

## Human Capital Development

- Army SE Career Development Model
- Body of Knowledge and Curriculum to Advance Systems Engineering (BKCASE)
- Capstone Research to Grow SE Workforce Capacity
  - Developing SE Technical Leadership
- The Helix Project (Workforce Evolution)
- Mission Engineering Competencies(\*)
- SE and the Cloud: Impacts and Opportunities
- SE Assessment & Workforce Development Plan
  - SE Experience Accelerator
  - SE Expert Knowledge (SEEK)
- SERC Doctoral Fellows Program
- Strategic Planning S&T Portfolio

## Trusted Systems

- Security Engineering – Design Patterns and Operational Concepts
- Cybersecurity for System of Systems Architectures(\*)
- Systems Security Engineering Roadmap
  - Systemic Assurance

## Systems Engineering and Management Transformation

- Agile Systems Engineering Enablers and Quantification
  - Agile-Lean Software Engineering Evaluating Kanban
    - Communications Effects Server Model
  - Complexity-Based Quantitative Technical Risk
    - Contingency Basing
  - Defining the Meaning of a Major Modeling and Simulation Change as Applied to Accreditation
  - Development and Application of Framework for Assessing Cost and Technology (FACT) Portfolio
    - Early Warning Quantitative Technical Risk
  - Electronic Product Data Management (ePDM) to Improve Design Producibility, Reliability, Availability, Maintainability, and Sustainability
- Engineered Resilient Systems Knowledge Capture and Transfer
  - Engineered Resilient Systems Tradespace Tools
    - Enterprise Architecture Tradespace Analysis
  - Evaluation of SE MPTs on DoD and IC Programs
    - Expedited System Engineering
- Flexible Vehicle System Engineering and Integration
  - Graphical Concept of Operations
- Formal Methods in Resilient Systems Design using a Flexible Contract Approach(\*)
- Interactive Model-Centric SE (IMCSE)
- Life Cycle SE Needs for Evolutionary Acquisition
  - Management Capability
- Modular, Re-configurable Architecture for Tailored, Rapid SE Artifact Generation and Dissemination
- Next-Generation Cost Estimation and Metrics for Software-Intensive Systems
  - SE M&S Integration Framework
  - SE Transformation Roadmap
  - Software Reliability Modeling
- System Readiness Level, System Maturity and Architecture Assessment
  - Systems 2020
  - Tradespace and Affordability
- Transforming Systems Engineering Through Model Based Systems Engineering (MBSE)
- Valuing Flexibility for Complex Engineering Systems
- Verification, Validation, and Accreditation Shortfalls for Models and Simulations
- Virtual Collaborative Environment for Conducting Project Design and Tests
- Transforming Systems Engineering through Model-Centric Engineering(\*)

## Enterprise and Systems of Systems

- Assessing System of Systems Architecture and Acquisition Evolution
  - Evolutionary Requirements for Net-Centric Enterprises
- Enterprise Systems Value-Based R&D Portfolio Analytics: Methods Processes and Tools
- Flexible Intelligent Learning Architectures for Systems of Systems (FILA-SoS)
  - Multi-Level Socio-Technical Modeling
- Investigating Approaches to Achieve Modularity Benefits in the Acquisition Workforce (MOSA)(\*)
  - Army Lethality Study(\*)

(\*) new project in 2016