



**Carnegie Mellon
Software Engineering Institute**

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Process Mismatch with COTS-Based Systems: Problems and Solutions

GSAW Breakout Session

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Demands of COTS-Based Systems

New challenges

- COTS products designed to be used “as is” to meet vendor’s perceived market needs; not a specific organization’s
 - Products presume business processes
 - Products presume an architecture

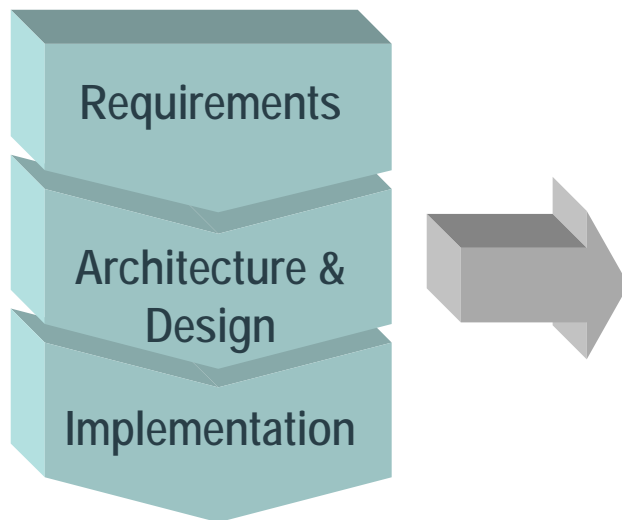
Project approaches are failing

- Some simply “glue” COTS products together => *system that is not supportable*
- Some use traditional requirements practices => *find no suitable COTS products*

New approaches needed

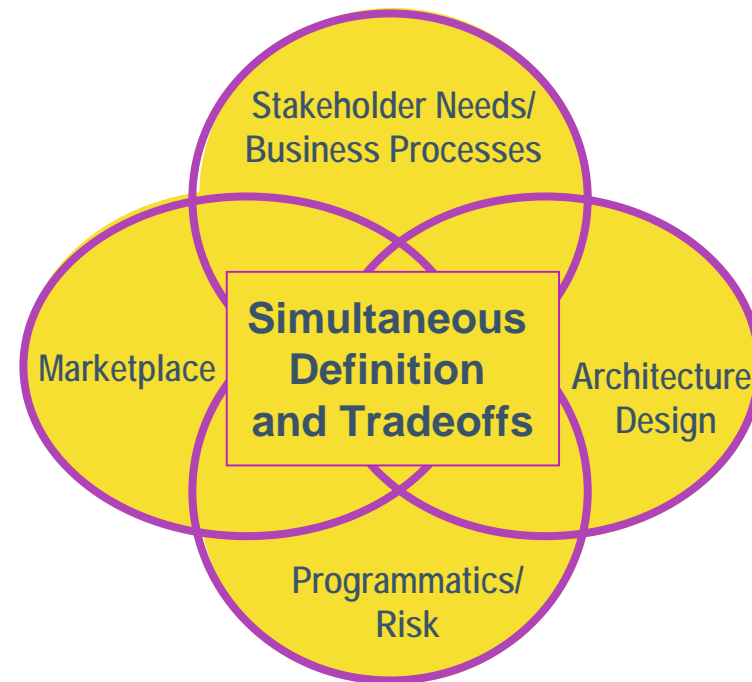
COTS-Based Systems Demand A New Approach

Traditional Engineering Approach



Requirements-driven

Required COTS Approach



Negotiation-driven



Selected Effects of Process Mismatch

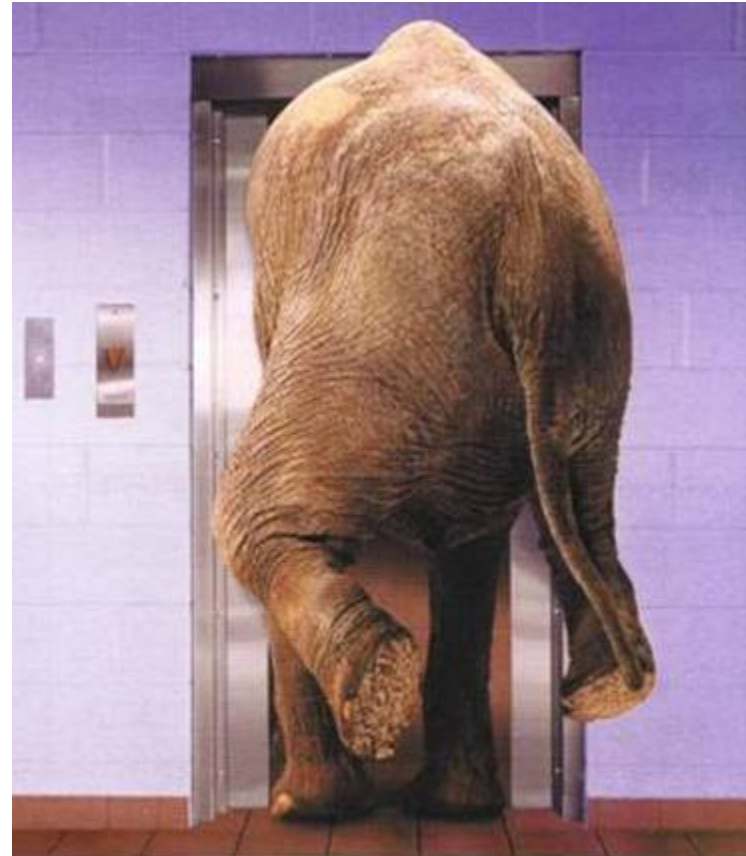
Requirements processes

- Detailed requirements defined up-front can preclude using COTS products; may limit technology refresh
- COTS-dependent requirements can cause significant disruption to operational users

Architecture processes

- Forming an COTS-independent architecture can limit viable COTS product choices
- An architecture formed around specific COTS products can lock a program to limited products and their versions

New skills, responsibilities, and processes are needed



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Breakout Session Overview

Objective

- Recommend suitable processes for acquiring, developing and maintaining COTS-Based Ground Systems

Format

- Short presentations to stimulate ideas
- Facilitated discussion to characterize mismatches
- Focused discussion to form recommendations

No more whining!
Building systems using COTS products is already a fact of life.
This is YOUR opportunity to explore processes that will support these systems.



Breakout Outline

Mismatches in processes for developing and negotiating requirements

- What's different about COTS-based systems?
- Discuss a sample commercial approach
- Discuss a traditional DoD approach
- Form recommendations for new and changed DoD processes
- (*discuss mismatches in tracking and managing requirements)

(break)

Mismatches in processes for creating and validating architectures

- What's different about COTS-based systems?
- Discuss a sample commercial approach
- Discuss a traditional DoD approach
- Form recommendations for new and changed DoD processes
- (*discuss mismatches in maintaining and evolving architectures)

* as time allows