

Acquisition M&S Master Plan Implementation Status



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Acquisition M&S Master Plan Structure



Department of Defense

Acquisition Modeling and Simulation Master Plan

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- **Foreword**
- **Introduction**
 - Purpose
 - Vision
 - Scope
- **Objectives (5)**
- **Actions (40)**
 - Action
 - Rationale (why it's needed)
 - Discussion (implementation guidance)
 - Lead & supporting organizations
 - Products (what is expected)
 - Completion goal (year)
- **Execution Management**

Five Objectives, 40 Actions

Objective 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

Key

Broader than Acqn

Partially broader

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 Systems Engineering 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 in acqn 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

Objective 1: Provide Necessary Policy & Guidance

1-1. Provide effective, persistent DoD-wide M&S management to address cross-cutting M&S issues, coordinate actions

Lead: OUSD(AT&L) **Support:** OUSD(AT&L)/DS(SSE), OUSD(P&R), OUSD(C)/PA&E, etc.
Products: Revised DoDD 5000.59 (M&S Management) (& DoDI) with clearer responsibilities, revised EXCIMS (MSSC) membership, SOP for EXCIMS (MSSC) processes, a refocused DMSO (MSCO)

Completion goal: 2006

- **New DoD M&S management structure in place; effectiveness in doubt**
- **No acquisition community leadership role (Tri-chair) on MSSC**
- **New DoD Directive 5000.59 finally released Aug 07, but defining key responsibilities and processes awaits a DoDI**
- **Current project selection process is inconsistent, inefficient, and wastes \$**
- **Action completion is overdue (2006)**

Next Steps:

- **Continue to argue for an SSE leadership role on M&S SC**
- **Push for a DoDI on M&S management**
- **Propose an alternative DoD M&S planning approach**

Objective 1: Provide Necessary Policy & Guidance

1-2. Promote model-based systems engineering (MBSE) and M&S-enabled collaborative environments, at both the program and joint capability level

Lead: OUSD(AT&L)/DS(SSE); **Support:** Components

Products: Revised guidance in DAG

Completion goal: 2007

- **Current DAG mentions collaborative environments 14 times, simulation-based testing once, SBA twice, and MBSE not at all.**
- **Programs/companies often claim collaborative environments, but only partial**
- **MBSE a prominent part of INCOSE's SE Vision 2020; MBSE Initiative underway**
- **Increasing industry use of MBSE concept & tools**
- **AMSWG (SSE) submitted new DAG language**

Next steps:

- **Nothing further now. Reconsider if submitted DAG language is rejected.**

Objective 1: Provide Necessary Policy & Guidance

1-3. Establish policy and guidance on appropriate use of M&S to plan tests, to complement system live tests, and to evaluate joint capabilities

Co-leads: OUSD(AT&L)/DS, ODOT&E; **Support:** Components

Products: Revised policy and guidance in DoDI 5000.2 and DAG

Completion goal: 2007

- **Concepts accepted, but little practical guidance regarding criteria for M&S use**
- **JMETC launched but many challenges ahead, including policy**
- **Increased discussion of M&S support to testing in latest submission to M&S section of DAG**
- **NDIA DT&E Cmte is coordinating development of industry recommendations for changes to T&E portions of DoDD 5000 series (& possibly CJCSI 3170.01)**

Next steps:

- **NDIA M&S Cmte participate in DT&E Cmte effort**
- **Track JMETC policy development, react as required**
- **Draft/submit changes to T&E portions of DoDI 5000.2 & DAG**

Obj. 1: Provide Necessary Policy & Guidance (cont.)

1-4. Establish policy to require documented M&S planning at the joint capability & program levels as part of the Systems Engineering Plan, T&E Strategy and T&E Master Plan

Co-leads: OUSD(AT&L)/DS(SSE), ODOT&E; **Support:** Components

Products: Revised policy and guidance in DoDI 5000.2, DAG, and DOT&E TEMP Planning Guidance

Completion goal: 2007

- **AMSWG (SSE) submitted revised language to DoD 5000.2, DAG language and SEP Preparation Guide**
- **Partial acceptance of SEP language thus far; other TBD**
- **No action this far regarding language in TEMP PIng Guidance**

Next steps:

- **Draft/submit language for TEMP Planning Guidance**

Obj. 1: Provide Necessary Policy & Guidance (cont.)

1-5. Establish M&S-related guidelines for solicitations, source selections, and contracting.

Lead: OUSD(AT&L)/DS(SSE); **Support:** OUSD(AT&L)/DPAP, ODOT&E, Components

Products: Sample language in DoD publications (e.g., DAG, SEP Preparation Guide, Contracting for Systems Engineering Guidebook) regarding M&S requirements, data rights, and the responsibilities and liabilities of parties regarding sharing and reuse

Completion goal: 2007

- Solicited inputs from AMSWG members and industry (through NDIA M&S Cmte)
- AMSWG (SSE) submitted DAG language regarding source-selection criteria
- Presentation at Oct 07 NDIA Systems Engineering Conference

Next steps:

- Further refinement and vetting of proposed guidance
- Synthesize best language & submit to DAG (update), SEP Preparation Guide, and Contracting for Systems Engineering Guidebook

Obj. 1: Provide Necessary Policy & Guidance (cont.)

1-6. Ensure practical guidelines for information assurance certification and accreditation of M&S federated networks falling under multiple Designated Accreditation Authorities (DAAs)

Lead: OASD(NII); **Support:** OUSD(AT&L)/DS(SSE), OUSD(I), NSA

Products: Proven, practical guidelines published in DAG and DoD 8500.2-H, per DoDI 8500.2 "Information Assurance Implementation," Feb 6, 2003

Completion goal: 2007

- **NII has published DoDI 8500.2, but AMSWG questions adequacy**
- **AMSWG-NII discussions underway; NII reviewing NAVAIR procedures for suitability in DAG**
- **Unlikely to complete in 2007**

Next steps:

- **Continue to ground discussions in practical experience; push NII as warranted**
- **Draft, vet, and submit DAG language**

Objective 2: Enhance the Technical Framework for M&S

2-1. Develop a product development information metamodel & associated metadata extensions to the DoD Discovery Metadata Specification

Lead: OUSD(AT&L)/DS(SSE); **Support:** OASD(NII), Components

Products: Revised DDMS; revised guidance in DAG.

Completion goal: 2008

- JSF has developed a metamodel specification and provided it to MSCO
- It seems unlikely MSCO M&S COI Discovery Metadata project will address anything beyond discovery metadata
- JSF hopes to enlist MSCO (Scrudder) assistance to evolve its metamodel

Next steps:

- Explore PA&E interest to make this a “blue” effort
- Cooperate with JSF in efforts to revise/extend metamodel

Objective 2: Enhance the Technical Framework for M&S

2-2. Support development of open commercial and non-proprietary standards for systems engineering, such as OMG's Systems Modeling Language (SysML) and ISO Standard 10303 AP-233

Co-leads: OUSD(AT&L)/DS(SSE); DoD CIO **Support:** OASD(NII), DLA, OUSD(AT&L), **Products:** Standards suitable for use by DoD

Completion goal: 2007

- **SysML v1.0 issued as an "available standard;" v 1.1 minor revision late 2008**
- **Increasing usage & teaching of SysML; major subject at INCOSE, NDIA**
- **Navy M&S Standards Steering Group has proposed SysML as a standard**
- **AP-233 SE data interchange standards being released incrementally**
- **COTS System Engineering tools incorporating SysML and AP-233**
- **Nothing yet submitted to DoD Standardization Program**

Next steps:

- **Track SysML and AP-233 implementations, publicize results**
- **Investigate DoD Standardization Program process; submit SysML and AP-233**

Objective 2: Enhance the Technical Framework for M&S

2-3. Establish a forum to clarify the characteristics and application of various distributed simulation standards (ALSP, DIS, HLA, SI3, TENA, etc.) and examine opportunities for convergence

Lead: OUSD(AT&L) **Support:** OUSD(AT&L)/TRMC & DS(SSE), ODOT&E, Components

Products: (1) Information on strengths & weaknesses of the various standards; (2) agreement on policy and/or guidance on the use of distributed simulation standards; (3) a way ahead regarding distributed simulation standards

➤ **Completion goal:** 2007

- **MSSC-funded LVCAR Project underway, but behind schedule**
- **SE Forum is interested, had taken one briefing**
- **AMSWG members engaged in this effort and tracking progress; concern on requirements definition**

Next steps:

- **No additional steps needed**

Obj. 2: Enhance the Technical Framework for M&S (cont.)

2-4. Improve the utility of the DoD Architecture Framework (DoDAF) for acquisition

2-4(a) ~~Develop Systems Engineering Overlay (profile) for DoDAF v2.0~~

~~Lead: OUSD(AT&L)/DS; Support: OASD(NII), Components~~

~~Products: Acquisition Overlay for DoDAF v2.0~~

~~Completion goal: 2006~~

2-4(b) Support development of open commercial standards for the depiction and interchange of DoDAF-compliant architectures

Lead: OASD(NII) Support: OUSD(AT&L)/DS(SSE)

Products: Published standards suitable for adoption by DoD in DoDAF 2.0; revised guidance in DAG

Completion goal: 2007

- **2-4(a): Overlay concept has been dropped, so this action is OBE**
- **2-4(b): OMG's UPDM (UML Profile for DoDAF/MODAF) nearing finalization**
- **SE Forum just beginning to appreciate the value of DoDAF**
- **ASD(NII) is attempting to make DoDAF v2.0 more useful for acquisition**
- **Acquisition Community participation in DoDAF WG curtailed**

Next steps:

- **Increase acquisition community involvement in DoDAF WG, including pushing for commercial standards for architecture data exchange**
- **Revise AMSMP to eliminate Action 2-4(a)**

Obj. 2: Enhance the Technical Framework for M&S (cont.)

2-5. Establish a standard template of key characteristics (metadata) to describe reusable M&S resources

Lead: OUSD(AT&L) **Support:** OUSD(AT&L)/DS(SSE) & TRMC, OASD(NII), ODOT&E, Components

Products: Published standard template; usage guidance in DAG

Completion goal: 2007

- **MSCO M&S COI Discovery Metadata project underway to address this**
- **Usage guidance in DAG will follow downstream, after template definition**

Next steps:

- **Support MSCO metadata project by participating in reviews**
- **Investigate OMG's Reusable Asset Specification (RAS)**

Objective 3: Improve Model & Simulation Capabilities

3-1. Establish a process to ensure acquisition needs are reflected in DoD M&S priorities

Lead: OUSD(AT&L) **Support:** OUSD(AT&L)/DS(SSE), ODOT&E, DOD CIO, Components

Products: A method to capture and prioritize acquisition needs.

Completion goal: 2007

- **AMSWG has successfully obtained M&S SC funding for several projects**
- **MSSC funding has gone to projects of questionable value, perhaps because AMSWG was too modest in what it proposed**
- **Acquisition M&S still does not have an effective voice in other DoD funding arenas that affect M&S capability, such as other S&T and DARPA**

Next steps:

- **Investigate DoD S&T planning process to identify entry points**
- **Build list of acquisition M&S S&T needs**

Objective 3: Improve Model & Simulation Capabilities

3-2. Define and foster best practices for efficient development and evolution of credible M&S tools, incorporating user-defined requirements, a systems engineering approach, and appropriate verification & validation

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), ODOT&E, DOD CIO, Components

Products: Best practices publication, available via MSIAC, DTIC, etc.; DAG guidance to use

Completion goal: 2008

- **No significant effort thus far**
- **Expect some insights from other best practices solicitation (Action 4-2)**

Next steps:

- **Conduct literature search; synthesize best practice**

Obj 3: Improve Model & Simulation Capabilities (cont.)

3-3. Enable readily-available distributed live-virtual-constructive environments, leveraging related initiatives

3-3(a) Establish DoD-wide standards for distributed environments

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/TRMC & DS(SSE); ODOT&E; DOD CIO, Components

Products: Published standard; DODI (# TBD) policy to use

Completion goal: 2008

3-3(b) Make candidate simulations, labs and ranges compliant with these standards

Lead: Components; **Support:** OUSD(AT&L)/DS(SSE) & TRMC, ODOT&E

Products: A larger collection of simulations, labs, and ranges ready to be employed in distributed events

Completion goal: 2010

3-3(c) Ensure availability of services to help plan and conduct events

Lead: Components; **Support:** OUSD(AT&L), OUSD(AT&L)/TRMC, DISA

Products: Fee-based technical services to help users (e.g., PMs, Capability Managers, OTAs) plan and conduct distributed events

Completion goal: 2009

- LVC Architecture Roadmap project underway
- Nothing begun on other standards (object models, data exchange, etc.)

Next steps:

- Investigate use of SysML in Federation Development and Execution Process (FEDEP)

Obj 3: Improve Model & Simulation Capabilities (cont.)

3-4. Centrally fund and manage the development of high-priority, broadly-needed M&S tools

3-4(a) Identify and prioritize broadly-needed M&S tools

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE); ODOT&E, DOD CIO, Components

Products: Prioritized list of common M&S tool needs

Completion goal: 2007

3-4(b) Conduct one or more pilot projects to develop new M&S tools or update existing ones to ~~meet these needs~~ **prove this mngmt concept**

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), Components

Products: Proof of concept for managing the development/evolution of M&S tools to meet broadly-shared needs

Completion goal: 2008

3-4(c) Expand the scope of central M&S tool management as warranted by pilot project results and the list of common M&S needs

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), ODOT&E, Components

Products: Capability to provide broadly-needed M&S tools in a more responsive and cost-effective way.

Completion goal: 2011

- **AMSWG submitted 3-4(b) pilot proposal, as one of the top 5 acquisition projects for MSSC FY08 funding**

Next steps:

- **Conduct central model management pilot project**

Objective 4: Improve Model & Simulation Use

- 4-1. Provide potential acquisition M&S users the knowledge needed to formulate an effective M&S strategy via ready access to M&S expertise and information about M&S capabilities and gaps, reusable resources, lessons-learned, etc.

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE)

Products: Revised guidance in DAG; improved knowledge base in MSIAC; assist visits (e.g., by OUSD(AT&L)/DS(SSE))

Completion goal: 2008

- Revised guidance submitted to DAG
- SSE M&S Cell assisting as able, but not widely advertised
- No other Components offering assistance
- 5-1 Education project Identified many M&S Bodies of Knowledge (BoKs) that may offer useful information

Next steps:

- Advertise and expand assist visits
- Improve MSIAC expertise regarding M&S in acquisition (Action 5-5)

Objective 4: Improve Model & Simulation Use

4-2. Define and disseminate best practices for disciplined M&S planning & employment

Lead: OUSD(AT&L)/DS(SSE), **Support:** OUSD(AT&L), Components

Product: Revised best practices guidance in DAG and MSIAC

Completion goal: 2007

- High-level discussion included in “M&S for Systems Engineering” CLM
- Expanded discussion submitted in recent DAG revision
- M&S Planning and Employment Best Practices solicitation completed in April

Next steps:

- Synthesize best practice, conduct AMSWG & NDIA reviews

Obj. 4: Improve Model & Simulation Use (cont.)

4-3. Facilitate the sharing of reusable resources

4-3(a) Establish a DoD-wide business model for compensating providers of reusable M&S resources (e.g., information, software, services)

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), OUSD(P&R), OUSD(C)/PA&E, Components

Product: Documented business model; revised policy and/or guidance in DoD 5000 series & DAG

Completion goal: 2007

- **MSSC-funded M&S Resource Reuse Business Model project underway**

Next steps:

- **No further action needed yet**

Obj. 4: Improve Model & Simulation Use (cont.)

4-3. Facilitate the sharing of reusable resources

4-3(b) Establish DoD policy and/or guidance regarding responsibilities to share, protect and properly use M&S information, tools, and data

Co-Leads: OASD(NII), OUSD(AT&L), USD(I); **Support:** OUSD(AT&L)/DS(SSE) & DPAP, OUSD(P&R), OUSD(C)/PA&E, Components

Product: Revised policy and/or guidance in various issuances (e.g., DoD 5000 series, DAG, contracting guidance)

Completion goal: 2008

- Drafted and submitted DAG language
- M&S Resource Reuse Business Model project may make recommendations on this subject

Next steps:

- Draft language for contracting guide
- (Hold-off submitting a 5000 change)

Obj. 4: Improve Model & Simulation Use (cont.)

4-3. Facilitate the sharing of reusable resources

4-3(c) Enhance the means (e.g., directory service, registries, bulletin boards) to discover the existence of reusable resources required for M&S and contact information

Lead: OUSD(AT&L) **Support:** OUSD(AT&L)/DS(SSE), OUSD(P&R), OUSD(C)/PA&E, Components

Product: A better way to discover reusable resources. Re-orientation and integration of various DoD M&S resources repositories.

Completion goal: 2007

- AI Shaffer has directed MSCO to develop a “reliable repository”; we have objected based on prerequisites; project is proceeding
- Actions 2-5 is a prerequisite to 4-3(c)

Next steps:

- Monitor MSCO project; no further action needed now

Obj. 4: Improve Model & Simulation Use (cont.)

4-4. Define the types of information DoD organizations shall make available to others with a clearance and valid need to know and the processes to obtain them (per reuse business model). The process to obtain information should include an efficient mechanism for industry to request government data with specific "need to know" outside a specific contract environment.

4-4(a) Scenario data

Lead: OUSD(AT&L) **Support:** OCJCS(J8), OUSD(C)/PA&E, DIA, Components

Product: Approved scenarios and process to obtain

Completion goal: 2007

4-4(b) System-related data

Lead: OUSD(AT&L)/DS(SSE); **Support:** ODOT&E, Components

Product: Process to obtain authoritative system data (characteristics and performance, interactions, interfaces, logistic support, etc.) documented in the DAG and appropriate OASD (NII) policy documents.

Completion goal: 2008

4-4(c) Threat data

Lead: DIA; **Support:** OUSD(AT&L); OUSD(AT&L)/DS(SSE), ODOT&E, and Components

Product: Authoritative threat data and process to obtain

Completion goal: 2007

4-4(d) Natural environment data

Lead: DoD Natural Environment MSEAs; **Support:** OUSD(AT&L), OUSD(AT&L)/DS(SSE), Components

Product: Authoritative natural environment data and process to obtain

Completion goal: 2007

Action 4-4 Assessment

- Acquisition Support Division of DIA has briefed AMSWG and NDIA M&S Cmte on its support to acquisition programs
- MSIC has briefed NDIA M&S Cmte on TMAP program and provided instructions on how to request TMAP models
- Draft DAG language discusses threat data sources and traceability
- **No method exists “for industry to request government data with specific ‘need to know’ outside a specific contract environment”**
- MSSC-funded Environmental Scenario Generator project underway
- **No progress regarding sharing U.S. system data**
- Joint Rapid Scenario Generation (JRSG) and Joint Data Alternatives (JDA) projects advertise they will address all the Action 4-4 info needs; time will tell

Next steps:

- Participate in JRSG and JDA effort as resources permit
- Investigate data sharing policies of OSD, JCS, and other Components
- Investigate JSC, PAE, & Service scenario data availability & access
- Draft add'l DAG language on all data types (interim prior to JRSG /JDA)
- Use NDIA M&S Cmte to assess seriousness of no-contract data access issue

Obj. 4: Improve Model & Simulation Use (cont.)

4-5. Foster cost-effective VV&A

4-5(a) Require DoD-wide standardized documentation of VV&A

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), ODOT&E, Components

Products: Revised policy in DODI 5000.2 and 5000.61; revised guidance in DAG

Completion goal: 2007

- **MSCO project underway**
- **AMSWG concern that draft MSSC's "DoD M&S Strategic Vision" call for "practical verification, validation, and accreditation guidelines that vary by application area" (emphasis added) will undermine VV&A.**

Next steps:

- **Monitor MSCO project**
- **Actively participate in any DoDI 5000.61 update**

Obj. 4: Improve Model & Simulation Use (cont.)

4-5. Foster cost-effective VV&A

4-5(b) Develop risk-based methodology and associated guidelines for VV&A expenditures

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), Components

Products: Updated DoDI 5000.61; revised policy and guidance in DoDI 5000.2 and DAG

Completion goal: 2007

- **MSCO project underway**

Next steps:

- **Monitor MSCO progress developing risk-based VV&A guidelines, take action as necessary**

Obj. 4: Improve Model & Simulation Use (cont.)

4-5. Foster cost-effective VV&A

4-5(c) Examine a program's VV&A when M&S informs major acquisition decisions and unambiguously state the purpose, key assumptions and significant limitations of each model/simulation when results are presented.

Lead: OUSD(AT&L)/DS(SSE) **Support:** DoD Components

Products: Guidance & training for oversight personnel; updates to DAG Chaps 4, 9

Completion goal: 2007

- Submitted DAG language on VV&A examination
- SSE M&S Cell has given initial briefing to OUSD(A&T)/SSE/AS
- No other Component activities underway

Next steps:

- Broaden teaching on VV&A examination

Obj. 4: Improve Model & Simulation Use (cont.)

4-6. Assess the use of COTS systems engineering tools (modeling environments) for collaborative architecture development

Lead: OUSD(AT&L)/DS(SSE); **Support:** OASD(NII), Components

Products: Revised guidance in DAG; enhanced M&S body of knowledge for dissemination

Completion goal: 2007

- **SysML and AP-233 already proving utility**
- **UPDM nearing finalization, can help with CADM AND DARS weaknesses**
- **NIST “Systems Engineering Tool Interoperability Plug-fest” underway**

Next steps:

- **Investigate use of SE tools for collaborative architecture development**

Obj. 4: Improve Model & Simulation Use (cont.)

4-7. Define and capture meaningful metrics for M&S utility in acquisition

Co-Leads: OUSD(AT&L), Dept. of the Navy **Support:** OUSD(AT&L)/DS(SSE),
Components

Products: Metric definitions in DAG; methods to capture and submit data in DAG;
data from individual projects in MSIAC, Body of Knowledge, etc.

Completion goal: 2007

- One of the top 5 acquisition M&S projects for MSSC FY08 funding

Next steps:

- Monitor MSSC project if funded

Objective 5: Shape the Workforce

5-1. Define required M&S competencies for the acquisition workforce

Co-Leads: DAU and OUSD(AT&L)/DS(SSE); **Support:** OUSD(P&R), OUSD(AT&L)/DDRE, OUSD(C)/PA&E, Components

Product: Identified lead FIPT; workforce qualification requirements; management process & structure

Completion goal: 2008

- “Educating the M&S Workforce” project underway with Navy & MSSC funding
- FY08 funding increment being considered by MSSC

Next steps: No further activities needed now

Objective 5: Shape the Workforce

5-2. Harvest lessons from commercial sector activities in the use of M&S to support product development

Lead: OUSD(AT&L)/DS(SSE); **Support:** OUSD(AT&L), Components

Products: Annual update to best practices in DAG and lessons from industry that should be considered by PMs in planning for M&S

Completion goal: Recurring; initial in 2007

- SSE participating in conferences, workshops, and literature review involving commercial industry use of M&S, capturing relevant points
- Increasing industry adoption of “Simulation-Based Design (SBD)”

Next steps:

- Collect and consolidate findings, feed into Action 5-3 BoK

Objective 5: Shape the Workforce

5-3. Assemble and evolve the M&S Body of Knowledge (information set) relevant to acquisition

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), Components

Product: Information base available to potential M&S users (e.g., PMs, CMs, OTAs); source material for education and training

Completion goal: Recurring; initial in 2006

- Several BoKs have been discovered
- Knowledge is being developed (e.g., best practices)

Next steps:

- Synthesize a consolidated BoK, put into configuration management, make accessible (how much of this is accomplished by Education Project is TBD)

Obj. 5: Shape the Workforce (cont.)

5-4. Educate and train the workforce to achieve required M&S competencies

5-4(a) Provide M&S knowledge via an expanded set of DAU courses, the Defense Acquisition Guide, and on-line CLMs

Lead: DAU; **Support:** OUSD(AT&L), OUSD(AT&L)/DS(SSE), Components

Product: Expanded set of DAU courses, improved M&S guidance in the Defense Acquisition Guide, on line Continuous Learning Modules; a better educated workforce

Completion goal: 2009

- CLM M&S for SE with over 1,600 graduates
- CLM on M&S for T&E just released
- DAG will be enhanced as information defined
- No action on DAU courses thus far

Next steps: Nothing further needed now; BoK is prerequisite

Obj. 5: Shape the Workforce (cont.)

5-4. Educate and train the workforce to achieve required M&S competencies

5-4(b) Provide M&S knowledge via conferences, workshops, and assist visits

Lead: OUSD(AT&L)/DS(SSE); **Support:** OUSD(AT&L), DAU, Components

Product: Annual outreach program; a better educated and trained workforce

Completion goal: Recurring; initial in 2006

- **FY07 Outreach Plan approved by AMSWG; includes M&S tutorial for AS staff, DMSC, NDIA and SISO presentations**
- **Add'l materials (e.g., best practices) in work**
- **Resource constrained**

Next steps:

- **Advertise and expand assist visits**
- **Hold workshops once recommended practices are in hand**

Obj. 5: Shape the Workforce (cont.)

5-5. Improve the knowledge and expertise available through the MSIAC to make it of greater utility to the acquisition community

Lead: OUSD(AT&L); **Support:** OUSD(AT&L)/DS(SSE), OUSD(P&R), OUSD(C)/PA&E, Components

Product: Plan of action with coordinated MSIAC CONOPS & staffing requirement; list of knowledge shortfalls that MSIAC will take on; success criteria & process to bring MSIAC up to criteria

Completion goal: 2008

- **Only preliminary conversations with MSIAC contractor thus far**

Next steps:

- **Develop a plan of action to improve the M&S Information Analysis Center's usefulness to the acquisition community**