NDIA
AT THE HEART OF THE MISSION

2020 TACTICAL WHEELED VEHICLES CONFERENCE

Fleet Modernization and Sustainment for the Future Battlefield

March 2 – 4 | Austin, TX | NDIA.org/TWV20

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WHO WE ARE

The National Defense Industrial Association is the trusted leader in defense and national security associations. As a 501(c)(3) corporate and individual membership association, NDIA engages thoughtful and innovative leaders to exchange ideas, information, and capabilities that lead to the development of the best policies, practices, products, and technologies to ensure the safety and security of our nation. NDIA's membership embodies the full spectrum of corporate, government, academic, and individual stakeholders who form a vigorous, responsive, and collaborative community in support of defense and national security. For more than 100 years, NDIA and its predecessor organizations have been at the heart of the mission by dedicating their time, expertise, and energy to ensuring our warfighters have the best training, equipment, and support. For more information, visit **NDIA.org**

SCHEDULE AT A GLANCE

MONDAY, MARCH 2

Golf Scramble
Lions Municipal Golf Course
7:00 am – 2:00 pm

U.S. Army Futures Command AAL & Capital Factory Tour
U.S. Army Futures Command
2:30 – 4:00 pm

Opening Reception & Registration
Etter-Harbin Alumni Center
5:00 – 7:00 pm

TUESDAY, MARCH 3

Registration & Networking Breakfast
Zlotnik Ballroom Foyer
7:00 am – 6:30 pm

General Session
Zlotnik Ballrooms 4 – 6
8:00 – 10:25 am

Networking Break
Zlotnik Ballroom Foyer
10:25 – 11:00 am

General Session
Zlotnik Ballrooms 4 – 6
11:00 am – 12:00 pm

Networking Lunch
Zlotnik Ballrooms 1 – 3
12:00 – 1:00 pm

General Session
Zlotnik Ballrooms 4 – 6
1:00 – 2:30 pm

Networking Break
Zlotnik Ballroom Foyer
2:30 – 3:00 pm

General Session
Zlotnik Ballrooms 4 – 6
3:00 – 5:15 pm

Award Presentations
Zlotnik Ballrooms 4 – 6
5:15 – 5:30 pm

Networking Reception
Zlotnik Ballroom Foyer
5:30 – 7:00 pm

WEDNESDAY, MARCH 4

Registration & Networking Breakfast
Zlotnik Ballroom Foyer
7:00 am – 12:00 pm

General Session
Zlotnik Ballrooms 4 – 6
8:00 – 10:15 am

Networking Break
Zlotnik Ballroom Foyer
10:15 – 10:45 am

General Session
Zlotnik Ballrooms 4 – 6
10:45 am – 1:15 pm

WELCOME TO THE 2020 TACTICAL WHEELED VEHICLES CONFERENCE

On behalf of NDIA's Tactical Wheeled Vehicles Division, welcome to the 2020 Tactical Wheeled Vehicles Conference in beautiful Austin, Texas! This conference is widely acknowledged as the premier conference focused on the tactical wheeled vehicle industry and its critical support to the Department of Defense and our nation's warfighters. This is the only conference held specifically for the military's tactical wheeled vehicle community.

Objective: This year's theme is Tactical Wheeled Vehicles: Fleet Modernization and Sustainment for the Future Battlefield.

This conference and seminar bring together the military services, industry, prime contractors, subcontractors, and their suppliers to discuss present and future wheeled vehicle requirements for all Services. You will hear from speakers and panels on a wide array of subjects that will provide critical insight into and understanding of the requirements and challenges facing the tactical wheeled vehicle community. This information is invaluable to all who participate in the design, development, production, modernization, and sustainment of tactical wheeled vehicles.

The Tactical Wheeled Vehicles Division is proud to present our 8th Annual Red Ball Express Award at the conference. We will present two separate awards: one in the government/military category and the other in the industry category. The recipients have made significant contributions to the strengthening of our national security by developing or procuring TWVs or critical technologies that contribute to the TWV community. Thank you to Dion Anglin, our Division Vice Chair, for leading the nomination and award selection committee. This year's award recipients are:

2020 RED BALL EXPRESS AWARD – GOVERNMENT:
Mr. Clifton Ellis, Chief Engineer and Product Director, Light Tactical Vehicles, Program Executive Office, Combat Support & Combat Service Support (PEO CS&CSS), U.S. Army

2020 RED BALL EXPRESS AWARD – INDUSTRY:
Hutchinson Industries, Inc., Trenton, NJ

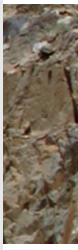
Thank you for attending and taking part in this important annual event for the tactical wheeled vehicle industry. While here, I strongly encourage you to take full advantage of the superb opportunity to engage with our industry, government, and military leaders. Your participation is important to the success of our conference and ensures we continue to send a message to Department of Defense decision-makers that a capable, modernized, and properly sustained tactical wheeled vehicle fleet is critically important to our national defense.

Barry Tyree
Chair
Tactical Wheeled Vehicles Division, NDIA

LEADERSHIP

Barry Tyree
Division Chair

Dion Anglin
Division Vice Chair



TACTICAL WHEELED VEHICLES DIVISION

WHO WE ARE

NDIA's Tactical Wheeled Vehicles Division works to increase the understanding of the U.S. military's tactical vehicle needs among all sectors involved. Its annual Tactical Wheeled Vehicles Conference brings together the military services, industry, prime contractors, academia, subcontractors, and suppliers to discuss present and future requirements for all services, the U.S. Army Tank & Automotive Command, and the Departments of Defense and Homeland Security. This annual event has historically afforded an atmosphere for open discussions between customers and suppliers based on the needs of military users.

EVENT INFORMATION

LOCATION

AT&T Hotel and Conference Center
1900 University Avenue
Austin, TX 78705

EVENT WEBSITE

NDIA.org/TWV20

EVENT THEME

Fleet Modernization and Sustainment for the Future Battlefield

WIFI

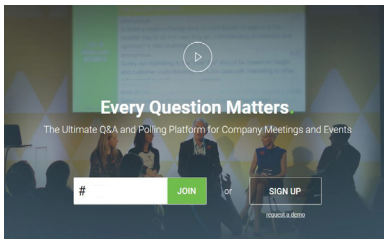
Network: UTguest
Password: *No password required*

MOBILE APP

Make the most of your attendance at the 2020 Tactical Wheeled Vehicles Conference with the NDIA Events mobile app, available on the App Store for Apple devices and Google Play for Android devices. Simply search "NDIA Meetings" to find and download the NDIA Events app for free. With it, you will have 24/7 access to an activity feed, speaker listings, sponsor and exhibitor information, Slido, venue maps, and an interactive game that could win you a 50% discount on registration for next year's TWV Conference. Be sure to accept push notifications so that you can receive the most up-to-date information regarding any changes to the conference agenda.

REAL-TIME CROWD-SOURCED Q&A

Sli.do is an audience engagement platform that allows users to crowd-source top questions to drive meaningful conversations and increase crowd participation. Participants can up-vote the questions they would most like to hear discussed.
Simply tap the thumbs-up button to up-vote a question. Top questions are displayed for the moderator and speaker to answer. Ask your question in the NDIA Events mobile app by selecting the "More" button in the bottom right-hand corner of the screen and then "Slido."



Event code: **TWV20**

ATTIRE

Civilian: Business Casual
Military: Uniform of the Day

SURVEY AND PARTICIPANT LIST

You will receive via email a survey and list of participants (name and organization) after the conference. Please complete the survey to make our event even more successful in the future.

EVENT CONTACT

Tiffany Milnor
Meeting Planner
(703) 247-2558
tmilnor@NDIA.org

Kabir Brown
Divisions Coordinator
(703) 247-2575
kbrown@NDIA.org

SPEAKER GIFTS

In lieu of speaker gifts, a donation is being made to the Fisher House Foundation.

PLANNING COMMITTEE

View the Planning Committee members' full bios in the NDIA Events mobile app.

Barry Tyree
Division Chair

Dion Anglin
Division Vice Chair

John Chadbourne
Session II Co-Chair

Jeff Earley
Session III Co-Chair

Eddie Garcia
Session II Co-Chair

Dave Laverdiere
Session III Co-Chair

Curtis McCoy
Session I Co-Chair

Roger Nadeau
Session I Co-Chair

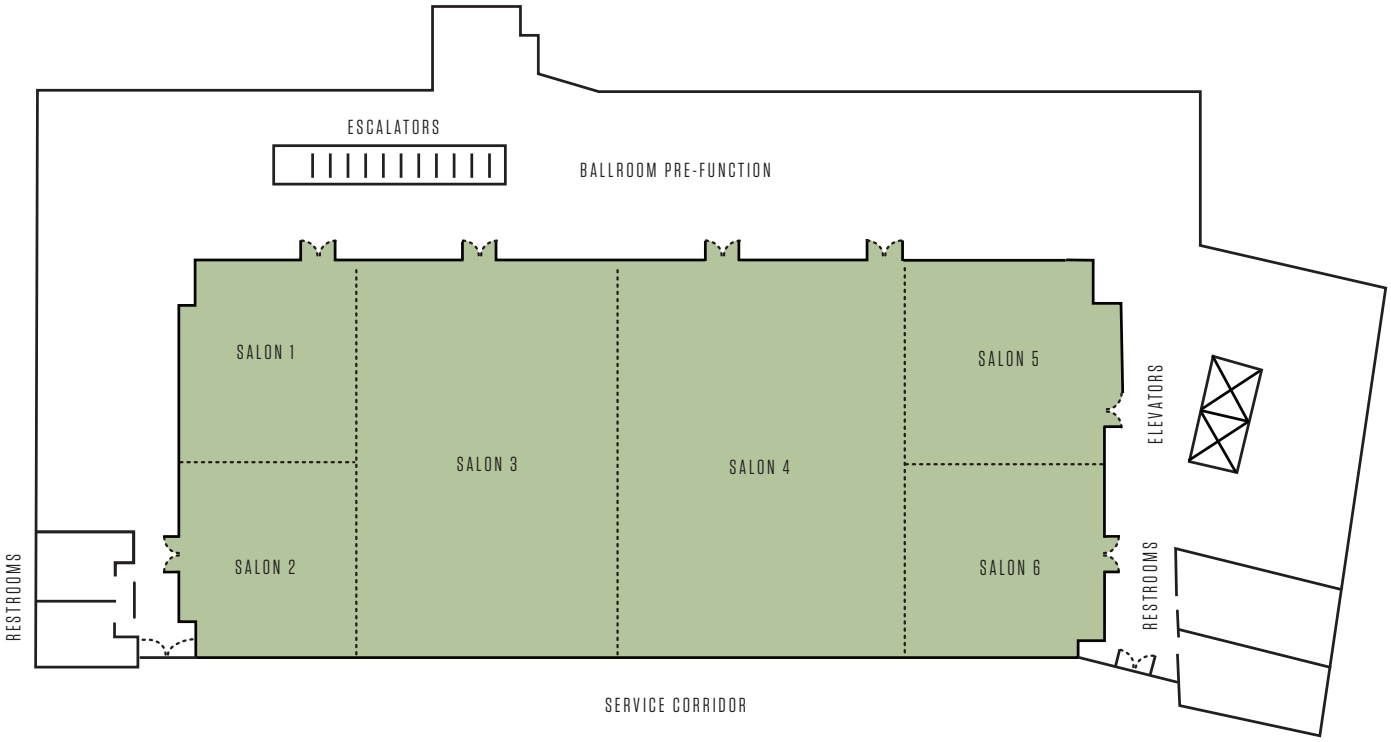
HARASSMENT STATEMENT

NDIA is committed to providing a professional environment free from physical, psychological and verbal harassment. NDIA will not tolerate harassment of any kind, including but not limited to harassment based on ethnicity, religion, disability, physical appearance, gender, or sexual orientation. This policy applies to all participants and attendees at NDIA conferences, meetings and events. Harassment includes offensive gestures and verbal comments, deliberate intimidation, stalking, following, inappropriate photography and recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome attention. Participants requested to cease harassing behavior are expected to comply immediately, and failure will serve as grounds for revoking access to the NDIA event.

ANTITRUST STATEMENT

NDIA has a policy of strict compliance with federal and state antitrust laws. The antitrust laws prohibit competitors from engaging in actions that could result in an unreasonable restraint of trade. Consequently, NDIA members must avoid discussing certain topics when they are together at formal association membership, board, committee, and other meetings and in informal contacts with other industry members: prices, fees, rates, profit margins, or other terms or conditions of sale (including allowances, credit terms, and warranties); allocation of markets or customers or division of territories; or refusals to deal with or boycotts of suppliers, customers or other third parties, or topics that may lead participants not to deal with a particular supplier, customer or third party.

VENUE MAP



AGENDA

MONDAY, MARCH 2

7:00 – 8:00 am

GOLF SCRAMBLE REGISTRATION & CONTINENTAL BREAKFAST
LIONS MUNICIPAL GOLF COURSE

8:00 am – 2:00 pm

GOLF SCRAMBLE
LIONS MUNICIPAL GOLF COURSE

2:30 – 4:00 pm

TOUR OF THE U.S. ARMY FUTURES COMMAND ARMY APPLICATIONS LAB (AAL) & THE CAPITAL FACTORY FACILITY
U.S. ARMY FUTURES COMMAND

LTC(P) Tim Sugars, USA
Army Applications Lab (AAL), U.S. Army Futures Command

Patrice Walker
VIP Manager, Capital Factory

5:00 – 7:00 pm

OPENING RECEPTION & REGISTRATION
ETTER-HARBIN ALUMNI CENTER

TUESDAY, MARCH 3

7:00 am – 6:30 pm

REGISTRATION
ZLOTNIK BALLROOM FOYER

7:00 – 8:00 am

CONTINENTAL NETWORKING BREAKFAST
ZLOTNIK BALLROOM FOYER

8:00 – 8:15 am

WELCOME & CONFERENCE OVERVIEW
ZLOTNIK BALLROOMS 4 – 6

Barry Tyree
Chair, Tactical Wheeled Vehicles Division, National Defense Industrial Association (NDIA)

8:15 – 8:30 am

NDIA ENTERPRISE UPDATE
ZLOTNIK BALLROOMS 4 – 6

Gen Hawk Carlisle, USAF (Ret)
President and Chief Executive Officer, NDIA

SESSION I
CO-CHAIRS: ROGER NADEAU & CURTIS MCCOY

8:30 – 8:40 am

REMARKS
ZLOTNIK BALLROOMS 4 – 6

Timothy Goddette, SES
Program Executive Officer, Combat Support & Combat Service Support (PEO CS&CSS), U.S. Army

8:40 – 9:15am

KEYNOTE
ZLOTNIK BALLROOMS 4 – 6

MG Erik Peterson, USA
Director, Force Development, Office of the Deputy Chief of Staff, G-8, HQDA, U.S. Army

9:15 – 9:50 am

REMARKS
ZLOTNIK BALLROOMS 4 – 6

Jeffrey White, SES
Principal Deputy, Assistant Secretary of the Army (Acquisition, Logistics & Technology), HQDA, U.S. Army

9:50 – 10:25 am

REMARKS
ZLOTNIK BALLROOMS 4 – 6

Kenneth Watson, SES
Deputy Commander, Defense Logistics Agency, Land & Maritime

10:25 – 11:00 am

NETWORKING BREAK
ZLOTNIK BALLROOM FOYER

11:00 am – 12:00 pm

CONGRESSIONAL PANEL

ZLOTNIK BALLROOMS 4 – 6

Thomas "TJ" Stapleton
President, Stapleton & Associates
Moderator

Blake Souter
Military Legislative Assistant (MLA) for Senator Tammy Baldwin (WI)

Wes Hallman
Senior Vice President, Strategy & Policy, NDIA

Michael Gray
Defense Systems Group, SAIC

12:00 – 1:00 pm

NETWORKING LUNCH

ZLOTNIK BALLROOMS 1 – 3

SESSION II

CO-CHAIRS: EDDIE GARCIA & JOHN CHADBOURNE

1:00 – 1:30 pm

KEYNOTE

ZLOTNIK BALLROOMS 4 – 6

Jeffrey Langhout, SES
Director, Ground Vehicle Systems Center (GVSC), Combat Capabilities Development Command (CCDC), U.S. Army

1:30 – 2:30 pm

POWER GENERATION PANEL: ENGINES & POWER MANAGEMENT/STORAGE

ZLOTNIK BALLROOMS 4 – 6

Regis Luther
Vice President of Engineering and Chief Technology Officer, AM General, LLC
Moderator

Jacob Brown
Electrification Leader – PSBU Markets, Cummins, Inc.

Nigel Sutton
Vice President, Business Development, General Motors Defense, LLC

Dr. Peter Schihl
Senior Research Scientist, Ground Vehicle Propulsion and Mobility Laboratory (GVPM), GVSC, CCDC, U.S. Army

Clifton Ellis
Chief Engineer and Product Director, Light Tactical Vehicles, Program Executive Office,
Combat Support & Combat Service Support (PEO CS&CSS), U.S. Army

2:30 – 3:00 pm

NETWORKING BREAK

ZLOTNIK BALLROOM FOYER

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3:00 – 4:15 pm

NEXT-GENERATION ENGINE TECHNOLOGY & FUEL PANEL: JP8 VS. LOW SULFUR DIESEL & NEW TECHNOLOGY

ZLOTNIK BALLROOMS 4 – 6

Dr. Peter Schihl
Senior Research Scientist, GVPM, GVSC, CCDC, U.S. Army
Moderator

Brent Cring
Chief Engineer, Mack Defense, LLC

John Major, Jr.
Vice President, Government Relations, Achates Power Opposing Piston

Jill Bramer
Branch Leader, Force Projection, Fuels & Lubricant, GVSC, CCDC, U.S. Army

Mark Grimm
Chief Engineer, 7.2L-18L Engines, Industrial Power Systems Division, Caterpillar Defense

4:15 – 5:15 pm

EQUIPMENT & LOGISTICS READINESS PANEL

ZLOTNIK BALLROOMS 4 – 6

Mark Colley
Director, Combat Support & Combat Service Support Readiness & Sustainment Directorate,
Integrated Logistics Support Center (ILSC), Tank-Automotive and Armaments Command (TACOM), U.S. Army
Moderator

Daniel Gallagher, SES
Executive Director, Army Contracting Command-Warren, TACOM, U.S. Army

Mike Ivy
Senior Vice President, International Programs & Global Product Support, Oshkosh Defense, LLC

Barry Bomier
Manager, Military Business & Programs, Michelin North America, Inc.

Jason Duncan
Publications and Software Support Group Leader, ILSC, TACOM, U.S. Army

Susan Cashero
Director, Transportation Systems Product Support Integration Directorate, ILSC, TACOM, U.S. Army

5:15 – 5:30 pm

RED BALL EXPRESS AWARD PRESENTATIONS

ZLOTNIK BALLROOMS 4 – 6

Dion Anglin
Vice Chair, Tactical Wheeled Vehicles Division, NDIA

Government Recipient Presentation

Industry Recipient Presentation

5:30 – 7:00 pm

NETWORKING RECEPTION

ZLOTNIK BALLROOM FOYER

WEDNESDAY, MARCH 4

7:00 am – 12:00 pm **REGISTRATION**
ZLOTNIK BALLROOM FOYER

7:00 – 8:00 am **CONTINENTAL NETWORKING BREAKFAST**
ZLOTNIK BALLROOM FOYER

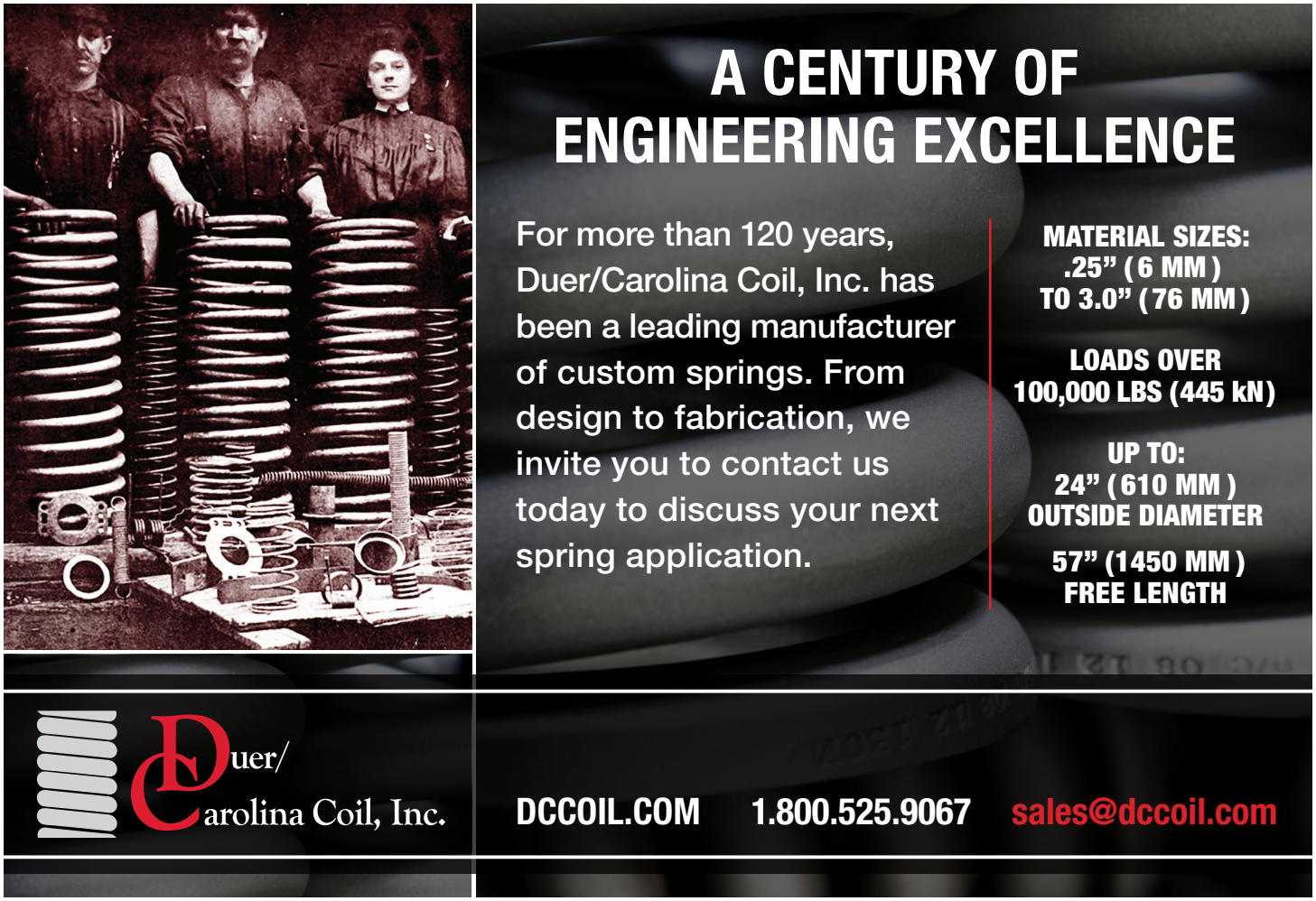
SESSION III
CO-CHAIRS: JEFF EARLEY & DAVE LAVERDIERE

8:00 – 8:30 am **KEYNOTE**
ZLOTNIK BALLROOMS 4 – 6

BG Jered Helwig, USA
Chief of Transportation, Transportation Corps and Transportation School, Fort Lee, VA

8:30 – 9:00 am **REMARKS**
ZLOTNIK BALLROOMS 4 – 6

Marion Whicker, SES
Executive Director, Integrated Logistics Support Center (ILSC), TACOM, U.S. Army



9:00 – 10:15 am

PEO CS&CSS (USA) REMARKS

ZLOTNIK BALLROOMS 4 – 6

Timothy Goddette, SES
Program Executive Officer, Combat Support & Combat Service Support (PEO CS&CSS), U.S. Army

Wolfgang Petermann
Project Manager, Transportation Systems

Michael Sprang
Project Manager, Joint Light Tactical Vehicles, Joint Program Office

COL Adrian Marsh, USA
Project Manager, Expeditionary Energy & Sustainment Systems

10:15 – 10:45 am

NETWORKING BREAK

ZLOTNIK BALLROOM FOYER

10:45 am – 12:00 pm

PEO LAND SYSTEMS (USMC) REMARKS

ZLOTNIK BALLROOMS 4 – 6

Rob Cross
Deputy Program Executive Officer, Land Systems (DPEO-LS), U.S. Marine Corps

Andrew Rodgers
Program Manager, Motor Transport, PEO LS

Gene Morin
Product Manager, Joint Light Tactical Vehicles

Jennifer Moore
Product Manager, Light Tactical Vehicles

Lorrie Owens
Product Manager, Medium Tactical Vehicles

Steve Oatridge
Project Officer, Heavy Tactical Vehicles

12:00 – 12:30 pm

BOXED LUNCH – EAT IN PLACE

ZLOTNIK BALLROOMS 4 – 6

12:30 – 1:00 pm

RESERVE COMPONENT MODERNIZATION/SUSTAINMENT CHALLENGES

ZLOTNIK BALLROOMS 4 – 6

COL Claudius von Fahnestock, USAR
Director, Strategic Equipping Division, Office of the Chief - Army Reserve (OCAR), U.S. Army Reserve

1:00 – 1:15 pm

CLOSING REMARKS

ZLOTNIK BALLROOMS 4 – 6

Barry Tyree
Chair, Tactical Wheeled Vehicles Division, NDIA

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BIOGRAPHIES

ROB CROSS

Deputy Program Executive Officer, Land Systems, U.S. Marine Corps

Rob Cross is assigned as the Deputy Program Executive Officer Land Systems (DPEO-LS). PEO LS is the only Marine Corps PEO and provides comprehensive portfolio management of all USMC ACAT I & II programs and other smaller affiliated programs. The PEO provides leadership across the full spectrum of acquisition disciplines for all assigned programs.

Prior to becoming DPEO-LS, Cross was the Acting Program Manager (PM) and Deputy PM of Global Combat Support System – Marine Corps (GCSS-MC). In this role, he delivered critical product improvements to the fleet while revamping the contracting and funding strategy to increase program agility.

Cross served as a project officer within the Deputy Assistant Secretary of the Navy for Expeditionary Programs and Logistics Management (DASN E&LM) wherein he led the effort to expand the role of DASN E&LM to include the full breadth of Marine Corps equities. Prior to the DASN E&LM, he served as the Deputy Director for the Amphibious Combat Vehicle (ACV) Study Team.

Before then, Cross served in a number of leadership roles within Program Manager Advanced Amphibious Assault (PM AAA), to include the first Product Director for the Amphibious Combat Vehicle program. As the Director of Acquisition and Business Management of the Expeditionary Fighting Vehicle, he successfully led program management recovery efforts immediately following a Nunn-McCurdy Breach. Prior to that role, Cross served as the Director of Test and Evaluation during which he oversaw the execution of the Expeditionary Fighting Vehicle Operational Assessment.

Prior to moving to the Marine Corps, Cross served as a structural engineer with the Topside Composite Branch at the Carderock Division of the Naval Surface Warfare Center. In his final assignment he served as the lead structural engineer for the LPD-17 Advanced Enclosed Mast/Sensor System.

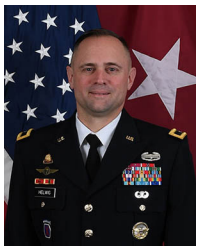
Cross is a Certified Level III Acquisition Professional in the Systems Planning, Research, Development and Engineering (SPRDE) and Program Management (PM) acquisition career fields. He has more than 28 years of civilian service, with over 20 years in MDAP and MAIS acquisition.

Rob Cross holds a BS in Mechanical Engineering from the University of Virginia (1991) and an MS in Civil Engineering from The George Washington University (1998).

TIMOTHY GODDETTE, SES

Program Executive Officer, Combat Support & Combat Service Support, U.S. Army

Appointed to the Senior Executive Service in January 2014, Timothy Goddette became the U.S. Army's Program Executive Officer, Combat Support & Combat Service Support, on June 4, 2018. In this role, he provides professional and executive management for the development, systems integration, acquisition, testing, fielding, sustainment, and modernization of diverse systems across the Army's Transportation, Quartermaster, Ordnance, and Engineer portfolios—all critical combat enablers for the "Big Six"—moving, carrying, fueling, feeding, powering, maintaining, and protecting lethal combat formations with manned and unmanned capabilities. He oversees 250 programs with a combined annual budget of approximately $3.5 billion and a total portfolio budget of approximately $15 billion (POM FY20-25). The PEO CS&CSS team includes four board-selected Joint and Army Project Managers and approximately 1,500 military and civilian teammates in PEO core and collocated matrix positions, liaison offices, fielding teams, indirect support positions, and support contractors in five geographic locations. Timothy Goddette is a retired Army colonel and is a member of the Army Acquisition Corps who holds the highest-level program management certifications.



BG JERED HELWIG, USA

Chief of Transportation, Transportation Corps and Transportation School, U.S. Army, Fort Lee, VA

Brigadier General Jered Helwig was commissioned as a Second Lieutenant in the Transportation Corps branch detailed to Armor in 1994 after graduating from Wheaton College with a BA in Communications. Additionally, he earned an MS in Public Policy from Georgetown University and an MS in National Resource Strategy from the National Defense University (Eisenhower School). BG Helwig is a graduate of the Armor Officer Basic Course, Scout Platoon Leaders Course, Combined Logistics Advanced Course, Command and General Staff College, National Defense University (Senior Service College), and Jumpmaster School.

BG Helwig's operational experience encompasses a career spent mostly in tactical units with two deployments to Afghanistan, one deployment to Iraq, one deployment to Bosnia, and one deployment to Haiti.

Throughout his 24 years of service, BG Helwig held many assignments: Platoon Leader and Troop Executive Officer (XO) in the 2nd Armored Cavalry Regiment, Fort Polk Louisiana; Transportation officer of the 173rd Airborne BDE in Vicenza, Italy; Company Commander of the 70th Transportation Company in Mannheim, Germany; JCS/OSD intern at OSD (Personnel and Readiness) in the Pentagon; Support Operations (SPO) Plans/Assistant SPO for the 82nd Sustainment BDE, S4 and later XO for the 2nd Brigade 82nd Airborne Division, Battalion XO for the 407th Brigade Support Battalion, and Secretary of the General Staff for the 1st Theater Support Command all at Fort Bragg, North Carolina; Battalion Commander of the 710th Brigade Support Battalion in 3rd Brigade 10th Mountain Division (Spartans), G4 of the 10th Mountain Division in Fort Drum, New York; CJTF4 of Regional Command (East) in Afghanistan; Commander of the 3rd

Infantry Division Sustainment BDE (Providers), Fort Stewart, GA; and Executive Officer to the Deputy Commanding General AMC, Redstone Arsenal, AL.

BG Jered Helwig's awards and decorations include the Legion of Merit (1 OLC), the Bronze Star Medal (2 OLC), the Meritorious Service Medal (4 OLC), the Joint Service Commendation Medal, the Army Commendation Medal (3 OLC), the Army Achievement Medal (1OLC), the Combat Action Badge, Parachutist Badge, and the Office of the Secretary of Defense Badge.

JEFFREY LANGHOUT, SES

Director, Ground Vehicle Systems Center, Combat Capabilities Development Command, U.S. Army

Jeffrey Langhout serves as the Director for the U.S. Army Combat Capabilities Development Command's (CCDC) Ground Vehicle Systems Center (GVSC). He leads a workforce of over 1,800 engineers, scientists, researchers, and support staff in delivering advanced technologies as required by the Army's strategic priorities and support to its Cross Functional Teams. Langhout also provides life cycle engineering solutions to the Army's Ground Combat Systems and Combat Support & Combat Service Support PEOs, the Tank Automotive Life Cycle Management Command, and the broader Department of Defense. In his capacity as the Director, Langhout ensures the GVSC is Forging the Future by developing world-class engineering talent in the areas of survivability and protection, autonomy and robotics, propulsion and mobility, electronics and power management, fuels and lubricants, and ground system design and optimization. GVSC (formerly the Tank Automotive Research, Development and Engineering Center [TARDEC]) is the Army's primary organic engineering talent to develop the Next Generation Family of Combat Vehicles and thus deliver land dominance in the future fight.

MG ERIK PETERSON, USA

Director, Force Development, Office of the Deputy Chief of Staff, G-8

Major General Erik Peterson became the Director, Force Development, Office of the Deputy Chief of Staff, G-8, on August 26, 2019. As the Director, Force Development, MG Peterson serves as the principal advisor to the Deputy Chief of Staff, G-8, the Vice Chief of Staff, Army, and the Chief of Staff, Army, on all Army-wide equipping programs and resources. Prior to this assignment, MG Peterson commanded Division West of First U.S. Army, consisting of five brigades and two mobilization sites arrayed across the country.

MG Peterson received his Army commission in 1986 as a Distinguished Military Graduate of the University of Idaho's Chrisman Battalion, Army Reserve Officer Training Corps program. He was assigned to the Aviation Branch and completed flight school in 1987.

His first assignment was as a Platoon Leader with the 271st Combat Aviation Company, Republic of Korea. He then served his first of four tours with the 160th Special Operations Aviation Regiment (Airborne); Bravo Company Platoon Leader, Bravo Company Commander, and Headquarters Company Commander, 3rd Battalion, Hunter Army Airfield, GA; Adjutant and Battalion Operations Officer, 2nd Battalion, Fort Campbell, KY; Battalion Executive Officer and Bravo Company Commander, 3rd Battalion; and Battalion Commander, 2nd Battalion.

In addition to his many other military assignments, MG Peterson has commanded and held key staff positions in numerous overseas combat and contingency operations. He is qualified in eight different military and commercial helicopters.

MG Peterson earned a BS in Geography and a BS in Cartography from the University of Idaho's College of Mines and Earth Resources in addition to Master's Degrees in Business Administration (MBA) and National Security Strategy. Other professional military education includes the Aviation Officer Advanced Course, Combined Arms Service Staff School, Command and General Staff College, and the National War College.

His military awards and decorations include the three Distinguished Service Medals, four Legions of Merit, six Bronze Star Medals, five Meritorious Service Medals, the Air Medal with valor device and numeral 5, the NATO Meritorious Service Medal, the Combat Action Badge, the Master Aviator Badge, the Master Parachutist Badge, and the Air Assault Badge. MG Petersen has earned various foreign military awards and decorations In 2016, he was inducted into the U.S. Army Reserve Officer Training Corps Hall of Fame. In 2018, Major General Peterson was recognized by the University of Idaho with an honorary PhD.

COL CLAUDIUS VON FAHNESTOCK, USAR

Director, Strategic Equipping Division, Office of the Chief - Army Reserve, U.S. Army Reserve

COL von Fahnestock is currently assigned at Fort Belvoir, VA, as the Director for Strategic Equipping under the Office of the Chief of Army Reserve (OCAR).

COL von Fahnestock received a U.S. Army Reserve commission in 1990 through the University of Dayton Army ROTC program. Upon completion of the Transportation Officer Basic Course at Ft Eustis, VA, COL von Fahnestock began his U.S. Army Reserve career as the assistant S4 to the 2nd Battalion Training Support Brigade, 70th Division in Richmond, Indiana. From 1993 until 1998, he served as the Third Platoon Leader and later as the Executive Officer for the 705th Transportation Company (Medium Truck, Petroleum) located in Dayton, OH.

From 1998 to 2000, he was assigned to the 718th Transportation Battalion, Columbus, OH, where he served as the Commander of the Battalion Headquarters and Headquarters Company in Columbus. In 2000, after graduating from the Transportation Officer

Advanced Course and being promoted to Captain, he commanded of the 854th Trailer Transfer Point Detachment, Dayton, OH.

In 2001, COL von Fahnestock was assessed into the Active Guard Reserve (AGR). As a Captain, he served as the Executive Officer at the Headquarters and Headquarters Company for the Army Reserve Readiness Training Center at Fort McCoy, WI. His next assignment from 2004 to 2007 was as the Assistant S3 at the 300th Transportation Group. Later, he was selected to attend the Army's Intermediate Level Education (ILE) at the Command General and Staff College, Fort Leavenworth, KS, from 2007 to 2008.

COL von Fahnestock has held assignements with the United States Transportation Command (USTRANSCOM); the 300th Sustainment Brigade located in Grand Prairie, TX; the 1398th Deployment and Distribution Support Battalion located in Curtis Bay, MD; the Assistant Chief of Army Reserve; the Office of the Chairman of the Joint Chiefs of Staff J4 team; and the Cross Functional Team supporting the Cross Functional Team of the Global Campaign Plan for Counter Violent Extremist Organizations (GCP- V).

COL von Fahnestock holds a BA in Marketing from the University of Dayton and a MSS from the Army War College. His military education includes the Transportation Basic and Advanced Courses, CAS3, Command and General Staff Course for Intermediate Level Education, Joint Professional Military Education Level Two, The Support Officer Course, and Army War College. His awards and decorations include the Defense Superior Service Medal, the Defense Meritorious Service Medal, 2 Meritorious Service Medals, Joint Commendation, 5 Army Commendation Medals, and one Army Achievement Medal.

KENNETH WATSON

Deputy Commander, Defense Logistics Agency, Land & Maritime

Kenneth Watson, a member of the Senior Executive Service, is the Deputy Commander of the Defense Logistics Agency, Land and Maritime, located in Columbus, OH. In this capacity, he is co-responsible for the logistics operations of over 2,500 associates at 37 locations worldwide. He is directly responsible for supply chain functions to include management of almost two million spare and repair parts. In 2018, DLA Land and Maritime's sales exceeded $3.7 billion. He assumed his current post in October 2019.

Watson previously served as the Deputy Assistant Secretary of Defense for Materiel Readiness, serving as the principal advisor to the Assistant Secretary of Defense for Sustainment, providing integration and oversight of the Department's annual $90 billion maintenance program. He developed policies and procedures for materiel readiness and maintenance support of major weapon systems and military equipment within the Department of Defense.

Watson also served as the Deputy Director, Strategy, Capabilities, Policy, and Logistics, U.S. Transportation Command. He deployed to Afghanistan as the Director of Sustainment under the Combined Security Transition Command – Afghanistan. He has served in numerous Joint assignments, serving as the Deputy Chief of the Capabilities Division in the Directorate of Logistics (J4), the Joint Staff, also deploying to Iraq under the Office of Security Cooperation – Iraq.

He is a 2011 graduate of the Industrial College of the Armed Forces at Fort Leslie J. McNair in Washington, DC, and graduate of the Defense Senior Leader Development Program's 2010 cohort. On the Air Staff, he was the Deputy to the Associate Director of Resource Integration assigned to the Directorate of Resource Integration, Deputy Chief of Staff/Logistics, Installation & Mission Support, Pentagon, Washington DC. With the associate director, he was responsible for Air Force logistics, installations and mission support long-range planning, strategic support planning, and associated policies.

Watson began his civil service career in 1989 as Palace Acquire Intern Inventory Management Specialist at McClellan Air Force Base in Sacramento, CA. His diverse experience includes Logistics Management for the F-117A and Commander in Chief Mobile Alternate Headquarters programs. He managed airborne electrical accessories for the Commodities Division at Sacramento Air Logistics Center. Watson served as a Logistics Plans specialist while assigned to HQ USAF on a Logistics Civilian Career Program career broadening position. He also performed logistics requirements analysis, Acquisition Program management, and was chief of the Strategic Planning Division, Plans and Programs Directorate, Oklahoma City Air Logistics Center, Tinker Air Force Base, OK. Watson served for three years overseas as the deputy for Mission Support, 31st Mission Support Group at Aviano Air Base, Italy. He holds both baccalaureate and master's degrees.

MARION WHICKER, SES

Executive Director, Integrated Logistics Support Center, Tank-Automotive and Armaments Command
U.S. Army

Marion Whicker was selected to the Senior Executive Service in June 2018 and is currently serving as the Executive Director of the Integrated Logistics Support Center (ILSC), U.S. Army Tank-Automotive and Armaments Command. In this position, Whicker oversees the readiness of the majority of Army maintenance, fielding, new equipment training, supply chain management, and system readiness. Whicker has direct oversight for a major Integrated Materiel Management Center with over 3,200 combined military and civilians. She provides the senior leader logistical support to almost 500 (63% of the Army's) new acquisition programs, as well as the sustainment support for over 10,000 major end items, ensuring operational readiness and support to the majority of the Army's major weapon systems. She provides leadership of a major logistics organization to include Weapon Systems Program Management, Materiel Management, Maintenance, Customer Support/Readiness, Integrated Logistic Support, and logistics support to five Program Executive Offices and associated Program/ Project/Product Manager Offices.

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JEFFREY WHITE, SES

Principal Deputy, Assistant Secretary of the Army (Acquisition, Logistics & Technology), U.S. Army

Jeffrey White is the Principal Deputy Assistant Secretary of the Army (Acquisition, Logistics & Technology). He advises the Assistant Secretary and Army leadership on all matters relating to Army acquisition, procurement, research & development and logistics. He participates in the development of policies, programs and processes for the execution of the Army's acquisition efforts.

He previously served as Vice President of Business Development at Siemens Government Technologies. He was responsible for identifying business opportunities, developing market strategy, and providing business intelligence to senior leadership/.

Prior to that role, White served in multiple SES positions within the Office of the Secretary of the Army, to include Assistant Deputy Under Secretary of the Army. His duties included the transformation of the Army's strategic human capital to include reengineering the Senior Executive Service assignment and distribution system. He served as the integrator for programs related to senior civilian development throughout the Army and oversaw projects related to Business Transformation and Continuous Process Improvement and the day-to-day execution of the Army's business transformation efforts.

White is a 1978 graduate of Shippensburg State College with a Bachelor's Degree in Psychology. He holds Master's Degrees in National Security and Strategic Studies from the United States Naval War College, Strategic Studies from the United States Army War College, and an Business Administration (MBA) from the University of Tennessee. Jeffrey White has over 33 years of Federal Service, including 27 years as an Army Aviation Officer.Division Biographies

DIVISION BIOGRAPHIES

COL BARRY TYREE, USA (RET)

Chair, Tactical Wheeled Vehicles Division, NDIA

Barry Tyree is President and CEO of BNT Consulting and has over 40 years of military and business leadership experience. Tyree currently serves as the chairman of the NDIA Tactical Wheeled Vehicles Division. Tyree spent 28 years in the U.S. Army in Infantry command and staff positions up to Corps level, and served two tours at the Pentagon. Additionally, Tyree has served as Director and Chairman of the Board of Directors for New Century US, Inc. Tyree is an Army War College Fellowship graduate with a BS in Business Administration from Oklahoma State University and an MA in Business Management from Webster University.

DION ANGLIN

Vice Chair, Tactical Wheeled Vehicles Division, NDIA

Dion Anglin is Director for Cummins Defense with a focus on the North and South American Military Market and has more than 17 years of experience in the defense industry since enlisting in the Marine Corps in 1994 and commissioning through Officer Candidate School in Quantico, VA. Anglin is currently a Reservist at U.S. Marine Corps Northern Command, serving as the senior Marine Emergency Preparedness Liaison Officer in Region III. He previously served in the J3 at U.S. Southern Command and as Commanding Officer, 4th Reconnaissance Battalion, 4th Marine Division. He has a BS in Entrepreneurship from Ball State University, an MBA from the University of Notre Dame, and a Master of Accounting and Financial Management from DeVry University, Keller Graduate School of Management.

JOHN CHADBOURNE

Session II Co-Chair, NDIA

John Chadbourne joined AM General in 2018 as the Senior Vice President for Washington, DC, Operations. Prior to joining AM General, Chadbourne had a 30-year career as a Logistics Officer in the U.S. Army, attaining the rank of Colonel and leading Logistics Units from platoon through brigade in addition to holding multiple staff positions. In total, Chadbourne served more than 17 years in overseas and deployed assignments, including his service in support of Operations Desert Shield, Desert Storm, Joint Forge, Joint Guardian, Iraqi Freedom, Enduring Freedom, and Freedom Sentinel. He holds a BS in Physics from the University of North Georgia as well as an MS in Logistics Management from the Naval Postgraduate School and an MS in Strategic Studies from the Army War College.

JEFF EARLEY

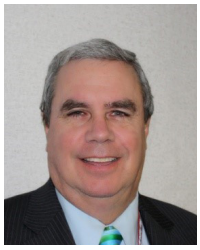
Session III Co-Chair, NDIA

Jeff Earley is Director of Military Programs at O'Gara-Hess & Eisenhardt Armoring Company, LLC. He leads and directs a workforce that is engaged in program management, acquisition management, business financial management, and commercial and international business development. In the past, he has led energy and environmental programs in the federal and commercial business space. Earley graduated from the U.S. Army War College with a degree in Strategic Studies in 1997. Additionally, he holds an MBA from Webster University.

EDDIE GARCIA

Session II Co-Chair, NDIA

Eddie Garcia is Senior Director of Business Development for the Defense Global Integrated Product Support (GIPS) section of Oshkosh Defense. He first joined Oshkosh in 1991 as a Contract Administrator on the U.S. Army's Palletized Load System (PLS) tactical wheeled vehicles program. Since then, he received various promotions, ultimately becoming Senior Director of International Capture Management before assuming his current role in 2014. Prior to joining Oshkosh, Garcia was a senior contract administrator for Texas Instruments Incorporated's Defense Systems & Electronics Group. He has a Bachelor's in Business from Southern Methodist University.



DAVE LAVERDIERE

Session III Co-Chair, NDIA

Dave Laverdiere became Director of Allison's Detroit Operations in 2012 after working for DRS Land Systems as Deputy Director and Senior Program Manager. Dave's last military assignment was as Director of Plans, Training, and Mobilization for the 5064th U.S. Army Garrison. During his 25-year military career, he was a multichannel radio equipment repairman, administrative non-commissioned officer, Armor Officer, Master Army Aviator (helicopters and fixed wing), helicopter instructor pilot, aviation safety officer, recruiting officer, and operations officer. Dave was commissioned as an Armor Officer and later transferred to the Aviation branch upon its creation. He holds Bachelor's Degrees in Sociology and Business along with Master's degrees in Business Administration (MBA), Operations Management (MSOM), and Administration (Human Resources; MSA-HR). He also holds various certifications and licenses. Dave teaches graduate-level courses as an adjunct professor at Lawrence Technological University in Southfield, MI.

COL CURTIS MCCOY, USA (RET)

Session I Co-Chair, NDIA

COL Curtis McCoy retired from the U.S. Army in 2008 with over 30 years of service and a final assignment as the Director of Materiel, Army G8, Force Development. He is currently the Director for Combat and Tactical Vehicles for Cypress International Inc. After graduating from the U.S. Military Academy, McCoy ultimately commissioned as an Armor Officer, completed two combat tours in Southwest Asia and one tour in Germany, and four tours at the Pentagon. He holds an MBA from Florida Institute of Technology, a Master's in Military Arts and Sciences from the Command and General Staff College, and an MS in National Resource Strategy from The National Defense University, Industrial College of the Armed Forces.

MG ROGER NADEAU, USA (RET)

Session I Co-Chair, NDIA

MG Roger Nadeau, USA (Ret), has been the Senior Vice President with the American Business Development Group (ABDG) since October 2012. Prior to joining ABDG, he held various roles: with Elbit Systems of America; as Vice President for Army Solutions; as Vice President for Land & C4I; in the U.S. Army for 36 years; as an Armor Officer; as an Armor Battalion Executive Officer; as General Officer for the Army Acquisition Corps; as a Program Executive Officer for Combat Support and Combat Service Support; as Program Executive Officer for Ground Combat Systems; as Commanding General of the Army's Research, Development and Engineering Command; and as Commanding General of the Army Test and Evaluation Command. Nadeau has a BS from the University of Rhode Island, an MBA from the Florida Institute of Technology, and an MS from the Industrial College of the Armed Forces.

RED BALL EXPRESS AWARD CITATIONS

GOVERNMENT

CLIFTON ELLIS

Chief Engineer and Product Director, Light Tactical Vehicles, Program Executive Office, Combat Support & Combat Service Support, U.S. Army

Mr. Clifton Ellis, PD-LTV Chief of Engineering, Quality Assurance and Testing, is the government recipient of the 2020 Red Ball Express Award. Mr. Ellis has made significant contributions to both the concept development and the production of Light Tactical Wheeled Vehicle programs. He has managed the largest tactical ground vehicle fleet in the DoD, at approximately 116,000 HMMWVs with multiple configurations and trailers. As the change control board chair, he oversaw the ensured approval and implementation of the HMMWV Engineering Change Proposal and more than 150 Requests for Variances (RFV). He demonstrated a willingness to take on and improve the vehicle system by applying available technology while updating purchase descriptions and requirements to address mission profiles within primary mover and trailer fleets. Mr. Ellis emphasized criteria—including system safety improvements, vehicle stability, ride quality and mobility—within ATPDs to ensure the vehicles meet the mission profile requirements. In 2016, he directed processes allowing the rate of M997A3 ambulance production to double from 30 to 60 vehicles per month while reducing costs by $10,000 per vehicle. In 2018, an ABS/ESC production cut occurred to the M997A3 Ambulance production line. Today, all HMMWV contracts now include ABS/ESC. Mr. Ellis worked significant sustainment issues resulting in two Safety of Use Messages (SOUMs) involving tires and several field messages for brake pads resulting in reducing risk of injury and fatalities in the field. Mr. Clifton Ellis's exceptional professionalism and selfless devotion to duty reflect credit upon him and keep with the highest traditions of the Red Ball Express Award and the Tactical Wheeled Vehicles Community.

INDUSTRY

HUTCHINSON INDUSTRIES, INC.

Trenton, NJ

Hutchinson Industries, Inc., is the industry recipient of the 2020 Red Ball Express Award. Hutchinson Industries, Inc., has significantly contributed to the tactical wheeled vehicles community through mobility and survivability. During the height of the Iraq War between 2007 and 2009, Hutchinson produced close to 100,000 wheel assemblies per year, enabling the MRAP manufacturers to deliver their vehicles on time to our deployed forces. Hutchinson pioneered runflat technology in the 1980s and then introduced it to the U.S. Army and U.S. Marine Corps. Initially placed on Light Armored Vehicles and HMMWVs, runflats now appear on dozens of different Tactical Wheeled Vehicle variants and hundreds of thousands of U.S. and NATO vehicles. Utilizing lessons learned and listening to feedback, Hutchinson launched an intensive internal Research and Development program that has advanced and evolved runflat technology and identified new improvements. Some of these improvements include self-sealing fuel tanks and aluminum wheels into the tactical wheeled vehicles. As a result, vehicle weights decreased from 900 to 400 pounds. Additionally, integrating the tire inflation system valves into the wheel rim eliminated cost, parts, and weight while greatly increasing the reliability of the overall tire inflation system. The same technology protecting our men and women in uniform also contributes to national security with placement on Secret Service presidential limousines and protection vehicles as well as U.S. embassy security vehicles. Finally, Hutchinson built the largest wheel and tire assembly facility in North America and applied modern manufacturing techniques. The result is complete assemblies resulting in a safer installation process in the field. Hutchinson Industries, Inc., exceptional professionalism and selfless devotion to duty reflect credit upon its organization and keep with the highest traditions of the Red Ball Express Award and the Tactical Wheeled Vehicles Community.

SPONSOR DESCRIPTIONS

OSHKOSH DEFENSE

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Oshkosh Defense is a global leader in the design, production and sustainment of best-in-class military vehicles and mobility systems. As a pioneer of combat-ready vehicle solutions, Oshkosh develops and applies emerging technologies that advance troop safety and mission success. Setting the industry standard for sustaining fleet readiness, Oshkosh ensures every vehicle is supported worldwide throughout its entire life cycle.

Oshkosh Defense, LLC is an Oshkosh Corporation company [NYSE: OSK].

Learn more about Oshkosh Defense at OshkoshDefense.com

MICHELIN

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Dedicated to the improvement of sustainable mobility, Michelin is a total solution provider offering a robust portfolio of top quality tires, retreads, and services to maximize fleet performance. Michelin designs, manufactures, and sells tires for every type of vehicle, including airplanes, automobiles, bicycles, earthmovers, farm equipment, heavy-duty trucks, and motorcycles. Headquartered in Greenville, SC, Michelin North America employs about 20,000 and operates 19 major manufacturing plants.

Michelin is very excited and optimistic about the future. We have a strong foundation of designing and building tires that deliver industry-leading mobility for a wide range of military vehicle platforms (Light, Medium, and Heavy Tactical Trucks and Ground Combat Systems). We've been expanding our view of what mobility means, and we believe that the future of mobility is not just limited to tires: It encompasses 'Mobility Systems' as well as 'Managing the Lifecycle' of the vehicle and its systems.

We've taken this to action by incorporating various other mobility experts into the Michelin Group: companies like Teleflow (CTIS) and Camso (Off-Highway Tires) and Lehigh (tire disposal) are now a part of the growth that is happening at Michelin.

Michelin is now very well positioned to better meet the 'Total Mobility Needs' of our Armed Forces.

Ibis Tek®

REGISTRATION SPONSOR

Ibis Tek is an engineering and manufacturing company certified to ISO 9001:2015. The company was organized twenty years ago with less than 10,000 square feet of manufacturing space and fewer than ten employees. Today Ibis Tek employs over 350 personnel and operates in facilities encompassing over 450,000 square feet. We attribute our tremendous growth to a continuing commitment to our company mission: defense, protection, and innovation and the organization's focus on quality.

Ibis Tek is experienced in designing, producing and kitting transparent and opaque armor systems for tactical military vehicles and civil security vehicles. Our operations are vertically integrated to not only include fabrication capabilities for opaque armor but also a state of the art lamination line for transparent armor. To ensure quality and on-time delivery we have ISO-certified Standard Operating Procedures (SOP) for all operations and utilize a comprehensive database system (MAS 500) to manage operations.

Ibis Tek provides complete armor kits, components, parts and equipment for U.S. military light, medium, and heavy ground vehicles. Additionally, Ibis Tek performs design and full customization of heavy and light vehicles for the U.S. Government (Department of Energy). These systems include design, manufacturing and installation of armor packages, structural modifications, specialized exteriors and interiors of cabs, and crew quarters.

AM General®

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AM General designs, engineers, manufactures, supplies and supports specialized vehicles for military and commercial customers worldwide. Through its military business, the company is widely recognized as the world leader in design, engineering, manufacturing and logistics support of Light Tactical Vehicles, having produced and sustained over 300,000 vehicles in over 70 countries. Through its heritage companies, AM General has over 100 years of experience meeting the changing needs of the defense and automotive industries, supported by its employees at major facilities in Indiana, Michigan, and Ohio, and a strong supplier base that stretches across 43 states.

TABLETOPS BY COMPANY

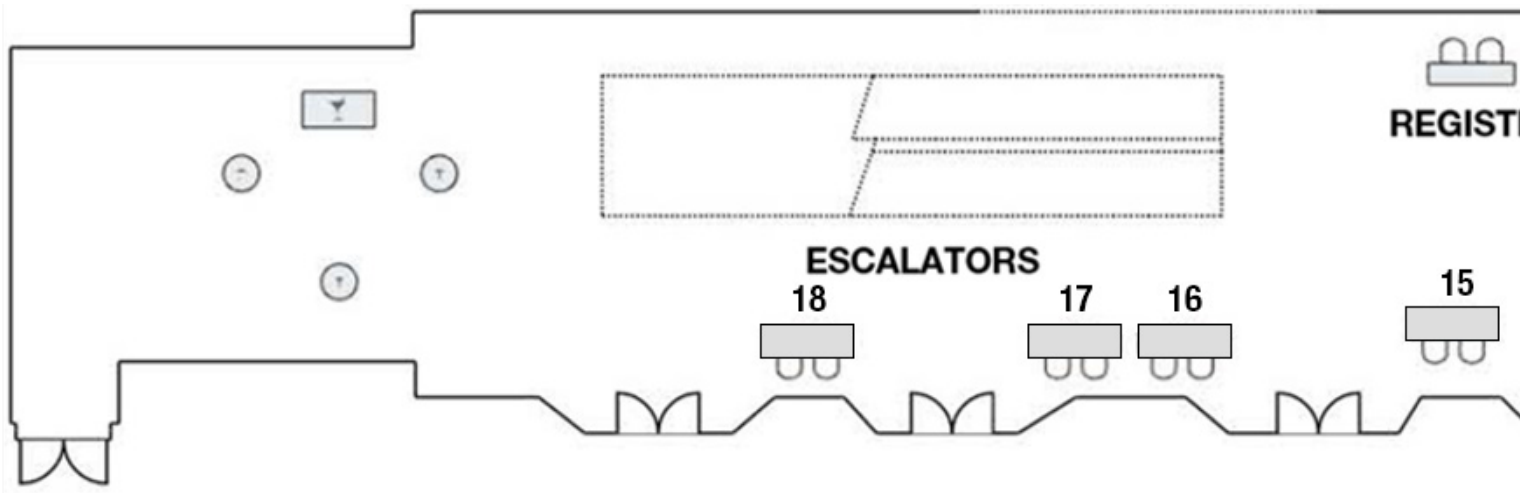
4K Solutions, LLC ..... #4
AM General ..... #9
Bren-Tronics, Inc. ..... #14
Command Decisions Systems & Solutions (CDS²) ..... #13
Defense Systems Information Analysis Center (DSIAC) ..... #12
DEWESoft, LLC ..... #2
Eck Industries, Inc. ..... #1
Galleon Embedded Computing, LLC ..... #15
Ibis Tek, Inc. ..... #7
Leonardo DRS ..... #5
MagLok Tools ..... #16
MulePAC ..... #6
NDIA Michigan Chapter ..... #18
Networks Enterprises, Inc. ..... #8
OnTime Networks, LLC ..... #11
Pacific Star Communications, Inc. (PacStar) ..... #17
Physical Optics Corporation ..... #10
TRANSHIELD, Inc. ..... #3

TABLETOP HOURS

TUESDAY, MARCH 3
7:00 am – 7:00 pm

WEDNESDAY, MARCH 4
7:00 am – 10:45 am

TABLETOP DIAGRAM



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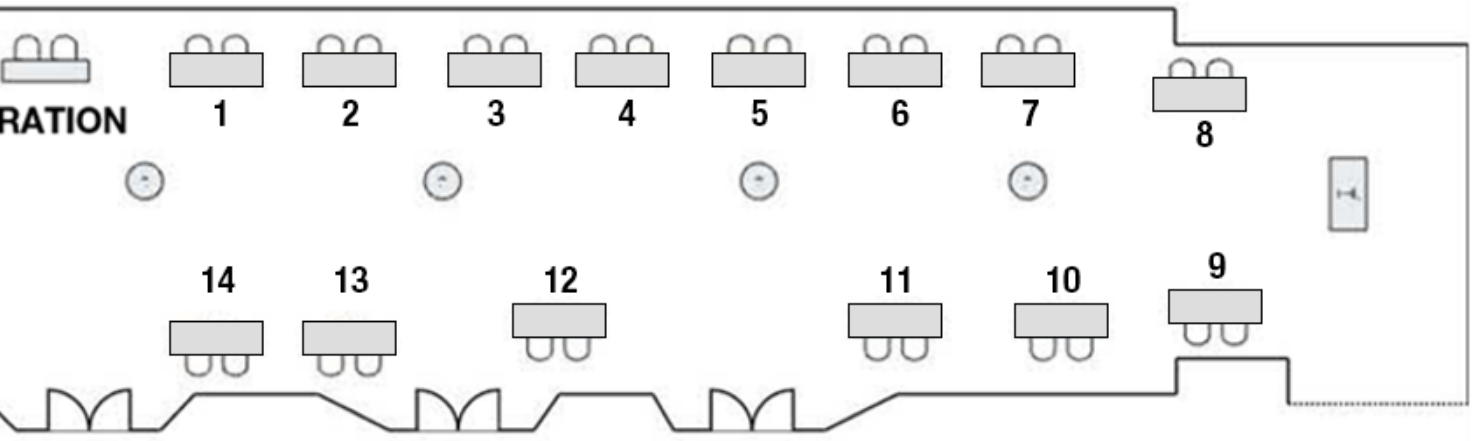

TABLETOP DESCRIPTIONS

4K SOLUTIONS, LLC #4

We bring over 20 years of Special Operations Communications experience delivering direct critical communications support and consul on some of the most demanding “no-fail”combat missions in the world. We Lead the Way in providing Custom System Designs, Rapid Fielding, Custom Solution Architecture, Business Development, Manufacturer Representative, Special Operations & Emergency Communications Consulting, Professional Services, and sourcing of emerging technologies.

AM GENERAL #9

See company description on page 21.

BREN-TRONICS, INC. #14

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COMMAND DECISIONS SYSTEMS & SOLUTIONS (CDS²) #13

CDS² is a dynamic and agile partner providing excellent customer support to our customers for C5ISR platform engineering, design, prototyping, testing, integration, technical documentation, configuration management and lifecycle sustainment. We provide solutions to customers facing challenges with space limitations, cable management, testing, material durability and access to equipment for maintenance.

DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER (DSIAC) #12

The Defense Systems Information Analysis Center (DSIAC) is a component of the U.S. Department of Defense’s Information Analysis Center (IAC) enterprise. The purpose of DSIAC is to provide information research and analysis, within nine chartered focus areas, for DoD and Federal government users to stimulate innovation, foster collaboration, and eliminate redundancy. The scope of DSIAC includes advanced materials; energetics; military sensing; reliability, maintainability, quality, supportability, and interoperability (RMQSI); survivability and vulnerability; weapon systems; autonomous systems; directed energy; and non-lethal weapons.

DEWESOFT, LLC #2

DEWESoft, offers a full suite of hardware for in-vehicle and lab applications. Scalable from 1-1000’s of channels our instruments are small USB and EtherCat devices, stand-alone battery-powered systems, rack-mounted configurations, and ruggedized field-ready solutions. Powered by DEWESoft X software, we acquire and control many multi-domain test sets that include analog in/out, digital in/out, video, CAN, FlexRay, XCP, GPS, and more.

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We deliver weight reduction! From combat vehicles to tactical trucks, Eck Industries, works with engineers to produce tough and lightweight aluminum castings for chassis structures, engine mounts, suspensions and brakes. Also specialize in driveline housings including electrification. The latest innovation is the production of high strength A206 aluminum in permanent mold.

GALLEON EMBEDDED COMPUTING, LLC #15

Galleon Embedded Computing is an innovative leader in development of high-performance, high-quality ultra-small rugged Network Attached Storage, data recording and processing devices. Galleon’s offerings span from commercial to fully rugged products for deployment in severe environments. Galleon servers the U.S. market with a product integration and support facility in Katy, Texas.

IBIS TEK, INC. #7

See company description on page 21.

LEONARDO DRS #5

Leonardo DRS (formerly DRS Technologies) is a leading technology innovator and supplier of integrated products, services and support to military forces, intelligence agencies and prime contractors worldwide. Specializing in naval and maritime systems, ground combat mission command and network computing, global satellite communications and network infrastructure, aviation support and avionics systems, and intelligence and security solutions.

MAGLOK TOOLS #16

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Maximizing Space and Cross-Functionality for the Warfighter

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MULEPAC #6

MulePAC: Lightweight, plastic, collapsible, nearly indestructible secondary containers designed specifically for the U.S. Military for transporting and storing all classes of military supplies to, from and within theater all the way to the last tactical mile. Built to withstand the toughest environments, MulePAC saves time, money and lives!

NDIA MICHIGAN CHAPTER #18

The NDIA Michigan Chapter, founded in 1942, provides legal and ethical forums for the exchange of ideas between the government, industry and academia to resolve industrial problems of joint concern. The Michigan Chapter champions many different activities supporting all branches of the armed forces, first responders, and patriotic Americans.

NETWORKS ENTERPRISES, INC. #8

Networks Enterprises, Inc. is the manufacturer of LoadTamer™ Cargo Nets, (and related restraint and tie-down hardware), that is NSN’d/tested and approved as heavy duty military grade solutions for restraint of all tactical combat loads including resupply, ammunition and soldier equipment, interior and exterior, on Tactical Wheeled and Tracked Vehicles, Trailers, Helicopters and Watercraft. Cargo will not bounce, shift or blow out of the cargo area as a result of severe terrain, rollovers and/or underbelly blast events!

ONTIME NETWORKS, LLC #11

OnTime Networks is a technology leader for rugged, time synchronized, fully managed, modular Gigabit Ethernet switches, routers, taps and mission computers, specifically designed to operate reliably in the harsh and climatically demanding environments of the aerospace and defense industry. Recognized for innovation and excellence, OnTime focuses on meeting technology needs of the warfighter today and in the future.

PACIFIC STAR COMMUNICATIONS, INC. (PACSTAR) #17

Pacific Star Communications, Inc. (PacStar) is a leading provider of advanced communications solutions for a wide range of military, intelligence and commercial applications. PacStar created and manufactures COTS-based rugged, small form factor expeditionary and mobile communications systems. Separately, it developed integrated, network communications management software, IQ-Core® Software, for the military, federal, state/local government and emergency responder markets.

PHYSICAL OPTICS CORPORATION #10

Physical Optics Corporation (POC) is a rapidly growing systems integrator of advanced technology, serving military and defense, homeland security, and selected commercial markets. POC continues its work in innovative R&D, focusing on several strategic thrust areas and advanced programs which includes developing and producing next-generation airborne systems, ground systems, maritime systems, cybersecurity, EW/RF, x-ray nondestructive inspection, and unmanned and intelligent deep learning systems.

TRANSHIELD, INC. #3

Transhield is the leading provider of corrosion-reduction protective cover technologies to the U.S. Military. Transhield Covers are lightweight and durable. They reduce corrosion, protect from environmental degradation, and most important, Transhield covers are effective and affordable.

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- Hydrotesting
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- JIT Services
- Kitting
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- MATV
- HEMTT
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- Stryker
- Abrams
- MRAP

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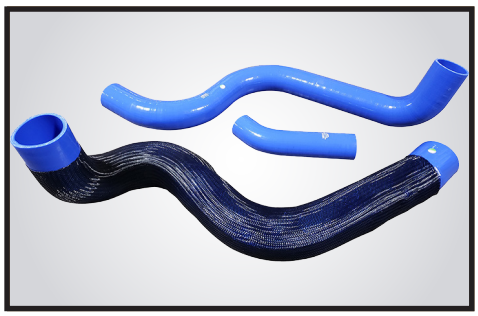

David E Propp • Business Development Mgr • Military Division

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PEO CS&CSS Overview to TWV Conference

Tim Goddette, SES
Program Executive Officer
Combat Support & Combat Service Support

Mission, Vision, and Priorities…

MISSION

Lead an innovative, proficient, and disciplined lifecycle management team that enables America's warfighters by consistently providing integrated, tailored, and cost-conscious products.

VISION

We are the Army's Acquisition experts for Commercial and Non-Developmental Items – rapidly delivering capabilities that reduce Soldier exposure, optimize manpower, and enable sustained mobility, lethality, and the network.

PRIORITIES

- Tailoring and Streamlining
- Human Capital
- Fleet Management

TECHNOLOGIES

- Robotics (Hazard) and Autonomy (Manpower)
- Condition Based Maintenance (Data)
- Advanced Manufacturing (Readiness)
- Technical Manuals (Video)

INTERESTS

- Enabling the "Big Six"
- Competition
- RDT&E to set conditions for future opportunities
- Growth, reliability, ease-of-use, lifecycle cost

Organization

Assistant Secretary of the Army for Acquisition, Technology, and Logistics (ASA(ALT))
Honorable Bruce Jette, Ph.D.

Principal Military Deputy to (ASA(ALT))
LTG Paul Ostrowski

Principal Deputy to (ASA(ALT))
Mr. Jeffrey White

Program Executive Officer
Mr. Tim Goddette

Deputy PEO
Mr. Andrew DiMarco

Chief of Staff
COL Shane Fullmer

PEO CS&CSS Staff

Executive Officer:
Mr. Nicholas Garon
APEO Business Management:
Mr. Jean (J.P.) Marcoux
APEO Logistics:
Mr. Glen Broman
APEO FMS/Integration:
Vacant
APEO Systems Engineering/ Information Technology:
Ms. Michelle Minto
APEO Strategic Operations:
Mr. Steve Roberts

Expeditionary Energy & Sustainment Systems

PM: COL Adrian Marsh
DPM: Ms. Lisa Stone

PdM Force Sustainment Systems
LTC Alexander Babington

PdM Mobile Electric Power Systems
LTC Anthony Leach

PdD Small Expeditionary Power Sources
Ms. Chen Xi Dong-O'Malley

Force Projection

PM: COL Shane Sullivan
DPM: Mr. Shon-Neil Severns

PdM Bridging
Mr. Steven Rienstra

PdM Appliqué & Large Unmanned Ground Systems
LTC Jon Bodenhamer

PdM Combat Engineer/ Material Handling Equipment
LTC Tony Jones

PdM Unmanned Ground Vehicles
Mr. Louis Anulare (USMC)

PdM Petroleum & Water Systems
LTC William Anderson

PD Test, Measurement, & Diagnostic Equipment
Mr. Thomas Lettis

PdM Sets, Kits, Outfits & Tools
LTC Evan Timmens

PL Robot Logistic Support Center
Ms. Diane McCarthy

Joint Light Tactical Vehicle

PM: Mr. Michael Sprang
DPM: Mr. Chris Brouwer
DPM-USMC: Mr. Andrew Rodgers

PdM Vehicle Systems
LtCol Mark Braithwaite (USMC)

PdM Systems Integration
LTC John Nelson

PD Light Tactical Vehicles
Mr. Craig Riedel

PL Ground Mobility Vehicles
Mr. Steven Herrick

Transportation Systems

PM: Mr. Wolfgang Petermann
DPM: Mr. Eric Fletcher

PdM Heavy Tactical Vehicles
Mr. Alvin Bing

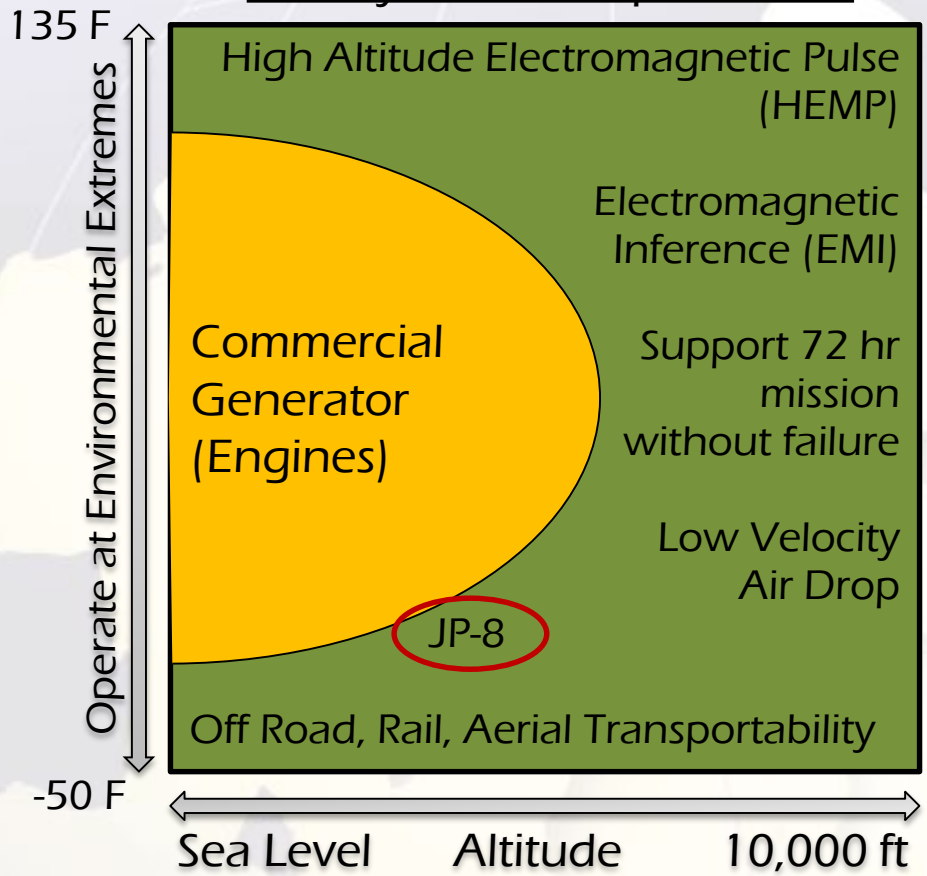
PdM Allied Tactical Vehicles
Mr. John Hufstedler

PdM Multi-Mission Protected Vehicle Systems
LTC Michael Riley

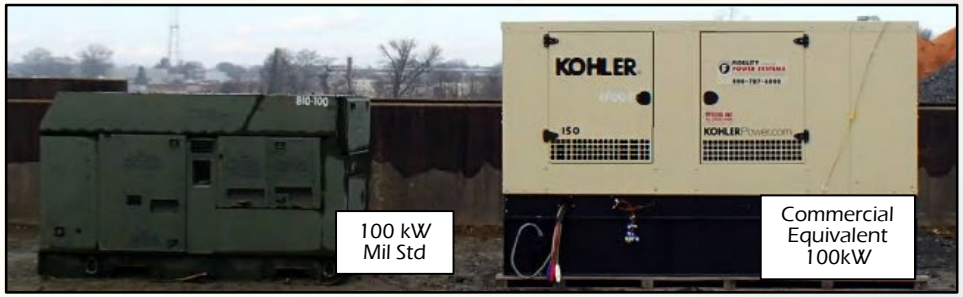
PD Army Watercraft Systems
Mr. Chad Stocker

Military-Commercial Requirement Comparison

Military Power Requirements



Reliability Size Weight



Commercial Generators do not meet the full array of military requirements

Industrial Base Support Across the States

- Partners in 21 states
- 4 Depots and 1 Arsenal
- 80+ different companies
  - 16 traditional
  - 67 non-traditional

West

- **Flyer Defense, Los Angeles CA**
- **SIAD, CA**
- **West-Mark, Ceres , CA**
- AMETEK – San Diego, CA
- Joy Signal Technology– CA
- General Micro Systems, Rancho Cucamonga, CA
- Parachute Manufacturer, Santa Anna, CA
- Vigor Works, LLC, Portland, OR

Southwest

- Firetrace Aerospace, Scottsdale, AZ
- Wamore, Inc, Phoenix, AZ
- **Textron, Slidell, LA**
- Swiftships, Morgan City, LA
- **Choctaw, Choctaw, OK**
- **Heil Trailers, Houston, TX**
- **Red River Army Depot, Texarkana, TX**
- Lockheed Martin, Texas

Midwest

- **Rock Island Arsenal-Joint Manufacturing Technology Center, IL**
- **Caterpillar Inc, Peoria, IL**
- **Navistar Defense LLC, Melrose Park, IL**
- **AM General LLC, South Bend/Mishawaka, IN**
- Laibe Corporation, IN
- **Talbert Manufacturing, Inc, Rensselaer, IN**
- **AM General LLC, Auburn Hills, MI**
- **GM Defense, Troy, MI**
- General Dynamics Land Systems, Sterling Heights, MI
- **Polaris, Medina, MN**
- **Cummins Power Generation, Fridley, MN**
- **Leonard DRS, St. Louis, MO**
- Boeing, St. Charles, MO
- MAC Panel, MO
- Brothers Body And Equipment, LLC, Gallon, OH
- Trimble, Trimble, OH
- Battelle Memorial Institute, Columbus, OH
- **O'Gara Hess & Eisenhardt Armoring, Fairfield, OH**
- Robot Solutions, Cincinnati, OH
- **Schutt Industries, Clintonville, WI**
- **Oshkosh Defense, Oshkosh, WI**
- IBVI, Milwaukee, WI
- Beyond Vision, Milwaukee, WI

Northeast

- Capwell, South Windsor, CT
- **Tru-HITCH, Barkhamsted, CT**
- Draper, Cambridge MA
- Endeavor Robotics, Chelmsford, MA
- Teradyne, North Reading, MA
- QinetiQ North America, Waltham, MA
- **Robotics Research, Gaithersburg, MD**
- Federal Resources, Stevensville, MD
- General Dynamics, MD
- Newton, Hyattsville, MD
- FASCAN International, Sparrows Point, MD
- **Howe & Howe, Waterboro, ME**
- AEE, Clinton, NY
- Buffalo Turbine, Springville, NY
- **TYAD, Tobyhanna, PA**
- **Grove U.S., Shady Grove, PA**
- **Mack Defense, Allentown, PA**
- Airborne Systems North America, Pennsauken, PA
- BAE Systems Land and Armaments Limited Partnership, York, PA
- ARA, Randolph, VT

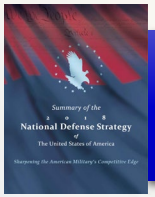
Southeast

- VT Miltope Corp., Hope Hull, AL
- Strata-g Solutions, Huntsville, Al
- DRS Network & Imaging Systems, Huntsville, Al
- **DRS Leonardo, AL**
- Fibrotex USA, Washington, DC
- **General Dynamics Ord &Tact Sys, FL**
- **Load King Manufacturing Company, Jacksonville, FL**
- Kipper Tool, Gainesville, GA
- **JCB INC, GA**
- **TEREX Corporation, GA**
- Lockheed Martin, Lexington, KY
- Messier & Associates, Inc, Louisville, KY
- **Carolina Growler, Inc, Star, NC**
- Isometrics, Reidsville, NC
- **Navistar Defense (ND), West Point, MS**
- KBR Wyle, Inc, Morrisville, NC
- **Critical Solutions International (CSI), Charleston, SC**
- Complete Parachute Systems, DeLand, FL
- Alion Science & Technology, McLean, VA
- Atlantic Diving Supply, VA Beach, VA
- Dyncorp International, McLean, VA
- General Dynamic Mission Systems, Marion, VA
- NCS Technologies, Gainesville, VA
- Pacific Architect Engineering (PAE), Arlington, VA
- Colonnas Shipyard , Norfolk, VA
- **HDT, VA**
- **PD Systems, Springfield VA**
- **Anniston Army Depot, AL**

PEO CS&CSS – AFC CFT Linkages

67% of PEO CS&CSS resources are aligned to enable CFT-equipped formations through 30% of current PEO CS&CSS programs

	Programs	Investment FY20-25*	LRPF	NGCV	FVL	Network	IAMD	Soldier Lethality
JLTV	1	$5,127 M				X	X	X
Infantry Squad Vehicle	1	$177 M		X				X
Maneuver Support Vessel - Light	1	$588 M	X	X				
Heavy Equipment Transport System [USAEUR ONS]	1	$61 M	X	X	X			
Heavy Trailers (Re-supply fuel, ammo)	4	$225 M	X	X	X			
Assault Breacher Vehicle	1	$109 M		X				
Joint Assault Bridge	1	$1,124 M	X	X				
Line of Communication Bridge	1	$189M	X	X			X	
Expedited Leader Follower	1	$461 M	X	X				
Robotics	5	$670 M		X		X		X
Petroleum and Water (Tactical)	7	$493 M	X	X	X	X	X	
NGATS	1	$203 M	X	X	X	X	X	X
Tactical Electric Power	5	$381M	X		X	X	X	X
	31	**$9,808 M**						



- "Transitioning from large, centralized, unhardened infrastructure to smaller, dispersed, resilient, adaptive basing..."
- "...invest broadly in military application of autonomy...to gain competitive military advantages."
- "Prioritize...strategic mobility assets...as well as non-commercially dependent distributed logistics...to ensure logistics sustainment while under persistent multi-domain attack."

Other Transaction Authority (OTAs)

PM	Product Office	Current Project	Future Project
E2S2	PdM SEPS	2kW Military Tactical Generator (MTG)	
		Platoon Power Generator (PPG)	
		3kW Lightweight Housing Development	
	PdM FSS	Army Standard Family of Rigid Wall Shelters (ASF-RWS)	
		Rapid Rigging & De-Rigging Airdrop System (RRDAS)	
		Expeditionary Solid Waste Disposal System (ESWDS)	
FP	PdM ALUGS	Squad Multipurpose Equipment Transport (S-MET)	
		Leader Follower (LF)	
	PdM Bridging	Line of Communication Bridge (LOCB)	
		Family of High Military Load Class (FoHMLC) AVLB	
	PdM PAWS	Mobile Tactical Retail Refueling System (MTRRS)	
		Bulk Fuel Distribution System (BFDS)	
		HEMTT-LHS Compatible Water Tank Rack (HIPPO)	
	PdM TMDE	Radio Test Set-TS-4549	
	PdM UGV	Common Robotics System (Heavy) (CRS(H))	Enhanced Robotic Payloads (ERP) - Unmanned Ground Systems (UGS) (ERP-UGS)
JLTV	PdL GMV	Infantry Squad Vehicle (ISV)	
TS	PdM HTV	Heavy Equipment Transporter System (HETS) Trailer	Medium Equipment Transporter System Trailer (METS-Trailer)
		25-Ton Semitrailer Low Bed (STLB)	Enhanced Heavy Equipment Transport System (EHETS)
			Cold Weather All -Terrain Vehicle (CATV)

2020 TWV Framework

- The strategy focuses in three areas:
  - Multi-Domain Operations:
    - Payload – Mobility - Protection
    - Transportation-Based Distribution
    - Highlight increased capabilities: active safety, protection, capacity, Condition-Based Maintenance (CBM+) autonomous technologies, and Advanced Manufacturing
  - Investment:
    - Leverage commercial industry investment in automotive technologies, focus limited S&T on military unique capabilities
    - Provide Army Leadership with affordable solutions, competition will be critical (with or without TDPs) to affordability
    - Maintain "Open" Long-Term Contracts to enable our ability to surge, if Army accepts risk with limited procurement funding
    - 100% Armor capable, tiered Force Protection B Kit requirements from blanket 30%
  - Divestiture:
    - Limiting number of variants fielded to reduce impacts to training and sustainment (maintenance & supply chain)
    - Use Sales and Exchange Programs & Divestiture to generate revenue and savings to support TWV modernization
    - Change USR policy to not penalize units for divestment

Ends, Ways, and Means

- **Ends**
  - Maintain a viable, modern (avg. age 15 years) and safe fleet
  - Strive for fleet commonality
  - Maintain an industrial base with surge capability
- **Ways**
  - Maintain average annual funding of $1.5 - 2.0B
  - Divesture of legacy fleet
- **Means**
  - OTAs and Open Contracts
  - Competition

Project Manager Expeditionary Energy & Sustainment Systems (PM E2S2)

Colonel Adrian Marsh

PM E2S2 Portfolio

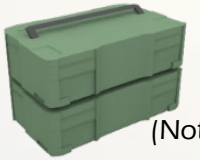
Product Director Small Expeditionary Power Sources (PD SEPS)

2kW Military Tactical Generator (MTG)

3kW Tactical Quiet Generator (TQG)

Platoon Power Generator (PPG)

Small Tactical Electric Power (STEP)



(Notional)

Product Manager Mobile Electric Power Systems (PM MEPS)

5-60kW Advanced Medium Mobile Power Sources (AMMPS)

Microgrid

Prime Power – 840kW Deployable Power Generation & Distribution System (DPGDS)

Power Units (PU)

Power Plants (PP)

Large Advanced Mobile Power Sources (LAMPS)

Power Distribution Illumination Systems Electrical (PDISE)

5-60kW Tactical Quiet Generators (TQG)

100kW/200kW Tactical Quiet Generators (TQG)

Product Manager Force Sustainment Systems (PM FSS)

Expeditionary Support

Cargo Aerial Delivery

- EHLSCDS
- LCADS
- ALVADS
- SADE
- JPADS
- RRDAS

Shelter Systems

- ASF-RWS
- ASF-SWS
- ULCANS
- ASLMS
- ESPS

Expeditionary Service Support

Heaters & Environmental Control Units

Force Provider Expeditionary Modules

Field Feeding

- Assault Kitchen
- Containerized Kitchen
- Mobile Kitchen Trailer

Field Services

- MTRCS
- MIRCS
- 12 Head Shower
- Mortuary Affairs

Power Generation, Power Distribution, and Force Sustainment Service Support

PM E2S2 Upcoming Opportunities

- **Small Expeditionary Power Sources**
  - **PPG:**
    - Vendor down select for PPG COTS production contract **(T) RFP 1QFY21 - Award 2QFY21**
    - PPG Electronic Technical Manual (ETM) purchase **(T) 2QFY20**
  - **STEP:**
    - Lightweight 2kW COTS generator development OTA **(T) RFP 1QFY20 and Award 2QFY20**
- **Force Sustainment Systems**
  - JPADS 2K Block 1 Avionics Module – **Sep 2020**
  - Force Provider Technical Assistance Team Contract – **Aug 2020**
  - Integration of Kitchens, Latrines, Shower, Sanitation - GFE containers (ETS Contract) – **Aug 2020**
  - ESWDS Production Contract– **Nov 2020**

Project Manager Joint Light Tactical Vehicles (PM JLTV)

Michael Sprang

JPO JLTV Initiatives

Joint Light Tactical Vehicles (Army and Marine Corps)	Light Tactical Vehicles (Army)	Ground Mobility Vehicles (Army)

Mission

The Joint Program Office Joint Light Tactical Vehicles will develop, acquire, field and sustain a portfolio of Light Tactical Vehicles, with a focus on affordability, continuous process improvement, and partnering, in order to provide capability and flexibility to Joint Forces across the full spectrum of military operations throughout the economic useful life of the portfolio.

Vision

Developing and Empowering the premiere acquisition workforce to deliver the World's Best Light Tactical Vehicles to the Joint Force to accomplish their mission

- Industry Opportunities
  - Competition
    - Follow-on JLTV (truck and trailer)
  - System technical solutions
  - Other transactional authorities
  - Partner with primes
- Focus areas
  - Balance performance and cost
  - Balance speed to warfighter with quality
  - Balance modernization with sustainability

Project Manager Transportation Systems (PM TS)

Wolfgang Petermann

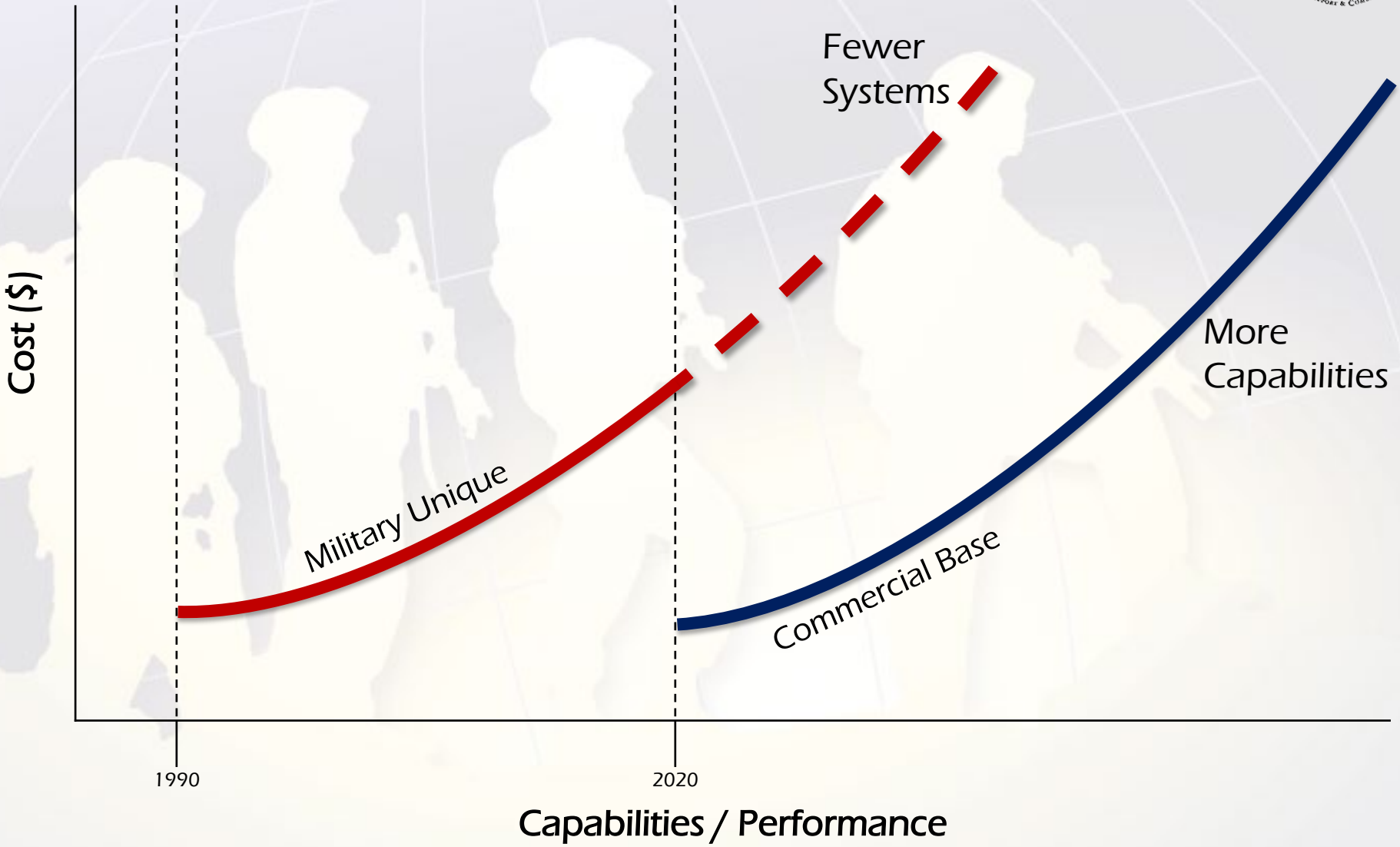
PM TS Upcoming Opportunities (FY20-22)

- **Heavy Trucks**
  - Enhanced Heavy Equipment Transporter System (EHETS) Trailer RFP release in FY21
  - Medium Equipment Transporter (MET) RPP release in FY21
  - Introducing competition for Heavy Truck Family of Vehicles, RFI pending
  - Total Package Fielding (TACOM Strategic Service Solution (TS3)) FY20-FY25
- **Allied Tactical Vehicles**
  - A 10-year IDIQ follow-on effort for the NMS GVS contract (MARVEL) which supports Afghan National Defense Security Forces for Training, Mentoring and Contractor Logistics Support is currently in development. - FY 21
- **Multi-Mission Protected Vehicle Systems (MPVS)**
  - Cold Weather All-Terrain Vehicle (CATV) – TBD FY21
    - Draft Performance Specification (P-Spec) – Released 31 Jan 2020
    - OTA Release for Prototype Proposal (RPP) – 3QFY20
    - OTA Award of Task Assignment 1QFY21 – estimated $4-$6.3M Total RDTE
  - Family of Medium Tactical Vehicles (FMTV) Total Package Fielding (TACOM Strategic Service Solution (TS3)) FY20-FY21 – $3 to 7M

Watch SAM.GOV for these opportunities! *https://beta.sam.gov*

Back-Up Charts

Shifting the Curve



U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND – GROUND VEHICLE SYSTEMS CENTER

ARMY FUELS

Jill M Bramer
3 March 2020

DISTRIBUTION A. Approved for public release; distribution unlimited.

DISTRIBUTION A. Approved for public release. Distribution is unlimited.

AGENDA

- History
- Commercial & Military Fuel Distribution
- Use of Commercial Fuels
- Diesel Fuel
- Challenges with Commercial Diesel

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HISTORY

- **Prior to 1960s – Army operated on gasoline**
- **1960s – 1980s → Used Diesel Fuel (F-54)**
  - Major Problem: Waxing @ low temps
- **1981–1988 → M1 Fuel Mix AKA NATO F-65**
  - Started in Germany in 1981
  - Blended F-54 Diesel with kerosene aviation fuel (JP-5 or JP-8)
- **1988 → Implemented Single Predominate Fuel, JP-8**
  - Field test at Fort Bliss from October 1988 through July 1991
- **2013 to present → Conversion to F-24 in CONUS**
  - Official notification via ALARACT 113/2013 (30 April 2013)
  - Complete conversion in December 2014

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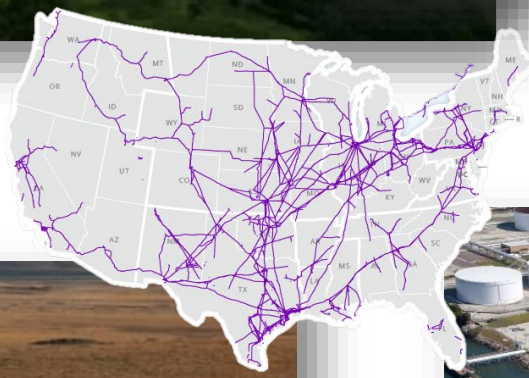
COMMERCIAL FUEL DISTRIBUTION



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MILITARY FUEL DISTRIBUTION

DISTRIBUTION A. Approved for public release. Distribution is unlimited.

USE OF COMMERCIAL FUELS

- DOD has moved to commercial fuels
  - Except JP-5 & F-76
  - Aviation fuels must still be additized to meet military requirements
- Logistically easier & cheaper to pull product off the pipeline
  - Led to cancellation of military specifications for MOGAS, DIESEL
- DOD has limited control over specifications
- Commercial fuels are intended for near-term use; military stores & consumes fuels at a slower rate
- DOD does not align with commercial practices for particulate contamination and filtration for diesel engines and fuel injection systems

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DIESEL FUEL

- Commercial Off The Shelf (COTS) diesel engines are optimized for diesel fuel
  - ULSD required for diesel engines with modern emission controls

- Commercial diesel fuel properties have advanced to meet new hardware requirements & country emission regulations

- Major Differences between Jet Fuel and US Diesel
  - US commercial engines are optimized for ULSD
  - Energy content
  - Cetane Number
  - Lubricity
  - Viscosity
  - Sulfur Content (modern emission controls)

- US Diesel Fuel
  - DF2 is not specific to a sulfur content level.
  - DF2 15ppm (Ultra Low Sulfur Diesel) is most common

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CHALLENGES WITH COMMERCIAL DIESEL

- Worldwide Diesel Fuel Specifications
  - US commercial engines are optimized for local diesel fuel
  - Not harmonized across the world
  - Spec updates driven by changes in emission standards & engine advances
- Availability
  - ULSD not available all over the world; sulfur content varies by country
- Low Temperature Operability
  - Diesel fuel is seasonal & regional
  - Ambient temperatures would have to be monitored to prevent gelling
- Storage & Handling
  - Addition & segregation for diesel supply chain
- Diesel Exhaust Fluid – is NOT a fuel additive
  - Addition to supply chain
  - Risk to ground vehicles and aircraft
- Implications to Army Force Structure & Installation infrastructure

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EQUIPMENT & LOGISTICS READINESS PANEL

Moderator: Mr. Mark Colley

Panel Member from ACC Detroit Arsenal: SES Mr. Dan Gallagher

Panel Member from Oshkosh Corporation: Mr. Mike Ivy

Panel Member from TACOM ILSC Transportation Systems: Ms. Susan Cashero

Panel Member from Michelin Corporation: Mr. Barry Bomier

Panel Member from TACOM ILSC CBM+ Program Director: Mr. Jason Duncan

DISTRIBUTION A. Approved for public release: distribution unlimited

TWV Readiness & Sustainment

UNCLASSIFIED

TWV STATS: FEB 2020 Data

Major Item Overview:

- Over 594 LINs Managed – 1,141 Individual NSNs
- 37ea Organic Industrial Base (OIB) Programs

Secondary Item Overview:

- 2,352 Items Managed
- 1,147 Active / 1,288 Reparable

- **Supply Availability (Overall: 1st – 2nd pass) / (NMCS: 1st – 2nd pass):**
  - TWV Rollup – 95.4% - 96.4% / 96.5% - 97.7%
    - HTV – 85.7% - 87.6% / 84.1% - 88.9%
    - MTV – 100% - 100% / 100% - 100%
    - LTV – 95.7% - 96.9% / 99.8% - 100%
    - MRAP – 94% - 95.6% / 95.8% - 95.8%
    - Wheel Assemblies - 96.7% - 97.5% / 96.9% - 98.2%
- **Repair:**
  - 101 National Maintenance Programs
  - 101 Depot Programs
- **Obligations: $265.73M YTD**
  - FY19 Total: **$478.72M**
- **Demands: $120.77M YTD**
  - FY19 Total: **$623.8M**
- **Sales: $184.47M YTD**
  - FY19 Total: **$662.4M**

TACOM ILSC CS & CSS
Transportation Systems PSID
Force Projection PSID
Light Tactical Vehicles PSID
"Deeds Not Words"
Readiness and Sustainment Directorate

- Transition To Sustainment
  - Obsolescence (Tech)
    - DMSMS (Procurement)
- Reduce ALT/PLT
- Field Level Maintenance Optimization

EQUIPMENT & LOGISTICS READINESS PANEL

Daniel J. Gallagher
Executive Director
Army Contracting Command - Detroit Arsenal (ACC-DTA)

DISTRIBUTION A. Approved for public release: distribution unlimited

NDIA Tactical Wheeled Vehicles Conference

Mike Ivy
Sr. Vice President
International Programs & Global Product Support

OSHKOSH DEFENSE
YOUR MISSION. OUR HONOR.

March 3, 2020

Oshkosh Corporation & Oshkosh Defense

OSHKOSH™

Access

Commercial

Defense

Fire & Emergency

OSHKOSH DEFENSE

Heavy

Medium & MRAP

Light & ARFF

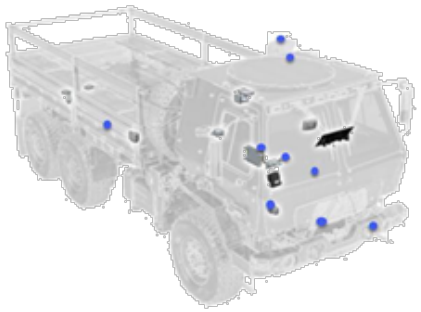
Performance Based Readiness Support

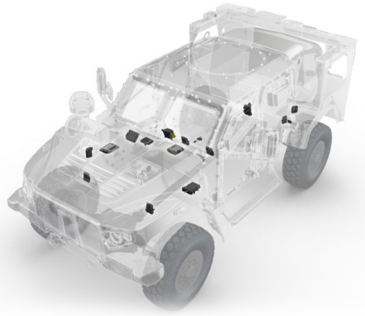
- Time definite delivery
  - Mission critical spares
  - Guaranteed global availability of readiness-drivers for new and legacy systems
  - Obsolescence management
- Requires a collaborative environment
  - Readiness issues
  - Maintenance and parts consumption data
  - Sharing of all collected usage information
- Impact on readiness
  - Improved readiness rates
  - Fleet maintenance opportunities

Condition Based Maintenance (CBM) +

Government and industry collaborate to improve readiness and lower life cycle cost

- Maintenance as required vs. maintenance by interval
- Enables readiness at both truck & fleet levels
- Directed troubleshooting with Augmented Reality (AR)
- Failure intelligence





Data Collection

Data Analytics

Reports & Implementation

UNCLASSIFIED

Equipment and Logistics Readiness

3 Mar 2020

Briefer: Susan Cashero

DISTRIBUTION A. Approved for public release: distribution unlimited

Overview

- Director, Transportation Systems Product Support Integrated Directorate, TACOM-ILSC

  310 personnel located in Warren, Virginia, Kuwait, Japan, and Hawaii

- Fleets Managed:

  Heavy Expanded Mobility Tactical Truck (HEMTT) – multiple variants

  Palletized Load System (PLS)

  Heavy Equipment Transport System (HET)

  915 Tractor Line Haul

  Dump Truck

  Medium Tactical Vehicles

  Mine Resistant Ambush Protection Vehicles (MRAP)

  Route Clearance Vehicles

  Trailers (Flatbed, Lowbed, Flatrack)

  Army Watercraft Systems

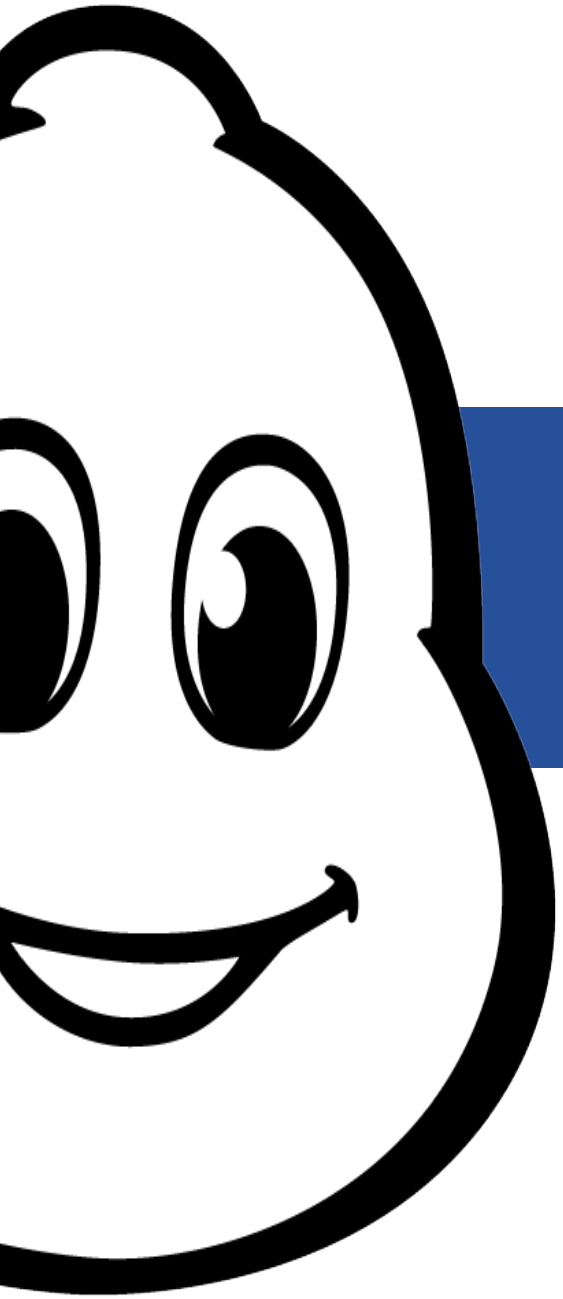
Challenges

- Obsolescence
  - Axles
  - Mitigate through development of organic capabilities through creative means
- Extended Contract Award Lead Times
- Extended Contract Delivery Lead Times
- Low monthly Contract Delivery Quantities
- Repair Delays
  - Low unserviceable asset returns to feed organic repair lines
  - High washout
- Funding

Initiatives

- Transparent Armor Re-lamination Effort
  - Leverage capability being developed by the USMC for use on Army systems
  - Possibility to develop and facilitize organic capability and/or commercial partnerships
  - Initial testing looks promising

- Innovative Contracting Initiatives
  - Long term, multi-item, multi-system contracts with OEM



Tactical Wheeled Vehicle Conference

Equipment & Logistics Readiness Panel

MICHELIN

Equipment & Logistics Readiness Panel

- Time to Change the DoD Tire Strategy
  - Maximize use of Commercial Distribution
  - Maximize use of Commercial Storage
  - Minimize Logistical Vulnerabilities
- Forecast Indicators
  - CL IX Funding
  - NTC Rotations
  - Fuel
- CBM → Fleet Maintenance
- Product Field Data → Access to the Fleets
- Mobility Solutions & the Introduction of New Technologies
- Readiness → Artic/Winter Mobility

MICHELIN

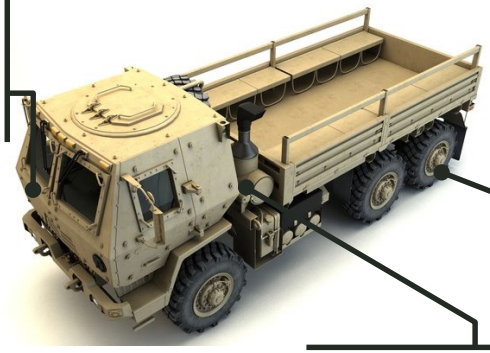
TWV Conference Equipment & Logistics Readiness Panel - Jason Duncan TACOM

DISTRIBUTION A. Approved for public release: distribution unlimited

UNCLASSIFIED

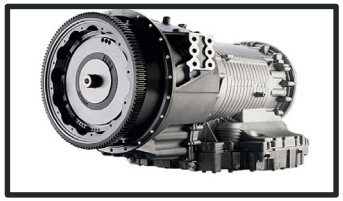
TURNING DATA INTO ACTIONABLE INFORMATION

Engine Parameters
Accelerator Pedal Position
Barometric Pressure
Boost Pressure
Coolant Level
Engine Coolant Temperature
Engine Hours
Engine Load
Engine Oil Pressure
Engine Oil Temperature
Engine Percent Torque
Engine Speed
Fuel Rate
Fuel Temperature
Injection Control Pressure
Intake Manifold Temperature
Mileage
Vehicle Speed
Power Take Off (PTO) Mode



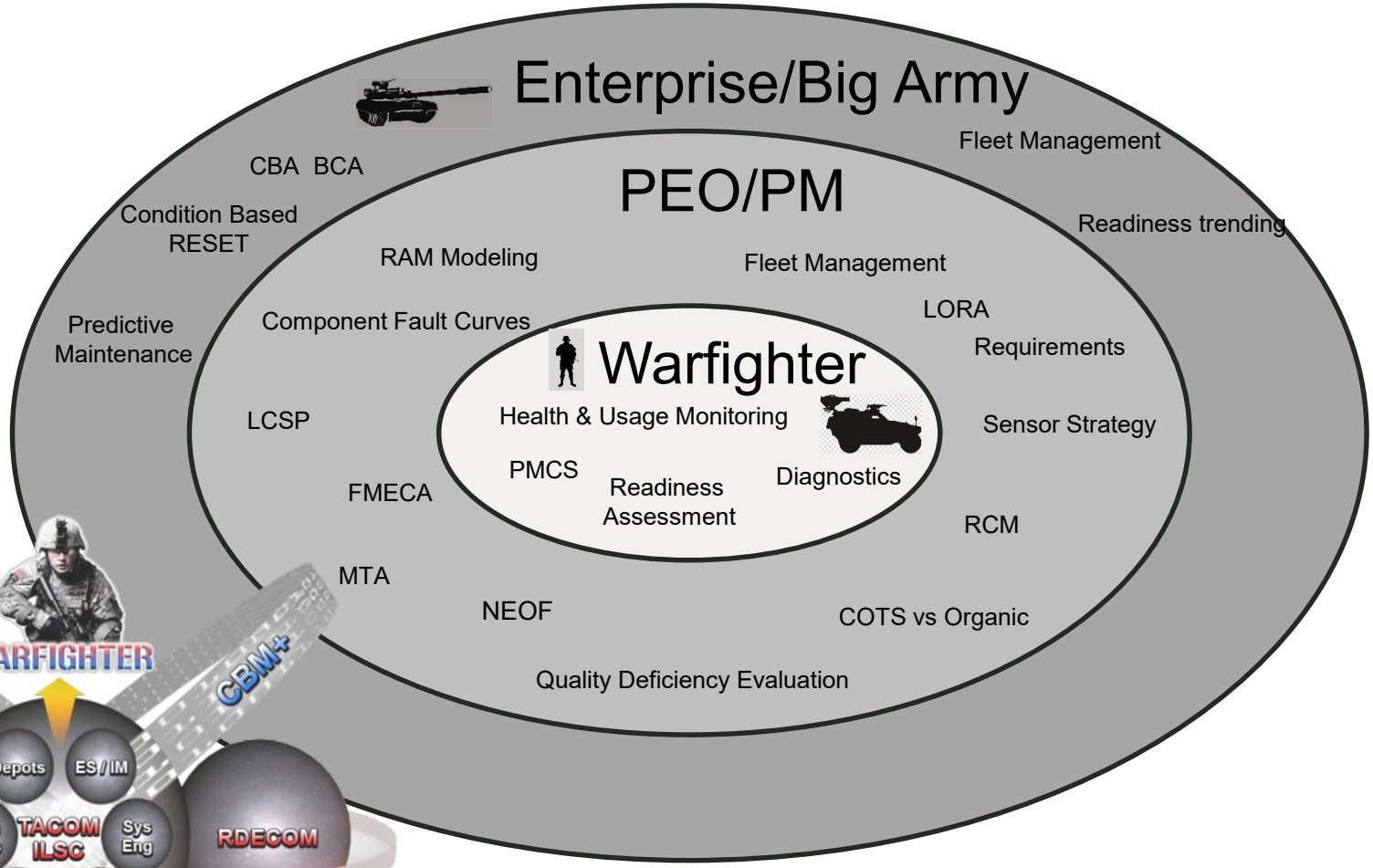
Brakes Parameters
Front Axle Speed
Relative Speed, Front Axle, Left Wheel
Relative Speed, Front Axle, Right Wheel
Vehicle Speed
Brake Switch

Electrical System Parameters
Alternator Potential (Voltage)
Alternator Speed
Battery Potential (Voltage)



Transmission Parameters
Transmission Oil Temp
Transmission Range Attained
Transmission Range Selected
Transmission Output Shaft Speed
Input Shaft Speed
Transmission Actual Gear Ratio
Transmission Current Gear
Transmission Selected Gear
Torque Converter Lockup Engaged

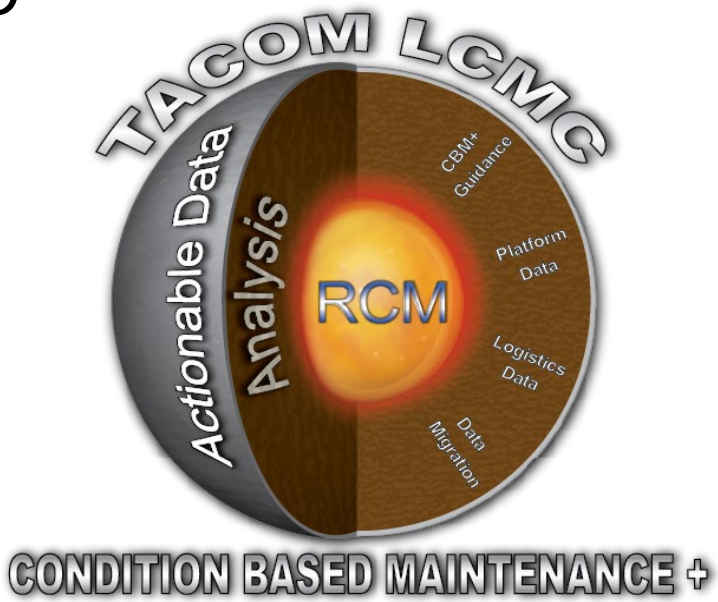
CBM+ USE CASES



CBM+ ACCOMPLISHMENTS

Direct impact to readiness and ROI

- Accurate & Autonomous OPTEMPO
- Enhanced Diagnostics
- Optimized Scheduled Services
- Warranty Claims
- Accident Reconstruction
- Fleet Management
- Log Product Updates
- Policy and Execution Order



CBM+ IMPLEMENTATION FOCUS AREAS

Requirements Codification

Field the CBM+ capabilities to collect, transmit, store and analyze CBM+ at scale

Implement data-driven decision making and integrate within ERPs

Questions

DISTRIBUTION A. Approved for public release: distribution unlimited

UNCLASSIFIED: Distribution Statement A - Approved for public release; distribution is unlimited

2020 TACTICAL WHEELED VEHICLE CONFERENCE

TANK-AUTOMOTIVE & ARMAMENTS COMMAND OVERVIEW

MARION WHICKER, EXECUTIVE DIRECTOR, INTEGRATED LOGISTICS SUPPORT CENTER

UNCLASSIFIED: Distribution Statement A - Approved for public release; distribution is unlimited

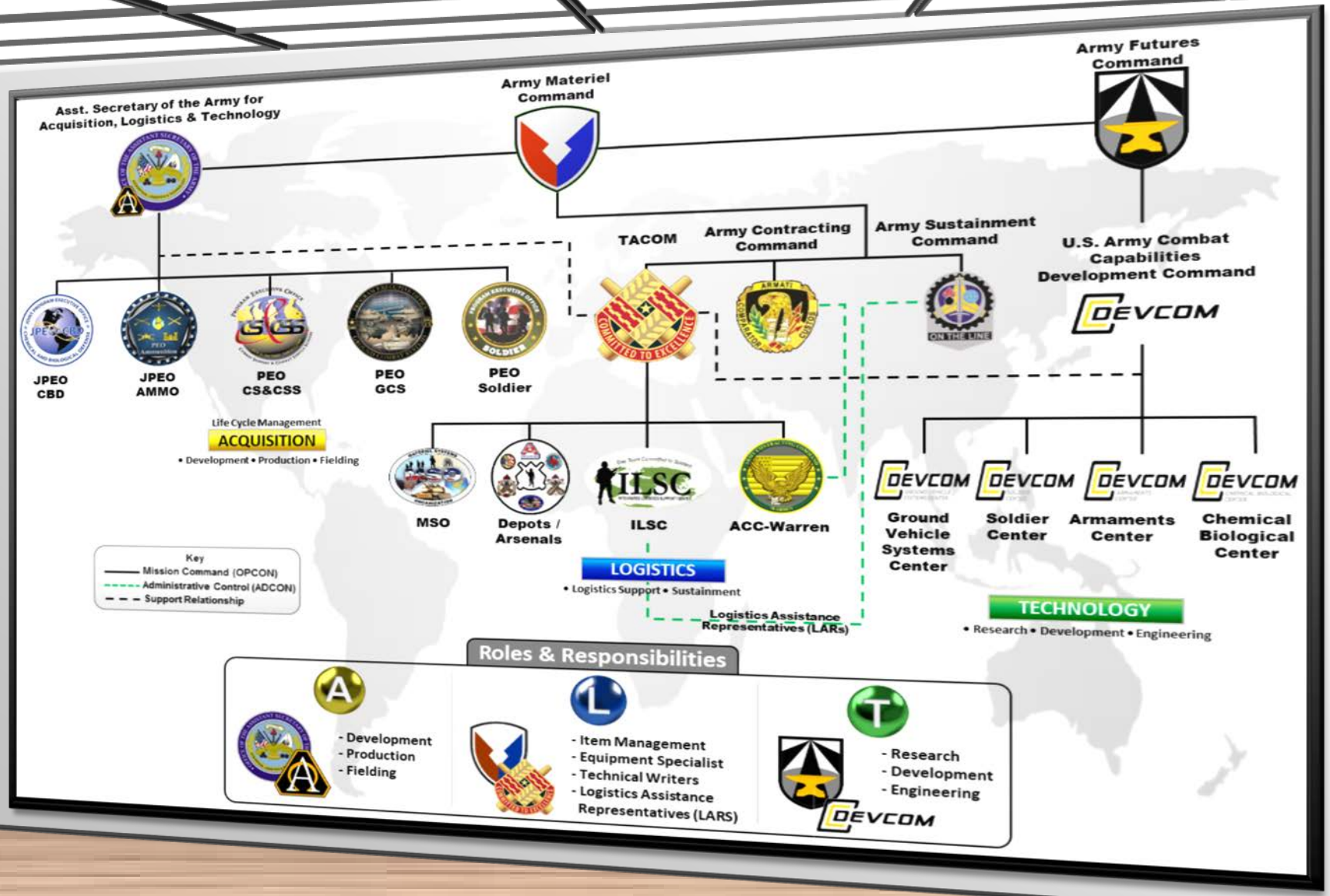
ENTERPRISE SUPPORT TO THE WARFIGHTER

MISSION

Develop and Deliver Readiness for ground and support systems globally

VISION

Be the Army's preeminent ground and support system provider, fully integrated as part of the Army's Materiel Integrator, AMC. Understand Army operational requirements, synchronize our capabilities and resources to develop and deliver flexible and responsive support that enables Army readiness



EQUIPPING OUR SOLDIERS

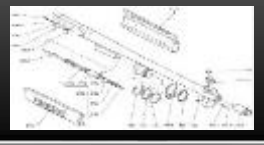
The Magnitude

500 Acquisition Programs

$30.0B U.S. Dollar Value

3200 Product Lines

38K Components



60-65% Managed Equipment in a Brigade Combat Team

130 Allied Countries

*Product Lines

- Combat Vehicles
- ✓ Tactical Vehicles
- ✓ Mine Resistant Ambush Protected
- Armored Security Vehicle
- ✓ Route Clearing Vehicle
- Howitzers
- Rifles / Machine Guns
- Large Caliber Guns
- Mortars
- ✓ Fuel & Water Distribution Equipment
- Rapid Fielding Initiative (RFI)
- ✓ Robotics
- Aircraft Armaments
- Soldier Uniforms & Equipment
- Force Providers
- ✓ Materiel Handling Equipment
- Chemical Defense Equipment
- ✓ Trailers
- ✓ Watercraft
- Rail
- ✓ Construction Equipment
- ✓ Commercial Vehicles
- Fuel & Lubricant Containers
- ✓ Sets, Kits & Outfits
- ✓ Shop Equipment
- ✓ Tactical Bridges

(* Not all inclusive)

STRENGTH OF THE INDUSTRIAL BASE

READINESS

Commercial

Public Private Partnership

P3

Organic Industrial Base

Additional opportunities through increased visibility

Statute for at least 50% organic capability

Core • Critical Manufacturing Capabilities • Complementary Capabilities • Best Value

Factors: Size, Capabilities, Capacity, Balance, Investments, Affordability

Depot and Arsenal Key Capabilities /Capacity

Red River Army Depot (RRAD)

Capacity exists for current production lines:

- HMMWV, MRAP, Trailers, FMTV, PLS, HET, HEMTT, and Heavy Tactical Vehicles.
- Engines, Transmissions, Wheels, Axles and Fire Suppression Systems Overhaul
- Secondary item Overhaul
- Material Handling Equipment, Construction Equipment, and Bridging Remanufacture

Rock Island Arsenal-Joint Manufacturing and Technology Center (RIA-JMTC)

- HMMWV Ambulance
- Founding, Forging, Machining

Sierra Army Depot (SIAD)

- Fuel & Water Systems
- Retrograde of Material & Redistribution of Serviceable Assets
- End of First Life Center - Long Term Storage & Management of Major End Items
- Trailers

TACOM ARSENALS AND DEPOTS

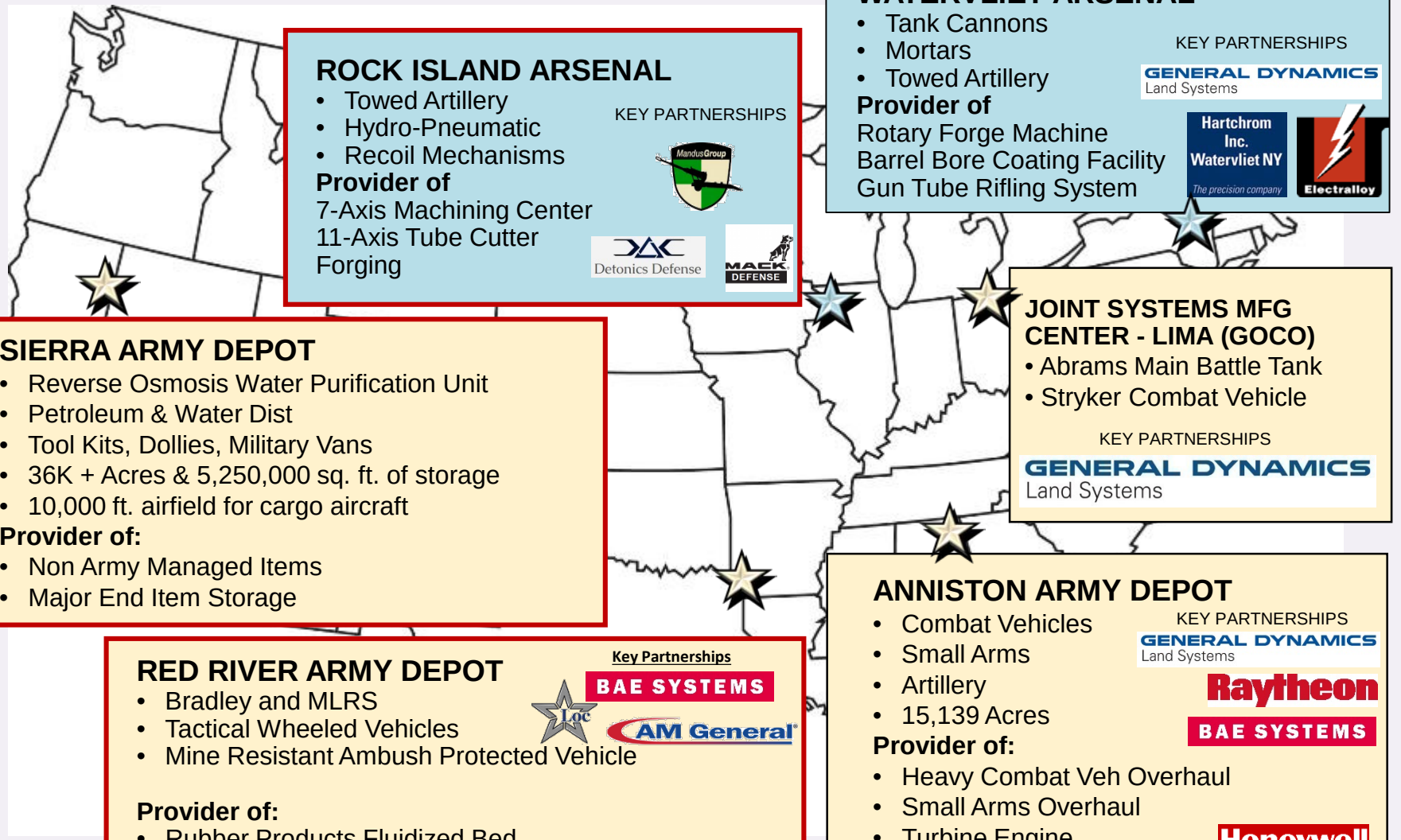
The Army's Organic Industrial Base: A National Security Readiness Insurance Policy

DEPOTS

- Remanufacturing
- Complete End Item Overhaul
- Component Overhaul
- Other Military Service Work
- Other Government Work
- Public-Private Partnerships (P3) on-site
  - ✓ Manufacturing
  - ✓ Maintenance
- Fabrication of Commercially Unavailable Components and Parts
  - ✓ Reverse Engineering
  - ✓ Flexible Light Manufacturing
- Depot Field Teams In-Theater

ARSENALS

- Complete Manufacturing Plant
- Unique Capabilities:
  - ✓ New Weapons Prototyping
  - ✓ End Item Production
  - ✓ Spare/Repair Parts Production
- Two Types of Arsenals:
  - ✓ Hard Iron (Watervliet, Rock Island Arsenal)
  - ✓ Chemical (Pine Bluff)



ROCK ISLAND ARSENAL

- Towed Artillery
- Hydro-Pneumatic
- Recoil Mechanisms

Provider of

7-Axis Machining Center
11-Axis Tube Cutter
Forging

KEY PARTNERSHIPS

Mandus Group
Detonics Defense
MACK DEFENSE

WATERVLIET ARSENAL

- Tank Cannons
- Mortars
- Towed Artillery

Provider of

Rotary Forge Machine
Barrel Bore Coating Facility
Gun Tube Rifling System

KEY PARTNERSHIPS

GENERAL DYNAMICS Land Systems
Hartchrom Inc. Watervliet NY The precision company
Electralloy

SIERRA ARMY DEPOT

- Reverse Osmosis Water Purification Unit
- Petroleum & Water Dist
- Tool Kits, Dollies, Military Vans
- 36K + Acres & 5,250,000 sq. ft. of storage
- 10,000 ft. airfield for cargo aircraft

Provider of:

- Non Army Managed Items
- Major End Item Storage

JOINT SYSTEMS MFG CENTER - LIMA (GOCO)

- Abrams Main Battle Tank
- Stryker Combat Vehicle

KEY PARTNERSHIPS

GENERAL DYNAMICS Land Systems

RED RIVER ARMY DEPOT

- Bradley and MLRS
- Tactical Wheeled Vehicles
- Mine Resistant Ambush Protected Vehicle

Provider of:

- Rubber Products Fluidized Bed
- Rubber Compound Injection Mold Press

Key Partnerships

BAE SYSTEMS
Loc
AM General

ANNISTON ARMY DEPOT

- Combat Vehicles
- Small Arms
- Artillery
- 15,139 Acres

Provider of:

- Heavy Combat Veh Overhaul
- Small Arms Overhaul
- Turbine Engine
- Reciprocating Engine

KEY PARTNERSHIPS

GENERAL DYNAMICS Land Systems
Raytheon
BAE SYSTEMS
Honeywell

DELIVERING READINESS FOR THE TACTICAL WHEELED VEHICLE FLEET

Red River Army Depot (RRAD)

Center of Industrial and Technical Excellence
Tactical Wheeled Vehicles

CAPABILITIES

- Inspection & Testing
- Engines & Transmission
- Powertrain Repair and Overhaul

- Axles, Final Drives, Drive Train and Transfer Cases

- Reset/RECAP
- Component Repair

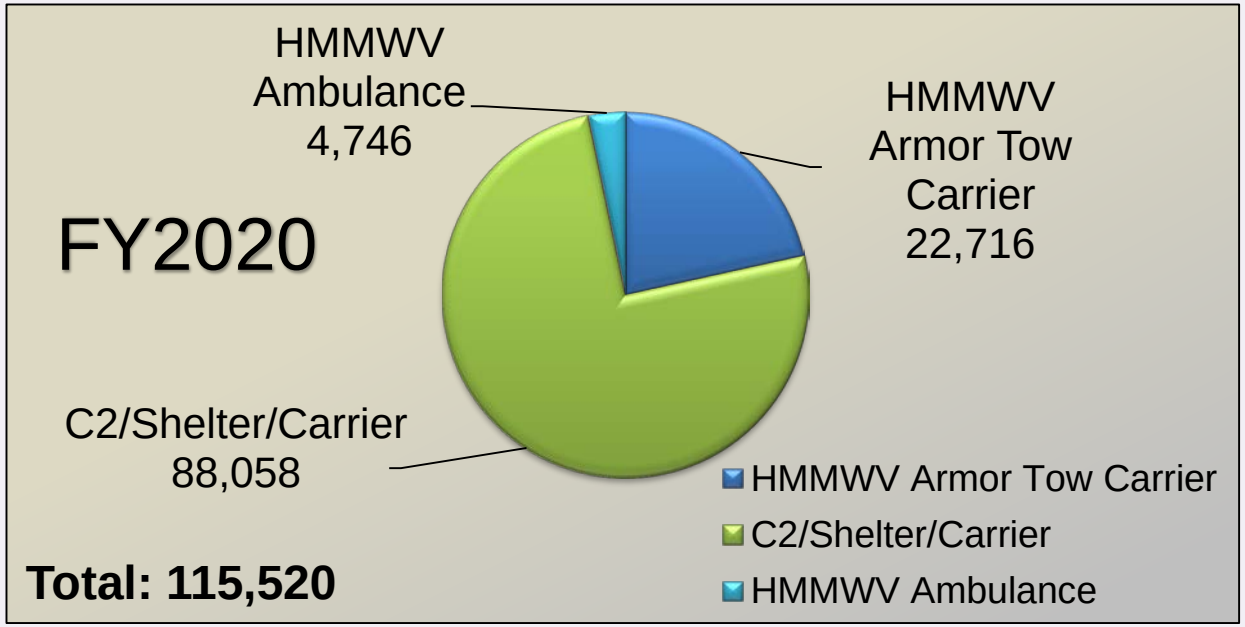
- Ballistic Armor Welding

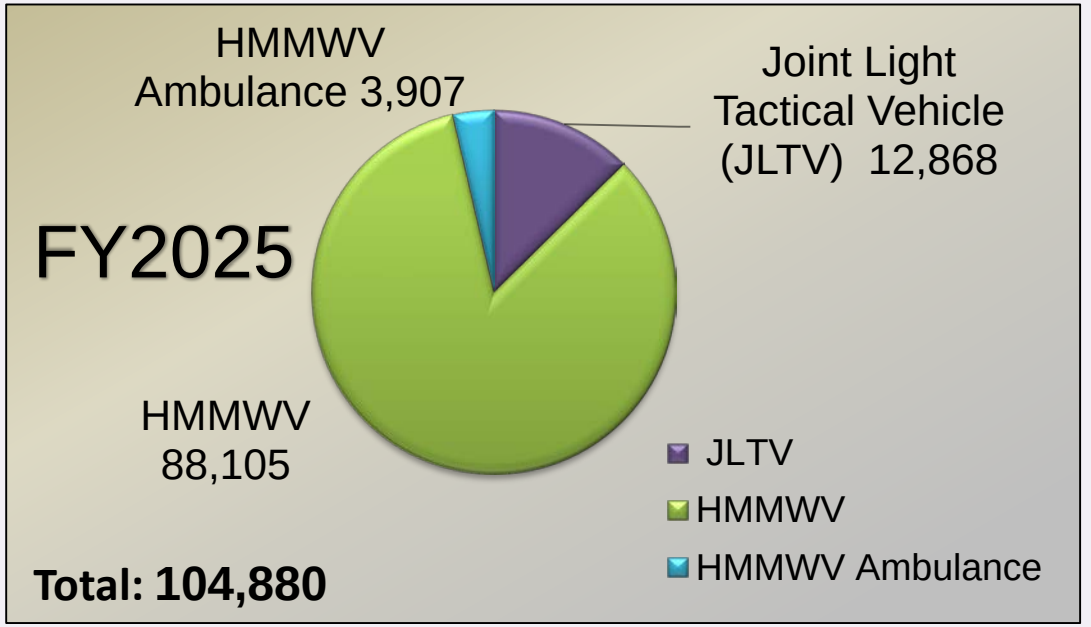
- Dynamometer Testing
- Radiators & Coolant Systems
- Heat/Air Conditioning

- Fabrication of Armor Components
- Forward Fielding and Repair Support
- Electronic Wiring Harnesses

FLEET MANAGEMENT SUSTAINMENT CHALLENGES

Light Tactical Vehicles





Army Fleet Management Constraints:

- System Life Cycle
- Investment Decisions (Pure Fleet?)
- Maintaining the Fleet
- Effective Useful Life (EUL) /Divestiture

Opportunities:

- Sustainment now and future
- Spare and Repair Parts Provider
- Obsolescence
- Modification Work Order (MWO)
- Public Private Partnerships (P3)

TEAMING / PARTNERING OPPORTUNITIES

Successes

- Red River Army Depot /AM General/Partnership Overhaul of M1152A1 and M1165A1 Up-Armored HMMWVs
- Red River Army Depot /AM General/Partnership Conversion of M1151A1's to the M1167 TOW Variant
- Watervliet Arsenal partnership with Electralloy

Public Private Partnership Opportunities

Rock Island Arsenal, Joint Manufacturing and Technology Center (RIA-JMTC) / AM General Partnership anticipated HMMWV Ambulance M997A3 production

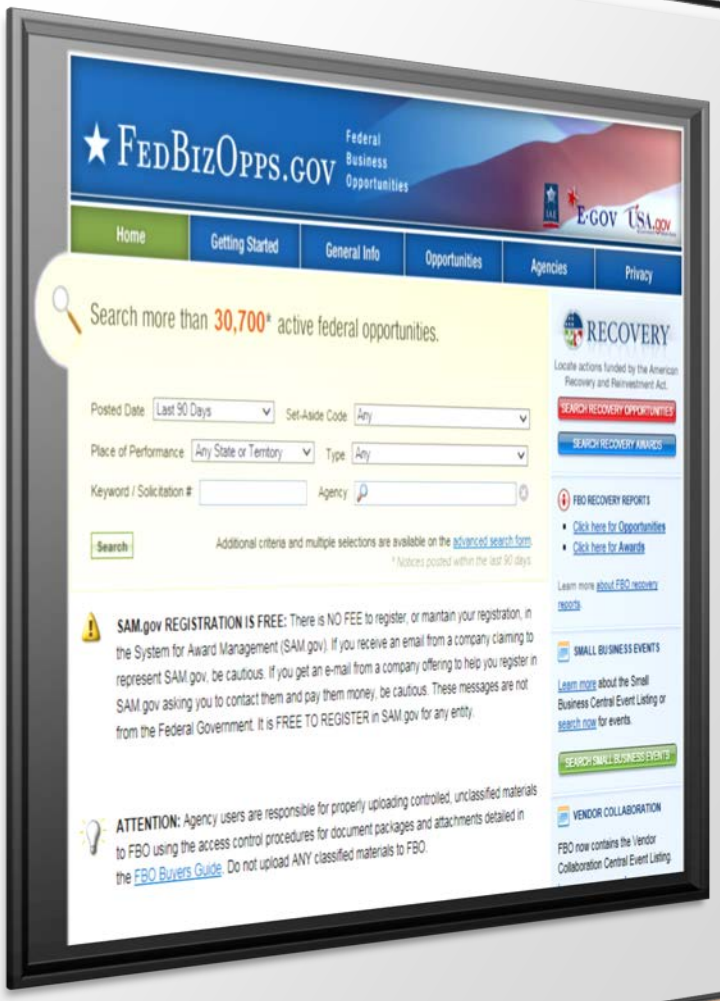
FMTV Reset

Red River Army Depot Supply Chain Management services rebuy under TACOM Strategic Services Solutions contract (TS3)

Army Watercraft

Logistics Support, TACOM LCMC/Defense Logistics Agency collaboration leveraging the Special Operational Equipment Tailored Logistics Support Programs

DOING BUSINESS WITH THE FEDERAL GOVERNMENT



1. Register with Dun & Bradstreet (D&B) at http://fedgov.dnb.com/webform to obtain a Data Universal Numbering System (DUNS) number. A DUNS number is a unique numeric identifier assigned to a single business entity.

2. Register in the **System for Award Management (SAM)**, www.sam.gov in order to receive a Contractor and Government Entity Code (CAGE) required to be eligible for a prime contact. You must have a tax identification number to register.

3. Search for Active Federal Opportunities FedBizOpps.gov at Federal Business Opportunities like the ones in this presentation at http://www.fbo.gov.

4. Bid on Federal Opportunities at https://www.fbo.gov/downloads/FBO_Vendor_Guide.pdf

POINTS OF CONTACT FOR ASSISTANCE

Subcontracting Opportunities

Small Business Administration (SBA) Sub-Net - www.sba.gov/subnet

DoD Subcontracting Directory - www.acq.osd.mil/osbp/doing_business/

DoD Prime Contract Descriptions - www.defense.gov/contracts

TACOM LCMC Headquarters

Army Contracting Command-Warren
Phone: (586) 282-7027
http://acc.army.mil/contractingcenters/acc-wrn/index.html
Email: usarmy.detroit.acc.mbx.wrn-xo@mail.mil

TACOM Office of Small Business Programs
Phone: (586) 282-5388
Email: usarmy.detroit.tacom.mbx.lcmc-osbp@mail.mil

TACOM LCMC Competition Management Office
Future and Potential Buys/Source Approval Program
Phone: (586) 282-5207
Email: usarmy.detroit.tacom.mbx.lcmc-competition-management-office@mail.mil

TACOM LCMC Depots and Arsenals

Anniston Army Depot (ANAD)
Phone: (256) 235-6512
http://www.anad.army.mil/

Red River Army Depot (RRAD)
Phone: (903) 334-5046
https://www.redriver.army.mil/

Sierra Army Depot (SIAD)
Phone: (530) 827-5153/4888
http://www.sierra.army.mil/Public/

Rock Island Arsenal-Joint Mfg and Technology Center
(RIA JMTC)
Phone: (309) 782-0595
https://ria-jmtc.ria.army.mil/

Watervliet Arsenal (WVA)
Phone: (518) 266-4005
http://www.wva.army.mil/

Procurement Technical Assistance Centers (PTAC)

To contact a PTAC outside of Michigan, please visit: www.aptac-us.org/

Questions

PEO CS&CSS Overview to TWV Conference

Tim Goddette, SES
Program Executive Officer
Combat Support & Combat Service Support

Mission, Vision, and Priorities…

MISSION

Lead an innovative, proficient, and disciplined lifecycle management team that enables America's warfighters by consistently providing integrated, tailored, and cost-conscious products.

VISION

We are the Army's Acquisition experts for Commercial and Non-Developmental Items – rapidly delivering capabilities that reduce Soldier exposure, optimize manpower, and enable sustained mobility, lethality, and the network.

PRIORITIES

- Tailoring and Streamlining
- Human Capital
- Fleet Management

TECHNOLOGIES

- Robotics (Hazard) and Autonomy (Manpower)
- Condition Based Maintenance (Data)
- Advanced Manufacturing (Readiness)
- Technical Manuals (Video)

INTERESTS

- Enabling the "Big Six"
- Competition
- RDT&E to set conditions for future opportunities
- Growth, reliability, ease-of-use, lifecycle cost

Organization

Assistant Secretary of the Army for Acquisition, Technology, and Logistics (ASA(ALT))
Honorable Bruce Jette, Ph.D.

Principal Military Deputy to (ASA(ALT))
LTG Paul Ostrowski

Principal Deputy to (ASA(ALT))
Mr. Jeffrey White

Program Executive Officer
Mr. Tim Goddette

Deputy PEO
Mr. Andrew DiMarco

Chief of Staff
COL Shane Fullmer

PEO CS&CSS Staff

Executive Officer:
Mr. Nicholas Garon
APEO Business Management:
Mr. Jean (J.P.) Marcoux
APEO Logistics:
Mr. Glen Broman
APEO FMS/Integration:
Vacant
APEO Systems Engineering/ Information Technology:
Ms. Michelle Minto
APEO Strategic Operations:
Mr. Steve Roberts

Expeditionary Energy & Sustainment Systems

PM: COL Adrian Marsh
DPM: Ms. Lisa Stone

PdM Force Sustainment Systems
LTC Alexander Babington

PdM Mobile Electric Power Systems
LTC Anthony Leach

PdD Small Expeditionary Power Sources
Ms. Chen Xi Dong-O'Malley

Force Projection

PM: COL Shane Sullivan
DPM: Mr. Shon-Neil Severns

PdM Bridging
Mr. Steven Rienstra

PdM Appliqué & Large Unmanned Ground Systems
LTC Jon Bodenhamer

PdM Combat Engineer/ Material Handling Equipment
LTC Tony Jones

PdM Unmanned Ground Vehicles
Mr. Louis Anulare (USMC)

PdM Petroleum & Water Systems
LTC William Anderson

PD Test, Measurement, & Diagnostic Equipment
Mr. Thomas Lettis

PdM Sets, Kits, Outfits & Tools
LTC Evan Timmens

PL Robot Logistic Support Center
Ms. Diane McCarthy

Joint Light Tactical Vehicle

PM: Mr. Michael Sprang
DPM: Mr. Chris Brouwer
DPM-USMC: Mr. Andrew Rodgers

PdM Vehicle Systems
LtCol Mark Braithwaite (USMC)

PdM Systems Integration
LTC John Nelson

PD Light Tactical Vehicles
Mr. Craig Riedel

PL Ground Mobility Vehicles
Mr. Steven Herrick

Transportation Systems

PM: Mr. Wolfgang Petermann
DPM: Mr. Eric Fletcher

PdM Heavy Tactical Vehicles
Mr. Alvin Bing

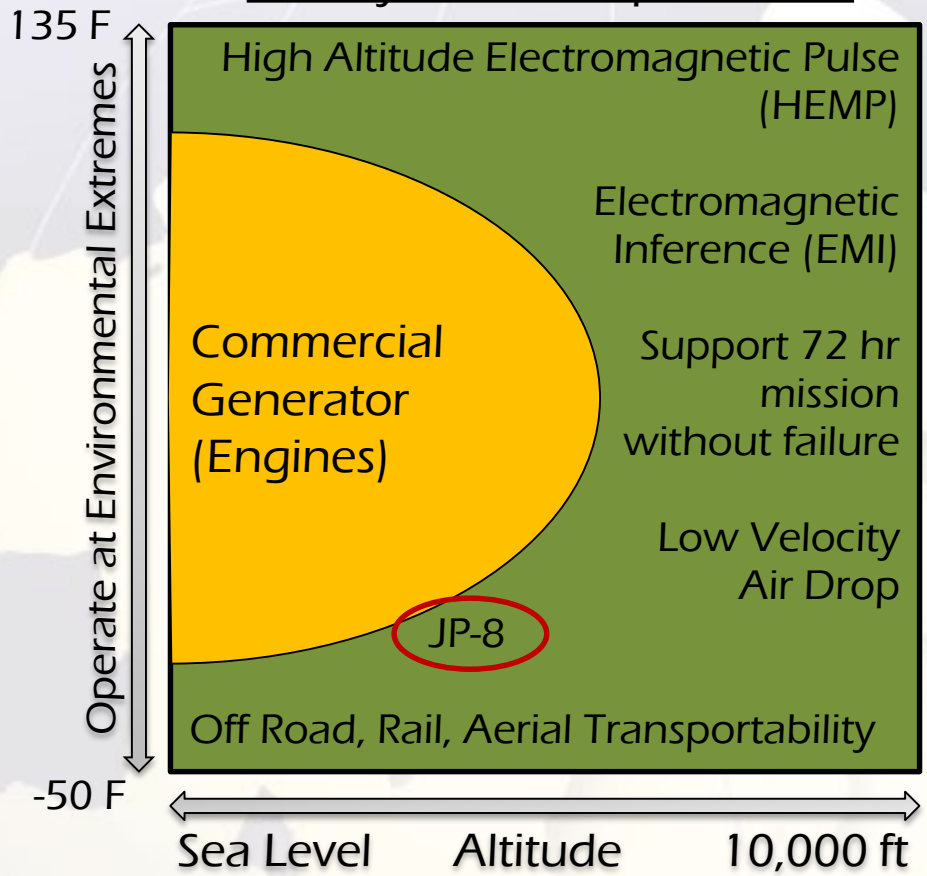
PdM Allied Tactical Vehicles
Mr. John Hufstedler

PdM Multi-Mission Protected Vehicle Systems
LTC Michael Riley

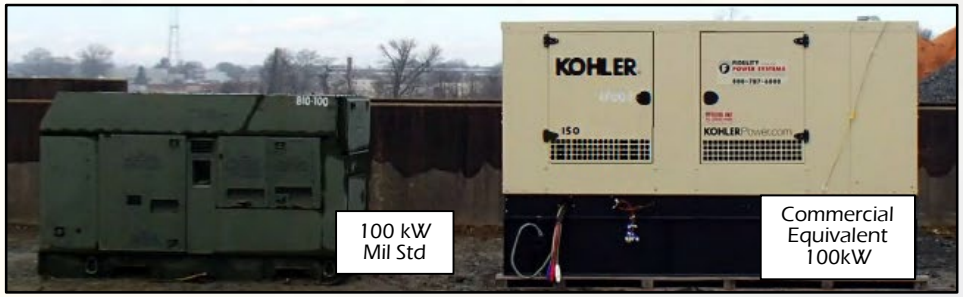
PD Army Watercraft Systems
Mr. Chad Stocker

Military-Commercial Requirement Comparison

Military Power Requirements



Reliability Size Weight



Commercial Generators do not meet the full array of military requirements

Industrial Base Support Across the States

- Partners in 21 states
- 4 Depots and 1 Arsenal
- 80+ different companies
  - 16 traditional
  - 67 non-traditional

West

- **Flyer Defense, Los Angeles CA**
- **SIAD, CA**
- **West-Mark, Ceres , CA**
- AMETEK – San Diego, CA
- Joy Signal Technology– CA
- General Micro Systems, Rancho Cucamonga, CA
- Parachute Manufacturer, Santa Anna, CA
- Vigor Works, LLC, Portland, OR

Southwest

- Firetrace Aerospace, Scottsdale, AZ
- Wamore, Inc, Phoenix, AZ
- **Textron, Slidell, LA**
- Swiftships, Morgan City, LA
- **Choctaw, Choctaw, OK**
- **Heil Trailers, Houston, TX**
- **Red River Army Depot, Texarkana, TX**
- Lockheed Martin, Texas

Midwest

- **Rock Island Arsenal-Joint Manufacturing Technology Center, IL**
- **Caterpillar Inc, Peoria, IL**
- **Navistar Defense LLC, Melrose Park, IL**
- **AM General LLC, South Bend/Mishawaka, IN**
- Laibe Corporation, IN
- **Talbert Manufacturing, Inc, Rensselaer, IN**
- **AM General LLC, Auburn Hills, MI**
- **GM Defense, Troy, MI**
- General Dynamics Land Systems, Sterling Heights, MI
- **Polaris, Medina, MN**
- **Cummins Power Generation, Fridley, MN**
- **Leonard DRS, St. Louis, MO**
- Boeing, St. Charles, MO
- MAC Panel, MO
- Brothers Body And Equipment, LLC, Gallon, OH
- Trimble, Trimble, OH
- Battelle Memorial Institute, Columbus, OH
- **O'Gara Hess & Eisenhardt Armoring, Fairfield, OH**
- Robot Solutions, Cincinnati, OH
- **Schutt Industries, Clintonville, WI**
- **Oshkosh Defense, Oshkosh, WI**
- IBVI, Milwaukee, WI
- Beyond Vision, Milwaukee, WI

Northeast

- Capwell, South Windsor, CT
- **Tru-HITCH, Barkhamsted, CT**
- Draper, Cambridge MA
- Endeavor Robotics, Chelmsford, MA
- Teradyne, North Reading, MA
- QinetiQ North America, Waltham, MA
- **Robotics Research, Gaithersburg, MD**
- Federal Resources, Stevensville, MD
- General Dynamics, MD
- Newton, Hyattsville, MD
- FASCAN International, Sparrows Point, MD
- **Howe & Howe, Waterboro, ME**
- AEE, Clinton, NY
- Buffalo Turbine, Springville, NY
- **TYAD, Tobyhanna, PA**
- **Grove U.S., Shady Grove, PA**
- **Mack Defense, Allentown, PA**
- Airborne Systems North America, Pennsauken, PA
- BAE Systems Land and Armaments Limited Partnership, York, PA
- ARA, Randolph, VT

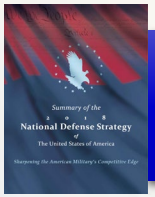
Southeast

- VT Miltope Corp., Hope Hull, AL
- Strata-g Solutions, Huntsville, Al
- DRS Network & Imaging Systems, Huntsville, Al
- **DRS Leonardo, AL**
- Fibrotex USA, Washington, DC
- **General Dynamics Ord &Tact Sys, FL**
- **Load King Manufacturing Company, Jacksonville, FL**
- Kipper Tool, Gainesville, GA
- **JCB INC, GA**
- **TEREX Corporation, GA**
- Lockheed Martin, Lexington, KY
- Messier & Associates, Inc, Louisville, KY
- **Carolina Growler, Inc, Star, NC**
- Isometrics, Reidsville, NC
- **Navistar Defense (ND), West Point, MS**
- KBR Wyle, Inc, Morrisville, NC
- **Critical Solutions International (CSI), Charleston, SC**
- Complete Parachute Systems, DeLand, FL
- Alion Science & Technology, McLean, VA
- Atlantic Diving Supply, VA Beach, VA
- Dyncorp International, McLean, VA
- General Dynamic Mission Systems, Marion, VA
- NCS Technologies, Gainesville, VA
- Pacific Architect Engineering (PAE), Arlington, VA
- Colonnas Shipyard , Norfolk, VA
- **HDT, VA**
- **PD Systems, Springfield VA**
- **Anniston Army Depot, AL**

PEO CS&CSS – AFC CFT Linkages

67% of PEO CS&CSS resources are aligned to enable CFT-equipped formations through 30% of current PEO CS&CSS programs

	Programs	Investment FY20-25*	LRPF	NGCV	FVL	Network	IAMD	Soldier Lethality
JLTV	1	$5,127 M				X	X	X
Infantry Squad Vehicle	1	$177 M		X				X
Maneuver Support Vessel - Light	1	$588 M	X	X				
Heavy Equipment Transport System [USAEUR ONS]	1	$61 M	X	X	X			
Heavy Trailers (Re-supply fuel, ammo)	4	$225 M	X	X	X			
Assault Breacher Vehicle	1	$109 M		X				
Joint Assault Bridge	1	$1,124 M	X	X				
Line of Communication Bridge	1	$189M	X	X			X	
Expedited Leader Follower	1	$461 M	X	X				
Robotics	5	$670 M		X		X		X
Petroleum and Water (Tactical)	7	$493 M	X	X	X	X	X	
NGATS	1	$203 M	X	X	X	X	X	X
Tactical Electric Power	5	$381M	X		X	X	X	X
	31	**$9,808 M**						



- "Transitioning from large, centralized, unhardened infrastructure to smaller, dispersed, resilient, adaptive basing..."
- "...invest broadly in military application of autonomy...to gain competitive military advantages."
- "Prioritize...strategic mobility assets...as well as non-commercially dependent distributed logistics...to ensure logistics sustainment while under persistent multi-domain attack."

Other Transaction Authority (OTAs)

PM	Product Office	Current Project	Future Project
E2S2	PdM SEPS	2kW Military Tactical Generator (MTG)	
		Platoon Power Generator (PPG)	
		3kW Lightweight Housing Development	
	PdM FSS	Army Standard Family of Rigid Wall Shelters (ASF-RWS)	
		Rapid Rigging & De-Rigging Airdrop System (RRDAS)	
		Expeditionary Solid Waste Disposal System (ESWDS)	
FP	PdM ALUGS	Squad Multipurpose Equipment Transport (S-MET)	
		Leader Follower (LF)	
	PdM Bridging	Line of Communication Bridge (LOCB)	
		Family of High Military Load Class (FoHMLC) AVLB	
	PdM PAWS	Mobile Tactical Retail Refueling System (MTRRS)	
		Bulk Fuel Distribution System (BFDS)	
		HEMTT-LHS Compatible Water Tank Rack (HIPPO)	
	PdM TMDE	Radio Test Set-TS-4549	
	PdM UGV	Common Robotics System (Heavy) (CRS(H))	Enhanced Robotic Payloads (ERP) - Unmanned Ground Systems (UGS) (ERP-UGS)
JLTV	PdL GMV	Infantry Squad Vehicle (ISV)	
TS	PdM HTV	Heavy Equipment Transporter System (HETS) Trailer	Medium Equipment Transporter System Trailer (METS-Trailer)
		25-Ton Semitrailer Low Bed (STLB)	Enhanced Heavy Equipment Transport System (EHETS)
			Cold Weather All -Terrain Vehicle (CATV)

2020 TWV Framework

- The strategy focuses in three areas:
  - Multi-Domain Operations:
    - Payload – Mobility - Protection
    - Transportation-Based Distribution
    - Highlight increased capabilities: active safety, protection, capacity, Condition-Based Maintenance (CBM+) autonomous technologies, and Advanced Manufacturing
  - Investment:
    - Leverage commercial industry investment in automotive technologies, focus limited S&T on military unique capabilities
    - Provide Army Leadership with affordable solutions, competition will be critical (with or without TDPs) to affordability
    - Maintain "Open" Long-Term Contracts to enable our ability to surge, if Army accepts risk with limited procurement funding
    - 100% Armor capable, tiered Force Protection B Kit requirements from blanket 30%
  - Divestiture:
    - Limiting number of variants fielded to reduce impacts to training and sustainment (maintenance & supply chain)
    - Use Sales and Exchange Programs & Divestiture to generate revenue and savings to support TWV modernization
    - Change USR policy to not penalize units for divestment

Ends, Ways, and Means

- **Ends**
  - Maintain a viable, modern (avg. age 15 years) and safe fleet
  - Strive for fleet commonality
  - Maintain an industrial base with surge capability
- **Ways**
  - Maintain average annual funding of $1.5 - 2.0B
  - Divesture of legacy fleet
- **Means**
  - OTAs and Open Contracts
  - Competition

Project Manager Expeditionary Energy & Sustainment Systems (PM E2S2)

Colonel Adrian Marsh

PM E2S2 Portfolio

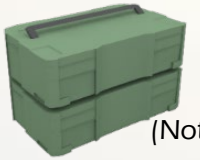
Product Director Small Expeditionary Power Sources (PD SEPS)

2kW Military Tactical Generator (MTG)

3kW Tactical Quiet Generator (TQG)

Platoon Power Generator (PPG)

Small Tactical Electric Power (STEP)



(Notional)

Product Manager Mobile Electric Power Systems (PM MEPS)

5-60kW Advanced Medium Mobile Power Sources (AMMPS)

Microgrid

Prime Power – 840kW Deployable Power Generation & Distribution System (DPGDS)

Power Units (PU)

Power Plants (PP)

Large Advanced Mobile Power Sources (LAMPS)

Power Distribution Illumination Systems Electrical (PDISE)

5-60kW Tactical Quiet Generators (TQG)

100kW/200kW Tactical Quiet Generators (TQG)

Product Manager Force Sustainment Systems (PM FSS)

Expeditionary Support

Cargo Aerial Delivery

- EHLSCDS
- LCADS
- ALVADS
- SADE
- JPADS
- RRDAS

Shelter Systems

- ASF-RWS
- ASF-SWS
- ULCANS
- ASLMS
- ESPS

Expeditionary Service Support

Heaters & Environmental Control Units

Force Provider Expeditionary Modules

Field Feeding

- Assault Kitchen
- Containerized Kitchen
- Mobile Kitchen Trailer

Field Services

- MTRCS
- MIRCS
- 12 Head Shower
- Mortuary Affairs

Power Generation, Power Distribution, and Force Sustainment Service Support

PM E2S2 Upcoming Opportunities

- **Small Expeditionary Power Sources**
  - **PPG:**
    - Vendor down select for PPG COTS production contract **(T) RFP 1QFY21 - Award 2QFY21**
    - PPG Electronic Technical Manual (ETM) purchase **(T) 2QFY20**
  - **STEP:**
    - Lightweight 2kW COTS generator development OTA **(T) RFP 1QFY20 and Award 2QFY20**
- **Force Sustainment Systems**
  - JPADS 2K Block 1 Avionics Module – **Sep 2020**
  - Force Provider Technical Assistance Team Contract – **Aug 2020**
  - Integration of Kitchens, Latrines, Shower, Sanitation - GFE containers (ETS Contract) – **Aug 2020**
  - ESWDS Production Contract– **Nov 2020**

Project Manager Joint Light Tactical Vehicles (PM JLTV)

Michael Sprang

JPO JLTV Initiatives

Joint Light Tactical Vehicles (Army and Marine Corps)	Light Tactical Vehicles (Army)	Ground Mobility Vehicles (Army)

Mission

The Joint Program Office Joint Light Tactical Vehicles will develop, acquire, field and sustain a portfolio of Light Tactical Vehicles, with a focus on affordability, continuous process improvement, and partnering, in order to provide capability and flexibility to Joint Forces across the full spectrum of military operations throughout the economic useful life of the portfolio.

Vision

Developing and Empowering the premiere acquisition workforce to deliver the World's Best Light Tactical Vehicles to the Joint Force to accomplish their mission

- Industry Opportunities
  - Competition
    - Follow-on JLTV (truck and trailer)
  - System technical solutions
  - Other transactional authorities
  - Partner with primes
- Focus areas
  - Balance performance and cost
  - Balance speed to warfighter with quality
  - Balance modernization with sustainability

Project Manager Transportation Systems (PM TS)

Wolfgang Petermann

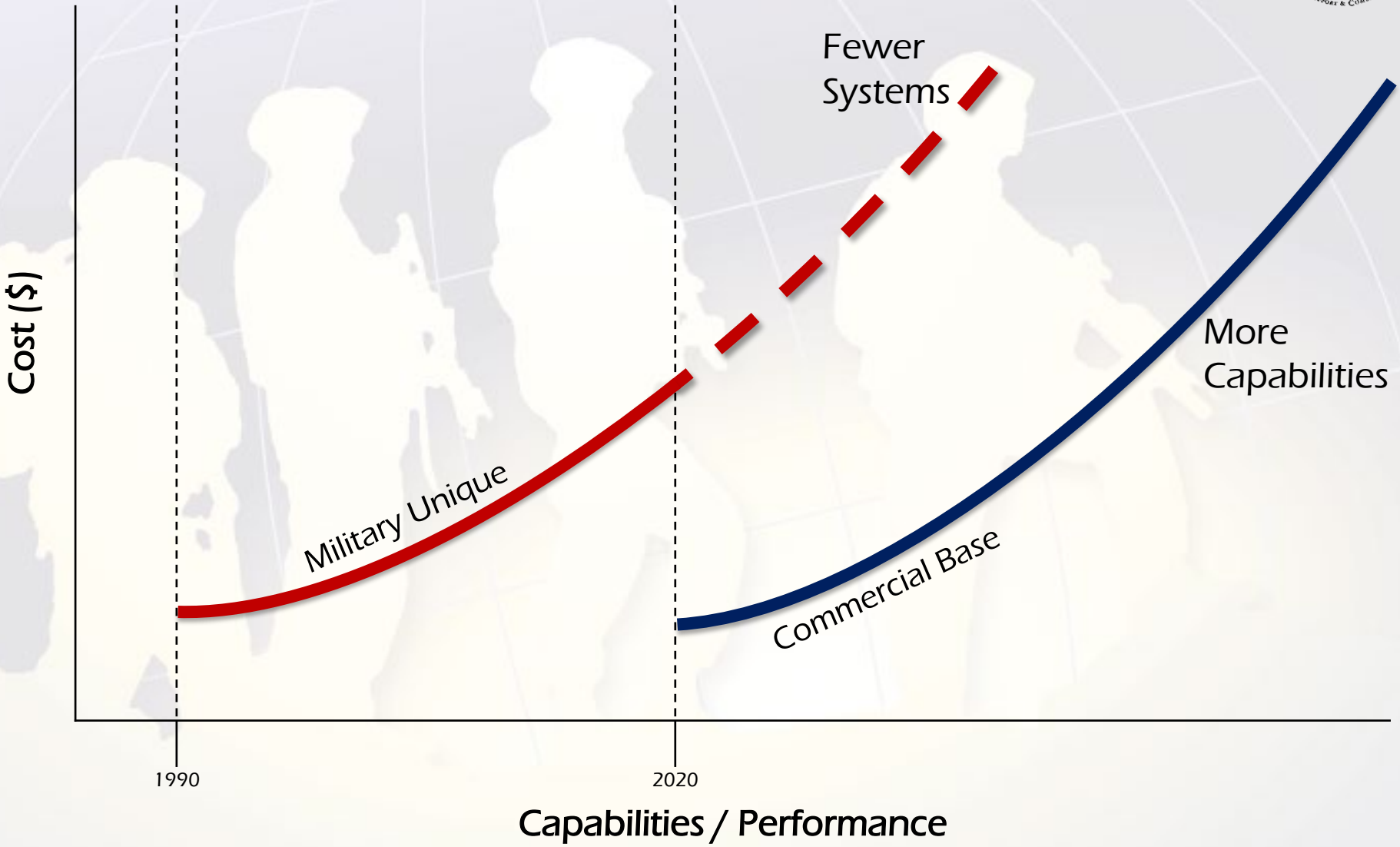
PM TS Upcoming Opportunities (FY20-22)

- **Heavy Trucks**
  - Enhanced Heavy Equipment Transporter System (EHETS) Trailer RFP release in FY21
  - Medium Equipment Transporter (MET) RPP release in FY21
  - Introducing competition for Heavy Truck Family of Vehicles, RFI pending
  - Total Package Fielding (TACOM Strategic Service Solution (TS3)) FY20-FY25
- **Allied Tactical Vehicles**
  - A 10-year IDIQ follow-on effort for the NMS GVS contract (MARVEL) which supports Afghan National Defense Security Forces for Training, Mentoring and Contractor Logistics Support is currently in development. - FY 21
- **Multi-Mission Protected Vehicle Systems (MPVS)**
  - Cold Weather All-Terrain Vehicle (CATV) – TBD FY21
    - Draft Performance Specification (P-Spec) – Released 31 Jan 2020
    - OTA Release for Prototype Proposal (RPP) – 3QFY20
    - OTA Award of Task Assignment 1QFY21 – estimated $4-$6.3M Total RDTE
  - Family of Medium Tactical Vehicles (FMTV) Total Package Fielding (TACOM Strategic Service Solution (TS3)) FY20-FY21 – $3 to 7M

Watch SAM.GOV for these opportunities! *https://beta.sam.gov*

Back-Up Charts

Shifting the Curve



NDIA TWV Conference

Presented by: Mr. Robert Cross

Deputy Program Executive Officer Land Systems

04 March 2020

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Commandant's Planning Guidance

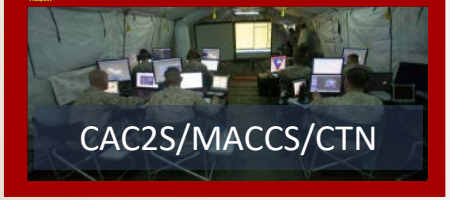
"The Marine Corps will be trained and equipped as a naval expeditionary force-in-readiness and prepared to operate inside actively contested maritime spaces in support of fleet operations."

-- General David H. Berger
Commandant of the Marine Corps

PEO LS Program Portfolio

Advanced Amphibious Assault (PM AAA)

Air Command Control and Sensor Netting (PM AC2SN)



Motor Transport (PM MT)

Towed Artillery Systems (PM TAS)

Ground Based Air Defense (PM GBAD)

Ground/Air Task Oriented Radar (PM G/ATOR)

Non-Motor-T Opportunities

- USMC Armored Vehicles
  - Amphibious Combat Vehicle
  - Advanced Reconnaissance Vehicle
- Integration Efforts
  - HMMWV to JLTV Migration
  - Ground Based Air Defense and Missile Systems

Questions?

Contact: PEOLSPAO@usmc.mil