Leveraging System Safety and ESOH in the Acquisition Process

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System Safety Discipline

- **A Systems Engineering discipline:**
  - Evolving engineering discipline influenced by increasing complexity of future defense systems.
  - System Safety engineering is an essential element to developing TRUST of future defense systems.
- **Advances in Autonomy will require:**
  - Need to leverage automated tools for hazard identification and software certification.
  - Tools for the automation of hazard identification (hardware/software) and will leverage software assurance practices' tools.
  - System Safety processes will evolve to adapt to the high degree of concurrency of design and certification.

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Acquisition Command Organizational Approaches

- **Different organizational approaches are used to integrate system safety and ESOH activities in acquisition programs.**
  - Approaches are driven by mission, organizational structure, weapon system responsibility, and culture.
  - Three predominant approaches identified.
  - All approaches provide the required System Safety and ESOH outputs for the acquisition process.
  - No one approach appears to demonstrates significant performance advantages or issues.

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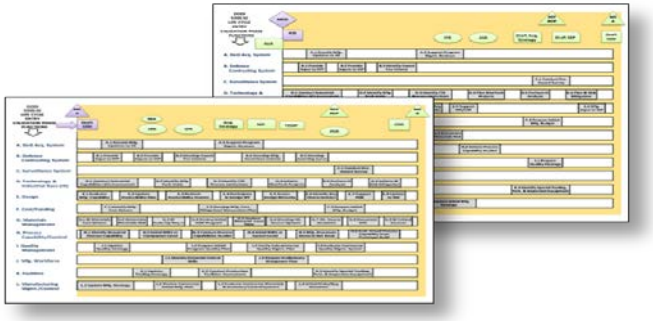
Body of Knowledge

- **System Engineering's and all acquisition processes must adapt for future Defense systems.**
- **Initiative to improve our disciplines' 'Body of Knowledge' involves defining the activities by acquisition phase and aligning them within the acquisition process.**
  - Process descriptions.
  - Input requirements.
  - Output products.
  - Execution Timing of the process.



- **Processes are planned and developed to aid practitioners with readily available reference material.**
- **This reference material also serves to better inform other acquisition stakeholders.**

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Q&A Session Topic

- **Question for the DoD Acquisition ESOH IPT Principals Q&A Session to consider:**
  - Does ESOH lower level guidance and processes adequately describe ESOH activities in the acquisition process?
  - Is the ESOH guidance (including lower level guidance within the discipline) synchronized with acquisition and Systems Engineering activities?
  - Would the ESOH disciplines' personnel benefit from integration of the processes?
  - If this activity is performed, will other acquisition stakeholders obtain more visibility and understanding of how ESOH activities benefit programs?

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Systems Engineering: Critical to Defense Acquisition

Defense Innovation Marketplace
http://www.defenseinnovationmarketplace.mil

DASD, Systems Engineering
http://www.acq.osd.mil/se

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