



PM PNT

POSITIONING
NAVIGATION
TIMING

Standards as a Strategic Capability

2nd Sprint

16 November 2020

COL Nickolas Kioutas, PM PNT

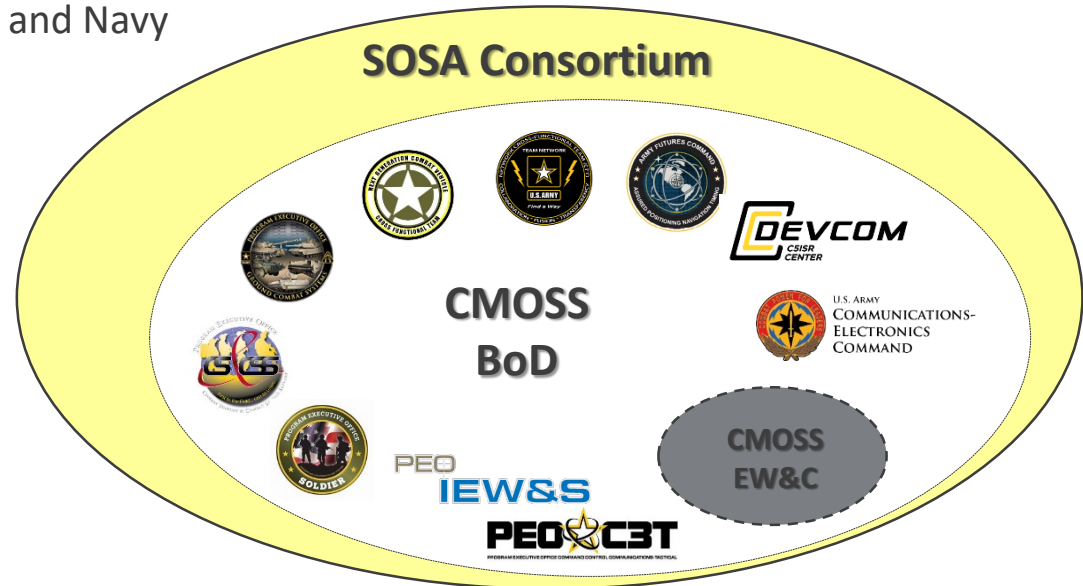


PMPNT POSITIONING
NAVIGATION
TIMING

SPRINT 1 REVIEW

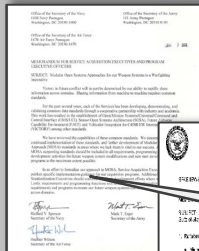
Modular Open Systems Approaches

- **WHY?** At the core, C5ISR/EW systems use many of the same technologies, but they are not always compatible between systems (e.g., amplifiers, filters, processors).
- **HOW?** CMOSS is being included in and managed under the SOSA initiative with Army, Air Force, and Navy participation.
- Reduces integration costs and risks
- Mitigates obsolescence
- Facilitates interoperability and reuse
- Accelerates fielding and deliveries



Modular Open Systems Approaches for our Weapon Systems

Tri-Service



PM EW&C

Utilization of Electronic Warfare & Cyber C5ISR/EW Modular Open Suite of Standards (EW&C CMOSS)

We determined the continued implementation of these standards, and further Development of **Modular Open Systems Approach (MOSA)** standards in areas where we lack them is vital to our success.

- Secretaries of the Army, Navy, & Air Force

I approve and direct the use of the EW&C **CMOSS** for use and integration of all future Project Manager EW&C Systems where applicable.

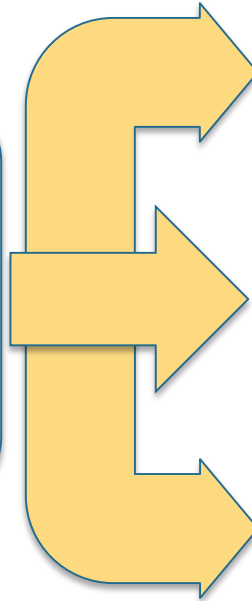
- COL Kevin E. Finch, Project Manager, EW&C



PM PNT Agile Process

PdM PNT Modernization Focus

- Translate needed capabilities from Industry, Academia and Government to fieldable PNT solutions. Pace and overmatch the Threat.
- Deliver solutions ready for final engineering integration to Programs



PdM Mounted Assured PNT Focus

- Final development + engineering integration
- Training, Operational testing, fielding, sustainment

PdM Dismounted PNT Focus

- Final development + engineering integration
- Training, Operational testing, fielding, sustainment

When requested (*Aviation, Precision Weapons, etc.*):

- Final development + engineering integration
- Training, Operational testing, fielding, sustainment

- Conducts market research identifying potential solutions fulfilling PNT capability gaps
- Via studies, modeling/simulation, and rapid prototyping, assess the utility of the initial capabilities through Soldier feedback, laboratory, and field assessments. A “buy, try and decide” methodology informs requirements.
- ***Developing and delivering material solutions meeting needs for final integration and fielding***

Standards “clearing house” for rapid integration of latest technology to outpace the threat

Exploiting Modular Open System Architecture



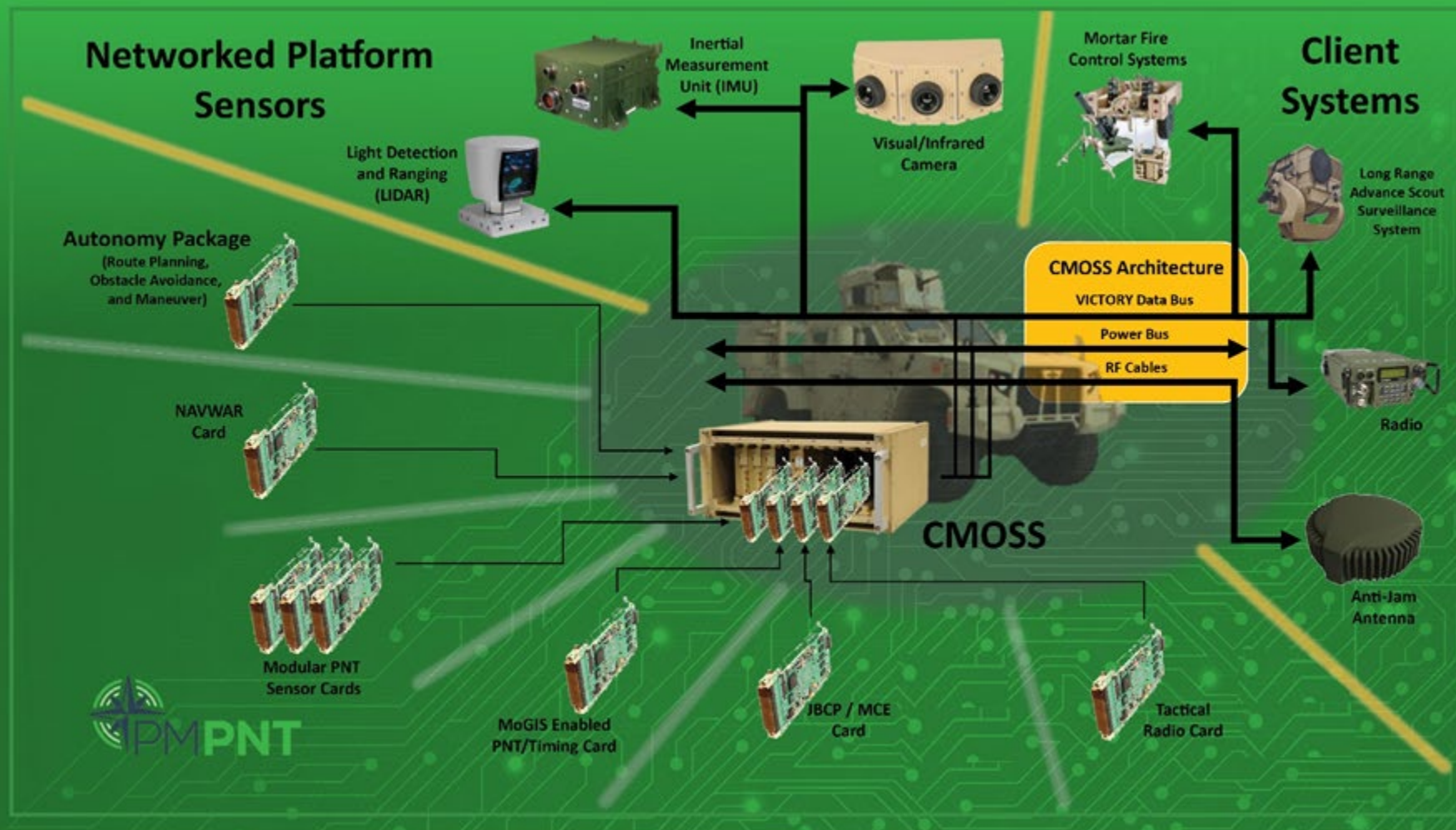
MISSION: Provide Warfighter-valued Assured PNT solutions Today that enable Multi-domain Operations in rapidly evolving denied environments.
VISION: Ensure overmatch capability through innovative acquisition & rapid integration of cutting-edge Modular and Open System Assured PNT technologies.

ACCELERATING MODULAR OPEN SYSTEM ARCHITECTURE (MOSA) ITERATION TIMELINE



EFFICIENT, AFFORDABLE APPROACH FOSTERS RELATIONSHIPS AND SHARES COST/RISK BETWEEN GOVERNMENT, ACADEMIA AND INDUSTRY

C5ISR/EW Modular Open Suite of Standards (CMOSS) Integration



INTEGRATION ARCHITECTURE ACROSS THE C5ISR ACTIVITIES



SPRINT 2

CMOSS Requirement

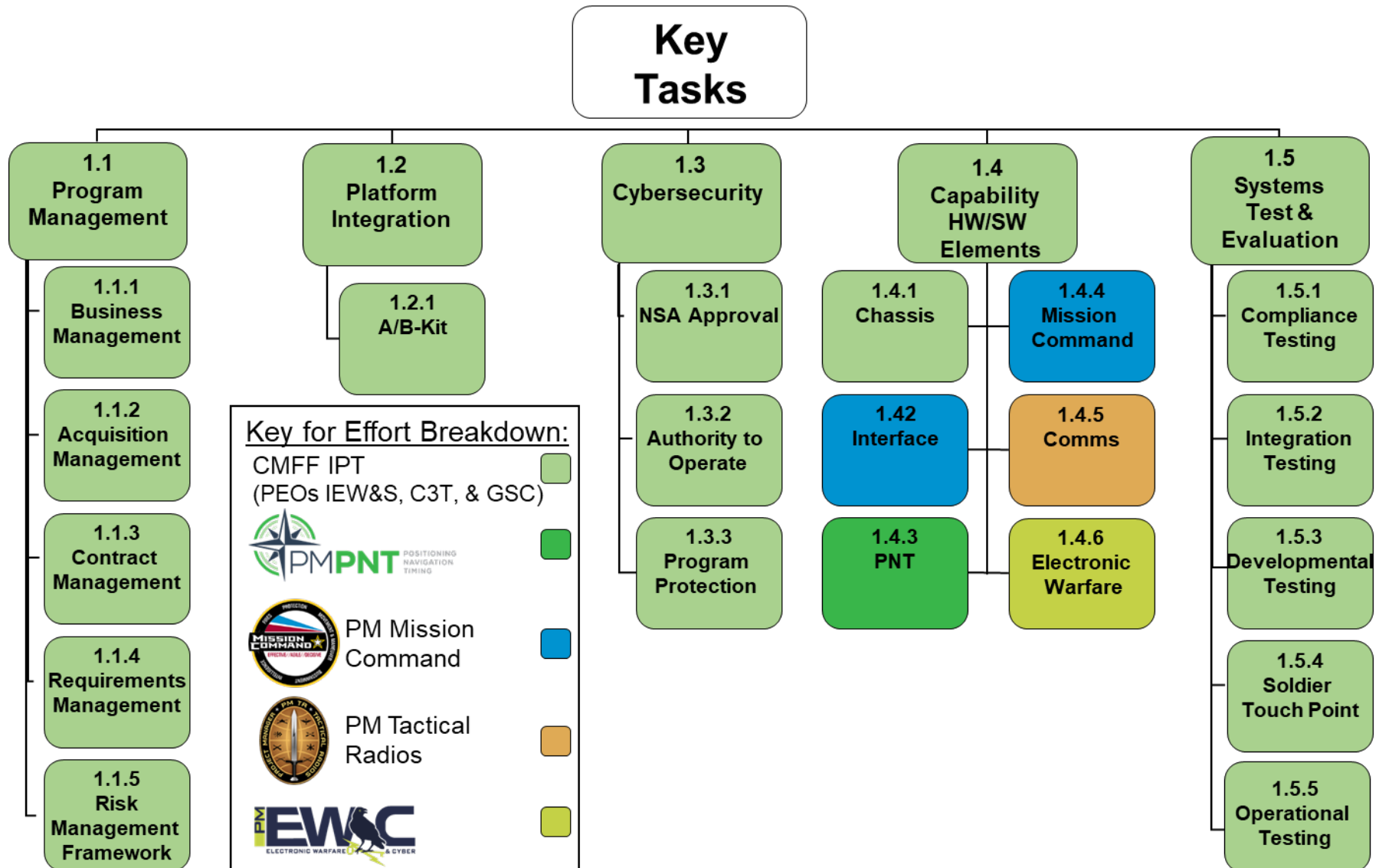


CMFF A-CDD

Command, Control, Communications, Computers, Cyber,
Intelligence, Surveillance, and Reconnaissance/Electronic Warfare (C5ISR/EW)
Modular Open Suite of Standards (CMOSS) Mounted Form Factor (CMFF)
Abbreviated -Capability Development Document (A-CDD)

ACB Brief
28 October 2020

CMOSS Min Viable Product Management





Open Innovation Lab Overview

The Open Innovation Lab (OIL) is a facility that will **accelerate** technology transition and integration as part of the PNT Modernization Process and across the C5ISR Community

- Provides a unique, **unclassified**, facility for DevOps, **integration and assessment** of technology against Modular Open Systems Approach (MOSA), PNT Reference Architecture, pntOS, CMOSS, and other open standards
- Enables Academia, Industry, Government and other organizations to collaborate on Army PNT future capabilities and solutions
 - **Leverages the investments** of S&T, Industry, and Academia
- **Collaboration**, development and integration lab to accelerate mature PNT technology for insertion into the MAPS GEN 3 (CMOSS Mounted Form Factor (CMFF)) and DAPS GEN 3 capabilities



OIL Overview (continued)

Next Steps:

- PM PNT Virtual industry day - 17 Nov
- CMOSS Mounted Form Factor (CMFF) integration and compliance testing
- Trial Runs at the OIL to evaluate processes and procedures
- Incorporate feedback from Industry and Academia to implement a mutually beneficial value proposition (Win-Win)

A-PNT OPEN INNOVATION LAB

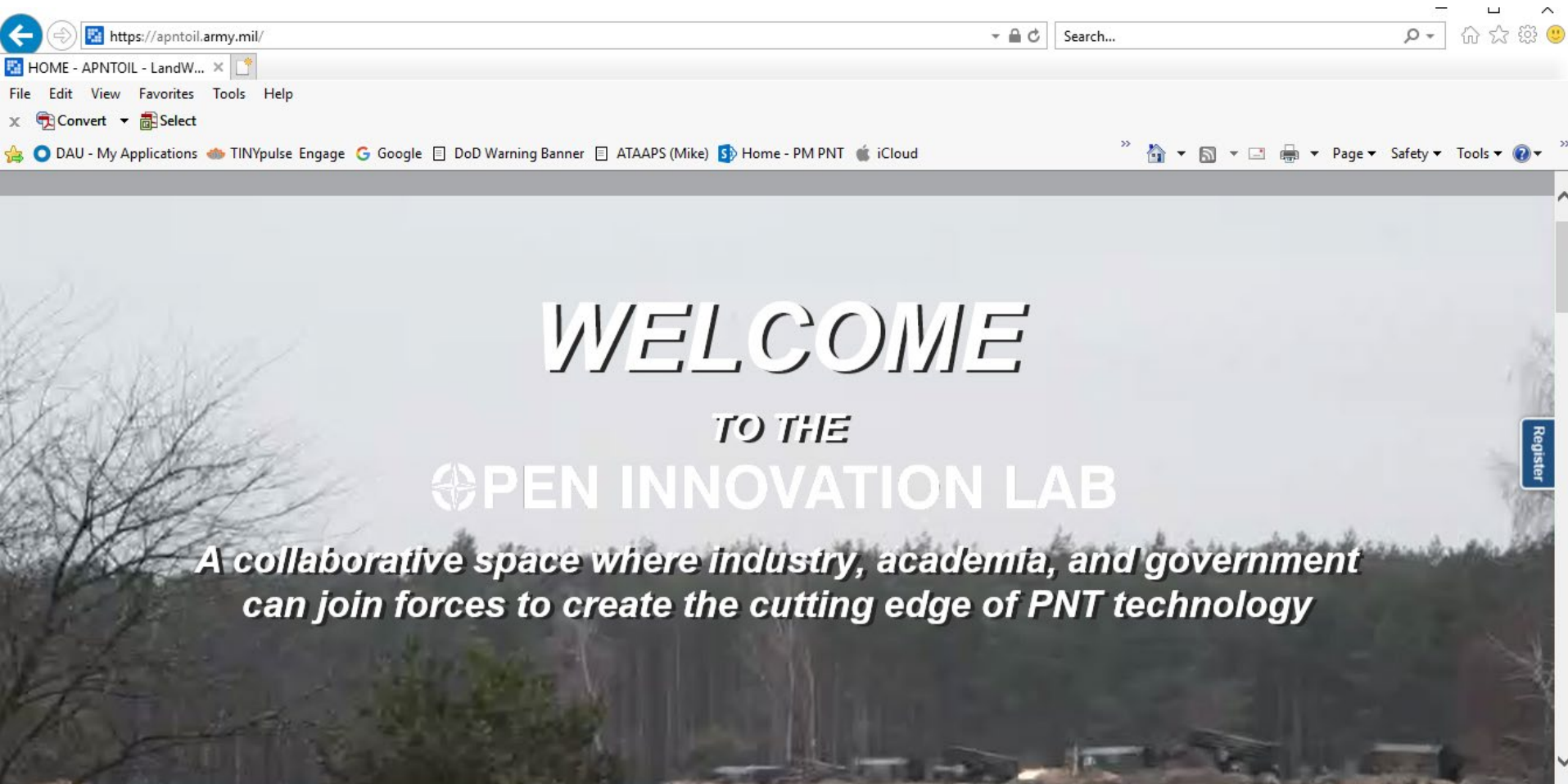


IN PARTNERSHIP WITH





OIL Website - https://apntoil.army.mil



STANDARDS AND SPECIFICATIONS



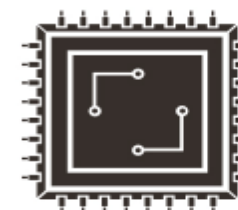
VICTORY – Vehicular Integration for C4ISR/EW Interoperability



MORA – Modular Open Radio Frequency Architecture



OpenVPX



SOSA – Sensor Open Systems Architecture





OIL Facility



Project Manager Positioning, Navigation, and Timing (PM PNT) has partnered with U.S. Army Combat Capabilities Development Command (CCDC) to create an open environment where the right people and the right ideas can connect to drive the advancement of the Army's PNT capabilities.



Register





OIL Registration

Contact Us

i Please describe your company and your technology, and let us know what brings you to the OIL. We look forward to speaking with you soon!

Summary*

Submitting
Organization

Description

Submit

Close



PMPNT POSITIONING
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QUESTIONS