



END OF YEAR RECAP

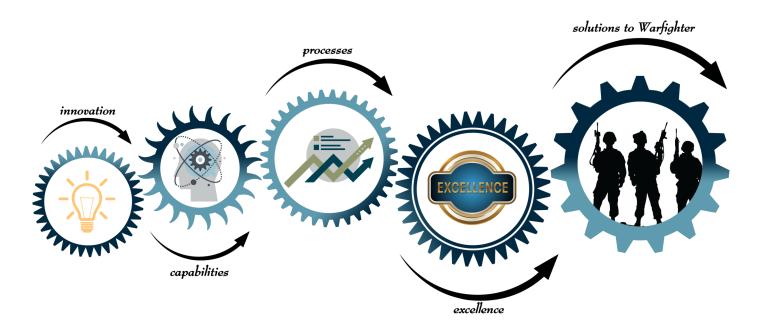
2017

# **WELCOME**

#### WELCOME TO THE 2017 ANNUAL REPORT!

We are excited to introduce the 2017 Annual Report which provides you with highlights of how Naval Surface Warfare Center, Crane Division (NSWC Crane) is "Expanding the Advantage" for Naval Sea Systems Command (NAVSEA), the Department of Defense (DoD) and the Nation. We believe it will be a resourceful reference by informing you about technical and business operations accomplishments and milestones throughout 2017.

The intent of the Annual Report is to capture Crane history - the present while planning



to document the future.

The report provides a snapshot of NSWC Crane's Commanding Officer, Technical Director and the entire Executive Leadership Team. Additionally, we capture Crane Values and Guiding Principles, which largely shape our innovative and collaborative culture, while focusing on special features and highlights throughout 2017.

We encourage you to use this Annual Report as a window to the past and into the future. A future in which we continue to "Expand the Advantage" for NSWC Crane, NAVSEA, DoD and the Nation.

# **TABLE OF CONTENTS**



CRANE LEADERSHIP	4
EXECUTIVE LEADERSHIP TEAM	5
MISSION   VISION   VALUES	6
GUIDING PRINCIPLES	6
MISSION AREAS	7
NSWC CRANE IMPACT	8
CRANE BY THE NUMBERS	9
FEATURES	10-11
HIGHLIGHTS	12-19
NAVSEA CAMPAIGN PLAN	20-23





# **CRANE LEADERSHIP**

#### **Commanding Officer**

#### Captain Mark H. Oesterreich, USN





Captain Mark H. Oesterreich assumed command of the Naval Surface Warfare Center, Crane Division (NSWC Crane) in July of 2017. A native of South Holland, Illinois, Captain Oesterreich received his commission from the United States Naval Academy in May 1991, graduating with a Bachelor of Science degree in Naval Architecture. He completed the nuclear training pipeline and served aboard USS ARCHERFISH (SSN 678), completing his qualification in Submarines. Throughout 2007 -2010, he served in several positions including Staff of the Chief of Naval Operations and Chief Engineering Officer aboard the USS Ronald Reagan (CVN-76). In June of 2010 he reported to the staff of Commander Naval Air Forces Pacific as the Carrier Force Maintenance Officer. Following selection for Captain, he reported to Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility where he served as the Business and Strategic Planning Officer and Production Resources Officer.

In July of 2014 Captain Oesterreich reported to the staff of Commander Naval Air Forces, Atlantic for duty as the Assistant Chief of Staff for Ship Maintenance and Material. One year later he was transferred to the same position at Commander Naval Air Forces Pacific Fleet. Oesterreich's service decorations include the Legion of Merit, Meritorious Service Medal and various personal, campaign, service, and operational awards.

#### **Technical Director**

#### Dr. Brett A. Seidle, SES





On 2 October 2016, Dr. Brett Seidle was appointed as a member of the Senior Executive Service and named the Division Technical Director at NSWC Crane. As the Division Technical Director, Dr. Seidle is responsible for an organization of approximately 3,400 civilian employees focused on providing engineering and technical expertise to the nation's warfighters.

Seidle began his career in the public sector with NSWC Crane in 2000, working intimately with the Strategic Systems Programs. He continued to take ever-increasing roles of responsibility at NSWC Crane and became Deputy Director of the Mission Support Services Department in 2004. In 2007, hewas awarded a fellowship from NSWC Crane to pursue his PhD in Public Policy at Indiana University, which he completed in 2010. From 2010 - 2016, Seidle assumed various senior leadership roles in the Applied Science Department and Mission Support Services Department responsible for a variety of business operations and support functions that support the NSWC Crane Command.

In 2013, Dr. Seidle was selected as NSWC Crane Division's Deputy Technical Director, providing technical leadership and supervision for the entire organization regarding strategy and technical relevance.

# **EXECUTIVE LEADERSHIP TEAM**



#### **Executive Leadership Team**



Deputy Technical Director
Ms. Janna Foxx, SSTM



Department Director
Global Deterrence & Defense
Mr. Ben Harkness, SSTM



Department Director
Spectrum Warfare Systems
Mr. Zahid Din, SSTM



Department Director
Special Warfare &
Expeditionary Systems
Ms. Patricia Herndon, SSTM



**Corporate Operations**Dr. Angie Lewis



**Director of Engagement**Dr. Kyle Werner



Comptroller

Mr. Roger Clark



Chief of Contracting
Mr. Kelly Siffin



# MISSION | VISION | VALUES



#### MISSION AREAS



**NSWC Crane** provides technical engineering solutions and total lifecycle leadership for many of the systems that protect and enable the warfighter. NSWC Crane has concentrated its resources and core competencies in the three mission areas which best support the warfighter. These are our critical missions areas:

#### Strategic Missions





NSWC Crane Strategic Missions Center delivers technical solutions to detect threats, provide a layered, integrated missile defense and offer global strike capability. Strategic Missions professionals work to develop, deploy and sustain the technologies to ensure that weapons systems are fully reliable and always available to the warfighter.

#### **Expeditionary Warfare**





Focused on agility, maneuverability, individual weapons, munitions, and technical training, Crane's Expeditionary Warfare Center equips the most elite warriors for the combat environment. With more than 1 million square feet of offices and laboratories, Crane provides a distinct advantage in sensors and communications, mobility and special munitions, and weapons.

#### Electronic Warfare

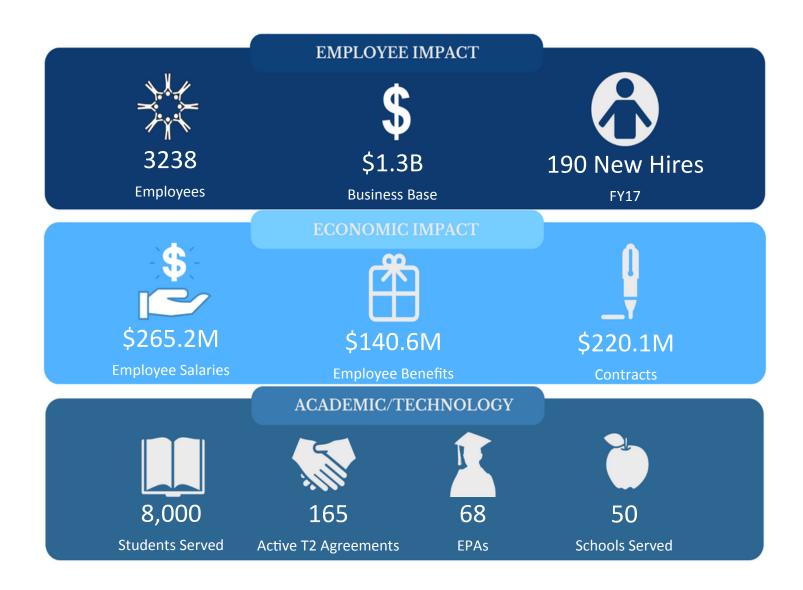




As the largest multi-service facility within the Department of Defense for Electronic Warefare (EW), EW sensors and electronics. NSWC Crane's EW Center is critical to the success of many military operations and is designated as the Naval Sea Systems Command Center of Excellence for Electronic Warfare.



# **NSWC CRANE IMPACT**



- Strategic Partnerships -
- Community Relationships -
  - Innovation Ecosystem -
    - School Partnerships -
      - Acquisition Hub -

# **CRANE BY THE NUMBERS**



# 3238 NSWC Crane Employees

67 %
Scientists,
Engineers &
Technicians

5 Technical Warrant Holders

47 Average Age 1 Mission \$1.3B

**Business Base** 

 $87\,$  PhD

584 Masters

1401 Bachelors

**3** Mission Areas

Electronic Warfare Strategic Missions Expeditionary Warfare



#### **FEATURES**



NSWC Crane held a formal Change of Command Ceremony on Jul. 13, 2017. Capt. Mark Oesterreich relieved Capt. JT Elder after three years as NSWC Crane's 28th Commanding Officer. Elder retired from the U.S. Navy after 28 years of service.

The Change of Command is a time honored tradition, formally restating the continuity of the authority of command. It is a formal ritual conducted before the assembled company of the command, as well as honored guests and dignitaries. The Change of Command is unique in the world today; it is a transfer of total responsibility, authority, and accountability from one individual to another.

As part of the ceremony, Lt. Governor Suzanne Crouch presented Capt. Elder with a Sagamore of the Wabash, the

highest award the state of Indiana can present. "I'm honored to be the Commanding Officer of the best warfare center in the Navy," Oesterreich said. "In my short time here, I have come to see that Crane is so much more to so many more. Capt. Elder has enabled Crane to reach new heights, and I wish him fair winds and following seas for his retirement."



A Navy EA-6B Prowler aircraft was formally dedicated to NSWC Crane employees who have provided 50 years of unwavering support in a ceremony held at Naval Support Activity Crane on Sept. 14, 2017. The plane is now a permanent memorial display and symbolizes Crane's Electronic Warfare (EW) roots dating back to 1971. Prowlers have been a part of every military conflict involving U.S. and coalition aircrafts since 1971. The EA-18G Growler is the Navy's replacement for the Prowler and will be the mainstay of the DoD Airborne Electronic Attack (AEA) capability into the 2030s, with NSWC Crane responsible for keeping the aircraft's AEA systems effective and available.

NSWC Crane employees have provided over 46 years of technical support to the Prowler's ALQ-99 Tactical Jamming

System (TJS). The ALQ-99 TJS provides offensive electronic attack capabilities that enable the Prowler to shut down enemy air defenses and communications systems by jamming signals within the Radio Frequency (RF) electromagnetic spectrum. NSWC Crane has the highest concentration of EW experts within the Department of Defense (DoD) and is responsible for research, development, engineering, and maintenance of EW weapons systems.





At the invitation of United States Senators Joe Donnelly and Todd Young, the Commandant of the Marine Corps – General Robert Neller – visited NSWC Crane on Oct. 13, 2017 to gain a more in-depth understanding of Crane's capabilities and its current efforts in supporting the Marine Corps.

This was the first time in its 75-year history that NSWC Crane has ever hosted a Commandant of the Marine Corps. Senators Donnelly and Young, as well as Indiana Congressman Larry Bucshon, M.D. (IN-08), accompanied General Neller and his staff on the visit.

NSWC Crane is the largest warfare center provider to the ade. Crane currently supports 11 of 15 Marine Corps Program

Marine Corps and has been for the last decade. Crane currently supports 11 of 15 Marine Corps Program Managers across Marine Corps Systems Command (MCSC) and PEO-Land Systems (PEO-LS).

During the visit, General Neller and his staff took in-depth tours of NSWC Crane's three mission areas – Expeditionary Warfare, Electronic Warfare, and Strategic Missions. General Neller had the opportunity to see and use a few of the many products NSWC Crane has either developed or is in the process of developing for the Marine Corps.

NSWC Crane and Air Force collaboration strengthened tremendously in 2017. High-ranking Air Force officer visits occurred throughout the year, including: Maj. Gen. Scott W. Jansson, Commander, Air Force Nuclear Weapons Center, Air Force Program Executive Officer for Strategic Systems; Lt. Gen Jack Weinstein, Deputy Chief of Staff for Strategic Deterrence and Nuclear Integration (A10); Gen. Robin Rand, Commander of Airforce Global Strike Command; and Gen. John Hyten, Commander of U.S. Strategic Command (USSTRATCOM).

All of these visits led to the culminating visit of Air Force Chief of Staff, Gen. David Goldfein on January 8, 2018. This was the first such visit from any Air Force Chief of Staff, and demonstrated the growing importance of NSWC Crane to American national security.





#### HIGHLIGHTS



In a signing ceremony on Jan. 25, 2017, Indiana University and NSWC Crane launched a new, multiyear commitment to support the integration of modern "smart" technology into existing systems critical to the country's defense.

Through the cooperative research and development agreement, scientists at the IU School of Informatics and Computing and at NSWC Crane will work together to transform existing military sensor technology through machine learning and artificial intelligence.

Vice Adm. Thomas Moore toured Naval Surface Warfare Center, Crane Division (NSWC Crane) on Wednesday, Feb. 8, 2017 to learn more about the cutting-edge engineering and technical work performed at the world's third largest naval installation.

"I had heard all these great things about Crane and what I was going to see when I got out here, but I have to tell you, I'm really blown away by the work that you're doing here," Moore said.





NSWC Crane's Technology Transfer (T2)
Office, in partnership with the Office of
Naval Research (ONR), conducted an
Innovation Discovery Event on Feb. 9,
2017. NSWC Crane initially created the
Innovation Discovery process – in
partnership with the University of
Southern Indiana – in hopes of increasing
its number of patent applications, issued
patents, and license agreements.





The 2017 Combined Federal Campaign (CFC) Awards Ceremony was held on Feb. 9, 2017 at the Garrison Restaurant in Indianapolis, Indiana, and NSWC Crane's accomplishments were highlighted due to the amazing results of the last CFC. In addition to raising \$137,215 for CFC in 2016, Crane's overall participation rate was the highest it had been since 2012 at 10.1% and well surpassed the 5.4% of 2015. The total dollars raised was the most since 2012 and up from \$118,352 in 2015.

On Feb. 7, 2017, NSWC Crane – in conjunction with the Crane Chapter of Blacks In Government (BIG) and the Hoosier Hills Chapter of Federally Employed Women (FEW) – hosted a luncheon and panel discussion to celebrate Black History Month.





On Mar. 21, 2017, students from area school systems entered STEM projects to compete for awards and cash prizes in the 33rd Annual Team Crane Science Fair held at WestGate Academy Conferencing & Training Center.



# **HIGHLIGHTS**



NSWC Crane, in conjunction with the Hoosier Hills Chapter of Federally Employed Women (FEW), hosted a luncheon to celebrate Women's History Month on Mar. 23, 2017.

Women's History Month honors and celebrates the struggles and achievements of American women throughout the history of the United States. This year's theme honors the generations of women who have courageously broken down barriers, shattered stereotypes, and changed our society.

NSWC Crane hosted nearly 300 military and civilian experts for the 14th Biannual Nuclear Triad & Advanced Conventional Strike Symposium on Apr. 10-12, 2017 to highlight Crane's invaluable work through collaboration with the United States Air Force in pursuit of both strategic nuclear modernization and other key conventional strike technological requirements.





NSWC Crane's Sea, Air and Land Challenge took place Apr. 15, 2017 at Ivy Tech Community College's main campus in Bloomington. The challenge is a new Science, Technology, Engineering, and Math (STEM) initiative with a focus on engineering and robotics. This initiative fosters interest in DoD technologies by giving high school students hands-on experience and exposure to the Special Operations community.





NSWC Crane co-hosted the 9th annual Electronic Warfare (EW) Capability Gaps and Enabling Technologies Conference with the Association of Old Crows (AOC) from May 9-11, 2017. This event provided an interactive forum for EW professionals from the military, government, industry, and academic fields to discuss issues related to the requirements of EW programs, platforms, and operations.

This three-day event – which featured a number of national leaders – focused on identified fleet gaps and

technologies the armed forces require to ensure freedom of maneuver in the Electromagnetic Spectrum (EMS). Speakers and presenters reviewed the past few years and identified progress made to ensure the success of the warfighter in tomorrow's battlespace.

NSWC Crane hosted its fifth annual Advanced Planning Briefings for Industry (APBI) meeting on May 17, 2017 at WestGate Academy Conferencing and Training Center. The APBI meeting provided a collaborative forum for industry, government, and academic partners to network and provide a view of NSWC Crane's strategic direction, future needs, and requirements.





On Jun. 20, 2017, NSWC Crane hosted a Lesbian, Gay, Bisexual, & Transgender (LGBT) Pride Luncheon themed "Understanding Through Education." This luncheon featured a panel from Indiana University's LGBT Speaker's Bureau.

NSWC Crane kicked off the third year of the Workplace Simulation Project at Bloomfield High School on Jun. 23, 2017. NSWC Crane, Indiana University, and DirectEmployers launched the WSP with a pilot year in the Bloomfield School District during the 2015-16 school year. They just finished up the second year of the program in Bloomfield, and have made several changes since then.





# **HIGHLIGHTS**



Three Naval Surface Warfare Center, Crane Division (NSWC Crane) employees were honored for individual excellence, and 17 others were commended for their participation in successful teams during a ceremony for Naval Sea Systems Command (NAVSEA) Excellence Awards and Commander's Awards for Innovation at the Washington Navy Yard on Jul. 19, 2017.

NSWC Crane's Dr. Ben Conley (right) and Harrison Holmes (left) were recognized as finalists of the CNR Concept Challenge during the Naval Future Force Science and Technology (S&T) Expo on Jul. 20, 2017 at the Walter E. Washington Convention Center.

There were over 200 submissions in the CNR Concept Challenge. Nine finalists were selected, and NSWC Crane was responsible for 43 of the more than 200 submissions, and two of the nine finalists.





The Radar Systems Division at NSWC Crane led an effort that resulted in a projected Navy-wide cost savings of \$27.65 million, while also ensuring critical products were delivered on time.

"Crane has potentially saved the Navy millions of dollars for redesigning systems to accommodate motors that meet the new standards," said Gary Mason, PEO-IWS Principal/Assistant Project Manager for Rotating Radars. "This is the kind of persistence we need everyone to exhibit. Crane should be held up as an example for everyone to follow."





NSWC Crane hosted its third annual Microelectronics Integrity Meeting (MIM) at the Crowne Plaza Downtown Indianapolis on Aug. 1-2, 2017.

Approximately 230 professionals from government, academia, and industry attended the event, which included keynote speeches from Kerry Bernstein of the Defense Advanced Research Projects Agency (DARPA) and Dr. Edward Ammeen, the Marine Engineering Director for Naval Systems Engineering Directorate of the Naval Sea Systems Command (NAVSEA).

The MIM held focused panel discussions on workforce development challenges, supply chain risk management, counterfeit detection, academic cyber challenges, and human factors engineering.

NSWC Crane was recognized for two different Technology Transfer (T2) awards during the Federal Laboratory Consortium (FLC) Midwest and Southeast Regional Meeting on Aug. 20, 2017.

NSWC Crane's partnership with GoX Studio received the 2017 Midwest Regional Excellence in T2 award, and NSWC Crane's partnership with Ohio Aerospace Institute (OAI) and NASA Glenn Research Center received the 2017 Midwest Region Interagency Partnership Award.





NSWC Crane hosted the ANTX 2017 Innovation and Sensor Fusion event Aug. 29 – 31 at NSWC Crane, Camp Atterbury in Edinburgh, Indiana and Muscatatuck Urban Training Center (MUTC) in Butlerville, Indiana.

Government civilians, as well as industry and academic partners, participated in a collaborative urban environment with experimentations and a technical interchange meeting focused on innovation, sensor data fusion, and distributed weapon control.



# **HIGHLIGHTS**



On Sept. 19, 2017, leaders at Indiana University (IU) and NSWC Crane re-signed a Partnership Intermediary Agreement (PIA) that gives NSWC Crane an avenue to move innovative technology through the commercialization pipeline with a goal of increasing the number of licensing and startup deals for both Crane and IU.

IU Vice President for Research, Fred H. Cate, represented the university; and Commanding Officer, Capt. Mark Oesterreich, represented NSWC Crane during an event at Naval Support Activity Crane.

NSWC Crane hosted the 10th Heat Flow Calorimetry Symposium --Energetic Materials (HFCS -EM) on Sept. 28, 2017. Guests were given tours to gain a better understanding of NSWC Crane's technical capabilities.





NSWC Crane hosted its third annual Invention and Technology Showcase on Oct. 5, 2017 to honor inventors who had patents issued during the 2017 fiscal year.

A total of 81 inventors were recognized during the event for excelling in their fields, aiding in support of the nation's warfighters, and for creating and sustaining NSWC Crane's intellectual capital and marketing potential. Dr. Jonathan Dilger and Christopher Brown were named Technology Transfer (T2) and Patent Contributors of the Year and received certificates of excellence.



#### FMA CONGRESSIONAL BREAKFAST REMARKS



# Admiral John Richardson Chief of Naval Operations

"Crane is deeply involved in every single component of naval power around the world today and absolutely moving forward into the future. Crane is a bright star in our constellation of intellectual talent."

"Crane is moving at a really blistering pace. They are connected to our operators downfield, who are doing some of the most dynamic and lethal work that we do. And when there is a problem, "911" connects us to Crane, which has a solution in days, not years. That's rapid innovation."



# Rear Admiral Lorin Selby Chief Engineer and Deputy Commander for Ship Design, Integration and Naval Engineering, Naval Sea Systems Command (NAVSEA)

"There is not a ship in the fleet, not an aircraft in the Navy or Air Force, that does not have something from Crane either touching it, or Crane was somehow involved in manufacturing or testing it."



# Kristin French Performing the Duties of Assistant Secretary of Defense for Logistics and Materiel Readiness

"There are a lot of areas where Crane has supported the warfighter, gained partnership, and really looked for reform. And I'm looking forward to continuing to partner with them and make sure the mission at Crane continues to sustain operations and support the warfighter overseas."



# NAVSEA CAMPAIGN PLAN

#### **Design for Talented People**

NSWC Crane experienced a 230% increase in external award nominations in FY17 over FY16. In addition, Crane saw over a 300% increase in external awards won in FY17 over FY16. This improvement was attributed to the following three factors: 1) increased focus from leadership, with monthly metrics being monitored; 2) having an individual with bandwidth to focus entirely on the program and apply project management practices to the program; 3) new process of coordinating awards through Department HR Specialists allowed for easy communications flow both in/out and up/down.





NSWC Crane's approach to a teaching organization has reinforced cultural imperatives through locally-developed, corporately-sponsored academic and other credentialed avenues. Over three hundred employees, or 10% of the workforce, have completed the 'Leading from Within' course as part of NSWC Crane's efforts to develop the leaders of tomorrow, while providing opportunity to embrace extraordinary career opportunities.

NSWC Crane developed and implemented the 'Technician to Engineer' program, in collaboration with University of Southern Indiana, which offers professional growth and development for technicians who have a passion to earn an engineering degree. NSWC Crane has leaned forward and carved out 64% of training investments for technical purposes in an effort to train and develop the "Force behind the Fleet."





Crane saw a 150% increase in the number of female entry-level scientists and engineers in FY17 over FY16. Crane's Corporate Hiring and Recruiting Team (CHART) has focused recruiting efforts at colleges and universities with a diverse student body and has also placed more value on hiring females in these positions. In addition, CHART has received a Human Capital Management Government (HCMG) Award for its innovative approach to hiring.

# **EXPANDING THE ADVANTAGE**



#### **Design for HVL**

NSWC Crane assembled a cross-functional tiger team to conduct a rapid internal assessment for the overall value stream associated with IT/IA/IM solutions within the organization. Top-level recommendations from the team are framed around increased communication, collaboration, and customer service. A detailed plan of action was built and is being worked to address the issues and improve customer service across the organization.





The NSWC Crane ANTX 2017 Innovation and Sensor Fusion event was held at NSWC Crane, Camp Atterbury in Edinburgh, Indiana and Muscatatuck Urban Training Center in Butlerville, Indiana on Aug. 29 – 31. The ANTX provides a low-risk environment in which scientists and engineers may evaluate their technological innovations at the research and development level before their technologies become militarized and integrated at the operational level.

NSWC Crane internally defined, designed and developed technical career paths which accelerate the learning and experience of 177 Engineers and Scientists with 84 completing level I certification. The program is a technical certification approach modeled after the personnel qualification standards for entry-level engineers and scientists. The certification is a commitment from the organization to invest in employees to offer career growth and development opportunities.





NSWC Crane has developed dedicated lab space for rapid innovation and experimentation, most notably the Rapid Innovation Prototyping Laboratory, which consists of 8,636 square feet of open space architecture. Future investments include a dedicated innovative and collaborative office space for S&T to be used to swarm emerging technical challenges that threaten on-time delivery of critical operational mission capabilities to the fleet.



# NAVSEA CAMPAIGN PLAN

#### Cybersecurity

NSWC Crane's Mr. Brett Hamilton serves as the Navy's Distinguished Scientist for Trusted Microelectronics and was promoted to the rank of Senior Scientific Technical Manager (SSTM). Mr. Hamilton leads the execution of the Trusted & Assured Microelectronics Program for OSD. Mr. Hamilton works with DoD organizations, the intelligence community, and suppliers in acquiring and analyzing newly discovered forms of counterfeiting to identify emerging threats, such as a trend in which exact copies of electronic parts not supplied by the original manufacturer are reverse-engineered from stolen intellectual property. The collective capability at NSWC Crane is unique in the DoD and fulfills a crucial role in ensuring our customers' systems are reliable.





NSWC Crane's Dr. Robert Templeman, Chief Engineer for Cybersecurity in the Global Deterrence and Defense Department, is responsible for ensuring that we can meet our customers' needs as they pertain to cyber. Dr. Templeman spends a significant amount of his time managing a research portfolio with some really outstanding projects and working alongside great people in government and academia. Dr. Templeman also serves as an advisor to the Indiana Executive Council on Cybersecurity which is responsible for developing a comprehensive cybersecurity strategy for the state of Indiana.

NSWC Crane responded to cyber threats/attacks directed at the microelectronics supply chain by creating the SCREAM Lab (Supply Chain Risk Evaluation, Assessment, and Mitigation). This lab leverages our current Crane Shipboard Technology lab and builds an abstracted shipboard control system from existing hardware assets.



# **EXPANDING THE ADVANTAGE**



#### **Culture of Affordability**

NSWC Crane received three FY16 DoD Value Engineering Awards for realizing cost benefits exceeding \$46.7 million for the Navy and DoD. The Wide Field of View Night Vision Goggle Development Team invented an innovative, biologically-inspired optical design resulting in a system-wide physical size, weight, and power improvement of nearly 40 percent.





The AN/SLQ-32(V) Electronic Warfare (EW) Suite Performance Based Logistics (PBL) Team at NSWC Crane implemented an organic arrangement between NAVSUP WSS and DLA Supply Centers to perform Lean Projects to salvage and reutilize material and aggressively manage inventory costs. The use of salvaged material to offset warfighter requirements resulted in a total cost savings of \$31.2 million and \$1.3 million in annual cost avoidance. The team was announced as a Component-Level winner of the 2016 Secretary of Defense PBL Award.

#### On-Time Delivery of Ships & Subs

NSWC Crane has significantly advanced the US Navy's Maritime Electronic Warfare capability through the initial three blocks of the Surface Electronic Warfare Improvement Program otherwise known as SEWIP. SEWIP is the evolutionary development block upgrade program for the AN/SLQ-32(V)6 EW system offering incremental enhancements across multiple ACAT-II programs. NSWC Crane launched the fleet modernization and introduction with the USS Bainbridge (DDG 96) as the test ship, and has performed a total of 9 additional fleet installations. NSWC Crane is an integral player in the design, modernization, and sustainment of all Surface EW and decoy launching systems (DLS) completing over 158 installations and 1066 technical assist visits.





NSWC Crane leadership led to three significant accomplishments within the microelectronics supply chain security. Crane's counterfeit parts experts published the Navy Counterfeit Materiel Guidebook for Navy PMs, the assignment of Crane as the NAVSEA Electronics Technical Warrant Holder and Contracting Officers Representative for DARPA supply chain hardware integrity for electronics defense (SHIELD) program.

# NSW C Crane Corporate Communications

300 Highway 361 Crane, IN 47522

CRAN\_NSWC\_PAO@Navy.mil

