



**EXWC Perspective on Autonomous
and Unmanned Systems
5 February 2019**

Kail S. Macias, P.E.
EXWC Technical Director

Addressing Emerging Priorities

Urgency...Collaboration...Alignment



2018 National Defense Strategy

- Nuclear forces
- Space and cyberspace as warfighting domains
- Command, control, communications, computers, and intelligence, surveillance, and reconnaissance (C4ISR)
- Missile defense
- Joint lethality in contested environments
- Forward force maneuver and posture resilience
- **Advanced autonomous systems**
- Resilient and agile logistics

CNO “A Design for Maritime Superiority”

- Strengthen Naval power at and from sea
- Achieve high velocity outcomes at every level
- Strengthen our Navy team for the future
- **Expand and strengthen our network partners**

Research, Development & Acquisition

- **Deliver and sustain lethal capacity**
- Increase agility
- Affordability
- Develop a workforce to compete and win

Naval Research & Development Framework

- Augmented warfighter
- Integrated and distributed forces
- Operational endurance
- **Sensing and sense-making**
- Scalable lethality

Navy 30-year RDT&E Strategic Plan

- **Advanced autonomous systems**
- Advanced computing and sensing
- Advanced materials and manufacturing technologies
- Advanced EMW and cyber
- Advanced weapons and systems technologies
- Advanced energy technologies

NAVFAC Strategic Design 2.0

- Enable Lethality
- **Maximize Shore Readiness**
- Strengthen Our SYSCOM Team

Inspections and Condition Analysis



EXWC Vision

Accelerate Innovation to Enable Fleet Lethality at Sea and Ashore

- **Mission Relevancy**

- Readiness, Lethality, Agility, Affordability

- **Technology Applications**

- Rapidly conduct Inspections; augment personnel in dangerous situations
- Up-to-date data that can be used to make decisions/investments
- Greater awareness of what we have, and what we need to maintain

- **Partnerships / Collaborations**

- Collaboration between Navy and Industry/Academia
- Partnerships through Contracting

