

NSWC Crane Division Overview



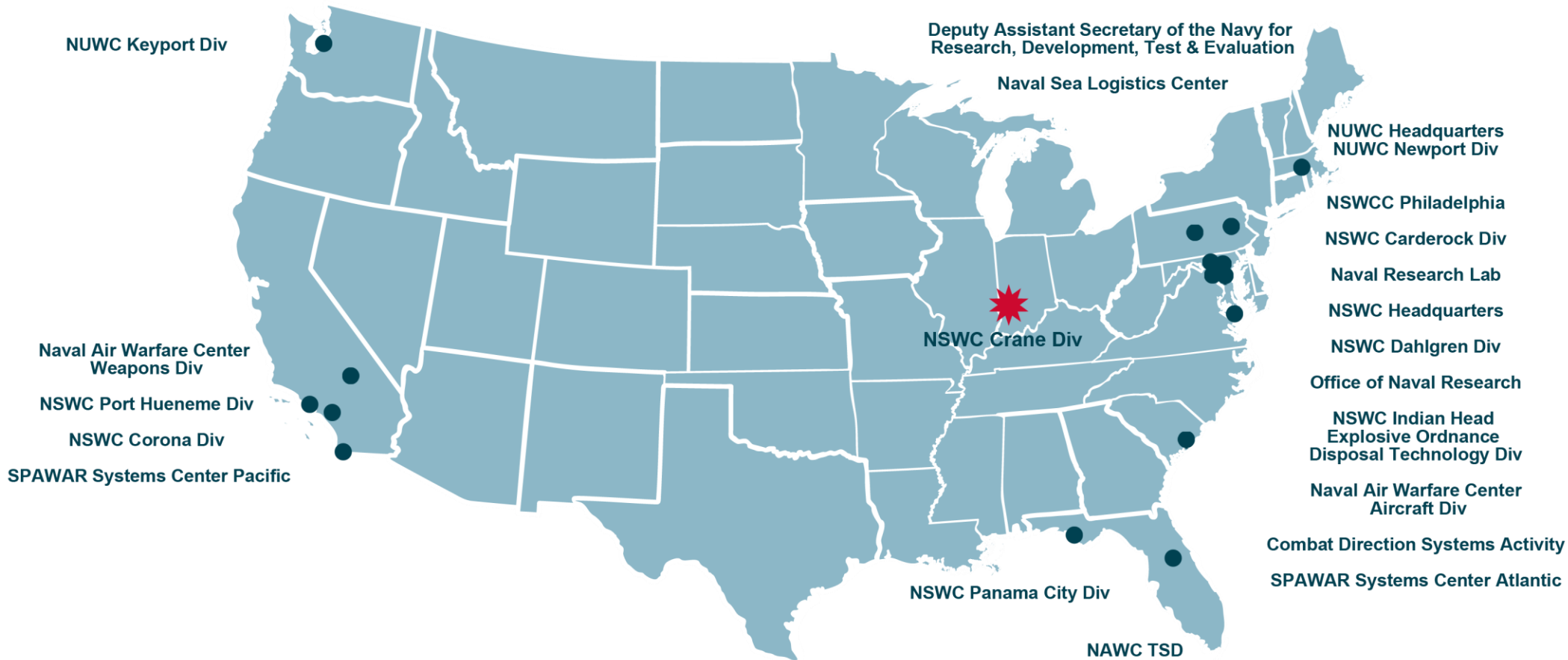
CAPT Duncan McKay, USN
Commanding Officer



Dr. Angela Lewis, SES
Technical Director

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Naval Research & Development Establishment



Aggressive *RESEARCH, DEVELOPMENT, TEST & EVALUATION*
for Reliable Real World Solutions.

QUICK FACTS

\$3.024B
Economic
Impact

1 MISSION

3806
NSWC Crane
Employees

3 MISSION AREAS



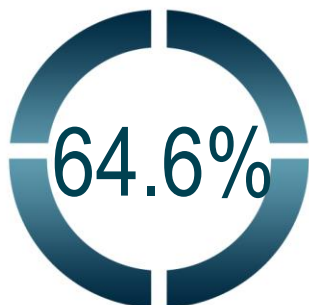
Strategic Missions



Expeditionary Warfare



Electronic Warfare



Scientists,
Engineers,
& Technicians

127 Doctorate
653 Masters
1,746 Bachelors

Our Mission . . . Provide acquisition engineering, in-service engineering and technical support for SENSORS, ELECTRONICS, ELECTRONIC WARFARE and SPECIAL WARFARE WEAPONS. Apply component and system level product and industrial engineering to surface sensors, strategic systems, special warfare devices and electronic warfare/information operations systems. Execute other responsibilities as assigned by the Commander, Naval Surface Warfare Center.



Strategic Missions

Expeditionary Warfare



Electronic Warfare

We, at NSWC Crane exist to provide the **AMERICAN WARFIGHTER** with solutions to their toughest technical challenges in order to better equip them with a **DECISIVE ADVANTAGE** over our Nation's adversaries!



Combating our Nation's greatest threats, NSWC Crane is the indispensable mission expert, leveraging our deep technical heritage to deliver solutions through **INNOVATION and **STRATEGIC PARTNERSHIPS**.**

Areas of Expertise:

- Trusted Electronics
- Radiation Sciences
- Failure/Material Analysis
- Flight Eng
- Design & Systems Eng
- Component Eng
- Anti-Tamper Technologies
- Automated Test Equipment
- Printed Circuit Board Design

Hardware Product Areas:

- Launcher Systems
- Missile Handling and Transportation Systems
- Fire Control and Navigation Systems
- Deployed Test and Measurement Equipment
- Polymer Sciences and Underwater Sensors
- ASIC Design and Verification

Claims & Credentials:

- Nation's primary organic field activity for Nuclear Deterrent systems
- Key contributor to the Missile Defense mission
- Navy's preeminent center for Microelectronics Technology
- Trusted & Assured Microelectronics Program Lead
- Microelectronics Innovation for National Security & Economic Competitiveness Program Lead
- Executive Agent for Printed Circuit Board Technology
- Strategic Radiation Hardened Electronics Council Execution Lead
- NAVSEA Technical Warrant Holder for Anti-Tamper and Electronics
- Strategic Systems Deputy Assistant Technical Warrant Holder for Radiation Hardening

**DETER
DEFEND
DEFEAT**

Areas of Expertise:

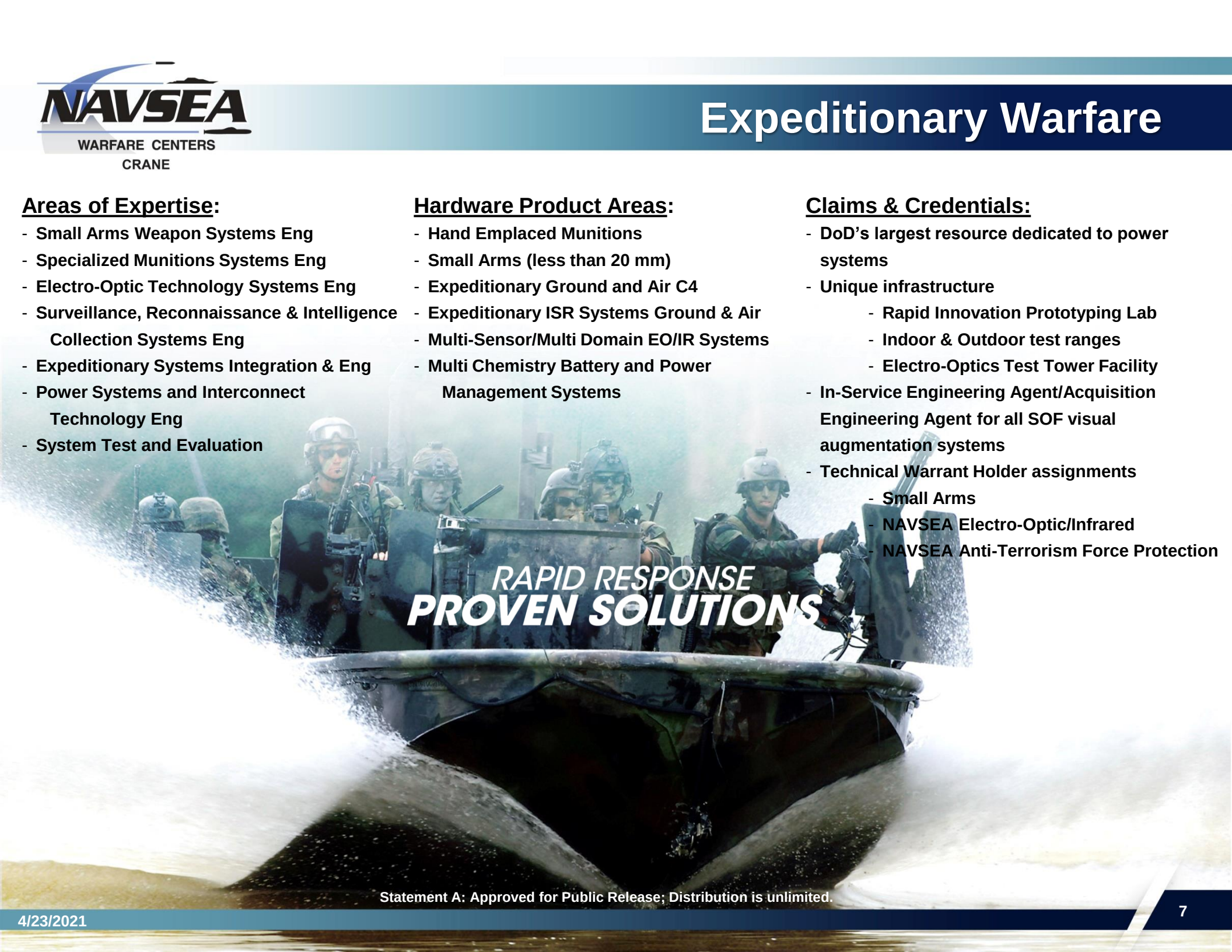
- Small Arms Weapon Systems Eng
- Specialized Munitions Systems Eng
- Electro-Optic Technology Systems Eng
- Surveillance, Reconnaissance & Intelligence Collection Systems Eng
- Expeditionary Systems Integration & Eng
- Power Systems and Interconnect Technology Eng
- System Test and Evaluation

Hardware Product Areas:

- Hand Emplaced Munitions
- Small Arms (less than 20 mm)
- Expeditionary Ground and Air C4
- Expeditionary ISR Systems Ground & Air
- Multi-Sensor/Multi Domain EO/IR Systems
- Multi Chemistry Battery and Power Management Systems

Claims & Credentials:

- DoD's largest resource dedicated to power systems
- Unique infrastructure
 - Rapid Innovation Prototyping Lab
 - Indoor & Outdoor test ranges
 - Electro-Optics Test Tower Facility
- In-Service Engineering Agent/Acquisition Engineering Agent for all SOF visual augmentation systems
- Technical Warrant Holder assignments
 - Small Arms
 - NAVSEA Electro-Optic/Infrared
 - NAVSEA Anti-Terrorism Force Protection



**RAPID RESPONSE
PROVEN SOLUTIONS**

Areas of Expertise:

- Full Lifecycle Eng
- System Test and Integration
- Threat Exploitation
- Technology Transition
- Hardware in the Loop,
Modeling & Simulation

Hardware Product Areas:

- Surface Electronic Warfare
- Counter Radio Electronic Controlled Improvised
Explosive Device Warfare (CREW) Systems
- Airborne Electronic Attack
- Infra-Red (IR) Countermeasure Design
Flares/Lasers
- Phased Array and Solid State Technologies

Claims & Credentials:

- DoD's largest concentration of EW expertise
- 550,000 Sq. Ft. of office, labs & specialized test
facilities dedicated to the EW mission
- Leadership for DoN's Live/Virtual/Constructive
Experimentation Capability
- Next Generation Jammer Principal Investigator
- Engineering experts for CREW systems
- AN/ALQ-99 Fleet Support Team
- Leaders in Surface Warfare EW systems and Off-
Board Decoys

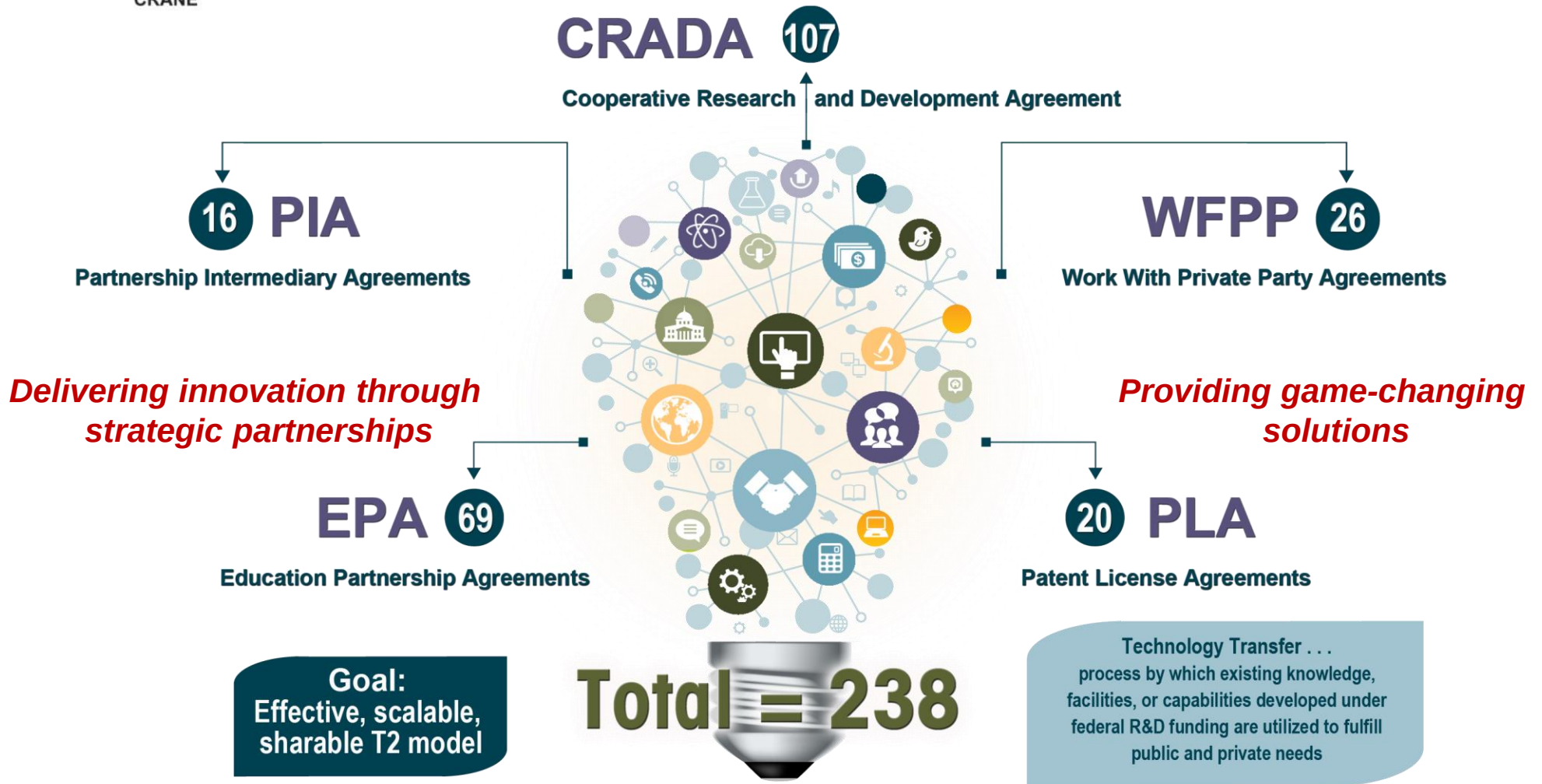
***CONTROL THE SPECTRUM
CONTROL THE FIGHT***



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ACCELERATE and ENABLE the development of a vibrant innovation ecosystem across the region and state.

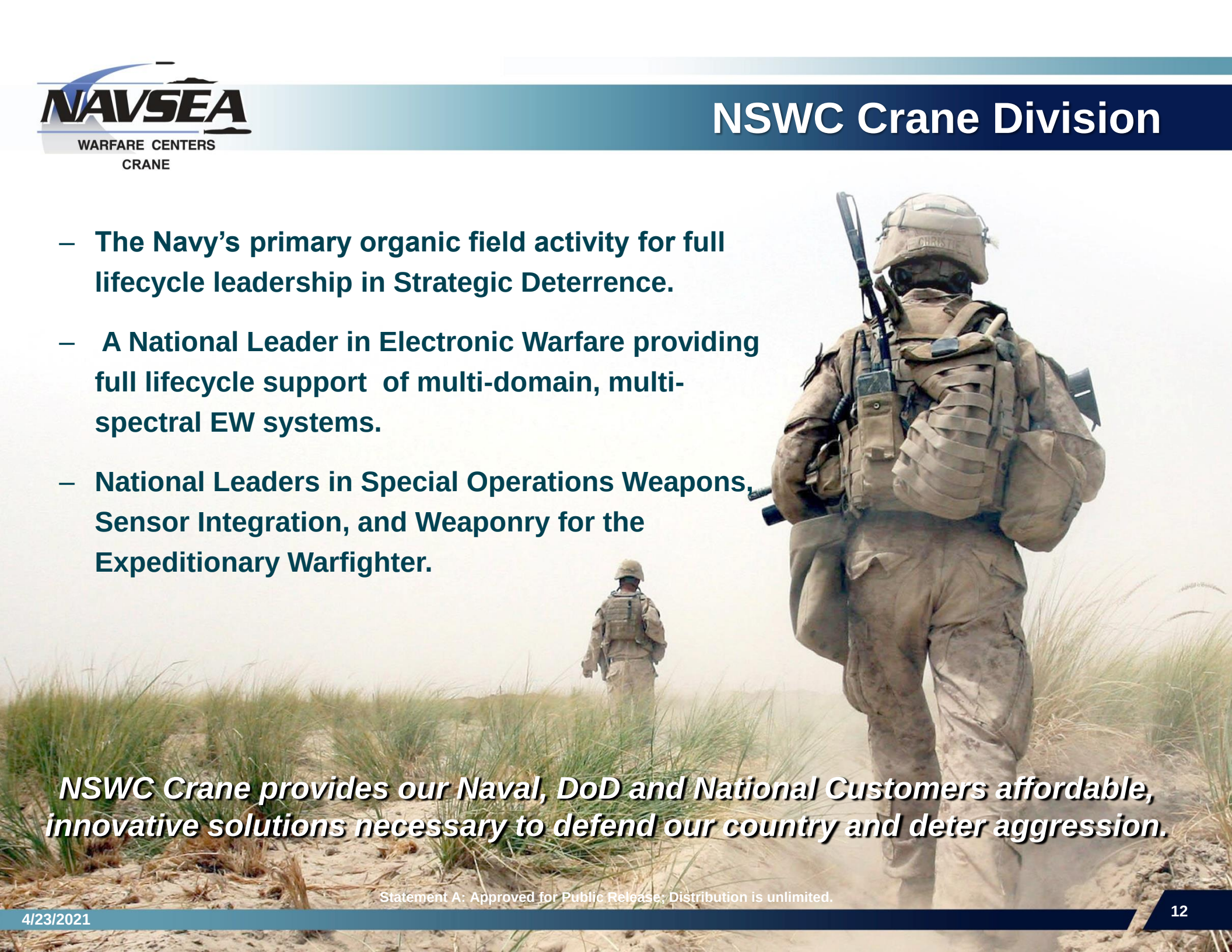


*Leveraging T2/IP for Enhanced Lab Mission Effectiveness through **TECHNOLOGY, INNOVATION and COLLABORATION** is ensuring we're using all our assets.*

- PhD Fellowships
- SMART PhD Scholarships
- Naval Research Enterprise Internship Program
- Naval Engineering Education Consortium Grants
- Microgrants for Research
- Temporary Faculty Hires
- Post-doctoral Researcher On-Site Fellowships
- Cooperative Research and Development Agreements
- Educational Partnership Agreements



- The Navy's primary organic field activity for full lifecycle leadership in Strategic Deterrence.
- A National Leader in Electronic Warfare providing full lifecycle support of multi-domain, multi-spectral EW systems.
- National Leaders in Special Operations Weapons, Sensor Integration, and Weaponry for the Expeditionary Warfighter.



NSWC Crane provides our Naval, DoD and National Customers affordable, innovative solutions necessary to defend our country and deter aggression.

Contributing to the Surface Navy After Next

Kinetic & Non-Kinetic Effects



Sensors



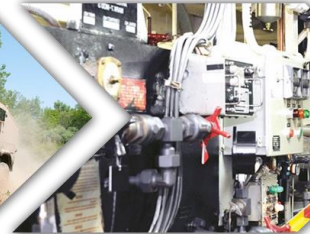
Platform & Payload Engineering



Expeditionary



Power & Propulsion



Surface Warfare Combat Systems



DISTRIBUTED LETHALITY



Mine Warfare



**Ranges, Training
Performance
Assessment**



**Autonomous
Vehicles**



Electronic Warfare



**Mission
Engineering &
Warfare Analysis**



**Forward Support
& Agile Logistics**

- Increase the offensive lethality of all warships
- Distribute offensive capability geographically
- Give ships the right mix of resources to persist in a fight

Surface Force Strategy – Return to Sea Control
Commander Naval Surface Forces, January 2017