



# CAD/PAD Joint Program Office Advanced Development

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Presented to: Industry

Presented by: Ben Kerlin CADPAD Advanced Development, JPO

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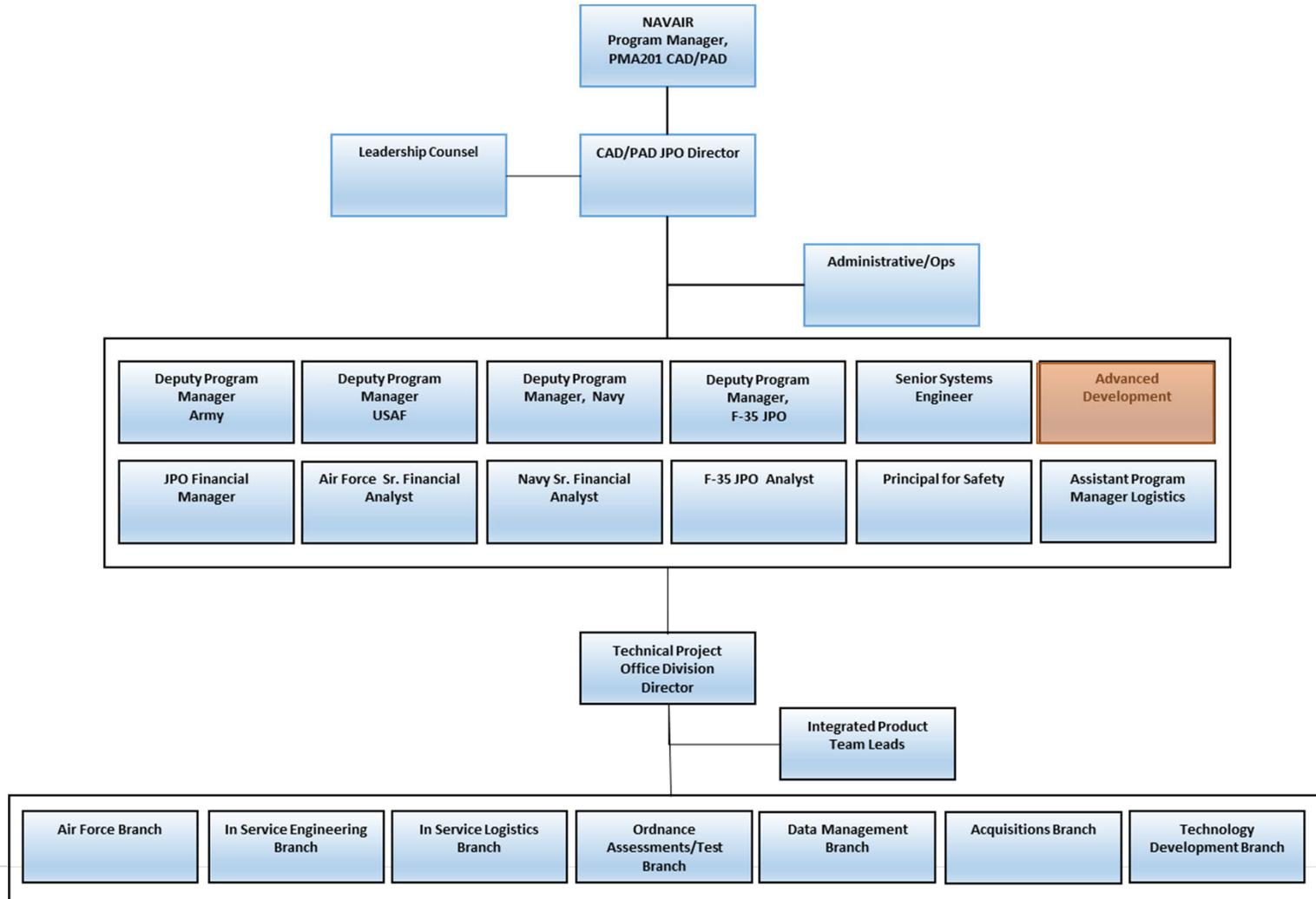
# Agenda



- Organization chart
- Funding
- Background
- Current Efforts
  - Obsolescence, CAD/PAD Technology Roadmap
  - CRADAs
  - SBIRs
- Closing Notes



# CAD/PAD Joint Program Office





# Funding

NAVY SUMMARY	
FY22 NAVY PANMC PIP	\$ 3,572,000.00
FY22 NAVY PANMC OBSOLESCENCE	\$ 4,443,000.00

FY21 NAVY RDTE DIGITAL TWIN	\$ 769,203.00
FY21 NAVY RDTE N-RAY	\$ 4,826,764.00
FY22 NAVY RDTE DIGITAL TWIN	\$ 744,331.00
FY22 NAVY RDTE N-RAY	\$ 5,792,117.00

AIR FORCE SUMMARY	
FY22 AF CAT I	\$2,702,000
FY22 AF CAT II	\$806,016

ARMY SUMMARY	
FY22 ARMY	\$731,000

TOTAL: \$24,386,431



# Background

- Excerpts from “*CAD/PAD Joint Program Office Industry Day State of the Program*”, 01 NOV 2021, Greg Longworth, CAD/PAD Director, JPO
- The CADPAD JPO has several challenges in the execution of the program:
  - Diminished [Manufacturing Sources and Material Shortages (DMSMS) in the] industrial and organic bases. [Nearly all CAD/PAD items are susceptible to DMSMS and obsolescence risk.]
  - Machined/metal parts availability and energetic material to support production operations.
- CAD/PAD Vision 2025: JPO effort to align CAD/PAD to Technology Roadmap and to ensure organic capabilities maintained and strengthen the industrial base
- JPO Vision 2025, Early Initiatives:
  - **Second Source/Alternate Technology:**
    - To mitigate production constraints with sole source CAD/PAD providers, the JPO has directed a dual sourcing strategy. The dual/second sourcing strategy consist of sustaining multiple manufacturers (gov’t and industry) that can produce specific CAD/PAD products.
    - CAD/PAD Joint Program Office (JPO) has identified critical sole sourced items that require an immediate second manufacturing source.
    - Under NSWC IHD Cooperative Research and Development Agreements (CRADA) we have provided several technical data packages (TDPs) to potential industry partners.
    - Alternate Technologies offer options to mitigate SCM constraints and allow for newer digital/manufacturing technologies to be integrated into the portfolio



# Background

Excerpts from “CAD/PAD Joint Program Office Industry Day State of the Program”, 01 NOV 2021, Greg Longworth, CAD/PAD Director, JPO



## JPO Second/Alternate Source/Alternative Technology

- **Why?** The CAD/PAD portfolio consists of several sole source only options.
  - **US Navy has 27,860 Items on extension for all categories (15,437 because of No Stock) [FY21 22,660 SLE requests]**
  - **US Air Force has 19,885 Items on Service Life Extension (13,644 because of No Stock)**
- **So What?** The JPO has \$100M in backlog orders and deliveries are often 2-3 years late to need. Late deliveries impact aircraft maintenance, production schedules and aircraft readiness.
- Metal parts fabrication, loss of energetics suppliers, dependency on foreign sources of material and loss of a skilled workforce all contribute to production delays. To mitigate production constraints with sole source CAD/PAD providers, the JPO has directed an alternate sourcing strategy. The alternate sourcing strategy consist of sustaining multiple manufacturers (gov't and industry) that can produce specific CAD/PAD products.
- Under NSWC IHD Cooperative Research and Development Agreements (CRADA) we have provided several technical data packages (TDPs) to potential industry partners
- **CRADA/IDIQ option:** Share information and GFE with vendors using CRADA agreement. Industry partners can use IRAD dollars to develop and test functional units. Upon successful testing of functional units, gov't can issue a competitive IDIQ contract for low rate production.
- **OTA option:** Add CAD/PAD vendors to the Indian Head's OTA NEST consortium. for rapid prototyping, then a follow-on low rate production effort.
- **Other options:** Private Party Agreements, CITE, FAR option



# Current Efforts



- **Obsolescence**
  - Managing Obsolescence continues to be a major driver
  - Communications across agencies and industry is critical to identify and mitigate obsolescence issues
- **CAD/PAD Technology Roadmap**
  - Objectives:
    - Develop a tool to facilitate the CAD/PAD Joint Program Offices strategic decision making and investment direction in support and implementation of new technologies:
      - Investment into new technology and technology projects
      - Development of workforce expertise and training
      - Supporting equipment facilities and/or capabilities
    - Align new technologies and associated development efforts with technology objectives and implement the identified technologies into specific fleet applications
    - Technology Trends
      - Improvement/replacement of pyrotechnic time delays, new propellants, developing second sources, munitions health monitoring, additive manufacturing, etc.



## Current Efforts

- CRADAs (Cooperative Research & Development Agreements)
  - Agreements between NSWC IHD and one or more non-Federal parties to perform cooperative and mutually beneficial R&D consistent with IHD mission
    - Industry (principally), academia, other non-federal agencies
  - Flexible, but generally used for research, development, non-routine testing, that are cooperative
  - Directly related and tailored to the research mission
  - Support commercial development, means to partner and protect IP, transition company developed technology for military use, support technology needs

(9) NSWC IHD CAD/PAD CRADAs in place with an additional (5) CRADAs in process



## Current Efforts

- Small Business Innovation Research (SBIR)
  - Ensures small business has a fair and equitable opportunity to compete for federal procurement opportunities
  - ASN(RDA) Memorandum, August 6, 2018, *Small Business Utilization for a Strategic Advantage*
    - Small Businesses are an incredible source for innovation, adaptability, pivot speed, and resilience
    - Leverage Small Business Innovation research (SBIR) and Small Business Technology Transfer Programs

(2) NSWC IHD CAD/PAD SBIRs in place



## *Closing Notes*



- Summary
- Ongoing issues and dynamic situations
- Communication plays a large part
- Thank you!