Defense Manufacturing Conference 2016: Army ManTech Strategic Investment Areas

Purpose: Announcement for Defense Manufacturing Conference (DMC) 2016 Session, "Army ManTech Strategic Investment Areas"

Date: Tuesday, 29 November, 2016 from 3:30PM – 5:00PM

Location: Denver, CO

Conference Details: This session is open to qualified conference participants for DMC 2016
http://dmcmeeting.com/

Summary:

The Army ManTech Program mission is to provide affordable and timely manufacturing solutions that address the highest priority needs of the Army. The Army ManTech strategy focuses on developing manufacturing processes that are necessary to more efficiently develop and maintain Army systems.

As part of implementation of this strategy, the Army ManTech program has reached out to program executive offices, science and technology, and other Army stakeholders that inform Focus Investment Areas for FY19-FY23 investment. The FY19 Army ManTech Focus Investment Areas with Army ManTech Strategic Investment Area (SIA) Future Trends are listed below:

- **C3I-ManTech**: Addresses Command, Control, Communications and Intelligence (C3I) manufacturing technology improvements in sensors and supporting systems; radar device technology manufacturing; measuring or detection devices and electronic components to reduce Size, Weight and Power plus Cooling (SWaP+C).
    - Future SIA Trends (in priority order): Assured Positioning, Navigation and Timing (PN&T); Intelligence and Electronic Warfare (Active Electronic Scanning Array radar using SiGe, Lower Cost Optics for MWIR Threat Warning Systems, Manufacturing Enhancements for Countermeasures); Night Vision & Electronic Sensors (Dual Band High Performance Optical Coatings, Multi-Spectral Transceivers; Longwave III-V Infrared Focal Plane Arrays; Longwave Pulsed Lasers for DVE LADAR).
- **Lethality-ManTech:** Addresses manufacturing costs and risks of offensive and defensive kinetic and directed energy systems and enabling technologies associated with energetic materials and component subsystems of missiles, munitions and weapon/launcher systems.
    - Future SIA Trends (in priority order): Utilizing Emerging Technologies in Solid Rocket Propellant; Advanced Processing Lines for Energetics; Manufacturing Technologies for Affordable Missile Systems and Components (missile propellant, radomes, motor case manufacturing, small guided modular rockets); Lower Total Armament System Acquisition Cost (Foamable Celluloid Materials, Electrochemical Machining, Precision Machining for Advanced Munitions).
- **Ground Maneuver-ManTech:** Addresses manufacturing technologies that reduce cost and weight of ground-based vehicle systems improving maneuverability and survivability; including

technologies that improve vehicle power and energy systems; and technologies to rapidly certify ground vehicle structures, materials and processes.

  - Future SIA Trends (in priority order): Materials for Ground Vehicles (e.g., lightweight, advanced materials and joining of dissimilar metals); Protection (transparent armor, lightweight armor materials and joining processes); Vehicle Electronics (Silicon Carbide high temperature power electronics).

- **Air-ManTech:** Addresses manufacturing technologies that improve air vehicle survivability and maneuverability; technologies to reduce costs and weight of air vehicle systems and sub-systems addressing payloads, engines, UAVs, and sensors; and technologies to rapidly certify structures, materials and processes for air vehicles.
  - Future SIA Trends (in priority order): Advanced Manufacturing for Legacy and Future Vertical Lift (CMC Exhaust Ducts; Fiber Reinforced Aluminum, Sensor Driven Remaining Life Extension, Stress Prediction); Composites (Delamination Resistance, Transmission Housing Covers; Automated Composites Manufacturing, Fastener Free Systems, Fiber Form Development).
- **Soldier/Squad-ManTech:** Addresses manufacturing technologies to reduce Soldier/Squad loads; improve Size, Weight and Power (SWAP) of power generation and storage devices; and enhance Soldier protective gear.
  - Future SIA Trends (in priority order): Novel Manufacturing for Soldier Protective and Sustainment Systems (Microfilament Yarns for Personnel Armor, Textile Treatments for Vector Protection; Variable Transmissive Eyewear, Low Profile Hearing Protection, Honeycomb Energy Dissipation); Advanced Soldier Wearable Power (High Energy Rechargeable Batteries, Wearable Fuel Cell Cartridges, Lithium ion Ultra-capacitors, High Energy Non-Rechargeable Batteries).
- **Innovation Enablers-ManTech:** Addresses manufacturing technologies that enable improved readiness, reduced time to repair, and decreased fielding times through increasing rates of prototype development, product development and fielding using additive manufacturing; and technologies that advance the Army's model based enterprise.
  - Future SIA Trends (in priority order): Additive Manufacturing (Friction Stir Additive Manufacturing; Metal Matrix Composite Materials, Smart Structures with Discrete Embedded Sensors, Flexible Additive Manufacturing In Field, Portable Additive Manufacturing Cell, Composites and Composite Tooling, Specialty Alloys; High Pressure Turbine Components and Sensors), Model Based Quality Validation for Life Cycle Management of Materiel Solutions.
- **Medical-ManTech:** Addresses affordable manufacturing of infectious disease countermeasures, combat casualty care, military operational medicine, chemical biological defense, and lighter weight multi-functional materials for clinical and rehabilitative medicine.
  - Future SIA Trends (in priority order): Advanced tissue biofabrication; advanced pharmaceuticals.

The Army ManTech Program Office breakout session at DMC 2016 will communicate its Focus Investment Area (FIA) strategy and attain industry input to this strategy. The Army ManTech session will

consist of a brief overview of the Army ManTech program strategy followed by industry "match-making" between industry and R&D/Laboratory ManTech technical leads to discuss any industry inputs to the investment areas. These will be scheduled on a first come-first-serve basis with regards to reserving one-on-one discussions of industry manufacturing technology ideas and feedback on FIA's with Army manufacturing technology experts. ManTech subject matter experts will be on hand representing Army Research and Development (R&D) and Acquisition organizations. These organizations may include the following (website links included for general organization information):

Aviation and Missiles (AMRDEC), https://www.amrdec.army.mil/amrdec/

Communications and Electronics (CERDEC), http://www.cerdec.army.mil/

Soldier (NSRDEC), https://www.army.mil/info/organization/natick

Armaments (ARDEC), http://www.ardec.army.mil/

Tank-Automotive (TARDEC), https://www.army.mil/tardec

Army Research (ARL), http://www.arl.army.mil/www/default.cfm

Corps of Engineers, Engineer Research and Development Center (ERDC)
http://www.erdc.usace.army.mil/Locations/

Medical Research and Materiel Command (R&D),
http://mrmc.amedd.army.mil/index.cfm?pageid=medical_r_and_d.overview

PEO Soldier, http://www.peosoldier.army.mil/

PEO Ammo, http://www.pica.army.mil/peoammo/home.aspx

PEO Aviation, https://www.army.mil/PEOAviation

PEO CGS, http://www.peogcs.army.mil/

PEO CS&CSS http://www.peocscss.army.mil/

Contact: To pre-arrange one-on-one meeting with a government subject matter expert at this session, or to ask questions about the program or this DMC session, please respond to contact@armymantech.com. The one-on-one meetings will be scheduled first-come-first serve.

Information on the Army ManTech Program can be located at: www.armymantech.com

Disclaimer: This is not a solicitation for proposals.