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

MDEX 2021 and Detroit Arsenal Opportunities Conference

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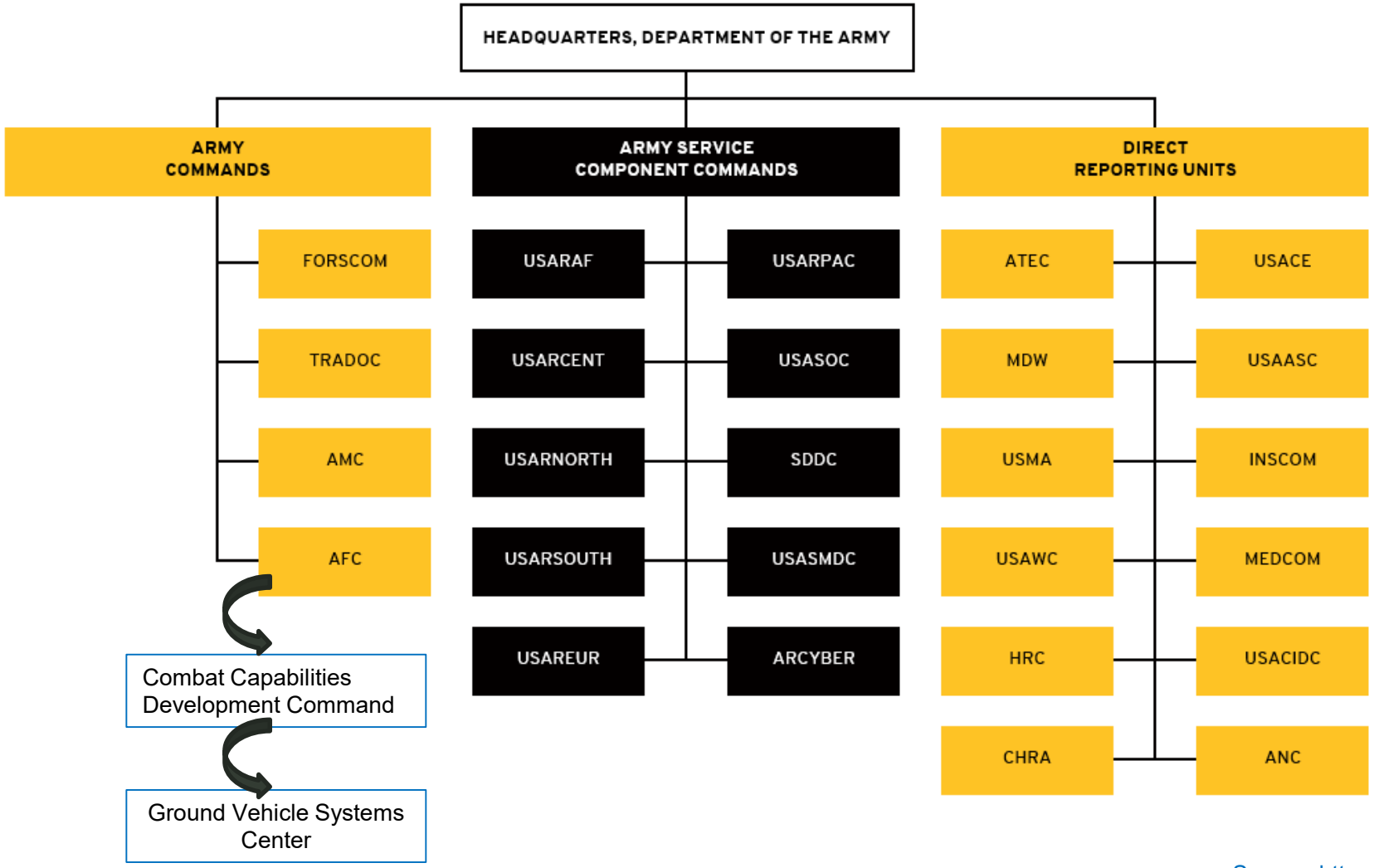
DEVCOM GVSC SYSTEMS ENGINEERING DIRECTORATE

ARMY COMMAND STRUCTURE

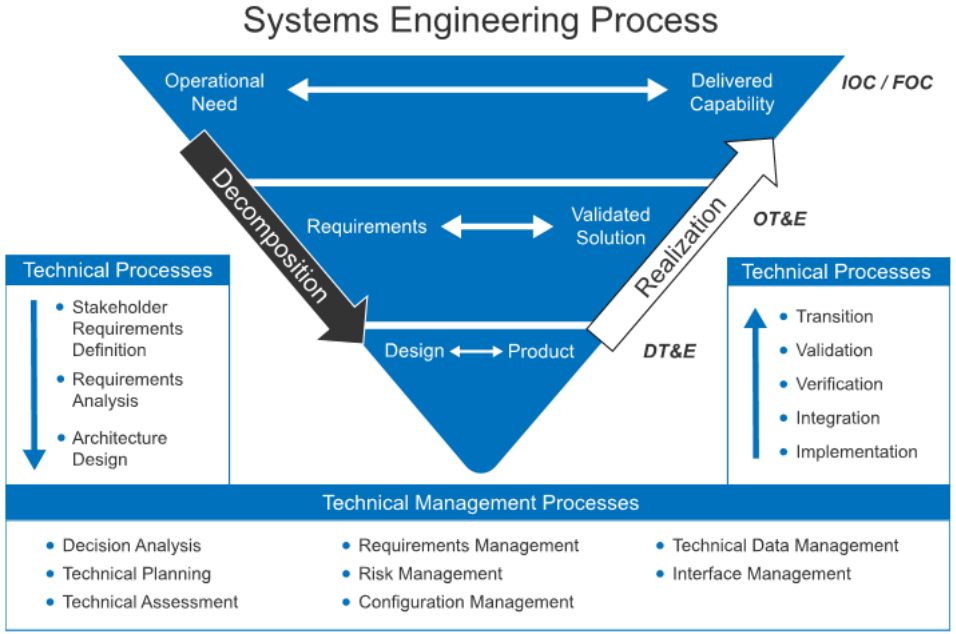


Source: https://www.army.mil/organization

WHY SYSTEMS ENGINEERING?

Systems Engineering is:

- Systems Engineering (SE) is the engineering discipline that focuses on **integrating** all the key elements of a system into one overall system and managing it throughout its **lifecycle** from cradle to grave. (DoD Defense Acquisition University)



- An **interdisciplinary**, **collaborative** approach that derives, evolves, and verifies a life-cycle **balanced** system solution which satisfies customer **expectations** and meets public **acceptability**. (IEEE)

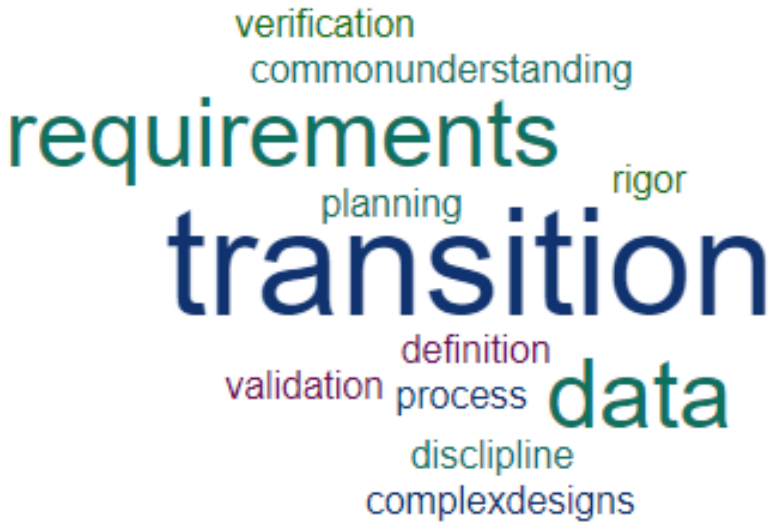
- Systems engineers are responsible for the system **concept**, **architecture**, and **design**. They analyze and manage **complexity** and **risk**. They decide how to **measure** whether the deployed system actually works as intended. They are responsible for a myriad of other facets of system creation. Systems engineering is the discipline that makes their success possible – their **tools**, **techniques**, **methods**, **knowledge**, **standards**, **principles**, and **concepts**. The launch of successful systems can invariably be traced to innovative and effective systems engineering. (INCOSE)

Sources: https://acqnotes.com/acqnote/careerfields/systems-engineering-overview; https://www.ieee.org; https://www.incose.org/systems-engineering.

WHY GVSC SYSTEMS ENGINEERING?

- We are the preferred provider of Systems Engineering for DoD ground systems to **PEO CS&CSS**, **PEO GCS**, **TACOM**, **USMC**, and **NGCV CFT** – and internally on GVSC's core **S&T** programs.
- We treat Systems Engineering as a **competency**, **training** our associates on DoD **policies** and **lessons learned**.
- We encourage **tailorable** and flexible approaches to support multiple **acquisition pathways**.
- Solid systems engineering rigor will enable **digital engineering**. Digital engineering will enable us to best position to **integrate** new technologies **faster** and **better** than our competitors.

TACOM LCMC SEIT



- To meet demand of our customers - and new acquisition approaches - we need a highly **trained** and **experienced workforce**. This requires skills in **mission engineering**, **multi-domain operations**, **requirements** engineering, **model-based** systems engineering, and **architectures** modeling.
- Our goal is to share these **tools**, **data**, and **artefacts** with you to speed the pace of new system development – new model of acquisition built on **collaboration** and industry **partnership**.

DEVCOM GVSC SYSTEMS ENGINEERING DIRECTORATE OVERVIEW

Mission: Provide excellence in the planning, integration, execution, and consultation of Systems Engineering principles, processes, and tools.

Vision: To be the preferred choice of Systems Engineering support in the DoD Ground Domain, delivering the highest quality products and services for a wide range of capabilities.

Purpose Statement: The Systems Engineering Directorate serves as the Technical Authority for Systems Engineering process competencies in the following areas:

- **Risk Management**
- **Technical Readiness Assessments**
- **Requirements Engineering**
- **Mission Engineering**
- **Systems Architecture**
- **SE Tools (i.e. Project Recon, MagicDraw, Honeycomb, etc.)**
- **Standardization (International and Domestic)**
- **Engineering Certification/Materiel Release**
- **Systems Engineering on-site expertise (Acquisition PMOs and S&T Project Offices)**

Additionally, serves as GVSC's representative as the Chief Systems Engineer on the following forums: TACOM LCMC Systems Engineering Integration Team (SEIT); ASEF Chief Systems Engineer Working Group and OSD Digital Engineering Information Exchange Working Group (DEXWG)

Externally affiliated with: NDIA, INCOSE, IEEE, SAE, ...

PARTNERS

- GVSC Systems Engineering Directorate has existing contract relationships with:

SAIC

Booz Allen

dcscorp
An Employee-Owned Company

ALION

SSI

Mettle Ops™
Warfighters Serving Warfighters

- If you have interest in becoming a partner, we are looking for skilled personnel and tools that are ***affordable*** responses to meet our customer demands.

QUESTIONS

Questions?

Join my Systems Engineering team tomorrow for One-on-One conversations

BACKUP CHARTS

SE TOOLS

GVSC provides access and training for numerous software tools to support SE activities

Software	COTS/USG	Purpose
IBM DOORS	COTS	Requirements Management and Traceability
IBM Rational Publishing Engine	COTS	Document Generation of DOORS Data
MagicDraw	COTS	MBSE and Architecture Modeling
Teamwork Cloud	COTS	Collaboration Environment for MagicDraw
Tom Sawyer	COTS	Visualization of Models and Database-Driven Datasets
MADe	COTS	Maintenance Aware Design, Reliability Analysis, CBM+ analysis
Fortify	COTS	Scanning Code for Security Flaws (required to validate compliance to Army RMF and STIGs)
OpenLM	COTS	Software License Manager
Project Recon	USG	Risk, Issue, and Opportunity Management (will be replaced with Honeycomb)
ISEF	USG	Decision Management (may be replaced by Honeycomb), Requirements Management, Technical Reviews (already replaced by Honeycomb)
Honeycomb	USG	Technical Reviews, Change Management. Future state will replace Project Recon and some portions of ISEF

~1000+ users across the different tools – not just Ground Domain.

Tools are used by multiple PMs within both DTA PEOs, across multiple organizations across the Army, as well as USMC, Navy, DLA

INTENT

- **New intent for 2021**
  - Industry Day is to provide usable/actionable information to industry. We want to provide information about our ground vehicle systems technology focus areas, the gaps we currently have, the technology and software developed by GVSC as well as the labs and services that are available for use through collaboration and partnerships with industry, academia and other government partners.

- **GVSC Briefings guidance from the Director**
  - Gaps and Needs GVSC has (with or without funding available)
  - Technologies and software developed by GVSC that industry can use
  - Labs that industry can use
  - Services that industry can use
  - Any contracts GVSC has available

- **REMEMBER everything must be Unclassified – Distro A**