only to nation states, as may other emerging technologies in gene editing, additive manufacturing, unmanned systems and nanotechnology. Meeting the challenge of networked munitions, interconnected sensors, and programmable electronics that can be controlled from anywhere in the world via the internet will require new EOD skills, equipment, and procedures.

Objective Five: Embolden Allies' and Partners' Capabilities

To secure competitive advantage in peace and victory in future fights, Navy EOD will require a robust constellation of bold, capable, and trusted allies and partners.

When stationed, deployed, or training abroad, we will seek to defend allies from aggression, bolster partners against coercion, and share responsibilities for common defense equitably.

As a community, we will strive to deliver performance continually with affordability and speed, adapting our mindset, culture, and management systems to adapt to technological opportunities and emergent threats, together with interagency, industry, and academic partners.

We will improve understanding, interoperability, and burden sharing with key international allies and partners in order to deter adversary aggression and coercion; improve our own and partner capabilities, capacity, and will; and prepare to fight together in war. Navy EOD will plan and assess our international engagements to ensure they are forums for mutual growth, improved trust, expanded options against adversaries, and enhanced regional understanding.

We will ensure competitive advantage against our adversaries by delivering performance affordably and at the speed of relevance

through, in part, deep dialogue and cooperation with industry, research and development (R&D) laboratories, and academia.

We aim to achieve additional agility in our requirements, capability development, and acquisitions processes through a more experienced cadre of acquisitions personnel empowered by and integrated with their most capable counterparts in industry and academia.

We intend to pursue more rapid, iterative, and streamlined approaches to develop and field new capabilities.





Key Strategic Initiative 5.1

Enhance Navy EOD integration with Joint Service and interagency partners.

The Navy EOD force will focus on enhancing integration with joint service and interagency partners in current operations and future planning, concept and capability development, and wargaming, assessment, and experimentation to improve force employment and align community development with current and emerging warfighting concepts, plans, and requirements. We will prioritize Fleet, Marine, and Naval Undersea and Special Warfare engagement in the development of the ExUSW concept and its integration into the concepts and frameworks for Distributed Maritime Operations (DMO), Amphibious Operations in a Distributed Environment (AODE), Littoral Operations in Contested Environments (LOCE), and Expeditionary Advanced Basing Operations (EABO), and applying Navy EOD capabilities and forces as part of these concepts and others in joint contingency and operational plans.

We must emplace talent within appropriate interagency, intelligence community, and law enforcement partners to influence and expand options for operational effects and outcomes in CWMD.

These key nodes will create an improved interagency understanding of CWMD in concepts, plans, and capability development through U.S. Special Operations Command, the Combatant Commands, and the Defense Threat Reduction Agency. We must also develop, refine, and expand the EODIMS to realize the opportunities that data science, machine learning, and cloud computing can provide for EOD operations, training, and capability development.

Key Strategic Initiative 5.2

Improve Navy EOD's understanding, interoperability, and burden sharing with key international allies and partners.

Over the next ten years, Navy EOD will focus on improving the understanding, interoperability, and burden sharing with key international allies and partners to deter adversary aggression and coercion, improve our partner capabilities, capacity, and will alongside our own, and prepare for shared sacrifice and victory in war.

We will be effective in expanding key information sharing and interoperability initiatives for key international partnerships through small-scale subject matter expert exchanges and exercises.

These engagements will build on existing maritime intelligence and logistics partnerships in the Pacific with key allies and partners,

and strengthening maritime domain awareness and access. They will also improve capabilities for high-end operations at sea with North Atlantic Treaty Organization (NATO) partners, including through agreements and technology for information and intelligence sharing and coordinated plans and exercises.

Key Strategic Initiative 5.3

Ensure competitive advantage against our adversaries through industry, research and development labs, and academia.

To ensure we maintain a competitive advantage against our adversaries, the Navy EOD force must deliver performance affordably and at the speed of relevance through, in part, deep dialogue and cooperation with industry, research and development (R&D) laboratories, university affiliated research centers, and academia.

Expanding our dialogue at all levels with industry partners will enhance shared understanding and reduce obstacles, resulting in more effective and efficient ways of doing business, such as leveraging commercial off-the-shelf and modified off-the-shelf technology solutions and partner-nation acquisitions programs.

The Navy EOD community will only achieve this initiative if we develop and recognize acquisition career tracks to improve our ability to refine and optimize integration of advanced technologies.

This career path will enhance talent management efforts and increase the volume and range of interaction with industry, labs, and academia alike, resulting in a shared understanding of requirements with an increasingly trusted community of stakeholders.



Additionally, we must improve integration between the public and private sectors with Navy EOD officers and enlisted undertaking graduate education.

We will accomplish this through intentional placement of our members at military and civilian institutions, the national laboratories, and civilian institutions at the forefront of unmanned systems, explosives detection, and forensic science, among other research areas.

We must also improve outreach to the Naval Postgraduate School, Naval War College, and an emerging public-private wargaming community.

Execution Management

Strategies for success that remain simply on paper without effective tools for measurement rarely produce results. In order for this strategic plan to be effective, we must take steps to ensure we are monitoring our progress and remain on track to meet our objectives.

First, we will measure our progress against each objective. To meet these objectives, we must first establish baseline data points and then create specific, measurable, attainable, relevant, and timely goals in order to benchmark any future success.

Second, we need an execution plan that includes necessary tactics and tasks, ideal outcomes, and timeframes. This execution plan needs to be communicated and clear-cut so that our force is able to internalize it and move out on these efforts.

Accountability for these tasks may be dispersed across the Navy EOD enterprise in our cross-functional teams, but we will make it our personal goal to support anyone who wants to help us further the community's vision.

Finally, we intend to meet quarterly to discuss and review the progress that is made in support of this strategic plan.

We will identify and discuss both opportunities and challenges,

and we will update this plan whenever new information and opportunities present themselves.

For accountability purposes, EOD Group One and EOD Group Two Commodores will provide regular updates to Navy Expeditionary Combat Command on the status of this strategic plan.

We realize our vision will take unwavering concentration, prioritization of tasks, and clear accountability.



A Call to Action



As the Navy EOD community moves into the future, we know that realizing both our vision and our potential will be impossible without the collective action of our people--our Sailors, our families, our partners, and our leaders.

We have now entered an era of great power competition and with that comes the urgent need to change the way we operate on a significant scale. We will need creative approaches, sustained investments, and absolute discipline in executing this plan to position the Navy EOD force of 2030 as fit for the time. Our force must be able to compete, deter, and win in this increasingly complex security environment.

Our force must be able to compete, deter, and win in this increasingly complex security environment. A dominant Navy EOD force will protect the security and future of the U.S., increase our country's influence abroad, preserve access at sea that will improve the standard of living, and strengthen cohesion among our allies and partners.

We finish with this call to action for all who stand with us in wanting to ensure America remains undeterred by explosive threats.



“

Train people well enough so they can leave, treat them well enough so they don't want to.

”

Richard Branson
Business Innovator



