



Ground System Survivability Overview

27 March 2012

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U.S. ARMY TANK AUTOMOTIVE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (TARDEC)

Report Documentation Page			Form Approved OMB No. 0704-0188		
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1. REPORT DATE 27 MAR 2012		2. REPORT TYPE Briefing Charts		3. DATES COVERED 01-03-2012 to 01-03-2012	
4. TITLE AND SUBTITLE Ground System Survivability Overview				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Jeff Jaster				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army TARDEC, 6501 East Eleven Mile Rd, Warren, Mi, 48397-5000				8. PERFORMING ORGANIZATION REPORT NUMBER #22692	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army TARDEC, 6501 East Eleven Mile Rd, Warren, Mi, 48397-5000				10. SPONSOR/MONITOR'S ACRONYM(S) TARDEC	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) #22692	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT Ground System Survivability Overview Presentation - 2012					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Public Release	18. NUMBER OF PAGES 11	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



GSS Vision & Mission

VISION

Demonstrate and be recognized as the Army ground vehicle survivability integration leaders

MISSION

Design for Occupant Centric Survivability via maturation & integration of technology

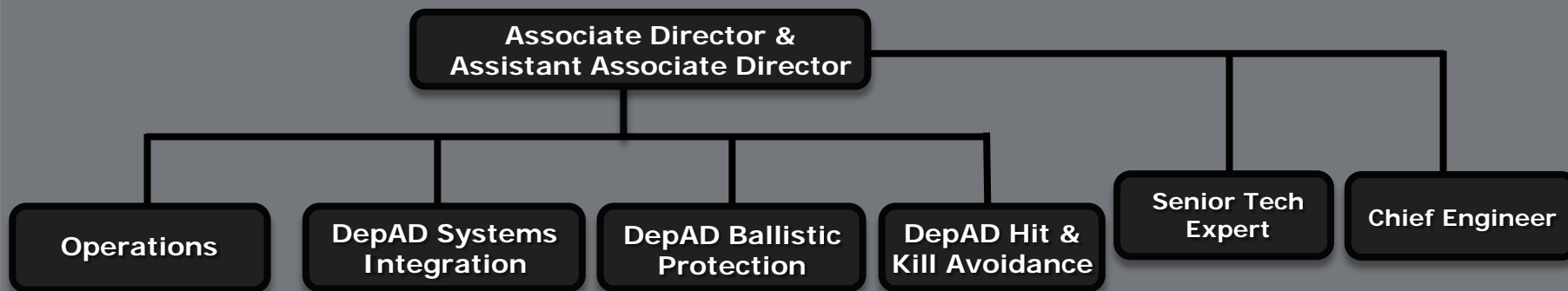


LEAD – INNOVATE - INTEGRATE – DELIVER !

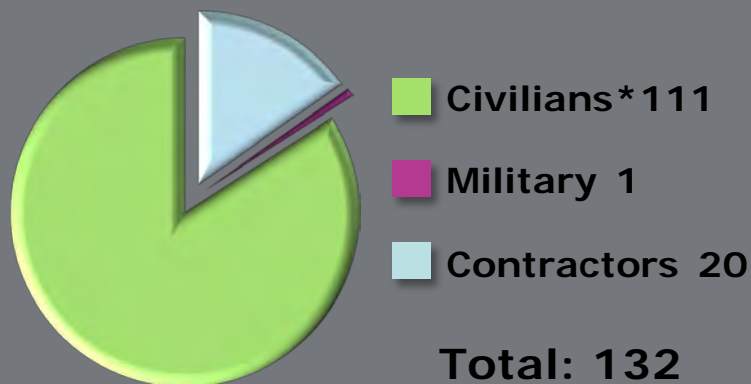


GSS

Organizational Structure & Personnel

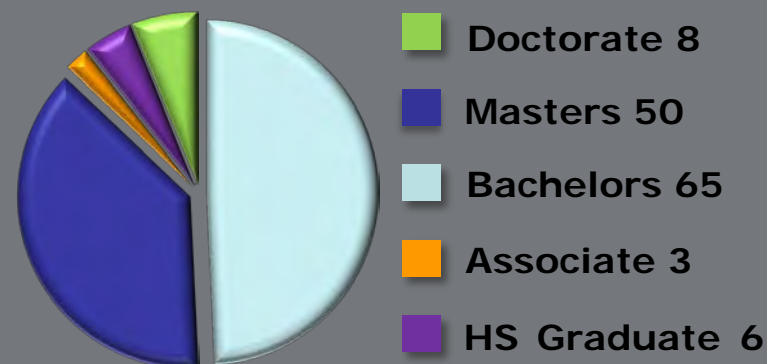


Total Workforce



*Includes permanent/term employees, local interns, STEPs, and local SCEPs (in a pay status).

Education



GSS has a proven, technically proficient workforce that meets mission requirements !

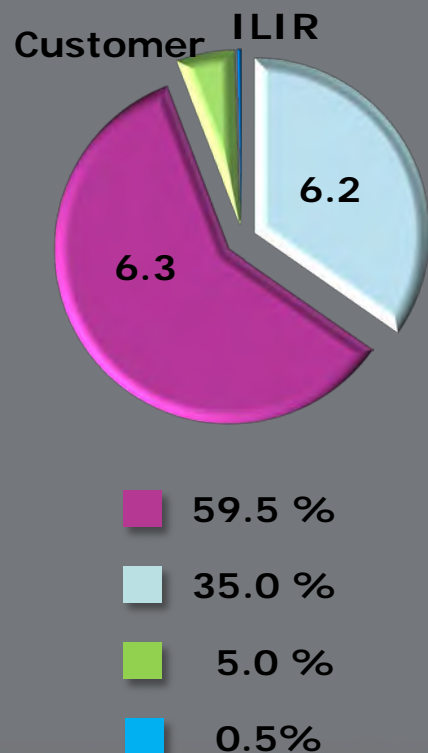


GSS

Financial Resources



RDT&E Funding



Appropriately Balanced Portfolio

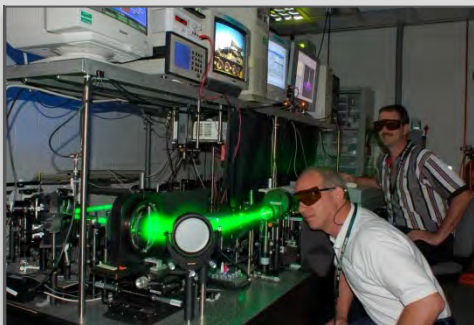


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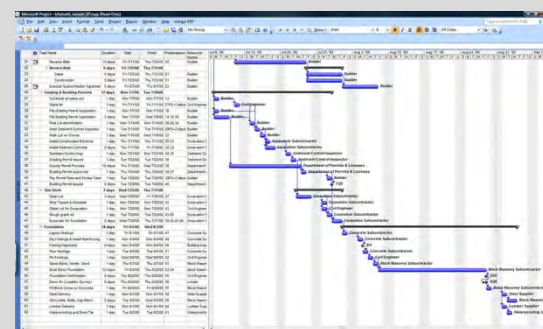


Key Capabilities

Full Life-Cycle Technical Support



Research/Technology Development

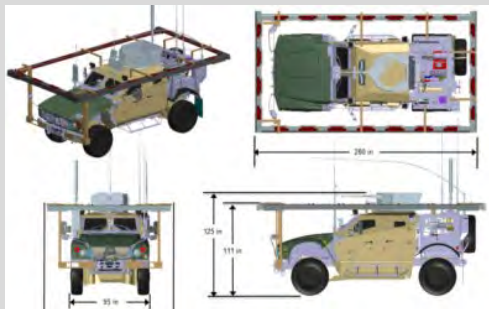


Program Management



Product Development

Integration



Production Support



Field Support



GSS is Part of the TARDEC Enterprise that Executes its Capabilities via an Integrated Team



GSS Core Competencies

Supporting Army Acquisition Decision-Making

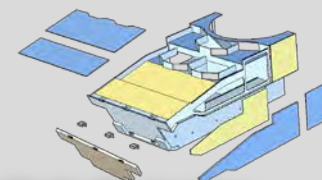
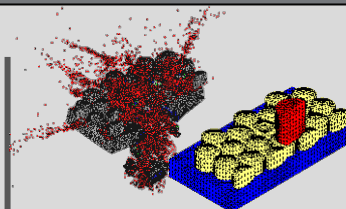


Integration Services:

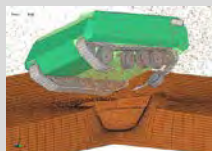
- *Hit Avoidance*
- *Ballistic Protection*
- *Kill Avoidance*
- *Optimization*



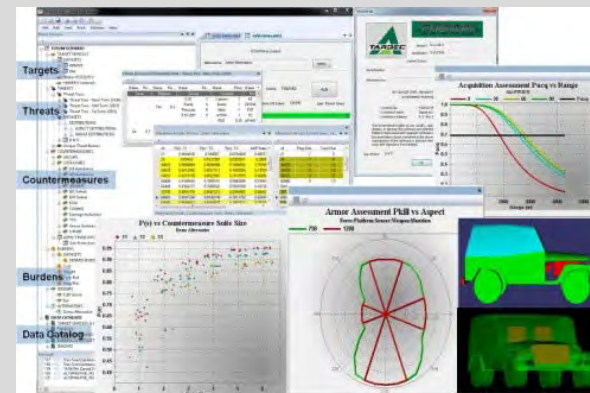
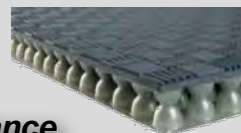
Hit Avoidance



Ballistic Protection



Kill Avoidance



Optimization

Demonstrated Technical Competency



Current Projects

Part of a Diverse Technology Portfolio



Kinetic Energy Active Protection System (KE-APS)

Architecture, Requirements, Maturation & Evaluation of Defensive-Aid Suites (ARMED)



Advanced Combat Vehicle Armor Development (ACVAD)



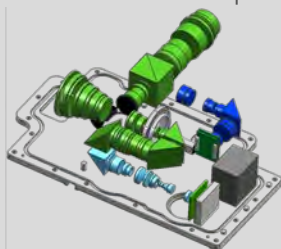
Occupant Centric Platform (OCP) - TECD



Common Automatic Fire Extinguishing System (CAFES)



Tactical Vehicle Armor Development (TVAD)



Ground Combat Vehicle Vision Protection



Transparent Armor Development



Ultra Light Vehicle (ULV)



Threat Oriented Survivability Optimization Model (TOSOM)



Warrior Injury Assessment Manikin (WIAMan)



Facilities

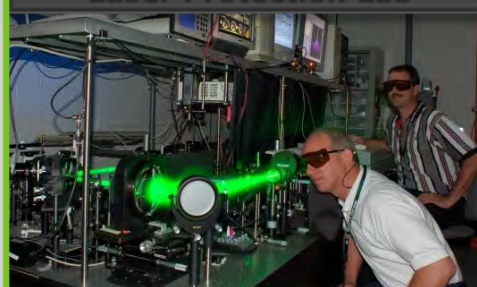
Robust – Unique



Laboratory Capabilities

- Laser Protection Lab
- Hit Avoidance Lab
- Sensor Enhanced Nondestructive Testing Lab
- Armor Development Lab
- Survivability Armor Ballistic Lab
- Fire Lab
- Occupant Protection Lab
- Grayling Experimental Range

Laser Protection Lab



Armor Development Lab



Hit Avoidance Lab - SANGB



Hit Avoidance Lab - Warren



Occupant Protection Lab - SANGB





Facilities

Robust – Unique



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Survivability Armor Ballistic Lab



Sensor Enhanced Nondestructive Testing Lab



Fire Lab SANGB



Building 1437

Grayling RPG Experimental Range

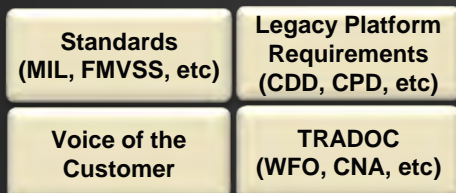


JAMES SCOTT 1/2012



Occupant Centric Platform

Approach to Execution



Theatre Data
Threat & Casualty



Soldier HFE



Live Fire Assessments



Modeling &
Simulation



Integration

Requirements Analyses
(using QFD)



Derived Requirements

Metrics

Technology Assessment

	Domain	Domain 1	Domain 2	Domain 3
Metric 1				
Metric 2				
Metric 3				
Metric 4				

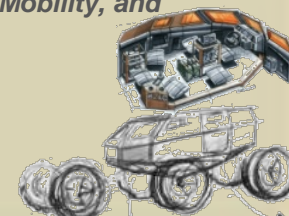
Technology Market Survey

Current Platform Technologies

New Acquisition Programs

Technologies and know-how to optimize Force Protection, Crew Effectiveness, Mobility, and Transportability Req'ts:

- **Cost-effective Acquisition**
- **Product Descriptions**
- **Efficient Trade Analysis**
- **Design Standards & Tools**
- **Test & Validation Methods**



Occupant Centric Concept Demonstrator "CAMEL"

Occupant Centric Survivability for Military Ground Vehicle Design:

Publish overarching MIL-STD, design guidelines, technical specifications & Test Operations Procedures

Platform Specific Demonstrators (light & heavy)

Existing Platforms

Technologies and know-how to optimize Force Protection while maintaining mobility:

- **Estimate capability gains with existing constraints**
- **Trade Analysis & SWaP-c**
- **Product Descriptions**
- **Design Standards & Tools**



A grayscale photograph of three soldiers in a desert environment. Two soldiers are standing on the left, facing away from the camera, looking out over a valley. A third soldier is kneeling on the right, facing towards the camera. The word "Questions?" is overlaid in the center of the image.

Questions?