



# 2024

## GVSC Briefings to Industry at Michigan Defense Expo (MDEX) GVSC One-on-One table Descriptions

Each One-on-One will be scheduled for 15 minutes. Only 2 people from any company will be allowed in a One-on-One meeting at a time. Each person is limited to 3 One-on-One meetings. Review the description of each tech area below to choose what area best fits your technology focus area.

### Classroom 143

- 1. Partnerships and Collaboration:** Partner with GVSC - Identify, pursue, and accelerate global and domestic business opportunities that improve resource utilization for both the Army and external partners. Mechanisms for collaborations could include: Technical Interchange Meeting (TIM), Focused Industry Day (FID), Focused Industry Technical (FIT) Engagement, developing a Cooperative Research and Development Agreement (CRADA), Patent License Agreement (PLA) or a Test Service Agreement (TSA).
- 2. Modeling, Simulation and Prototype (MSP) -** The GVSC Modeling, Simulation and Prototyping (MSP) organizations mission is to provide excellent customer support in the field of Army ground vehicle modeling, simulation, and prototyping by leveraging innovative technologies. We are dedicated to providing realistic, data driven solutions that empower the military to optimize vehicle performance, get direct soldier feedback early and often, and expedite the development of state-of-the-art ground vehicle systems in support of national defense. We develop cutting edge ground vehicle digital designs and physical prototype capabilities that enhance operational effectiveness, ensure soldier safety, and propel Army ground vehicle systems into the future.
- 3. Ground Vehicle Materials Engineering (GVME):** The Ground Vehicle Materials Engineering directorate focuses maturation of new materials (composites, elastomers, metals) and manufacturing methods (3D printing, casting, forging, joining), light weighting, corrosion prevention, elimination of hazardous materials, and materials characterization/analysis.
- 4. Ground Vehicle Survivability & Protection (GVSP) Laboratory and Test Support Agreements:** GVSP Subsystems Evaluation directorate's objective is to support GVSC and industry partners with laboratory and test support activities with facilities, weapons, ammo & explosives, instrumentation, infrastructure, equipment and logistics. This is accomplished by more than 25 subject matter experts in live-fire range operations, weapons, ballistics, blast simulators, ATDs (crash dummies), armor fabrication, high-speed/resolution cameras and other instrumentation for technology assessments on DTA, Selfridge ANGB and Camp Grayling as well as other locations across the United States.

## Classroom 144

5. **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;
  - Modular, common, sustainable RAS autonomy development
  - Standardized RAS autonomy software development, test, certification
  - Campaign of Learning: Deliberate RAS capability experimentation and demonstration
6. **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 vehicular cybersecurity technologies, GSCE ensures current and future Army ground vehicles have the ability to fight and win decisively in the Multi-Domain Battlespace. In addition, vehicle open architecture and mission critical systems are increasingly software dependent, making them desirable targets for adversaries to exploit. GSCE is pursuing techniques and approaches that enhance the cyber resiliency of open architectures and hardware and software assurance to secure the tactical edge of the modern Internet of Battlefield Things (IoBT). To this end, GSCE seeks to advance public-private partnerships for co-investment in research and development of vehicle cybersecurity technologies and continuous improvement and sharing of best practices.
7. **Software Engineering Center (SEC):** The Software Engineering Center mission is to provide full software lifecycle management; to engineer, develop, integrate and field precise software solutions; to improve Current Force effectiveness; and to provide superior software capabilities for the Future Force.
8. **Product Assurance & Test (PA&T) and Systems Engineering Directorate (SED):**
  - **PA&T** is the recognized subject matter expert (SME) in Department of Defense (DoD) Ground System Test & Evaluation, Reliability, Availability, and Maintainability (RAM) Engineering, Quality Engineering and Assurance, and Production Engineering. PA&T provides well-trained and knowledgeable matrix support to Team Detroit Arsenal across all our competency areas and supports GVSC S&T and Sustainment 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 provides decision makers with actionable data quickly, accelerating the pace of innovation within GVSC and Program Management Offices (PMOs). The DTL is an ISO/IEC 17025 accredited laboratory providing our customers with confidence in the traceability of the data that we provide. Our engagement with industry is primarily focused on SETA contractor support in our competency areas and conducting testing for industry in our Durability Test Lab.
  - **SED:** is responsible for providing systems engineering core capabilities and services to our ground vehicle partners. As systems engineering embraces digital change we are developing our workforce to utilize more models, tools, and environments for product development. Technology Areas: Digital Engineering.

## Classroom 145

9. **GVPM (Ground Vehicle Power & Mobility):** Technology Areas: Powertrain & Mobility (Combat & Tactical Powertrain Technologies, Hybrid Architecture & Thermal Systems)
10. **GVPM (Ground Vehicle Power & Mobility):** Technology Areas: Powertrain & Mobility (Tires, Track, & Suspension & Powertrain Control Systems)
11. **GVPM (Ground Vehicle Power & Mobility):** Technology Areas: Fuel Cell Technology and Energy Storage (Fuel Cells, Batteries including High Voltage)
12. **GVPM & VEA:** Technology Areas: Vehicle Electrification (Integrated Starter Generators, Power Electronics/Inverters, Electric Drive Motors, Power Distribution, and High Voltage cabling)
13. **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/sensor distribution networks, computers and components, and data network development and specification. VEA focuses on developing these technologies via a Modular Open Systems Approach (MOSA) to help maximize capability for the Soldier and PEO Customers.

