Digital Manufacturing Exchange:

Securely Scaling DoW Manufacturing & Sustainment

Disclaimer: The contents developed and presented may contain specific reference to actual events – this presentation is not intended to imply endorsement or recommendation by any U.S. Government agency.

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Recognition

Mr Steve Morani, PTDO ASD(S) (Ret)
Ms Leigh Method, PASD(S)
Mr Patrick Kelleher, DASD(MR)
Ms Lisa Smith, DASD(PS) (Ret)

"PS Vision: Provide the DoD policy, processes, and guidance to ensure effective and affordable life cycle product support solutions for our weapons systems, subsystems and components."

Military Services

- 3D TDP, 3D SAR
- Additive Manufacturing
- EN Assistance (-339, -202, -107)
- Requirements Traceability

Warfighter Readiness Support

- Contested Logistics / Disconnected Ops
- Digital Manufacturing Exchange
- OSD Advanced Mfg at the Edge
- Regional Sustainment Framework

Corporate Overview

Inc. 5000 — America's Fastest-Growing Private Companies

Certified SBA WOSB Woman Owned Small Business

CAGE: 8CGW6 **UEI:** P415RPQKMPU8 **EIN:** 85-0603525

Defense Counterintelligence and Security Agency

_ Certified Top Secret Facility Clearance

SBA U.S. Small Business Administration

The All Small Mentor-Protégé Program

SBIR · STTR America's Seed Fund

ASME American Society of Mechanical Engineers

ASNT The American Society for Nondestructive Testing

ASQ American Society for Quality

AIAG Automotive Industry Action Group

International Aerospace IAWA Womens Association

POMS Production and Operations Management Society

SME Society of Manufacturing Engineers

DoD Contract Vehicles

CDAO JAIC

DEVCOM Army Research Laboratory

Department of Defense

GSA MAS

Missile Defense Agency — Department of Defense

NCMS National Center for Manufacturing Sciences

SeaPort NxG

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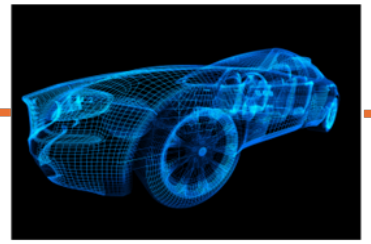
Purpose Built to Deliver Engineering Service Excellence for US DoW

Background



U.S. AIR FORCE

Ford

LOGISTICS DEFENSE AGENCY

ASSISTANT SECRETARY OF DEFENSE SUSTAINMENT

43 * 10^18
43 Quintillion
State Conditions

Model-based Engineering Requirements Traceability

Requirements Repository

magicdraw

SysML

Iterative EN Reviews

DFMEA → Iterative EN Reviews → **PFMEA** → Iterative EN Reviews → **MFMEA**

Engineering (EN) Artifacts:

- **DFMEA:** Design Record, Material Performance, MS&A Reports
- **PFMEA:** Control Plan, Dimensional Results, Fixturing / Tooling Cert
- **MFMEA:** IOT&E Reports, Technical Orders, Technician Training Aids

Design Failure Modes Effects Analysis (DFMEA), Process Failure Modes Effects Analysis (PFMEA), Maintenance Failure Modes Effects Analysis (MFMEA)

As Designed → As Manufactured → As Installed → As Removed → As Repaired

ANSYS, DASSAULT SYSTEMES, ptc, SIEMENS

AS9100(D) and PPAP-compliant Digital Twin Artifacts

(e.g., CAD Model(s), Ballooned Print, CMM Inspection Data, Machine Program Data)

DFMEA → PFMEA → MFMEA

UNDER SECRETARY OF DEFENSE INTELLIGENCE

JAIC

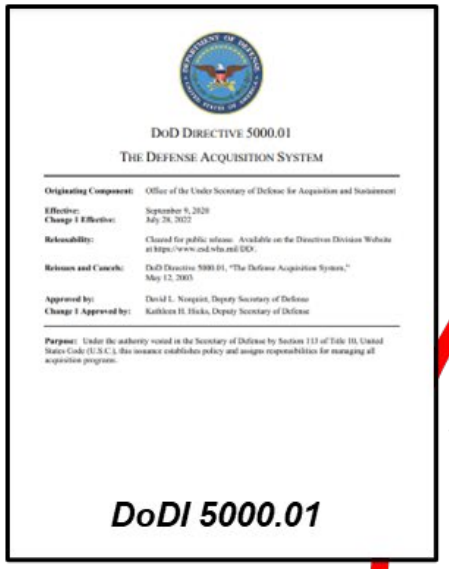
UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING USD R&E DEPARTMENT OF DEFENSE

NATIONAL AIR & SPACE INTELLIGENCE CENTER

LOGISTICS DEFENSE AGENCY

OFFICE OF THE UNDER SECRETARY OF DEFENSE ACQUISITION AND SUSTAINMENT

Central Focus


DoD Directive 5000.01

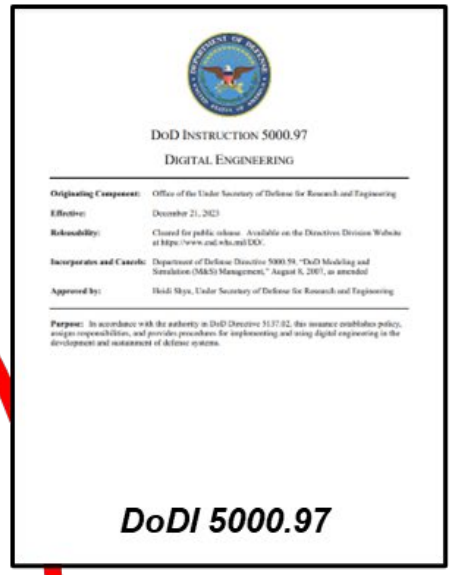
The Defense Acquisition System

DoDI 5000.01


DoD Instruction 5000.02

Operation of the Adaptive Acquisition Framework

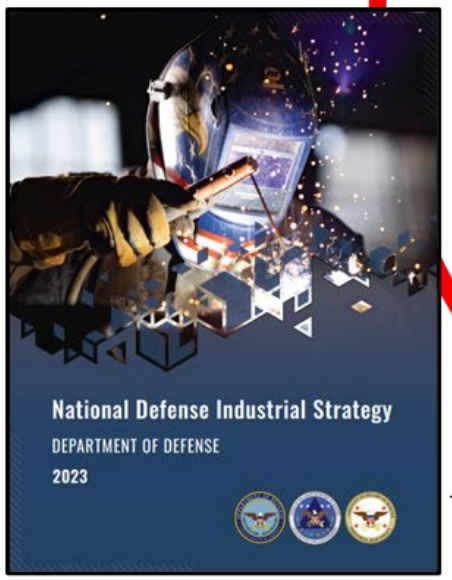
DoDI 5000.02


DoD Instruction 5000.97

Digital Engineering

DoDI 5000.97

The ODASD(PS)'s goals are to provide the DoD with policy, processes, and guidance that foster effective product support planning and execution;



DoDI 5000.91

Digital Sustainment Platform

Digital Sustainment Platform

rgbsi aerospace & defense

Engineering a Connected Future

DoDI 5000.97 Digital Engineering
Engineering, Model-based Manufacturing, Quality, Smart Factory, Supply Chain Risk Management

Gov Cloud Architectures

Microsoft Azure

amazon web services

SUNet

DoD Secure Unclassified Network
w/ High-side Data Integration Layer

The RGBSI A&D Digital Sustainment Platform® is the only DoDI 5000.97 Digital Engineering compliant platform designed, developed, demonstrated, and delivered in collaborative partnership with the U.S. DoD to provide scalable digital engineering and model-based manufacturing capabilities globally to enable U.S. National Security objectives.

DSP-enabled Use Cases – Materiel

DoD Gov Cloud Architectures

amazon web services | Microsoft Azure | Google Cloud

DoD Secure Unclassified Network w/ High-side Data Integration Layer

SUNet

Ruggedized Laptops

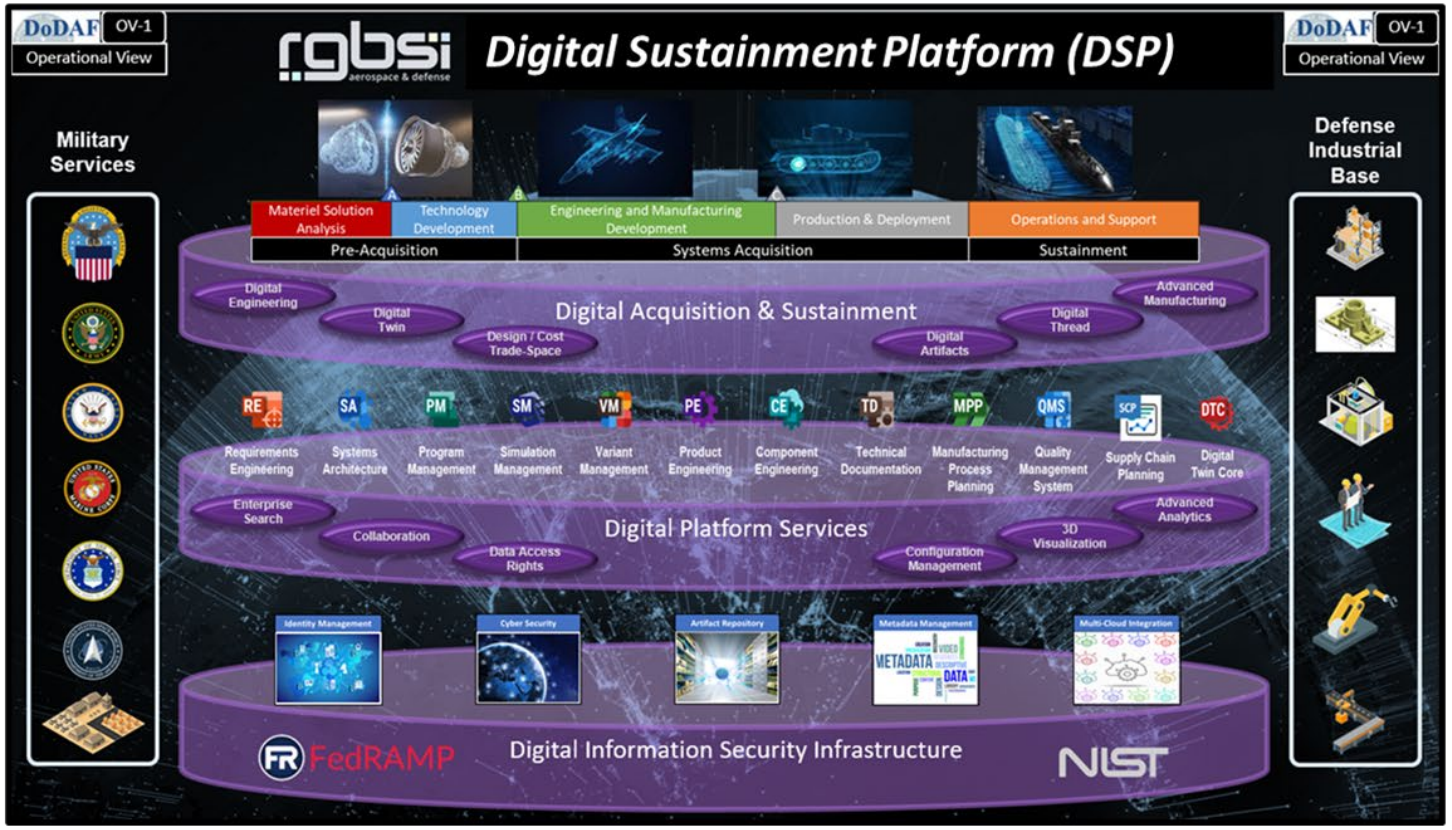
STARLINK Comms

Digital Artifact Repository

Cyber Security

Meta Data Management

Enterprise Data Integration

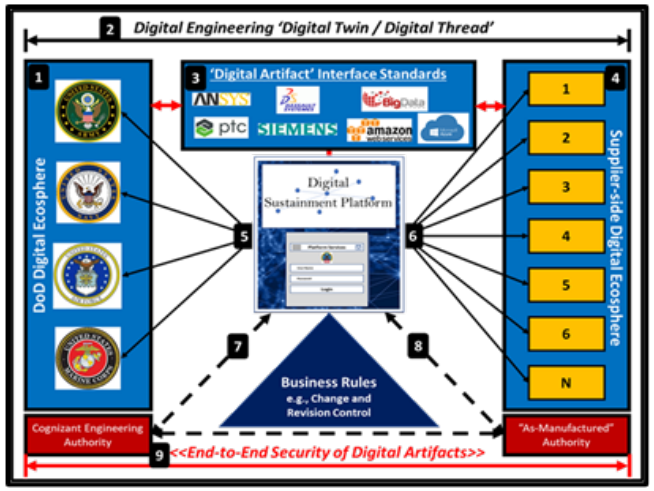


DSP's fully integrated suite of analytic, engineering, manufacturing, quality, and supply chain management capabilities are immediately and securely available to U.S. and close international allies and partners to support U.S. national security objectives (e.g., National Defense Industrial Strategy).

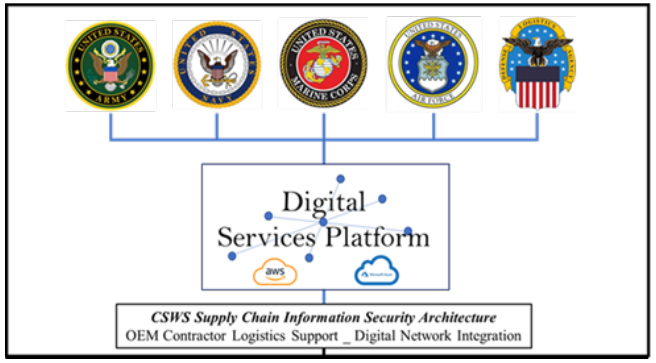
Enterprise-wide Seamless and Secure Integration of Industrial Base

Early Benefit Realization

Expediting Materiel Availability



Supply Chain Visibility



DSP-enabled Use Cases – DMSMS

DoD Gov Cloud Architectures

amazon web services | Microsoft Azure | Google Cloud

SUNet — *DoD Secure Unclassified Network w/ High-side Data Integration Layer*

Ruggedized Laptops

STARLINK Comms

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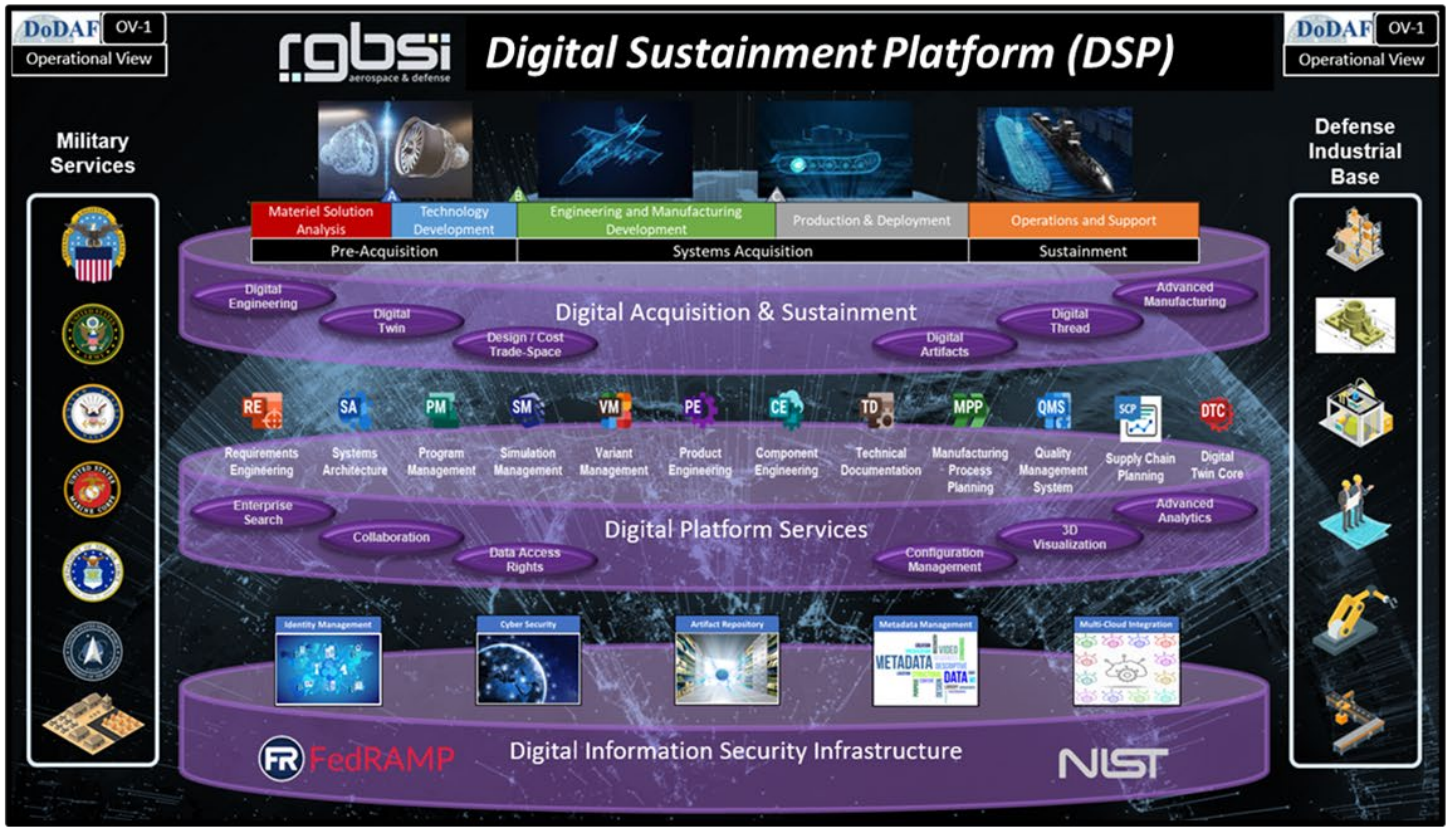

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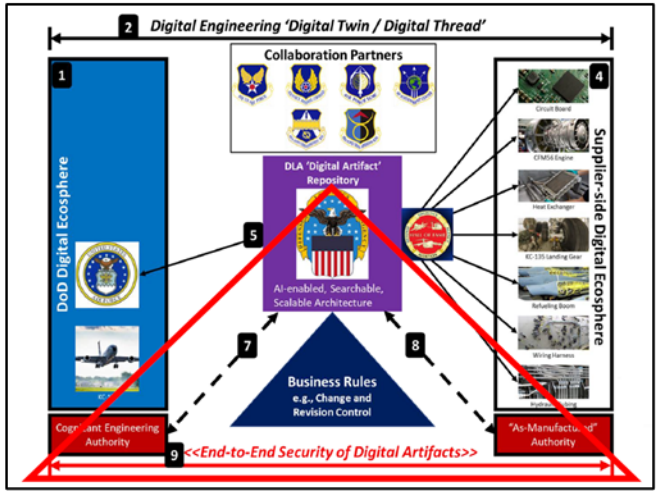

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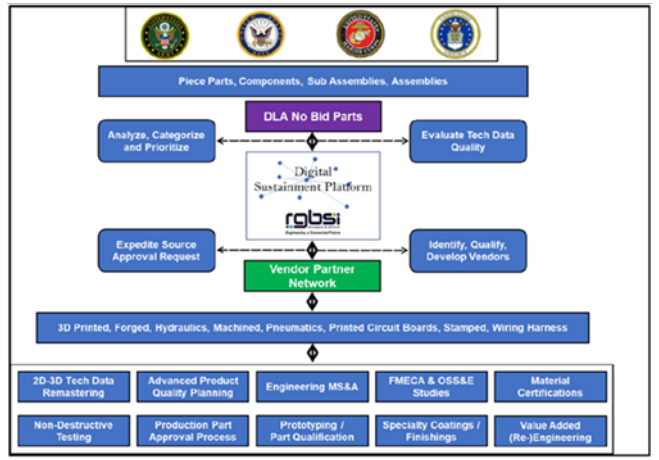

DSP-enabled Use Cases – LogC2

DoD Gov Cloud Architectures

amazon web services | Microsoft Azure | Google Cloud

DoD Secure Unclassified Network w/ High-side Data Integration Layer

SUNet

Ruggedized Laptops

STARLINK Comms

Digital Artifact Repository

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Meta Data Management

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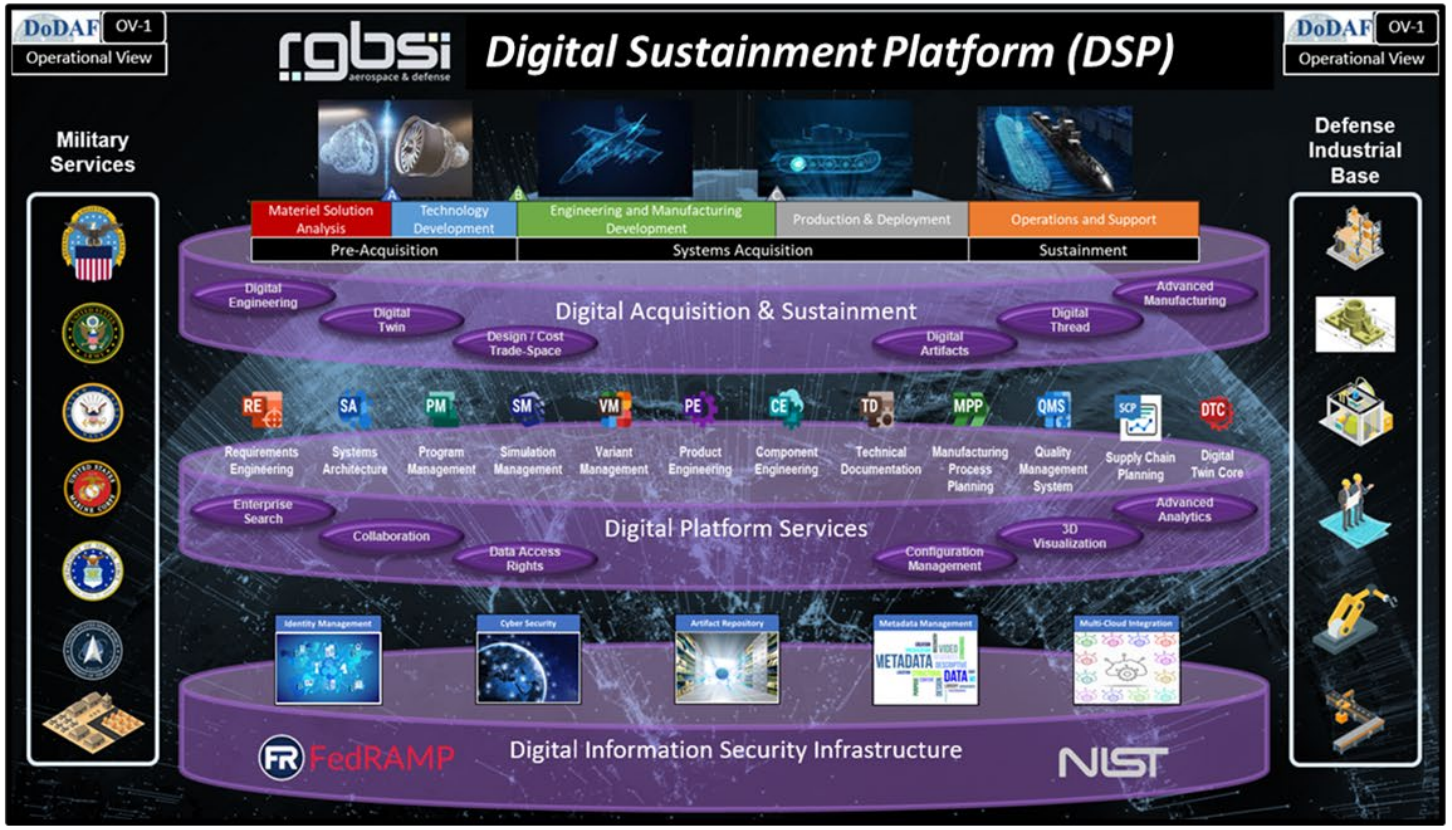

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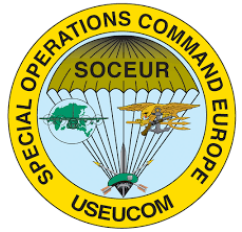


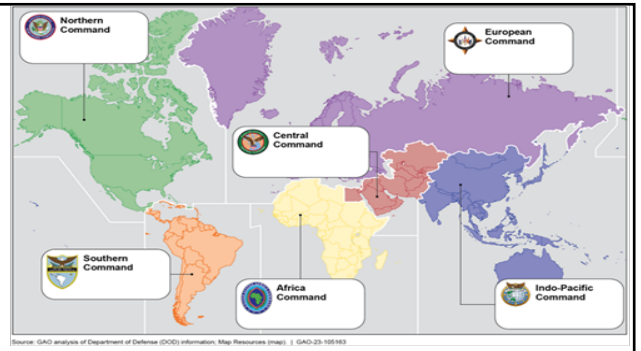
DSP-enabled Use Cases – RSF

RGBSI A&D Digital Sustainment Platform®

Selected As U.S. Department of War

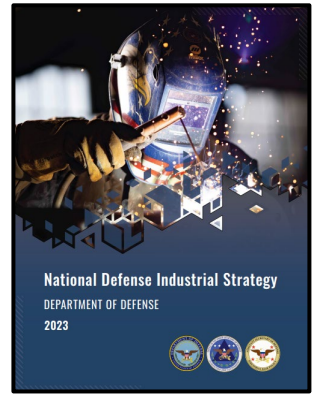
Digital Manufacturing Exchange!!

Digital Sustainment Platform



Enables Secure, Global Reach

- -DoW, Allies, and Coalition Partners
- -Additive / Advanced Mfg
- -Contested Logistics (LogC2)
- -Connected or Disconnect Ops
- -OEM Limited Use Data Rights



The only DoDI 5000.97 Digital Engineering compliant platform designed, developed, demonstrated, and delivered in collaborative partnership with the U.S. DoD to provide scalable digital engineering and model-based manufacturing capabilities globally to enable U.S. National Security objectives.

Seamless, Secure Digital Twin / Digital Thread Creation, Integration, and Management

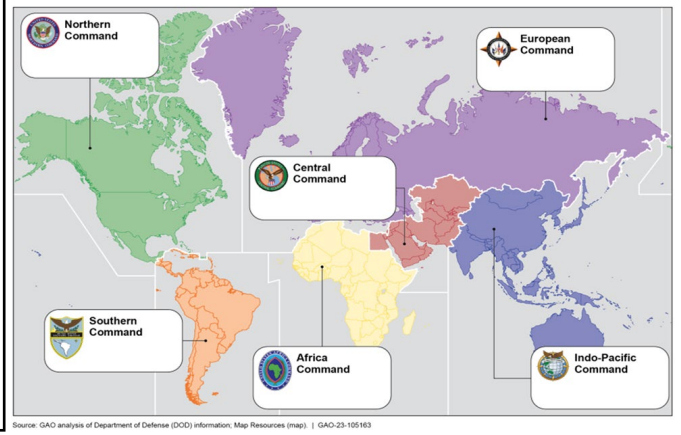
As Designed → As Manufactured → As Installed → As Removed → As Repaired

AI-enabled Acquisition, Digital Engineering, Product Support, and Multi-echelon O/I/D Level MRO Operations

Modular Open Systems Architecture (MOSA) interface and integration standards at the architecture, network, application, and data levels enables seamless bi-directional exchange of Digital Twin / Digital Thread artifacts.

RSF Objectives:

- Optimize supply chains
- Increase effectiveness and efficiency of product support solutions
- Address challenges of sustainment in a distributed and/or contested environment
- Leverage and increase existing MRO capabilities
- Develop new MRO capabilities



Advanced Mfg Center of Excellence

Announcement

Strategic Partnership Agreement

Digital Sustainment for Forward Fixed MRO

rgbsi aerospace & defense

RGBSI A&D Pte Ltd (Singapore)

Advanced Manufacturing Center of Excellence

700 West Camp Road #04-07, Seletar Aviation One, 797649 Singapore

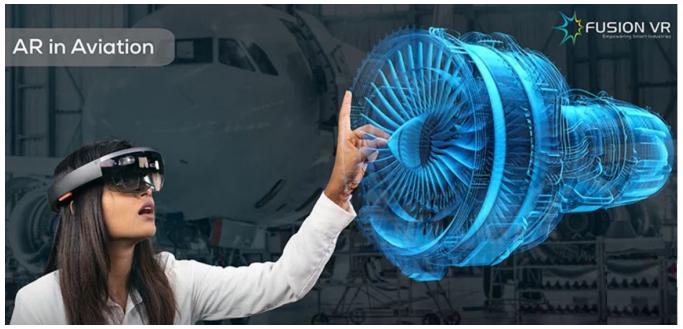
"Marunda delivers a comprehensive suite of engineering and support services tailored for maritime, defense, and industrial operations – equipped to handle critical maintenance, specialized fabrication, and auxiliary support, ensuring operational readiness at every stage."

MARUNDA

Naval Engineering for the Modern Fleet

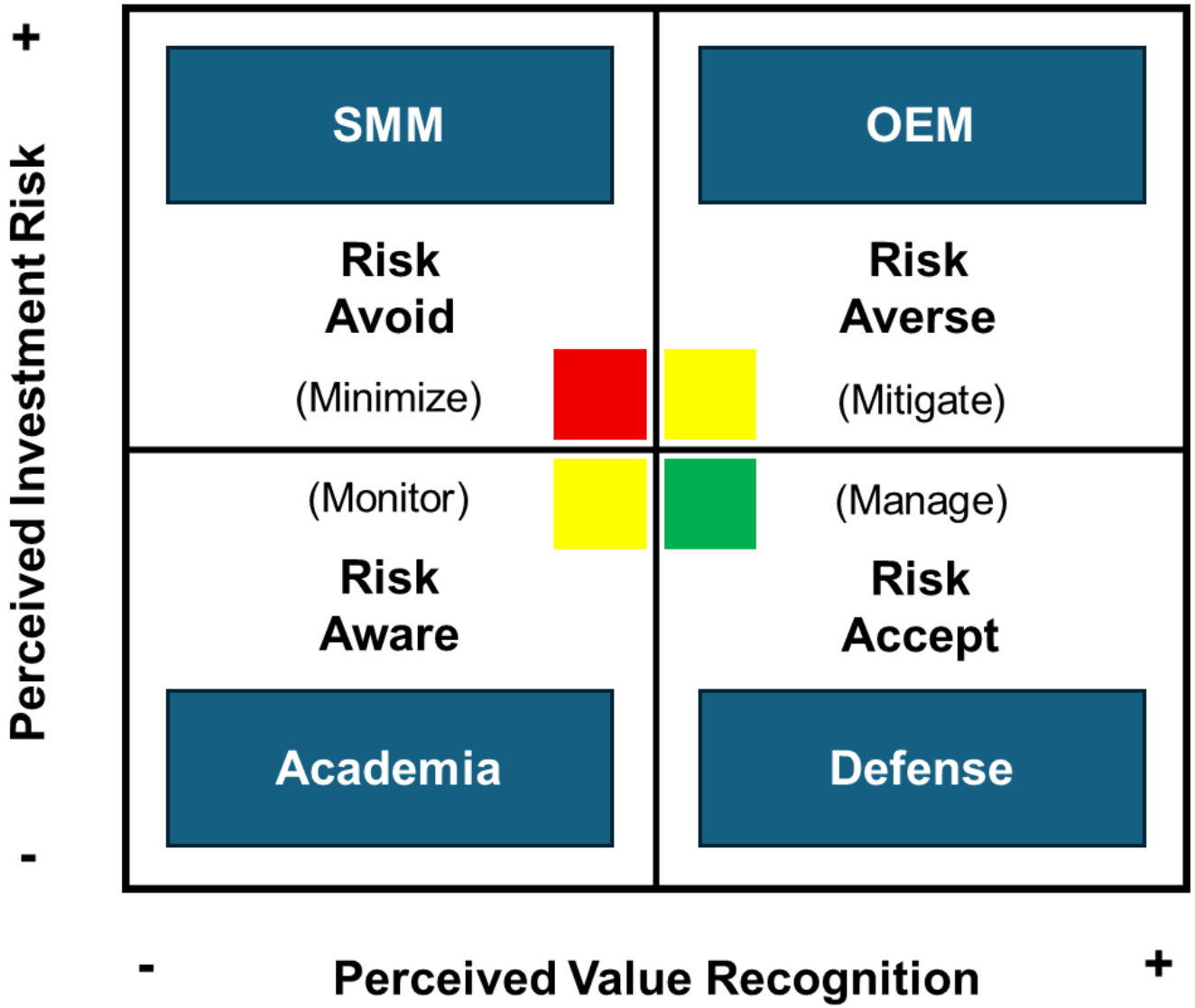
19 Ubi Crescent, Singapore 408577

Partnership for Indo-Pacific Industrial Resilience



Scaling 'Engineer-to-Order', 'Manufacture-to-Order', 'Repair-to-Order' Capabilities

AI Adoption for Operations



Source: Dr Paul Hartman, 15 Mar 2026, AAIS AI Seminar _ Not AI Generated

"Trustworthy AI refers to artificial intelligence systems that are explainable, fair, interpretable, robust, transparent, safe and secure. These qualities create trust and confidence in AI systems among stakeholders and end users."

https://www.linkedin.com/pulse/ai-data-governance-quality-critical-relationship-trusted-radwan-yob8f/

Discussion

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