

Implementing the Acquisition M&S Master Plan

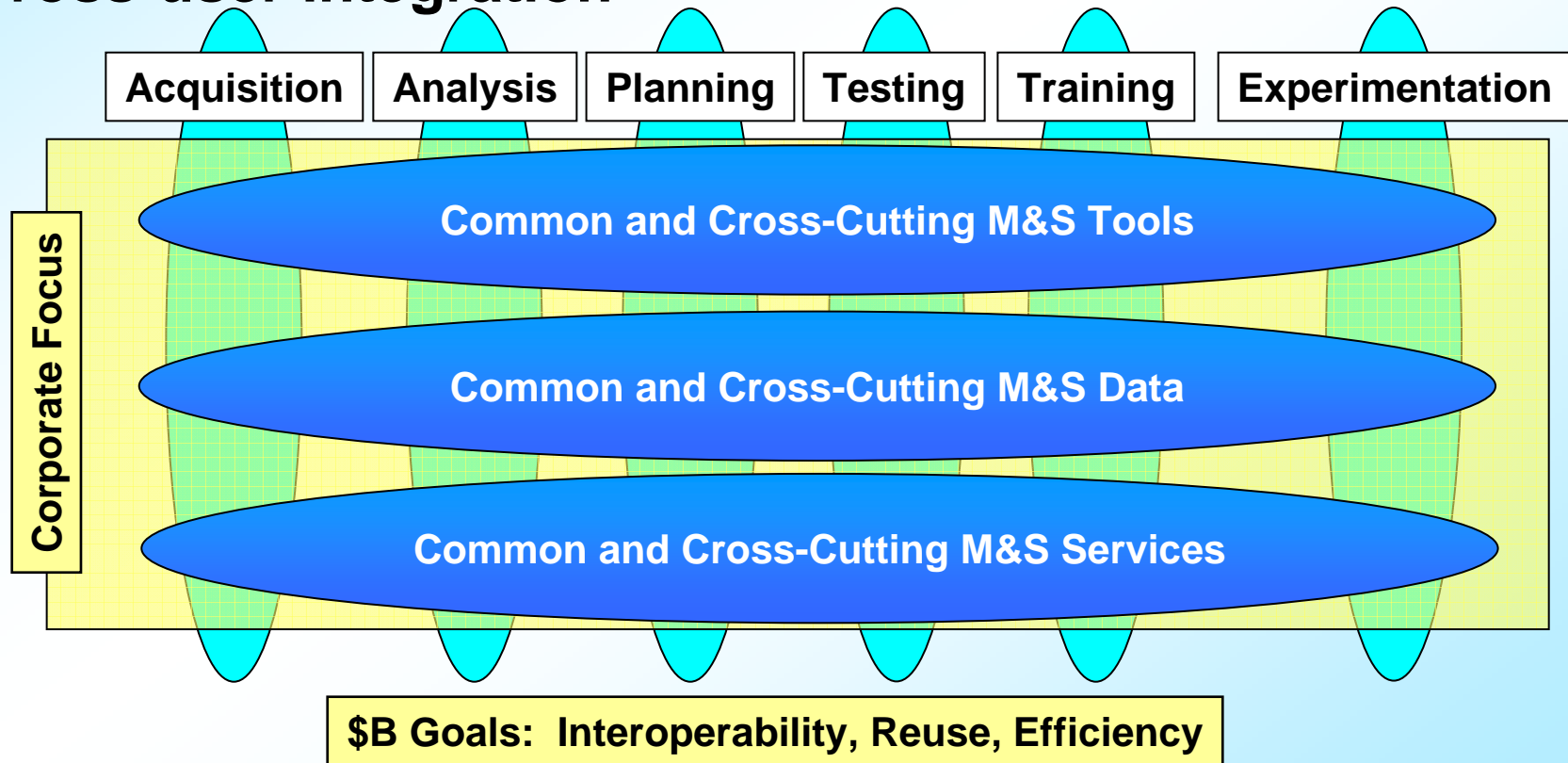
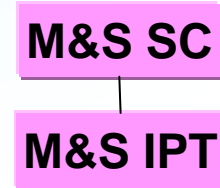
CAPT Mike Lilienthal, MSC, USN

Chairman, DoD Acquisition M&S Working Group

October 24, 2006

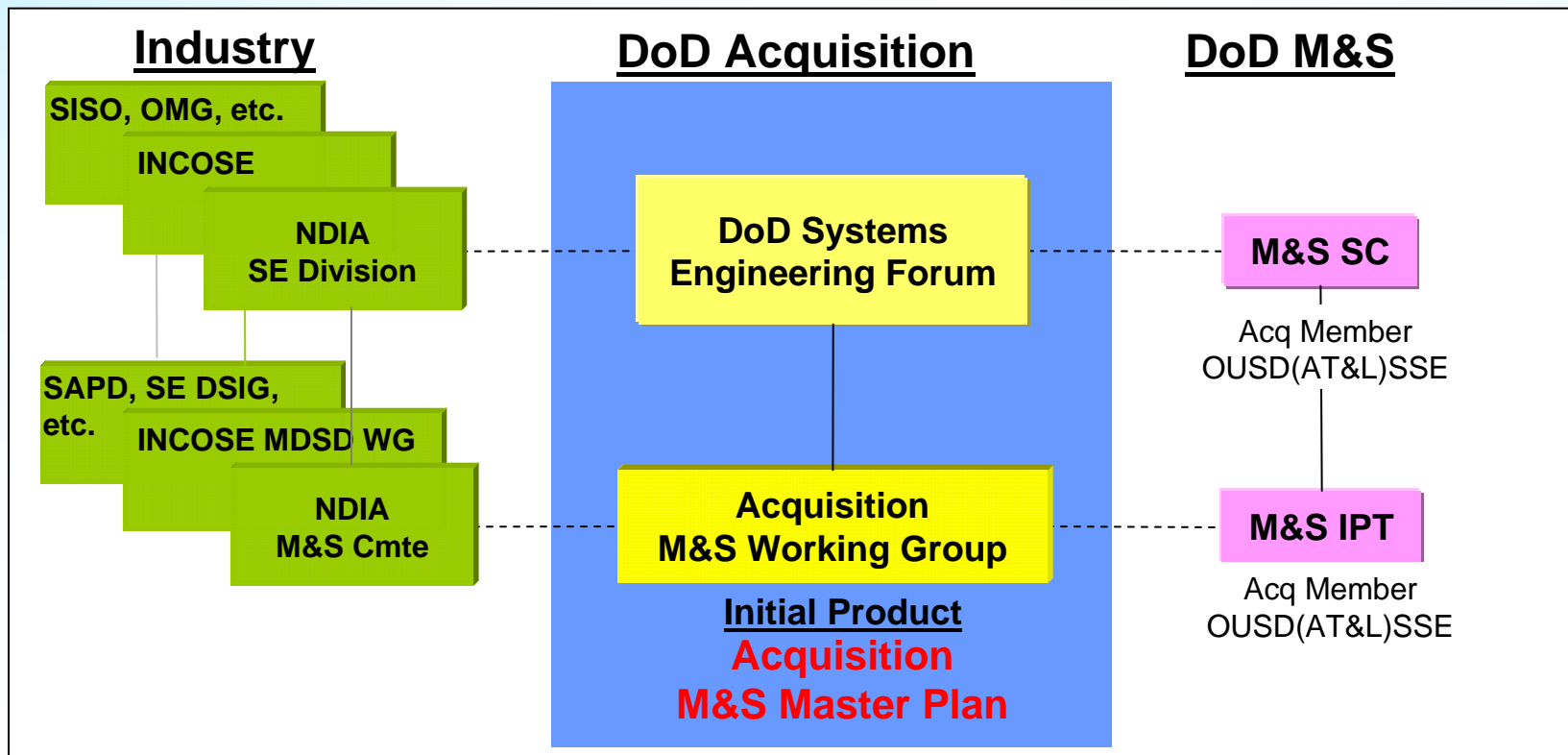
DoD M&S Management Structure

- Senior level: M&S Steering Committee
 - Working level: M&S IPT
- 6 user “Communities” (may add others)
- Cross-user integration



Acq M&S Management Structure

- SE Forum: “...to collaborate and leverage activities...and institutionalize SE discipline across DoD.” [USD(AT&L), Feb 20, 2004]
- Acquisition M&S Working Group: “...assist PMs by improving the utility of M&S in acquisition of defense capabilities and products delivered to the warfighters.” [Chair SE Forum, Apr 12, 2006]



NDIA SE Conference, Oct 24, 2006

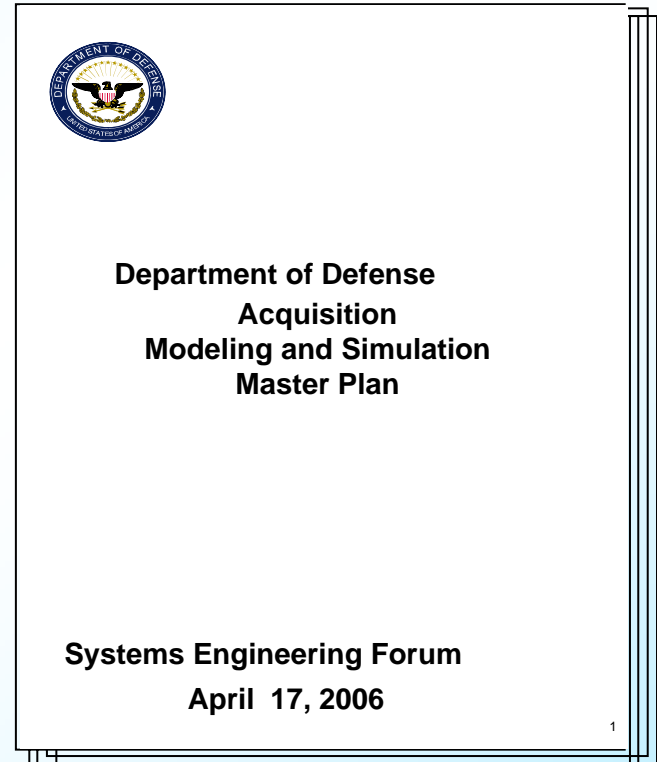
Acquisition M&S Master Plan

- **USD(AT&L) goal: Strategic & tactical acquisition excellence**
- **Purpose of plan:**
 - **Foster widely-needed M&S capabilities beyond the reach of individual programs;**
 - **Better enable acquisition of joint capabilities and systems-of-systems;**
 - **Empower program managers by removing systemic M&S obstacles, identifying new options for approaching tasks, and helping support widely-shared needs;**
 - **Promote coordination and interface with M&S activities of DoD Components.**
- **Development process:**
 - **Lessons from decade of studies & reports (including NDIA N&S Cmte)**
 - **Input from current programs (govt and industry)**
 - **Vetted with industry (NDIA, INCOSE)**
 - **Coordinated across SE Forum members**
- **Approval: Chairman, SE Forum (April 17, 2006)**

Acquisition M&S Master Plan

- **27 specific actions**
 - Rationale for action
 - Discussion of approach
 - Lead & supporting organizations
 - Products
 - Completion goal (year)

- http://www.acq.osd.mil/ds/se/publications/AMSMMP_041706_%20FINAL2.pdf



Content of the Plan

Obj 1

Provide necessary policy and guidance

- 1-1 M&S management
- 1-2 Model-based systems engineering & collaborative environments
- 1-3 M&S in testing
- 1-4 M&S planning documentation
- 1-5 RFP & contract language
- 1-6 Security certification

Objective 2

Enhance the technical framework for M&S

- 2-1 Product development metamodel
- 2-2 Commercial SE standards
- 2-3 Distributed simulation standards
- 2-4 DoDAF utility
 - a) DoDAF 2.0 Acqn Overlay
 - b) Standards for depiction & interchange
- 2-5 Metadata template for reusable resources

Objective 3

Improve model and simulation capabilities

- 3-1 Acquisition inputs to DoD M&S priorities
- 3-2 Best practices for model/sim development
- 3-3 Distributed LVC environments
 - a) Standards
 - b) Sim/lab/range compliance
 - c) Event services
- 3-4 Central funding of high-priority, broadly-needed models & sims
 - a) Prioritize needs
 - b) Pilot projects
 - c) Expansion as warranted

Objective 4

Improve model and simulation use

- 4-1 Help defining M&S strategy
- 4-2 M&S planning & employment best practices
- 4-3 Foster reuse
 - a) Business model
 - b) Responsibilities
 - c) Resource discovery
- 4-4 Info availability
 - a) Scenarios
 - b) Systems
 - c) Threats
 - d) Environment
- 4-5 VV&A
 - a) Documentation
 - b) Risk-based
 - c) Examination
- 4-6 COTS SE tools
- 4-7 M&S metrics

Objective 5

Shape the workforce

- 5-1 Definition of required M&S competencies
- 5-2 Harvesting of commercial M&S lessons
- 5-3 Assemble Body of Knowledge for Acqn M&S
- 5-4 M&S education & training
 - a) DAU, DAG & on-line CLMs
 - b) Conferences, workshops & assist visits
- 5-5 MSIAC utility

Key

Broader than Acqn

Implementation Process

- **Prioritize actions (completed)**
- **For actions “broader than acquisition,” interface with DoD M&S management (in work)**
- **Acq M&S Working Group:**
 - **Review plans by leads (in work)**
 - **Monitor progress**
 - **Assist, redirect, revise as appropriate**
 - **Report progress & issues to SE Forum**

Prioritization – Top 10 Actions

- 1. M&S education & training: DAU, DAG & on-line CLMs (5-4a)**
- 2. Foster reuse: Business model (4-3a)**
- 3. Metadata template for reusable resources (2-5)**
- 4. Central funding of high-priority, broadly needed models & sims: Prioritize needs (3-4a)**
- 5. Foster reuse: Resource discovery (4-3c)**
- 6. Foster reuse: Responsibilities (4-3b)**
- 7. Info availability: Environment (4-4d)**
- 8. Distributed LVC environments: Standards (3-3a)**
- 9. M&S education & training: Conferences, workshops & assist visits (5-4b)**
- 10. Distributed LVC environments: Event services (3-3c)**

Progress – Example 1

- DAU Continuous Learning Module “M&S for SE”**
 - DAU course available on-line: May 24, 2006
 - Oct 9 stats: 266 completed, 30 now taking, 23 dropped
 - More detail: see presentation Thursday, Oct 26
- Tutorial for Assessments & Support (AS) Staff**
 - Sep 26 tutorial for OSD staff that interfaces with MDAPS for SE technical planning (OUSD AT&L/SSE/AS)
 - 2-hour class: practical checklist based upon policy, guidance, best practices for PM planning and use of M&S in SE and test; offer technical “assist visits”

Progress – Example 2

- **Live Virtual & Constructive (LVC) Environment Architecture Roadmap**
 - **Issue: lack LVC interoperability due to different methods (HLA, TENA, CTIA, DIS, ALSP, etc)**
 - **DoD SC M&S funding recently approved**
 - **User communities to define roadmap for LVC architectures, including standards and policy changes required**
 - **JFCOM J-7 led team (Training, Acquisition, Testing, Experimentation M&S communities)**

Progress – Example 3

- **Educating the Workforce**
 - **Issue: Define M&S competencies**
 - **Ongoing Navy-led activity (initial spiral)**
 - **Determine user acquisition M&S KSAs, desired proficiency and knowledge elements**
 - **Develop mappings between these**
 - **Identify Instructional Delivery Technologies and Course accreditation**
 - **Subsequent spirals: development of course content, integration, assessment**
 - **Candidate for DoD SC M&S funding - extend scope to all DoD M&S community's users**

KSA = Knowledge, Skills and Abilities

NDIA SE Conference, Oct 24, 2006

Near Term Progress

- **Activity on these actions:**
 - **Update Defense acquisition policy: program M&S planning integrated with SE planning**
 - **MDA understand VV&A when M&S supports acquisition decision**
 - **Best practices for PM M&S planning**
- **Acquisition M&S Working Group**
 - **Focus of monthly sessions: plans and progress across all actions in Acq M&S Master Plan**
 - **Provide forum for creating and sustaining the Acquisition Work Force Community of Interest on M&S**

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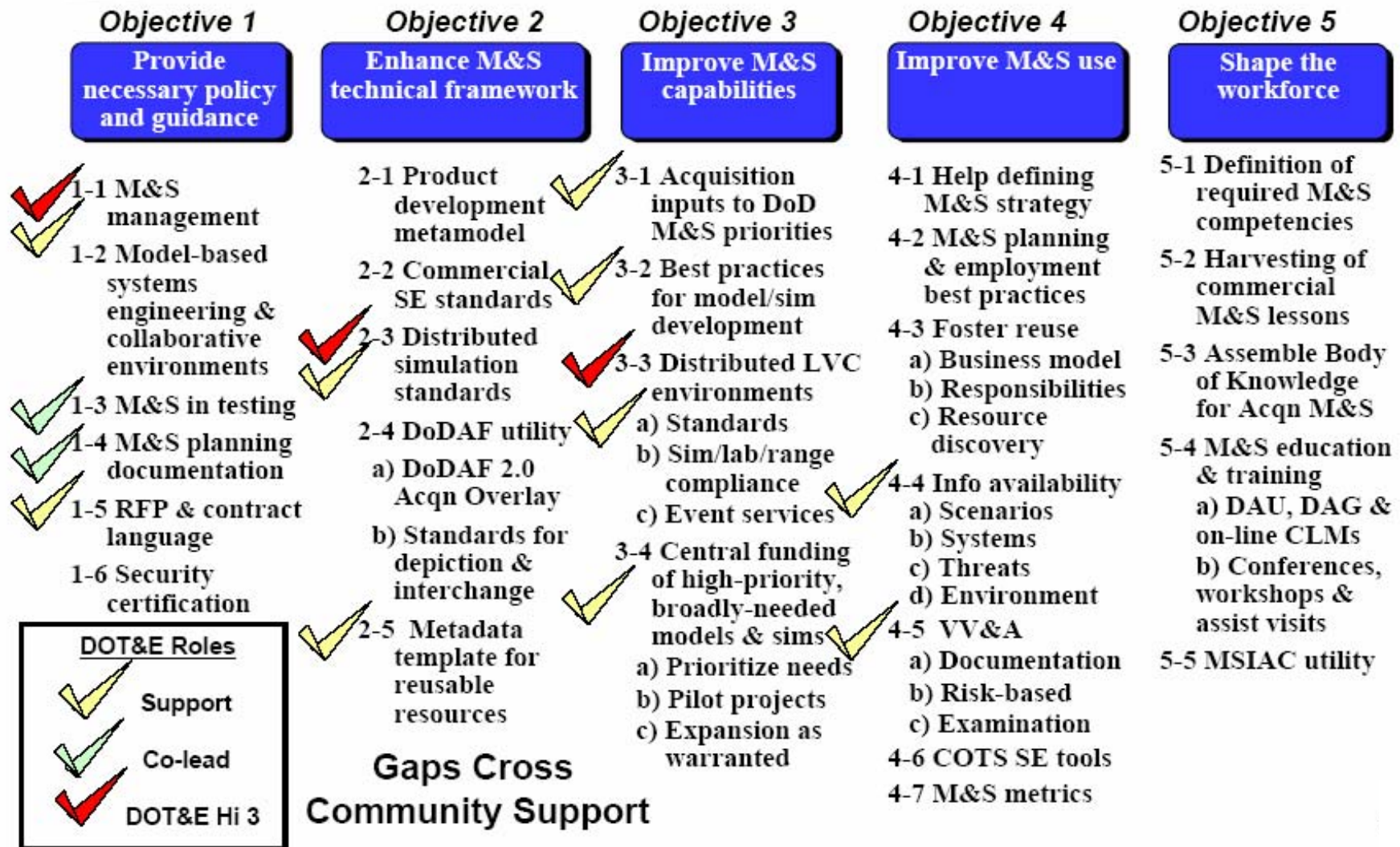
Progress

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5 Acquisition M&S Objectives

27 Actions with Equal Relevance to Training, Testing



Conclusion

- **Acq M&S Master Plan is a model for other M&S COI Master Plans still under development**
- **Acq M&S Master Plan set the pace for addressing common DoD M&S gaps**
- **Acq M&S Community making progress on several actions in the plan, collectively, through Acquisition M&S management structure**
- **Industry partnership is important; must sustain interface through Industry association activity**