GVSC One-on-One table Descriptions for MDEX 2021 – Day 2, May 26, 2021

Each One-on-One will be scheduled for 15 minutes.

GVSC One-on-Ones will be hosted in the MDEX Lounge – look for the GVSC group name on the tables.

Sign-up at https://www.usarmygvsc.com/mdex2021/

1. **Partner with GVSC**: Identify, pursue, and accelerate global and domestic business opportunities that improve resource utilization for both the Army and external partners.

2. **GVR (Ground Vehicle Robotics):** GVR's mission is to develop, experiment and transition autonomy-enabled ground system capabilities and technologies to meet and shape Army requirements. Our long term vision is to become the recognized leader for development and integration of Robotics & Autonomous System (RAS) technologies and systems on Army and Joint ground vehicle platforms. We are building on the momentum and success of prior and current research coupled with the operationally relevant near term RAS technical needs. Current three strategic priorities are;
    a. Modular, common, sustainable RAS autonomy development
    b. Standardized RAS autonomy software development, test, certification
    c. Campaign of Learning: Deliberate RAS capability experimentation and demonstration.

3. **GVPM (Ground Vehicle Power & Mobility):** GVPM is responsible for research, development and evaluation of the full spectrum of ground vehicle power and mobility technologies in the areas of: Powertrain, Powertrain Controls, Powertrain Electrification, Energy Storage, Fuel Cell Technology, Track & Suspension, and Test & Evaluation of Powertrain and Mobility Systems.

4. **Vehicle Electronics and Architectures (VEA**) VEA office was established to address emerging military ground vehicle electrical and electronics architecture needs. VEA develops, integrates, and sustains vehicle electronics technology solutions for all military ground vehicle systems to improve current force effectiveness and provide superior capabilities for the future force. Key VEA technology areas include: intra-vehicular data and video distribution networks, computers and components, power management and distribution, electrical power components, and both data network and power architecture development and specification. VEA also provides on-site matrix support and technical support for its customers in PEO Ground Combat Systems, PEO Combat Support and Combat Service Support, and the DEVCOM Science and Technology Community.

5. **Ground Vehicle Survivability & Protection (GVSP)** GVSP directorate's objective is to reduce the number of our nation's Soldiers wounded and/or killed in ground vehicles and to keep vehicles mission capable following a threat engagement. This is accomplished by more than 150 subject matter experts who lead the Army's research, development and integration efforts for holistic

survivability and protection systems. GVSP is functionally aligned into four core competencies including:

- RD&E Active Defeat Systems: Includes Active Protection Integration, Electronic Threat Defeat and Physical Threat Defeat – all of which will be enabled by Modular Active Protection Systems, or MAPS
- RD&E Passive and Reactive Defeat Systems: Includes Hull Frame Body Cab (HFBC) Structure, Armor Technologies and Occupant Protection
- Sub-System Evaluation: Performed in 11 GVSP labs
- Program Management, Operations and System Integration: Ensures excellence in program execution through strong systems engineering and program management tools and processes
- GVSP is co-located with PdM Vehicle Protection Systems (VPS) to support the Army's growing emphasis on layered protection and Active Defeat Technologies. PdM VPS will transition, mature and procure common components and work with platform PMs to integrate them; and GVSP will assist PdM VPS with identifying "leap ahead" S&T programs that provide increased protection and survivability and counter emerging threats in support of the VPS requirement.

6. **MS2 (Modeling, Simulation and Software):** MS2 mission is to develop, integrate, and assess ground vehicle systems accurately, efficiently, and cost effectively to inform DoD decisions for all manned and unmanned DoD ground vehicle platforms for both the Current and Future Forces. As such, the MS2 provides the following capabilities and services to DoD Ground Systems across their life cycles: (1) develops, maintains, modernizes, and sustains ground system software for embedded vehicle systems, subsystems, components, supporting systems, and LRUs; (2) generates novel industrial and full vehicle concept designs for both current fleet modifications and future force conceptual vehicles that define the system level implications of their requirements and component technologies; (3) generate multiple types of ground vehicle physics based analyses as well perform full system trade space analysis looking at how vehicle designs impact automotive performance, survivability, mobility, cost and risk factors; (4) robotics and autonomy modeling and simulations focused on immersing intelligent robotic systems within a virtual environment for performance or testing evaluation; crew station performance modeling and simulation to make the vehicle-robot-Soldier system as effective as possible using future scenarios with full-crew motion-based system simulators; first-person video game technology integrated with a cohesive unit of Soldiers, each represented by an avatar, performing an assigned mission as they would in a real operation with future technology within the game. The overarching MS2 organization is comprised of the following subordinate organizations: Advanced Concepts, Analytics, Immersive Simulations, and the Software Engineer Center (SEC).

7. **Detroit Arsenal Prototype Integration Facility (DTA-PIF):** Providing robust, innovative solutions to our customer requirements for our shared military mission

8. **DORE (DMSMS, Obsolescence Management & Reverse Engineering):** GVSC's DORE team provides Diminishing Manufacturing Sources and Material Shortages (DMSMS), Obsolescence Management and Reverse Engineering support to the U.S. Army TACOM Life Cycle Management Command's (LCMC's) mission under the Army Materiel Command (AMC) and to the Army Futures Command (AFC) for developing projects. The DORE Team maintains logistics and engineering expertise to early-identify, investigate, manage and resolve industrial base and obsolescence issues related to sustainment of TACOM LCMC equipment. These issues may include parts obsolescence, loss of manufacturing sources, lack of necessary materials &/or leveraging of the commercial supplier

base. Core functions in the team include an expertise in Industrial Base and DMSMS policy and procedures, Mechanical and Electrical Engineering, Logistics Data Analysis, and Project/Program Management. Proficiency in Reverse Engineering practices are a critical "value added" skillset. These competencies uniquely position the team at the Logistics, Engineering and Industrial Base intersection to provide Obsolescence Management for our customers as applicable.

9. **Materials Engineering Technology Areas**: Light-weighting, Joining (welding, adhesives, mechanical fastening), Additive Manufacturing, Composites, Metallurgy, Elastomers, Coatings/Plating, and Hazardous Materials Management.

10. **Ground Systems Cyber Engineering (GSCE):** GSCE team develops vehicle cybersecurity capability as well as provides a variety of value-added cyber engineering services to its acquisition partners and stakeholders. By developing innovative cybersecurity technologies, GSCE ensures current and future Army ground vehicles have the ability to fight and win decisively in the Multi-Domain Battlespace.

11. **PA&T Description:** PA&T is GVSC's Technical Authority for RAM Engineering, Test & Evaluation, Supportability Engineering, Quality, and Production. PA&T provides well-trained matrix support to PEO GCS, PEO CS&CSS, and PM LAV, and supports GVSC S&T efforts.
    - PA&T is home to the Durability Test Lab (DTL) which houses many one-of-a-kind simulators supporting system, sub-system, and component testing and characterization. The DTL is an ISO 17025 accredited lab that is open for Government and Industry use.
    - PA&T also leads GVSC's Prognostic/Predictive Maintenance (PPMx) efforts.

12. **System Engineering** – The Systems Engineering Directorate is interested in collaborating with Industry Partners in areas where personnel with specific experience to Systems Engineering such as Mission Engineering, Requirements Engineering, Systems Architecture, Risk & Readiness Assessments, Standardization and SE Tools.