



UNMANNED SYSTEMS IOP CONFERENCE

Cassandra Smith, Division Chief, Technical Management



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Report Documentation Page

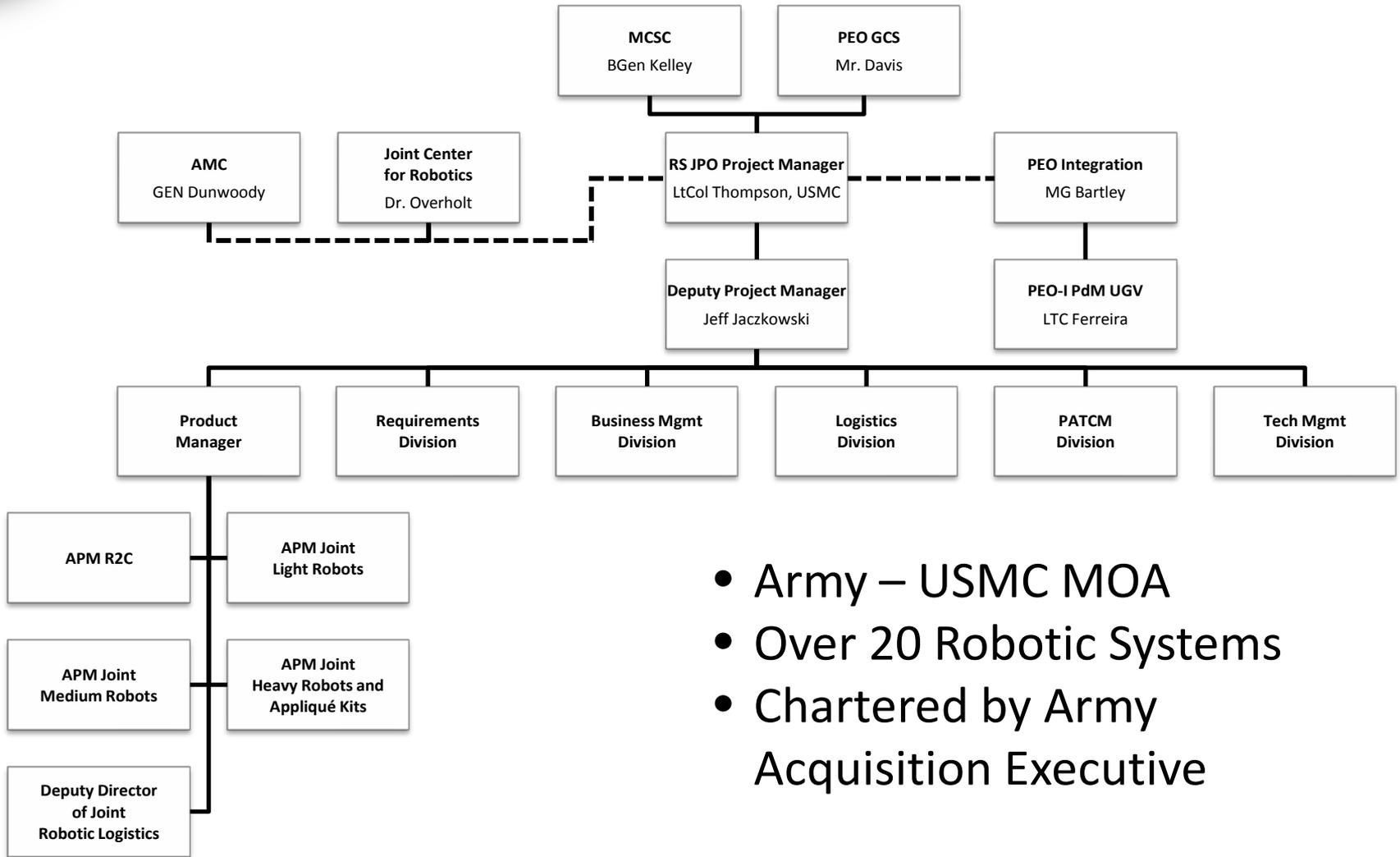
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RS JPO Organization & Relationships



- Army – USMC MOA
- Over 20 Robotic Systems
- Chartered by Army Acquisition Executive



Mission

Lead the development, systems engineering, integration, acquisition, testing, fielding, sustainment and improvement of unmanned systems for the Joint Warfighter to ensure safe, effective and supportable capabilities are provided while meeting cost, schedule and performance.

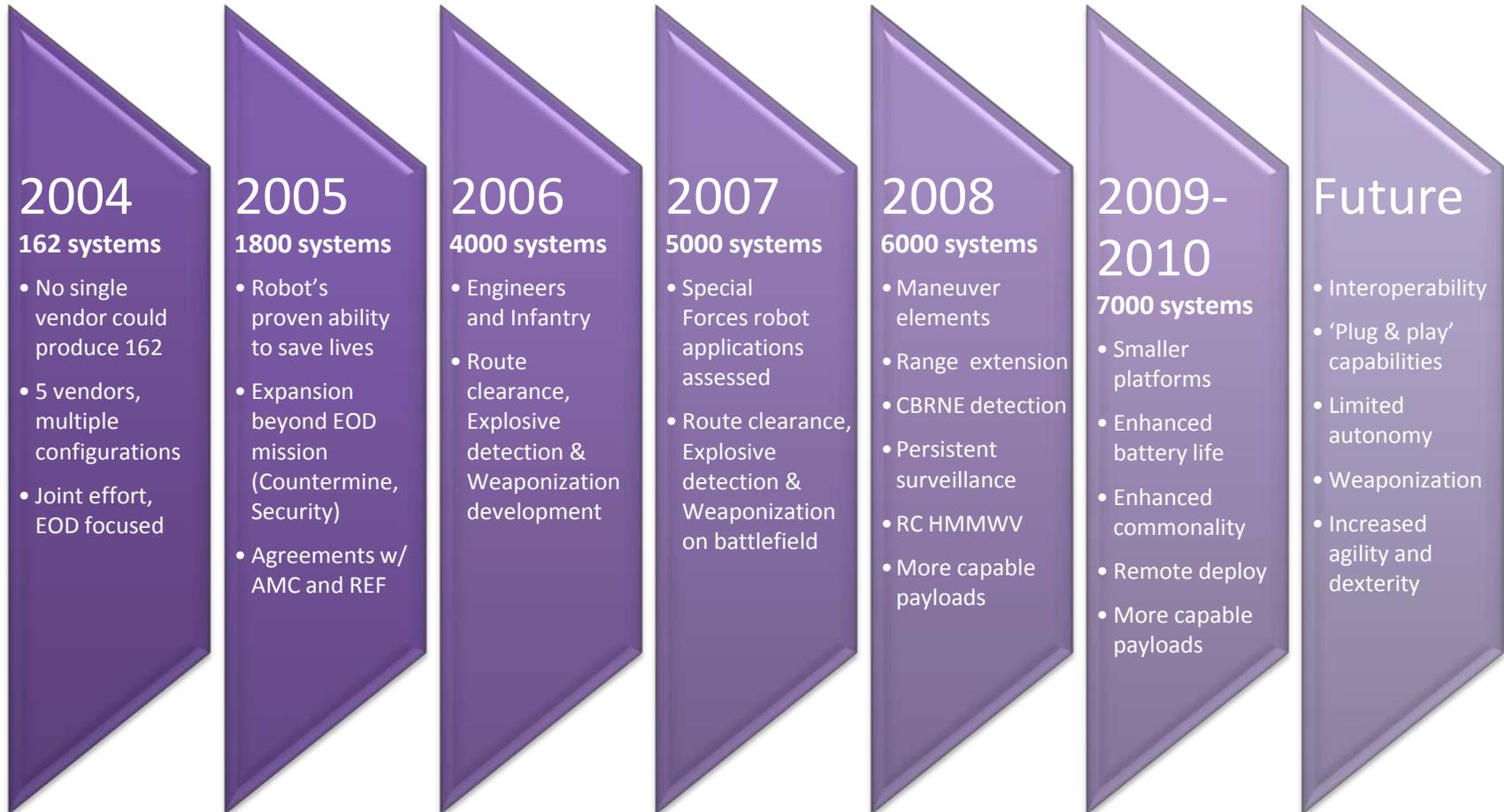
Vision

Continuous improvement of unmanned system capabilities to meet current and future Joint Warfighter objectives.



Evolution of Ground Robotics in Combat

- Sustainment, Modernization, Interoperability and Modularity



Leadership • Service • Innovation



Interoperability Objectives

- Progressive, building approach
- Define interoperability standards for integration across UGVs leveraging existing profiles to the greatest extent possible
 - Open Architecture
 - Common Control
 - Control Messages (JAUS)
 - Communications (“Common” Data Link)
 - Payload Modularity
 - Establish Performance Criteria to test compliance
- Establish, adopt and apply interoperability standards/
Levels of Interoperability (LOI) for UGVs



Interoperability Effort...

- is in support of modularity
- is in support of commonality
- is based on open and widely available standards
- is continually evolving
- is not a limit on innovation
- is not proprietary



Why Interoperability

- Increased Modular payloads across multiple platforms
- Enables agile, responsive mission realignment
- Enables Air/Ground coordination/collaboration
- Broadens payload/mission equipment package vendor base
- Specifies logical architecture, standards, requirements, and conformance approach
- Offers increased capabilities at lower life cycle costs
- Facilitates common control of multiple robotic systems



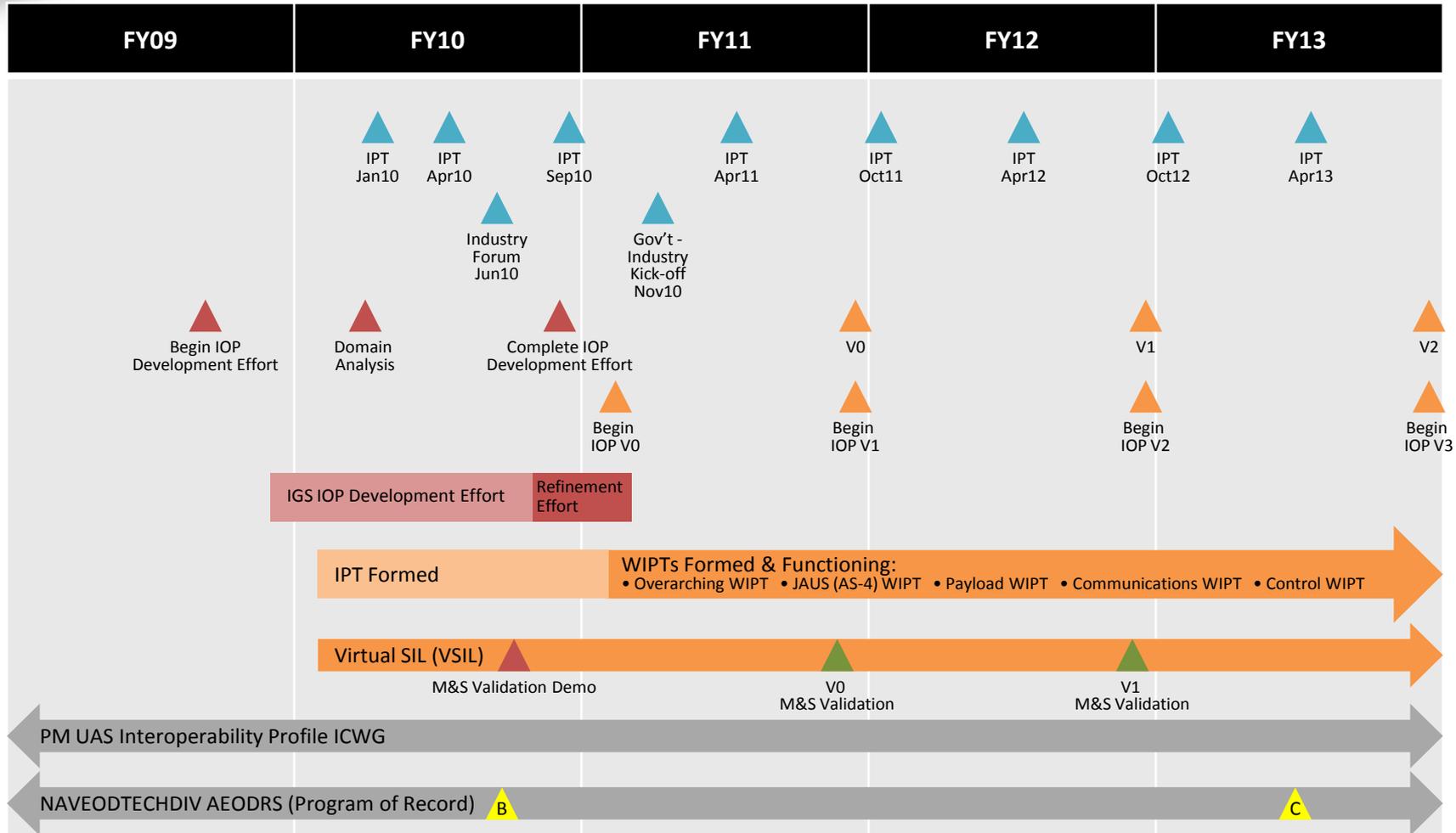
Emerging Requirements

Name	Status	Purpose
Overarching Unmanned Systems	ICD approved 23 Aug 10	Interoperable family of unmanned systems across domains
Multi Mission UGV	World-wide Staffing Complete	Large scale UGV platform for multiple missions
Small UGV	World-wide Staffing Complete	Recon and surveillance
Squad Multipurpose Equipment Transfer	World-wide Staffing Complete	Logistics/resupply vehicle
Family of Robotic Clearance and Interrogation Systems	Draft CPD	Prevent, detect and neutralize explosive hazards
Autonomous Mine Detection System	Draft CDD	Mine detection and marking
Explosive Detection Device	At DA G-3 for review	Handheld/Robot Mounted Explosive Detector
Small, Throwable Robot	Draft CPD	Recon and surveillance
III Corps Operational Need Statements	G3/5/7 validated but not resourced	Increased soldier safety and situational awareness thru intelligence and autonomy

Supporting immediate Warfighter needs while establishing a path forward for future requirements



Interoperability Top Level Schedule



KEY: ▲ IOP versions ▲ Test activities ▲ Interoperability development efforts ▲ Meetings

Leadership • Service • Innovation