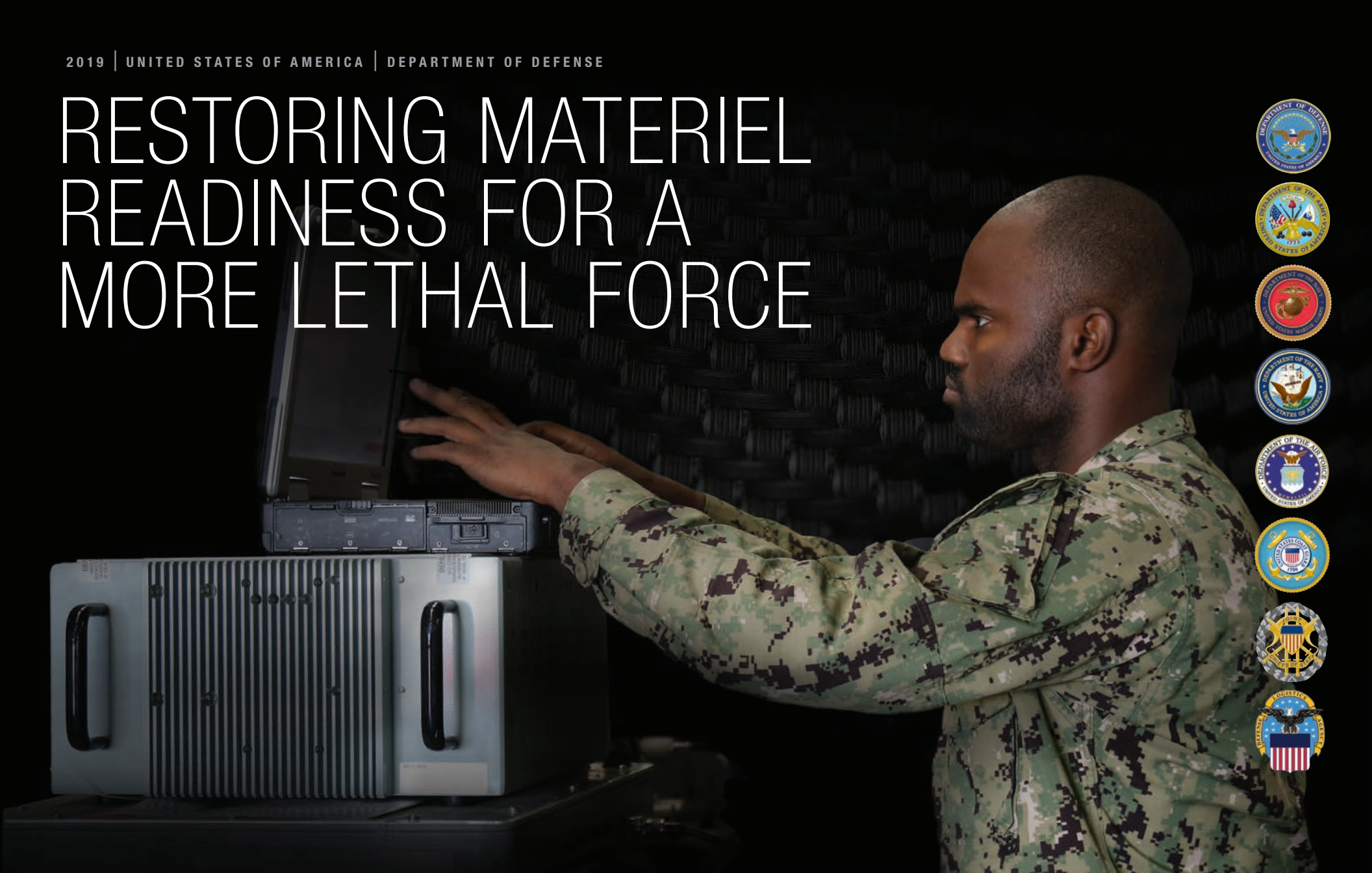
# RESTORING MATERIEL READINESS FOR A MORE LETHAL FORCE



# CHALLENGE THE STATUS QUO . . .

The mission of DoD maintenance is to generate and maintain materiel readiness to support National Security objectives. DoD maintenance repairs, overhauls, and modifies weapon systems, platforms, and equipment, to meet operational, contingency, and training requirements.

This publication highlights our readiness challenges and approaches, identifies a strategy and vision, and issues a call for action. It offers a snapshot into DoD's vast maintenance enterprise including the cost and scope of sustainment, the people, organizations, and locations performing maintenance.

GROWING A RELEVANT WORKFORCE

ADDRESSING INCREASING WEAPON SYSTEM COMPLEXITY

LEVERAGING SWIFT TECHNOLOGICAL INNOVATIONS

Achieving greater performance and affordability at maximum speed is in our DNA as sustainers. We are the enablers, the fixers. We understand what it takes to produce higher levels of materiel readiness — improving the availability of our weapon systems, platforms, and equipment.

The challenge of obtaining a more lethal, resilient, and rapidly innovating Joint Force is before us. There is no one-size-fits-all approach — no silver bullet. The solution lies in the dedicated and focused efforts of our maintenance and logistics professionals in the field, on the deck plates, on the line, in manufacturing, and in the back shops, each and every day, making incremental improvements, component by component, subsystem by subsystem, with a focus on long-term reliability, reducing mean-time between failures, and reducing turnaround time. Achieving targeted levels of availability is occurring as we systematically remove bureaucratic hurdles, stabilize sustainment resources, measure progress, and implement accountability. Although we have made considerable progress over the past year, we have a considerable way to go.

Innovation lives here. As technologies have matured and weapon system complexity has grown exponentially, we have kept pace with the latest capabilities and are implementing both commercial best practices and new state-of-the art capabilities. We are leveraging new tools, such as Artificial Intelligence, to provide us new insights from treasure troves of historical sustainment data.

We know how to compete successfully in this space; we've been doing it for decades. Our strength is in our diverse and talented workforce. Our advantage is the balanced industrial based capabilities both private and public; software and hardware alike.

The tide is turning — we are recovering materiel readiness daily. We must harness the momentum we gained over the past year to accelerate our pace of change. There is no time to wait for recapitalization efforts to deliver new systems. Conflict is upon us now – today - and we will produce ready and available fielded systems to compete, deter, and win.

Kenneth D. Watson
Deputy Assistant Secretary of Defense Materiel Readiness

# ADDRESSING KEY CHALLENGES AND SETTING THE CONDITIONS FOR READINESS ACROSS THE DOD ENTERPRISE

### Stimulate innovation and agility in maintenance response

- Requirement is scalable maintenance and sustainment capabilities ready—where and when needed
- Foster improved integration into contingency planning and execution
- Uphold enterprise approach to sustainment

### Preserve and evolve industrial base repair sources

- Ensure existence and balance across all critical capabilities—public and private
- Identify and secure required surge capacity
- Improve awareness of 2nd and 3rd Tier provider capabilities and last source provider impacts—including access to intellectual property

### Drive improved weapon system maintenance planning

- Emphasize sustainment planning during the acquisition process
- Eliminate single points of failure in maintenance planning approaches
- Utilize informed and reliant maintenance planning approaches

### Establish common and meaningful metrics to support decision-making

- Promote transparency and access to timely and authoritative sustainment data
- Develop ability to identify and resolve availability and cost drivers
- Nurture “Big Data” approach to improve readiness sustainment effectiveness and efficiency

### Confront uncertainties of budgetary unrest

- Anticipate sustainment budget realities
- Attack the compounding impact to carryover and materiel readiness
- Advocate timely adjustments to address materiel readiness needs

### Ensure relevance of our sustainment workforce

- Recognize the shift from a purely hardware-centric trade skill base to a more software engineering requirement.
- Ensure workforce responsiveness in meeting material readiness requirements
- Recruit, train, grow, and retain skilled technicians and artisan

### Visibility and knowledge of software sustainment capabilities

- Careful management of software operational baselines
- Enable workforce capability, knowledge, and skill set that are critical to performing software sustainment functions
- Recognize and take deliberate planning for software facilities and resources

## READINESS IS EVERYBODY’S BUSINESS

Maintainers have stepped up to meet the materiel readiness challenge of over 17 years of continuous combat. The readiness we have generated, however, has been predominantly focused on “today’s” requirements — fiscal uncertainties and prolonged engagements have placed tremendous stress on our Force, our installations, our equipment, and our long-term readiness. We must recommit ourselves to instilling balance, innovation, and proficiency across our maintenance industrial base — both public and private. Careful life cycle planning supported by meaningful metrics consistent across the Department must be in place to drive effectiveness and efficiency in weapon system sustainment. Our maintenance workforce, and the tools and processes they must master, will be our greatest asset moving forward.

## WARFIGHTER FIRST – UNWAVERING WARFIGHTER FOCUS TO DELIVER READY WEAPON SYSTEMS, EQUIPMENT, AND PLATFORMS

Maintenance generates and sustains materiel readiness– ensuring weapon systems, equipment, and platforms are available to support training and exercises, and ultimately, to deploy in support of warfighter requirements to respond to any humanitarian or contingency situation.

Maintenance is integral to sustaining the Joint Force, by restoring combat capability to keep our deployed forces in the fight. Evolving threats to our national security demand our sustainment enterprise be ever-vigilant, agile, and equally ready to adapt and evolve to warfighter requirements.

In order to be successful, DoD maintenance establishes, sustains and resources required capabilities, in the public and private sectors, in order to meet mobility and contingency requirements. Maintenance is organized and equipped to respond rapidly worldwide, based on efficient processes and fact-based warfighter focused outcomes.

## PEOPLE ALWAYS – TRAINED AND READY MAINTENANCE WORKFORCE

People are key to performing maintenance. The DoD sustainment workforce must respond successfully to materiel readiness requirements, with the ability to meet changing demands.

Workforce development is a continuous and enduring process and is fundamental to maintenance execution. Each maintenance activity strives to develop a highly-skilled workforce that operates in a safe and healthy environment. A pipeline of skilled workers is a constant goal and organizations strive to attract and retain critical technical skills to meet warfighter demands.

## TECHNICALLY ADVANCED – MODERN, SAFE AND PROPERLY-SIZED INDUSTRIAL FACILITIES AND EQUIPMENT

DoD sustainment leverages a deliberate balance of public and private maintenance capabilities and capacity to overhaul, repair, and modify the Department's wide array of fielded weapon systems, platforms, and equipment. As these systems become increasingly complex, modern and technically advanced maintenance and engineering facilities are required to support these often software-intensive technologies. Innovative maintenance capabilities, including facilities and equipment, must keep pace with and anticipate the broad range of rapidly evolving and emerging technology advances.

While retaining the capability to sustain the current legacy weapon workloads, the infrastructure must be shaped for the future and sized to accommodate both steady state materiel readiness outcomes, and contingency surge requirements. Our policies and strategies are designed to ensure DoD maintenance facilities remain viable capabilities and are able to swiftly mitigate mission risk due to process and product obsolescence. Active and effective programs for development of DoD maintenance facilities and equipment are essential to the nation's industrial health.

## PROACTIVE LIFE CYCLE SUSTAINMENT PLANNING – IMPROVE RELIABILITY, MAINTAINABILITY, AND SUPPORTABILITY FOR THE FUTURE FIGHT

DoD maintenance sustains and restores weapon systems and materiel to their inherent performance, safety and reliability levels. In order for this to be proactively planned and resourced, sustainment and maintenance considerations must be addressed at program inception, emphasized during design, and resourced simultaneously with production. History proves that sustainment and maintenance capabilities are critical to our warfighting capability. This fact cannot be ignored nor traded away. We must deliberately work with our acquisition brethren to identify those sustainment and maintenance capabilities, ensure they are adequately addressed in weapon system designs, and effectively and efficiently planned and resourced.

Maintenance planning is occurring earlier in the weapon system life cycle planning processes. We must ensue metrics and tools for effective maintenance management and oversight, and standard communication practices that ensure reliability, maintainability, and supportability considerations are increasingly incorporated in sustainment strategies. DoD must do more to ensure maintenance capabilities are fervently preserved and that they evolve as rapidly as weapon system capabilities do so that we can meet the imminent demands of our National Defense Strategy.

## RESPONSIVE AND AGILE – FLEXIBLE MAINTENANCE OPERATIONS AND MANAGEMENT WITH INNOVATIVE MAINTENANCE PROCESSES AND BUSINESS PRACTICES

DoD maintenance operations and management are becoming increasingly responsive, agile, and outcome-focused to meet challenging materiel readiness requirements and cost management targets. We are capturing our enterprise maintenance data related to inventory, availability, cost and day-to-day transactions. This data-driven approach will inform our decision making, while enabling more transparent and predictive analytical capabilities.

It is imperative that we concentrate our efforts as an enterprise on the most critical priorities and identify and exploit materiel availability improvement opportunities. Best practices are being shared throughout the DoD sustainment community to continually incorporate process improvement and innovation into every maintenance and business operation. We must leverage in-house scale and manage proliferation in important and growing workload areas such as additive manufacturing, artificial intelligence, digital applications, and software. As weapon systems become more complex, DoD maintainers must continue to be more innovative to increase responsiveness and incrementally reduce cycle times and life-cycle costs.

# SOFTWARE SUSTAINMENT CRITICAL TO DELIVERING MODERN WARFIGHTING CAPABILITY

## SOFTWARE SUSTAINMENT – SETTING THE CONDITIONS FOR SUCCESS: SUSTAINING SOFTWARE CRITICAL SYSTEMS THROUGHOUT THEIR LIFE-CYCLE

Prioritizing the transition to software sustainment during requirements and engineering development is critical to timely, effective, and affordable sustainment, regardless of how software engineering organizations are structured and resourced. Software sustainment organizations must be engaged and imbedded at the earliest design stages to ensure we can keep pace with new capabilities as systems become operational.

10 USC 2464 establishes a key imperative for DoD to establish core Government Owned Government Operated capabilities as a ready and controlled source of technical competence and resources for national security. The time is now to shift from our traditional, hardware-centric focus and identify what core means for software intensive systems and associated software engineering capabilities.

In today's software intensive environment, a "Go to War" analysis of what core means as it relates to software requires more strategic thinking than just focusing on individual weapon systems or platforms. We cannot risk mission success by underestimating the scope and magnitude of what should be considered core for software intensive systems.

Lastly, access to software source code, emphasizing an early focus on designing for sustainment, and investment into establishing and modernizing System Integration Laboratories are just a few of the challenges faced by the DoD software enterprise. These are among the many issues in preparing for the sustainment of software critical systems.



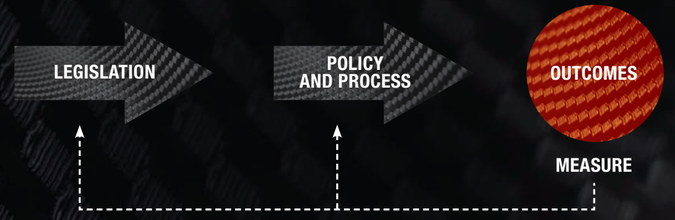
## SOFTWARE ENGINEERING – CRITICAL TO DELIVERING MODERN WARFIGHTING CAPABILITY

Software is a foundational building material for the engineering of systems, enabling almost 100 percent of the integrated functionality of cyber-physical systems, especially mission-critical and safety-critical software reliant systems. More simply, these systems cannot function without software. There is no plateau in sight for the advancement of software technology and its use by the DoD in new systems, as well as to enhance the capabilities of fielded systems and extend their operational value far beyond their original designed service life. We must ensure we can accommodate this growth.

There are now over 30 DoD organic software engineering organizations engaged in software sustainment with extensive capabilities, staffed by over 10,000 government engineers and other technical staff. These organic software sustainment organizations successfully respond to a range of customer needs and deliver critical software updates and enhancements, often under the intense schedule pressure of wartime operations, to deliver critical warfighter capability. Each service's government-owned, government-operated Software Engineering Centers' capabilities provide significant value to enhancing warfighter capability across a spectrum of weapon system domains.

# LEGISLATION, POLICY, AND END-TO-END PROCESSES –

## OUTCOMES THAT ARE SETTING THE GLOBE FOR MATERIEL READINESS




– **10 USC 2460:** Depot-level Maintenance Definition
– **10 USC 2464:** Core Logistics Capabilities
– **10 USC 2466:** 50/50 Rule
– **10 USC 2474:** CITEs and PPPs
– **10 USC 2469:** Requirement to compete previous public sector workload
– **10 USC 2476:** Minimum Capital Investment
– **10 USC 2366A/B:** MDAP Milestone A/B Sustainment Requirements

– Core Capability Determination
– 50/50 Reporting
– Readiness-based Materiel Condition Reporting for Mission Essential Systems and Equipment
– Sustainment Industrial Base Assessments
– Depot Source of Repair Decisions
– Service interface to set conditions for enterprise readiness outcomes
– Strategic sustainment technology insertion and advocacy
– Weapon system cost and availability analyses
– Corrosion Control

– Balanced and optimized defense industrial base
– Materiel contribution to lethality of the Force
– Early integration of sustainment equities in acquisition/ systems evolution
– Moving the readiness "needle" for the Department's key weapon systems
– Solving systemic sustainment issues through "Big Data" access and analysis



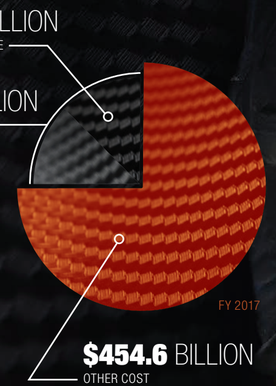
## ENTERPRISE CONDITIONS – THAT DRIVE MATERIEL READINESS

Title 10 of the United States Code outlines the role of the Armed Forces. It provides the legal basis for the roles, missions, and organization of each of the Military Services as well as United States Department of Defense.

Grounded in Title 10, DoD uses policy and processes to set the enterprise conditions that are aligned, mission focused, and supportive of our national security and military priorities. These policies and processes serve to support enterprise conditions that instill a culture of continuous improvement and performance excellence. Chief among these enterprise conditions are:

– Constructive integration at key maintenance levels and process points – this fosters a culture of excellence in which each contributor gains awareness of their customer and their customer's customer.
– Maintenance processes that yield accurate and transparent data – leveraged for improvements and improved decision making – Service organizations leverage this to address special cause deviations and higher level organizations conduct analyses to identify and solve systemic issues.
– A culture of collaboration – one that shares best practices as well as addressing common pitfalls to strengthen the capabilities of all maintenance providers.
– Processes and leaders that foster a culture of assessment and feedback – in which mistakes can be made and then corrected is encouraged in the quest to improve operations and customer satisfaction.
– A work environment in which people are treated as the organization's most important asset. Proper investments are made in order to meet the challenges of today and create the maintenance leadership of tomorrow.
– A balanced and strong industrial base that provides effective support in peacetime and a reliable source of surge capabilities if required by the nation.

# SUSTAINMENT SPENDING




# SUPPORT COSTS

FY 17 DoD total maintenance expenditures with the primary resource drivers being vehicles, common equipment, ships and submarines, and aircraft. By far, the 14,421 aircraft represented the greatest expenditure at $33.7 billion.

The Department recently launched several initiatives to attack these costs. The central nervous system of these initiatives consists of a common set of enterprise metrics, including one new metric: cost per day of availability or C/DA. C/DA is derived from the DoD Maintenance and Availability Data Warehouse (MADW), a data repository with over 1.5 billion transactional maintenance tasks and supply records for all weapon systems dating back to FY2006. Through the application of big data analytics and machine learning, MADW allows the Department to understand cost and availability drivers for each weapon system, common groups of systems and for the Department as a whole. This valuable tool is creating visibility of potential opportunities for reducing sustainment costs and improving availability where previous visibility was not evident.

$7.6 BILLION
**371,844 VEHICLES**
32,844 COMBAT — $2.3 BILLION
339,000 TATICAL — $4.0 BILLION
OTHER GROUND — $1.3 BILLION

$16.9 BILLION
**237 SHIPS AND SUBMARINES**
163 SURFACE — $13.6 BILLION
74 SUBMARINE — $3.3 BILLION

$33.7 BILLION
**14,421 AIRCRAFT**
8,328 FIXED WING — $26.1 BILLION
6,093 ROTARTY WING — $7.6 BILLION

$9.9 BILLION
**COMMON EQUIPMENT**
VEHICLES — $1.4 BILLION
SHIPS AND SUBMARINES — $1.0 BILLION
AIRCRAFT — $7.5 BILLION

# MAINTAINERS

DoD materiel maintenance is performed at different levels, ranging in complexity from daily system inspection to rapid removal and replacement of components to the complete overhaul or rebuild of weapon systems. Depot-level maintenance entails overhauling, upgrading, or rebuilding of parts, assemblies, or subassemblies, and the testing and reclamation of weapons system and equipment. The majority of depot maintenance workload is associated with ships and aircraft. Across all systems, there are critical software sustainment personnel continuously working to maintain an operational baseline in the face of technological advancements and an ever changing threat environment. Field-level maintenance includes both on and off equipment maintenance activities not performed at the depot-level.

**FIELD**

**DEPOT**

**ORGANIZATIONAL**

**INTERMEDIATE**

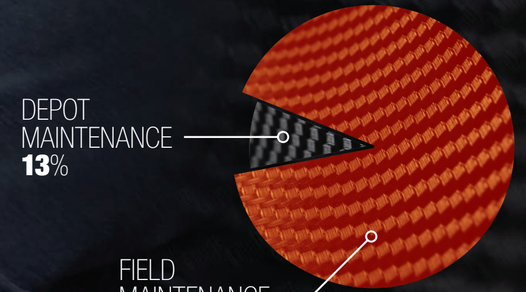
VOLUME OF MAINTENANCE

**MORE FREQUENT** TASKS THAT REQUIRE LESS FACILITIZATION AND SKILLS

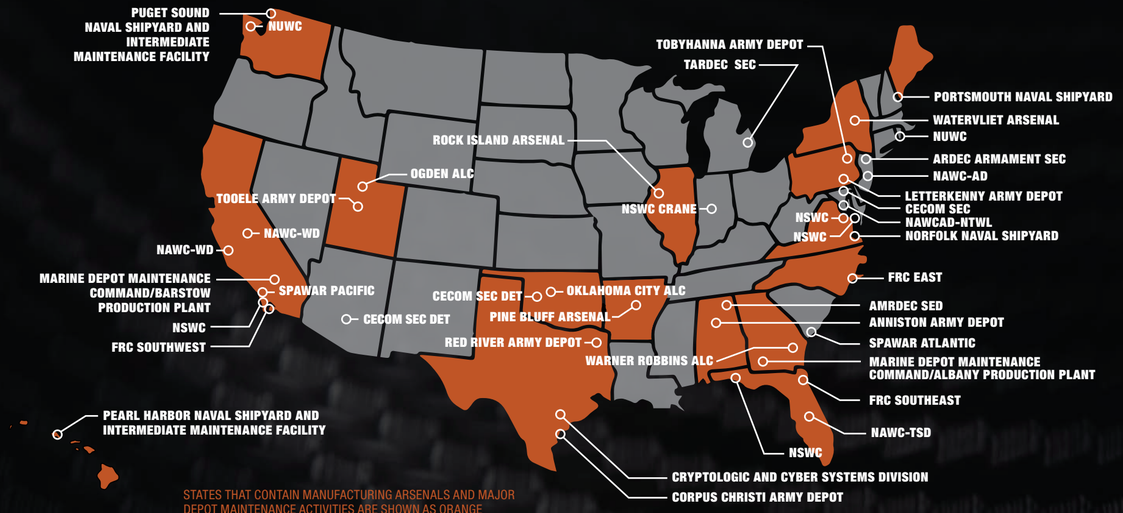
**LESS FREQUENT** TASKS THAT REQUIRE MORE FACILITIZATION AND SKILLS

COMPLEXITY OF MAINTENANCE

TOTAL DOD MAINTAINERS
**606,000**



# ORGANIC DOD ARSENALS, DEPOT-LEVEL ACTIVITIES, AND SOFTWARE ENGINEERING ACTIVITIES




STATES THAT CONTAIN MANUFACTURING ARSENALS AND MAJOR DEPOT MAINTENANCE ACTIVITIES ARE SHOWN AS ORANGE

## Software Engineering Activities

### Army

- Armament Research, Development and Engineering Center
  Armament Software Engineering Center, Picatinny Arsenal, NJ
- Aviation and Missile Research, Development and Engineering Center *
  Software Engineering Directorate, Redstone Arsenal, AL
- Army Communications-Electronics Command *
  Software Engineering Center, Aberdeen, MD
  - Detachment, Ft. Sill, OK
  - Detachment, Ft. Huachuca, AZ
- Tank Automotive Research, Development and Engineering Center
  Software Engineering Center, Detroit Arsenal, MI

### Air Force

- Ogden Air Logistics Complex, Hill AFB, UT *
- Oklahoma City Air Logistics Complex, Tinker AFB, OK *
- Warner Robins Air Logistics Complex, Robbins AFB, GA *

### Navy

- Naval Air Warfare Center Weapons Division, China Lake, CA *
- Naval Air Warfare Center Weapons Division, Point Mugu, CA *
- Naval Air Warfare Center Aircraft Division - Naval Test Wing Atlantic, Patuxent River, MD *
- Naval Air Warfare Center Aircraft Division, Lakehurst, NJ *
- Naval Air Warfare Center Aircraft Division - Training Systems Division, Orlando, FL *
- Naval Surface Warfare Center, Crane, IN *
- Naval Surface Warfare Center, Corona, CA
- Naval Surface Warfare Center, Dahlgren, VA
- Naval Surface Warfare Center, Indian Head, IN *
- Naval Surface Warfare Center, Panama City, FL
- Naval Undersea Warfare Center, Newport, RI
- Naval Undersea Warfare Center, Keyport, WA
- Space and Naval Warfare Systems Command Systems Center Pacific, San Diego, CA *
- Space and Naval Warfare Systems Command Systems Center Atlantic, Charleston, SC *

## Organic Manufacturing Arsenals and Major Depot Maintenance Facilities

### Army

- Anniston Army Depot, Anniston, AL *
- Corpus Christi Army Depot, Corpus Christi, TX *
- Letterkenny Army Depot, Chambersburg, PA *
- Red River Army Depot, Texarkana, TX *
- Tobyhanna Army Depot, Tobyhanna, PA *
- Rock Island Arsenal, Joint Manufacturing and Technology Center, Rock Island, IL *
- Watervliet Arsenal, Watervliet, NY *
- Pine Bluff Arsenal, Pine Bluff, AR *

### Marine Corps

- Marine Depot Maintenance Command, Albany Production Plant, MCLB Albany, GA *
- Marine Depot Maintenance Command, Barstow Production Plant, MCLB Barstow, CA *

### Air Force

- Ogden Air Logistics Complex, Hill AFB, UT *
- Oklahoma City Air Logistics Complex, Tinker AFB, OK *
- Warner Robins Air Logistics Complex, Robbins AFB, GA *

### Navy

- Fleet Readiness Center East, MCAS Cherry Point, NC *
- Fleet Readiness Center Southeast, NAS Jacksonville, FL *
- Fleet Readiness Center Southwest, NAS North Island, CA *
- Portsmouth Naval Shipyard, Portsmouth, ME *
- Norfolk Naval Shipyard, Portsmouth, VA *
- Puget Sound Naval Shipyard and Intermediate Maintenance Facility, Bremerton, WA *
- Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility, Pearl Harbor, HI *

* **Centers of Industrial and Technical Excellence**

Serve as recognized leaders in their core competencies throughout the department of defense and in the national technology and industrial base.

***Note**: Sierra Army Depot, Herlong, CA is a Center of Industrial and Technical Excellence but is not a covered depot according to 10 USC §2476*

**Corpus Christi Army Depot**
**2,945** CIVILIANS
- Helicopters
- Aviation Engines
- Transmissions
- Hydraulic Systems

**Anniston Army Depot**
**2,643** CIVILIANS
- Combat Vehicles
- Artillery
- Small Arms

**Red River Army Depot**
**2,395** CIVILIANS
- Tactical Wheeled Vehicles
- Multiple Launch Rocket System Chassis

**Ogden Air Logistics Complex**
**7,495** CIVILIANS
- Fighter and Attack Aircraft
- Landing Gear
- Software

**Air Warner Robins Logistics Complex**
**6,483** CIVILIANS
- Cargo Aircraft
- Aviation Electronics
- Software

**Letterkenny Army Depot**
**1,370** CIVILIANS
- Missile Ground Support Equipment
- Power Generation Equipment

**Tobyhanna Army Depot**
**2,499** CIVILIANS
- C4ISR Electronics

**Oklahoma City Air Logistics Complex**
**9,102** CIVILIANS
- Bombers
- Tankers
- Engines
- Software

**Marine Depot Maintenance Command**
**1,376** CIVILIANS
- Marine Corps Ground Vehicles
- Small Arms

**Fleet Readiness Center East**
**3,650** CIVILIANS
- Helicopters
- Sea Based and Maritime Aircraft

**Fleet Readiness Center Southeast**
**3,180** CIVILIANS
- Naval Aviation Fixed Wing Aircraft
- Helicopters
- Engines
- Components

**Fleet Readiness Center Southwest**
**2,847** CIVILIANS
- Naval Aviation Fixed Wing Aircraft
- Helicopters
- Engines
- Components

**Norfolk Naval Shipyard**
**10,535** CIVILIANS
- Nuclear Aircraft Carriers
- Submarines
- Surface Combatants

**Pearl Harbor Naval Shipyard and Intermediate Maintenance Activity**
**5,081** CIVILIANS
- Nuclear Submarines
- Surface Combatants

**Portsmouth Naval Shipyard**
**5,476** CIVILIANS
- Nuclear Submarines

**Puget Sound Naval Shipyard and Intermediate Maintenance Facility**
**13,548** CIVILIANS
- Nuclear Aircraft Carriers
- Submarines
- Surface Combatants

**Pine Bluff Arsenal**
**655** CIVILIANS
- Special Ammunitions
- Smoke
- CBRN Defense Capabilities

**Rock Island Arsenal Joint Manufacturing and Technology Center**
**1,089** CIVILIANS
- Ordinance
- Foundry
- Army Equipment Components

**Watervliet Arsenal**
**551** CIVILIANS
- Artillery and Gun Tubes for Cannons
- Mortars
- Tanks

FY2017

## ORGANIC DEPOT PERSONNEL NUMBERS BY SERVICE

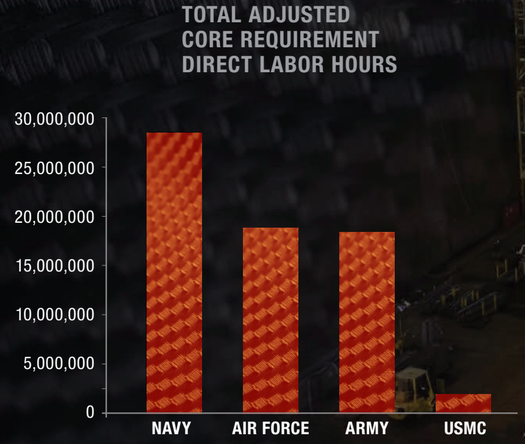
# CORE CAPABILITIES – A READY AND CONTROLLED SOURCE

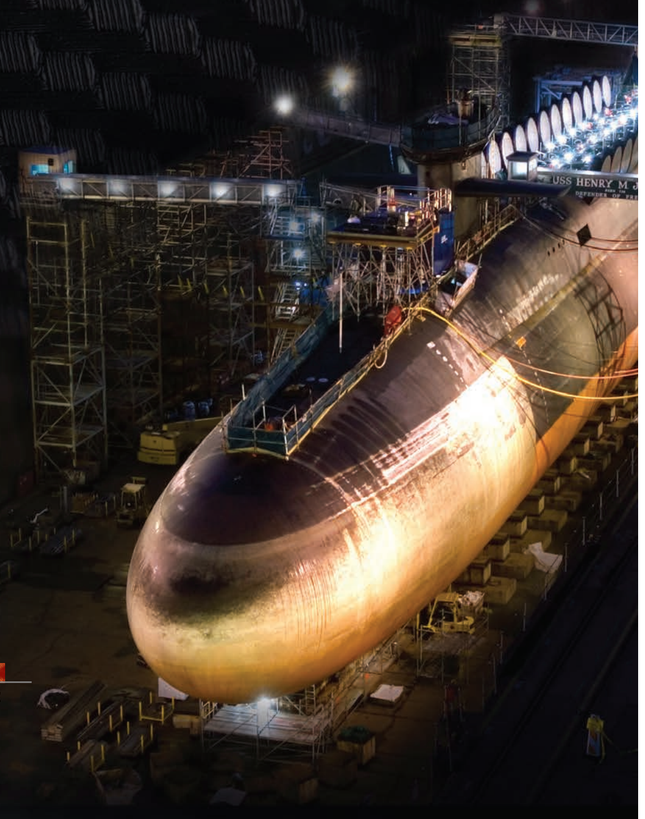
Sustainment is a critical enabler of a lethal military force. As such, the military command and control apparatus must closely align with and rapidly employ and direct both strategic and tactical sustainment functions. Recognizing this, the Congress adopted section 2464 of Title 10 USC, Core Logistics Capabilities, which states in part, it is essential for the national defense that the Department of Defense maintain a core logistics capability that is Government-owned and Government-operated (including Government personnel and Government-owned and Government-operated equipment and facilities) to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements. The core concept is foundational to the organic portion of the defense industrial base and is primarily focused on our maintenance depots. In short, our organic depot maintenance capability, to include the workforce, is a national asset and our nation's insurance policy as we deal with new global security realities and peer competitors







## IF NOT NOW WHEN...

We are a Department and nation at war. After some 16 years of conflict, the Secretary of Defense has challenged us to prevail in current contingencies as well as succeed in an increasingly complex and unstable global security situation.

The National Defense Strategy requires us to achieve a more lethal, resilient, and rapidly innovating Joint Force, combined with our with our allies and partners, that will ensure favorable balances of power safeguarding the free and open international order. These mandates must happen while we face a more lethal and disruptive battlefield, the rapid technological advancements and the changing character of war, and a decreasing capabilities overmatch to which our Nation has grown accustom.

This will not be easy. To meet the Secretary's challenge, each and every one of us must be committed to becoming more innovative, adaptive, and agile in our contributions to maintenance and sustainment excellence.

I invite each of you to use this document as a baseline reference, a kind of clarion call, towards improved performance. From the foxhole, flight line, and deck plate to the depot floor — we all must see our actions increasingly in the context of the DoD maintenance enterprise. This means increased collaboration across organizations, focused on making improvements in how we posture our maintenance and sustainment capabilities for maximum effectiveness, implement productivity improvements, and reduced lifecycle sustainment costs.

I am confident that DoD maintenance will continue to contribute directly to the competitive advantage of our Joint Force. In front of us, we have tremendous opportunities, and the consequences of complacency are significant and unacceptable.

## THE TIME IS NOW!


DEPARTMENT OF DEFENSE
UNITED STATES OF AMERICA