Development Planning Working Group Update

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DASD, Systems Engineering Mission

Systems Engineering focuses on engineering excellence − the creative application of scientific principles:

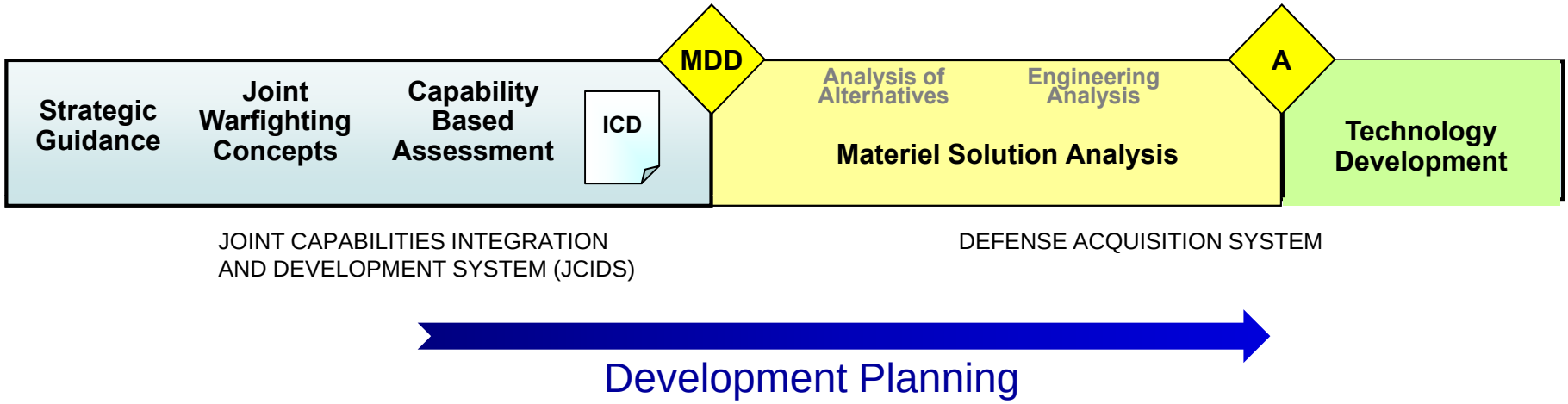
- To design, develop, construct and operate complex systems
- To forecast their behavior under specific operating conditions
- To deliver their intended function while addressing economic efficiency, environmental stewardship and safety of life and property

DASD(SE) Mission: Develop and grow the Systems Engineering capability of the Department of Defense – through engineering policy, continuous engagement with component Systems Engineering organizations and through substantive technical engagement throughout the acquisition life cycle with major and selected acquisition programs.

A Robust Systems Engineering Capability Across the Department Requires Attention to Policy, People and Practice

- ***US Department of Defense is the World's Largest Engineering Organization***
- ***Over 99,000 Uniformed and Civilian Engineers***
- ***Over 39,000 in the Engineering (ENG) Acquisition Workforce***

Development Planning



Development Planning is the upfront technical preparation to ensure successful selection and development of a materiel solution

OSD Development Planning Working Group (DPWG)

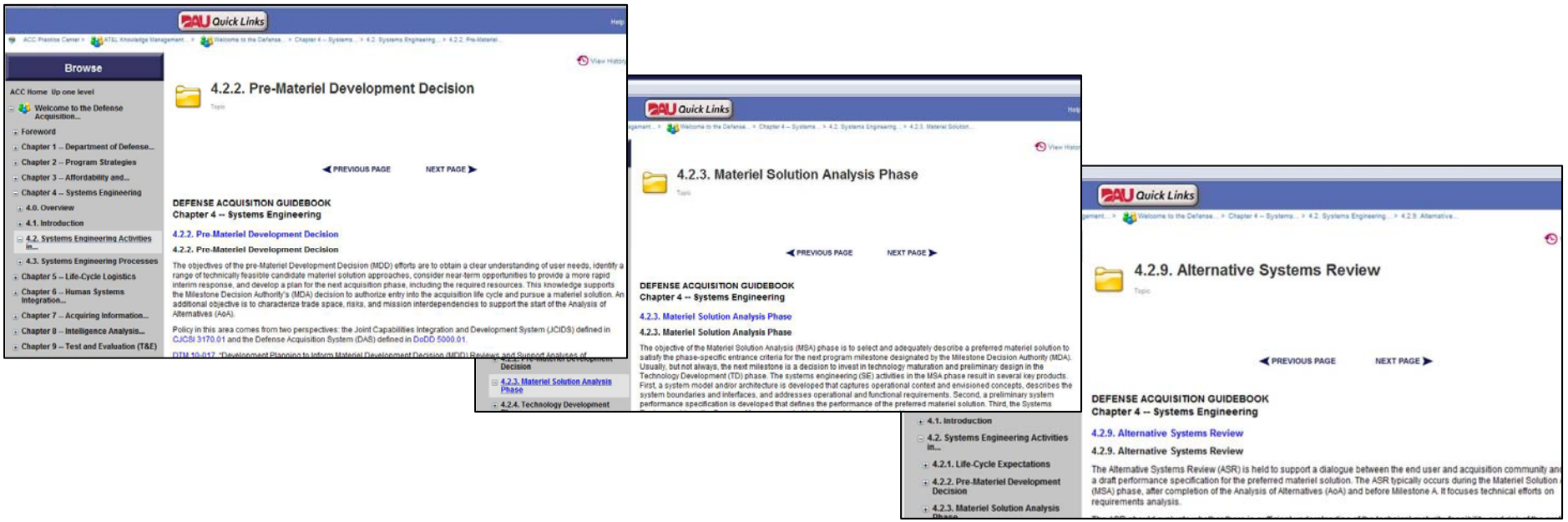
- **Background and Purpose**
  - Initiated March 2011; triggered by issuance of DP Policy (DTM 10-017) to coordinate implementation efforts among the Services and OSD and establish a community of practice
  - Monthly meetings with special working sessions as needed
  - 2013 Objectives:
    1. Continue to develop recommended changes to acquisition guidance to more fully address Development Planning
    2. Continue to facilitate, and serve as a forum for, the sharing of Development Planning information
    3. Determine SE activities required to support affordability, feasibility, and trades
    4. Better facilitate the interaction between Development Planning (DP) and Science and Technology (S&T)

- **Representation from across DoD**
  - All DoD Components (Army, Navy, Air Force)
  - OSD Organizations (CAPE, DTRA, S&TS, SE)
  - Requirements community (Joint Staff (J8))

2013 Objectives

1. Continue to develop recommended changes to acquisition guidance to more fully address Development Planning

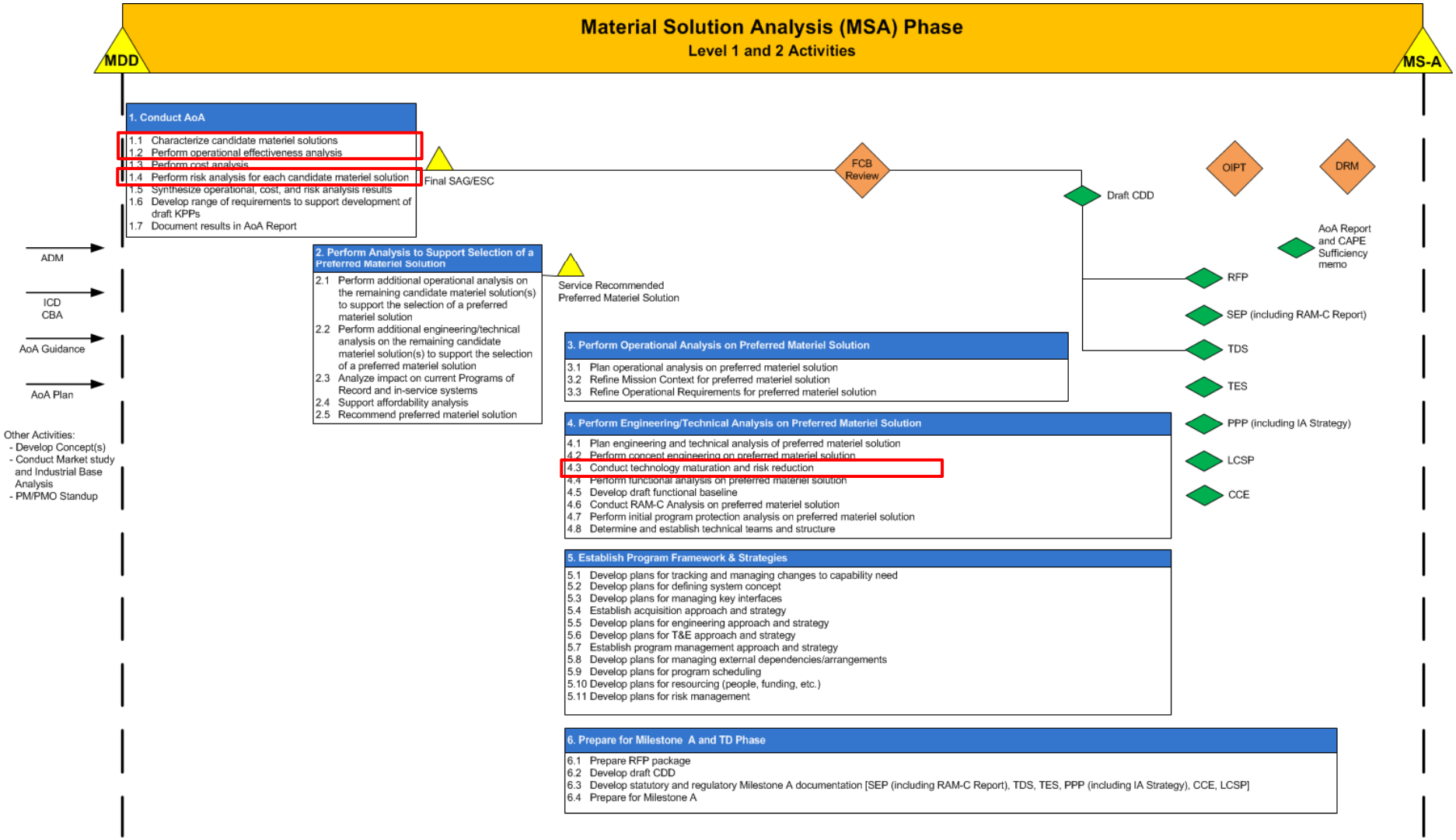
- ✓ DAG Chapter 4 - Pre-Materiel Development Decision, Materiel Solution Analysis (MSA) Phase, Alternative Systems Review
- ✓ Technical Activities in the Materiel Solution Analysis Phase White Paper to adequately plan for TD phase activities
- ✓ Comparison of the NDIA DPWG pre-MS A model with the DPWG MSA model



Comparison of the NDIA DPWG Pre-MS A Model & DPWG MSA Model

- **Action:**
  - ODASD (SE) and NDIA SE representatives identify and discuss the similarities & differences between the NDIA DPWG Analytics Table & Government-developed MSA Activity Model
- **Model Objectives:**
  - The government activity model was developed to identify and document the Materiel Solution Analysis (MSA) phase technical activities needed to obtain an appropriate level of knowledge and system maturity required to proceed into the next phase of acquisition.
  - The NDIA model was developed to identify and document the SE sub-processes, enablers, analytics, activities, techniques, methodologies, and tools utilized prior to Milestone A.
- **Analysis Outcomes:**
  - Models are very similar and align quite well
  - Majority of differences in terminology and based on perspective
  - Three NDIA activities will be added as qualifiers to existing activities
  - One NDIA activity should be added to the Government model. Add "Conduct Operational Suitability Analysis" during the AoA.

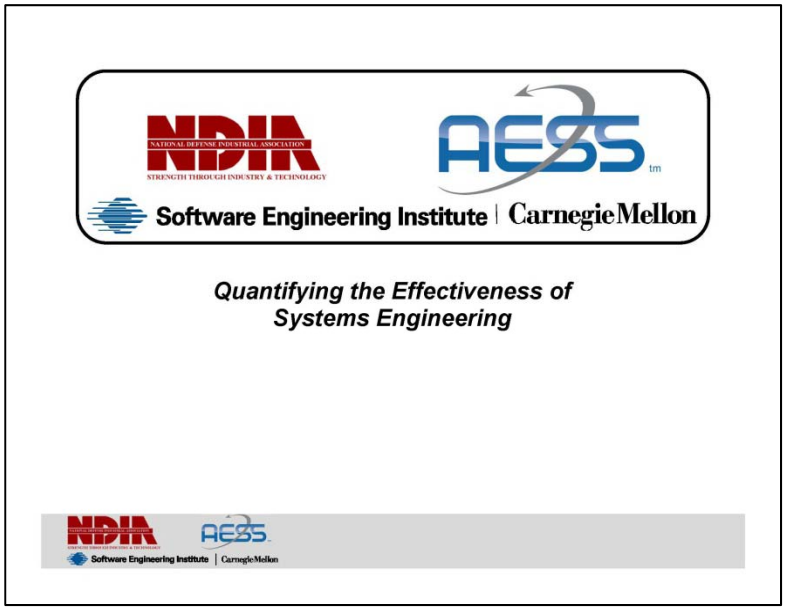
Comparison of the NDIA DPWG Pre-MS A Model & DPWG MSA Model

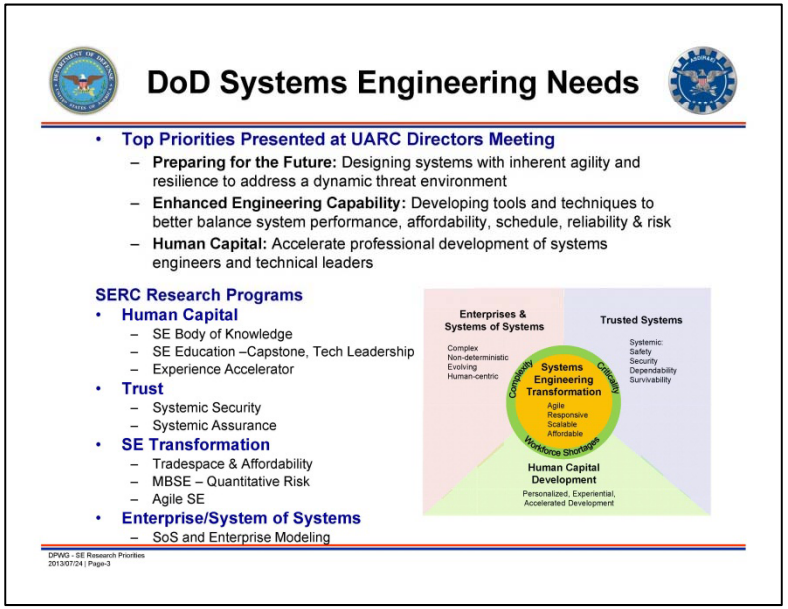


2013 Objectives

2. Continue to facilitate, and serve as a forum for, the sharing of Development Planning information

- ✓ Facilitate WSARA Report to Congress input and expectations
- ✓ Brief on Quantifying the Effectiveness of Systems Engineering by NDIA SE Division
- ✓ Brief on Air Force Development Planning by SAF/AQRT
- ✓ Brief on Systems Engineering Research Center (SERC) by ODASD(SE)

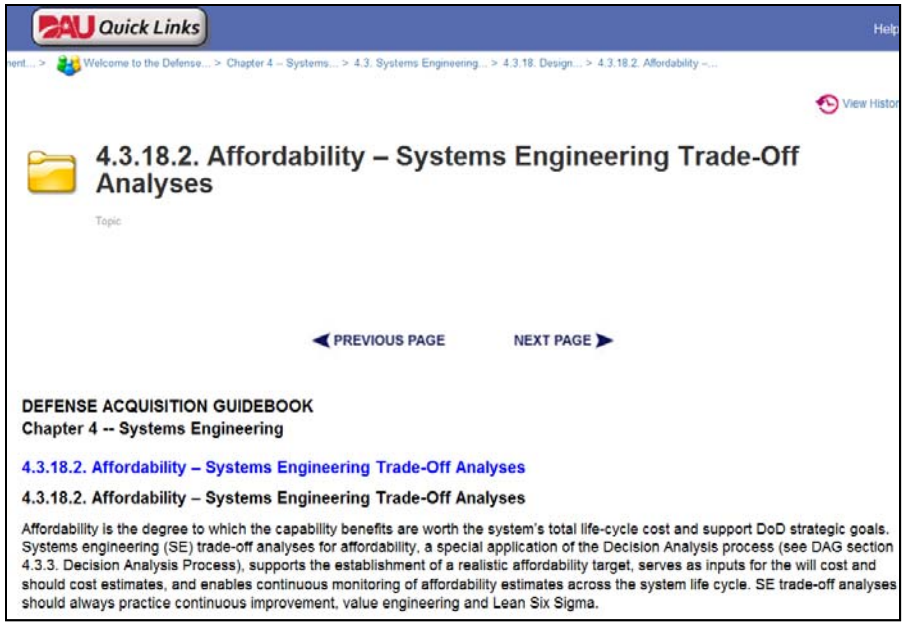


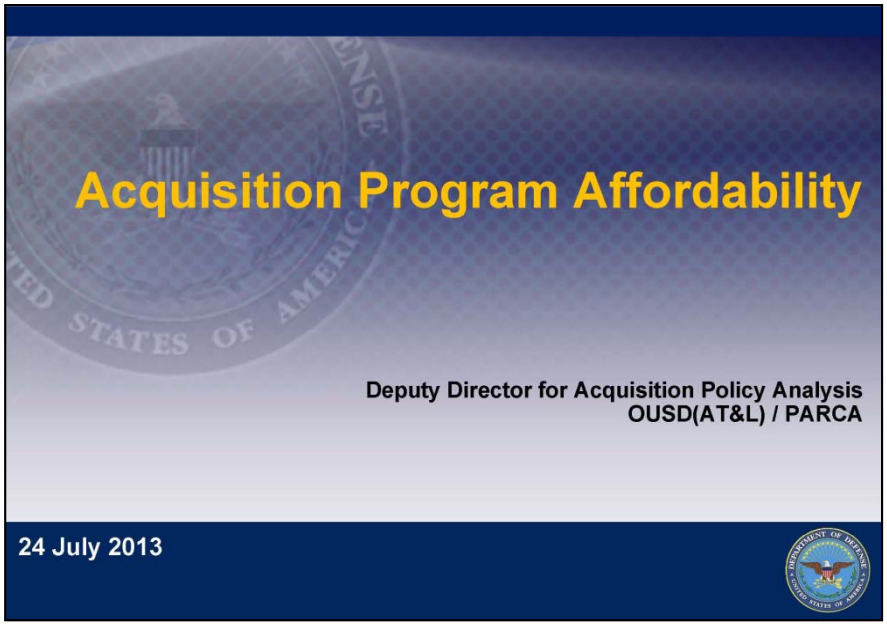


2013 Objectives

3. Determine SE activities required to support affordability, feasibility, and trades

- ✓ Trades inserted into DAG Chapter 4
- ✓ Brief on Acquisition Program Affordability by OUSD(AT&L)/PARCA
- ✓ Map MSA Model to Draft CDD content
- ❑ Generate DAG Chapter 4 updates to clarify guidance in this area





2013 Objectives

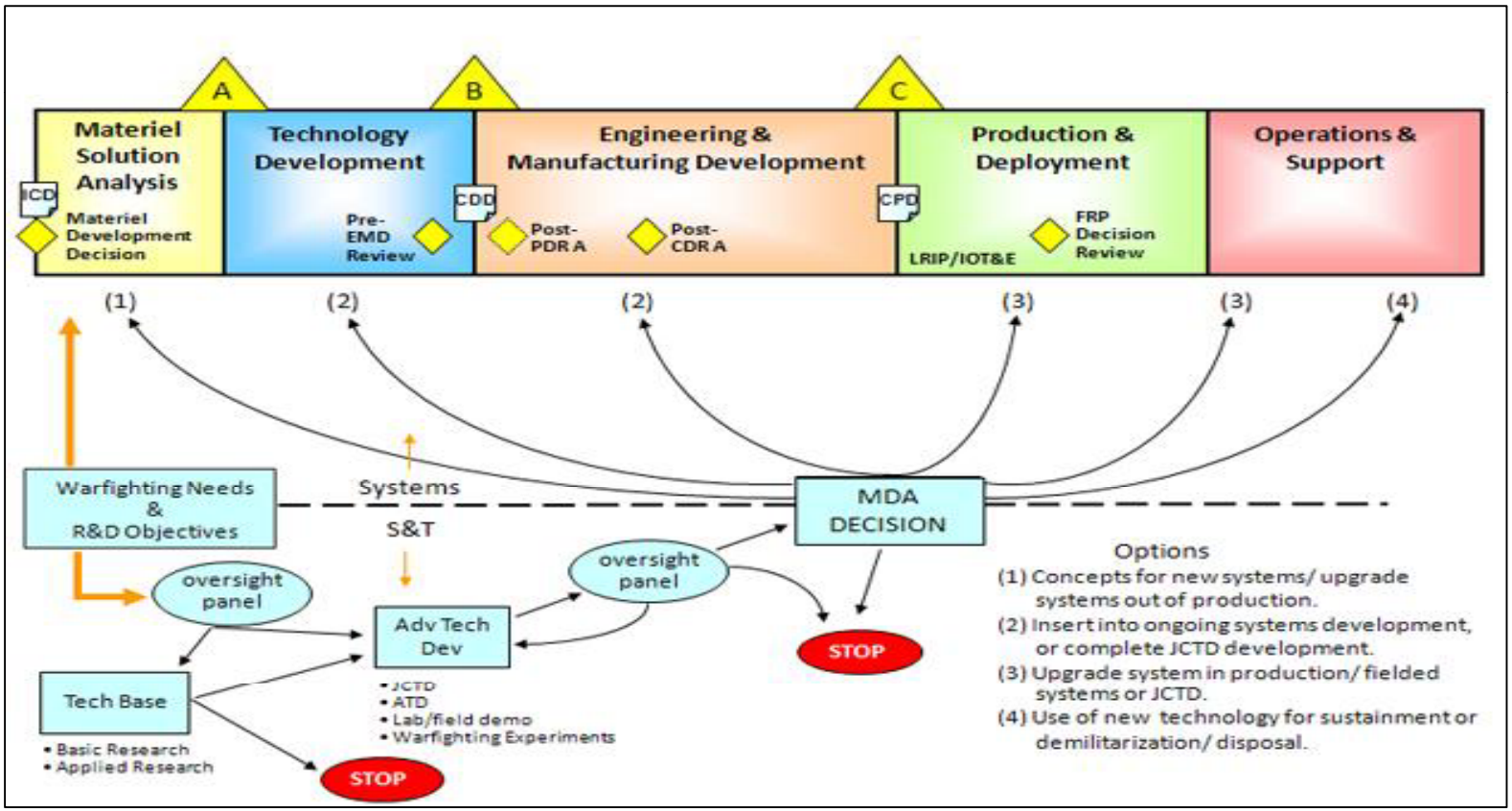
4. Better facilitate the interaction between Development Planning (DP) and Science and Technology (S&T)

- ✓ Brief on Defense Innovation Marketplace by OASD(R&E)
- ✓ Brief on Army S&T 101 by HQDA ASA ALT
- ✓ Interactions between the Warfighter, S&T, and Acquisition diagram
- ✓ Identify recommended activities that may improve interactions between Warfighter, S&T and Acquisition
- ❑ Work to incorporate Interactions between the Warfighter, S&T, and Acquisition diagram into appropriate DoD guidance

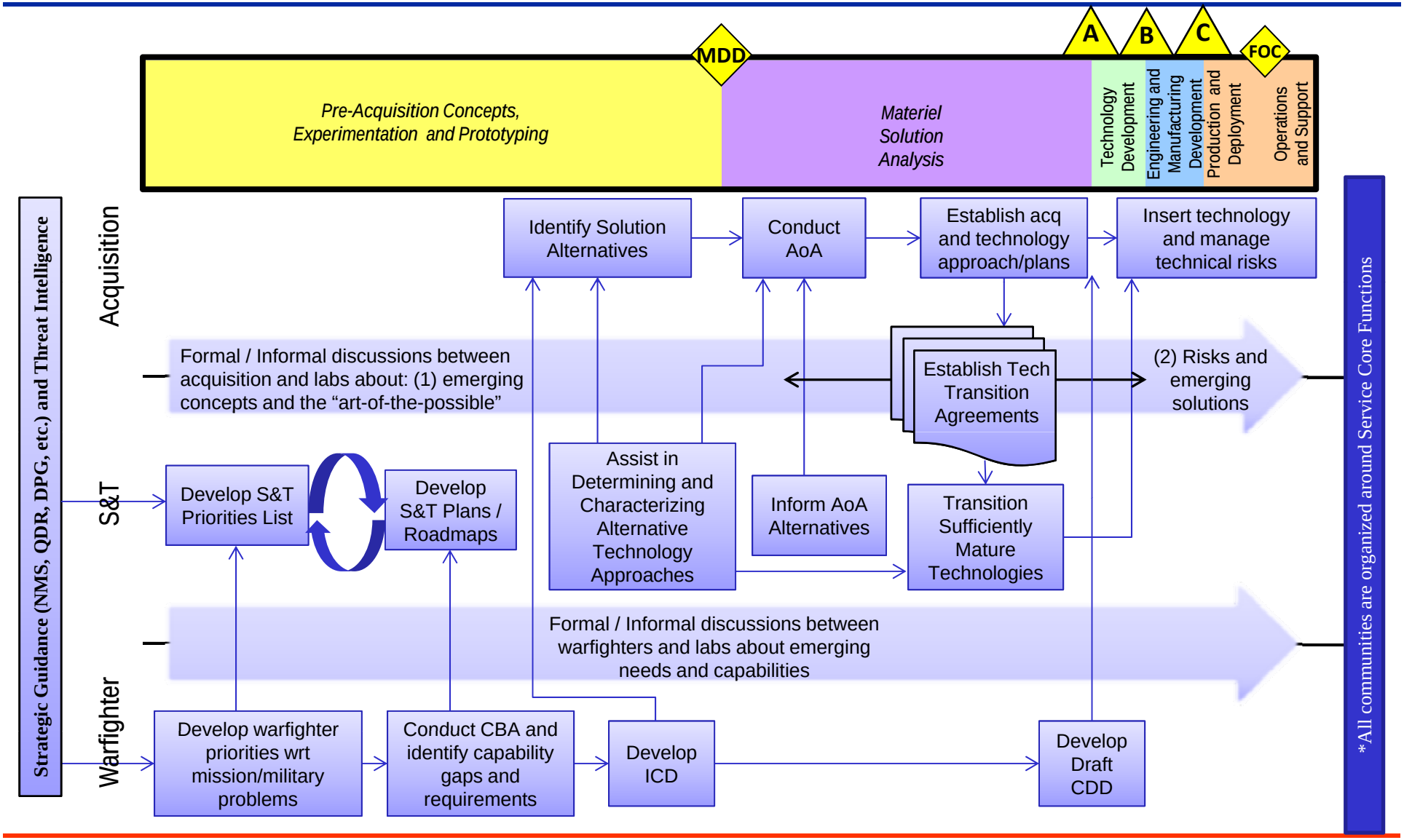
Interactions between the Warfighter, S&T, and Acquisition

Goal

Develop something similar to the S&T figure from PM Toolkit to represent a more comprehensive figure that shows the type of S&T interactions in the earlier phases



Interactions between the Warfighter, S&T, and Acquisition



Summary and Path Forward

- **OSD DPWG will continue working with Military Departments and NDIA to strengthen development planning and early systems engineering processes and implementation activities in support of acquisition programs.**

- **Remaining 2013 Activities:**
  - Generate DAG Chapter 4 updates to clarify guidance on affordability and feasibility
  - Work to incorporate Interactions between the Warfighter, S&T, and Acquisition diagram into appropriate DoD guidance

For Additional Information

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Systems Engineering: Critical to Defense Acquisition










Innovation, Speed, Agility

http://www.acq.osd.mil/se