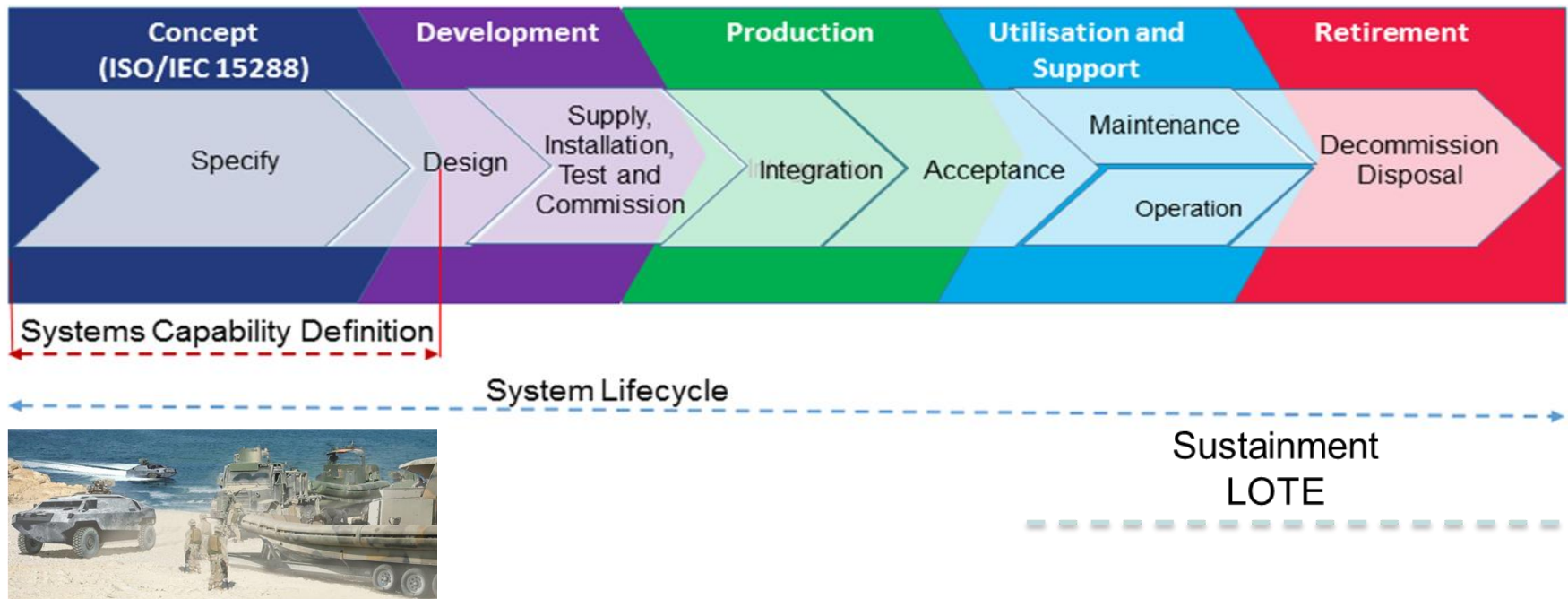# SysEng 6542
Model Based Systems Engineering

Capstone Project

MBSE Approach to

Capability System Definition

Capstone Project

Air-Deployable Amphibious Vehicle (ADAV) Capability

See LAND 999 ADAV Project example

Technical

- System Engineering Products
  - System Definition:
    - Operational Scenarios
    - User Needs
    - Requirements (draft)
  - System Design & Implementation
    - Functional Analysis (activity, sequence, state machine diagrams etc.…)
    - Trade Studies
    - System Architecture
    - Technical Performance Measures
    - Auto-document generation
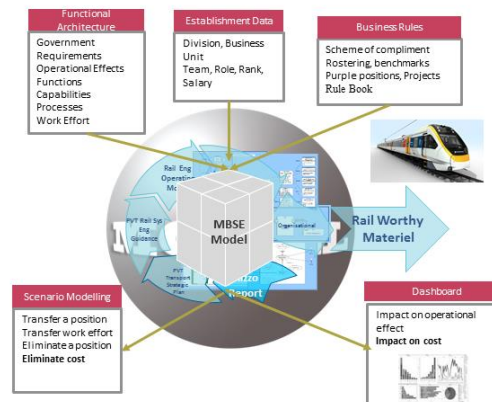   - Etc.…

Project Teams

- Create a system model through the use of SysML (Cameo Enterprise Architecture) and other modeling tools.

- Around 4-5 students per team

  (See team allocation on Canvas)

- Each team should choose a group leader to act as contact person with the customer.

- Geographical and experience diversity is **encouraged**

Project Artefacts

- Develop Content Throughout Semester to:
  - Develop an MBSE project proposal
  - Produce an MBSE System Model
  - Deliver an interim project presentation
  - Deliver a final project presentation
  - Produce a final project report.

Key Deliverables

- Project Proposal – Mar 2nd

- Interim project presentation – Mar 30th

- Project Final Presentation – May 5th

- Project Report and System Model (in Cameo Enterprise Architecture) – May 5th

- Team work is essential and a peer review and assessment is required to be submitted (May 5th) by each student on their team performance and contribution.

Project Proposal

- Section A – document-based project definition:
  - Update the provided draft Air-Deployable Amphibious Vehicle (ADAV) Capability description:
    - Add goals and objectives, measure of effectiveness etc.…
  - Update set of operational scenarios and add more as appropriate;.
  - Develop a complete set of high-level user Needs.
  - Develop a set of systems requirements (update the provided draft specification).
  - Develop a set of potential candidate solutions.
  - Add any additional content that you see relevant.

- Part B - Propose how you plan to do this project using an MBSE approach (including a method, process & tool), team structure, schedule of activities, milestones and deliverables.
- Submission by Mar 2nd on Canvas.

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