

Modeling and Simulation Support Plan

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Agenda

- Background
- Contents of the Plan
- Conclusion

Background

- More structured planning of M&S needed
- Evidence – Dept. Air Force AFI 16-1002
 - Modeling & Simulation Support to Acquisition
 - SAF/AQI “M&S support Plan Template”
3/29/00
- Some existing program plans call for M&S
 - placeholder in the document
- Nothing specific or focused strictly on M&S

Key Difference: M&S as a product versus as a tool

Background (cont)

- Training community leading the way – mainly simulation “products”
- Test community is growing in its use – also mainly simulation “products”
- Modeling on the rise – typically engineering tools

System Level M&S Context hierarchy gives rise to models becoming end products versus tools – see next chart.

System Level M&S Context (Hierarchy)

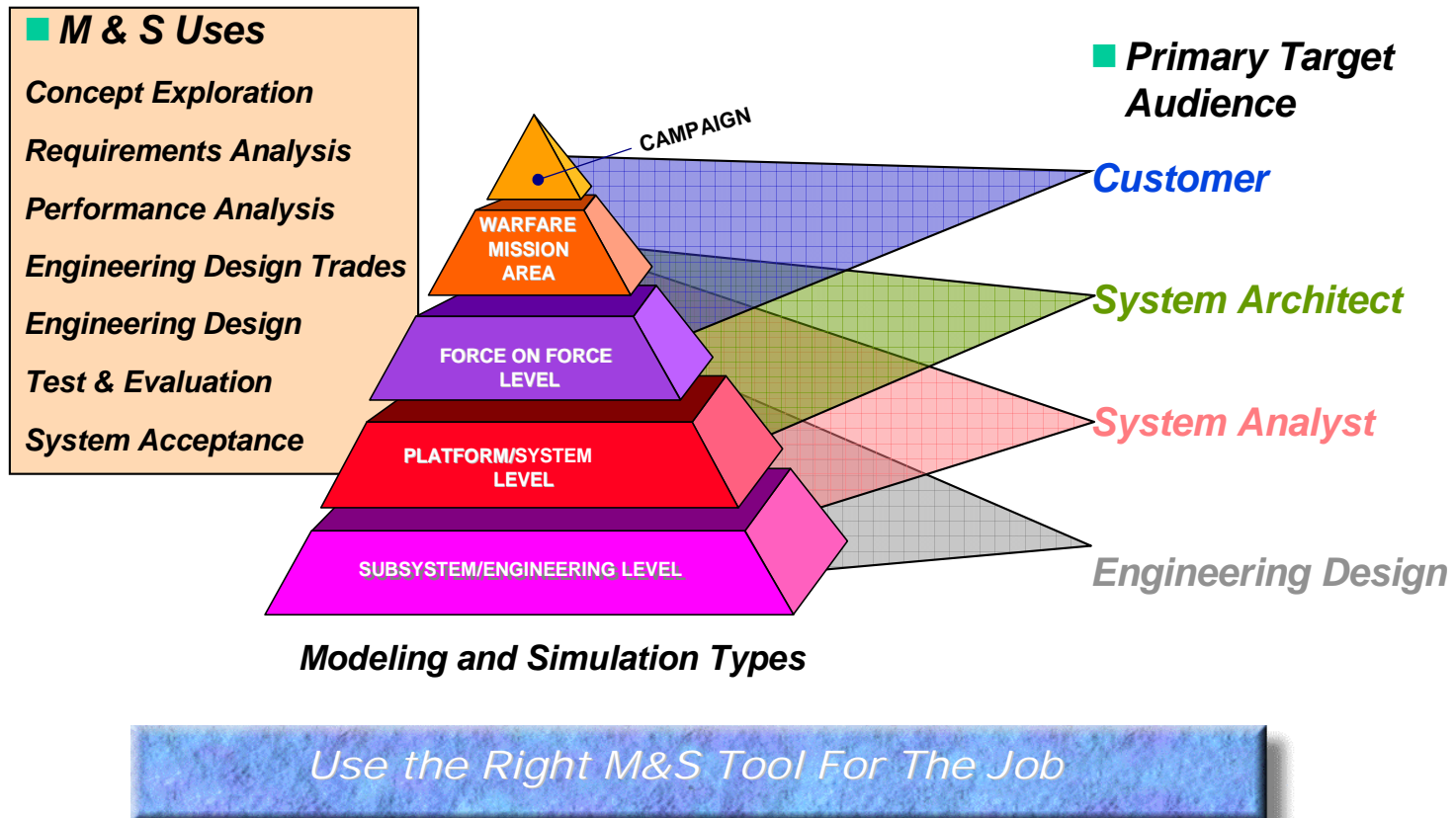


Figure 1

Background (cont)

- A formalized approach / structure is in order
- Certain items need to be addressed
- Will allow for proper evaluation, estimation, and tracking

Contents of the Plan

- Five sections (to discuss)
 - Executive Summary
 - Strategy / Approach
 - M&S Management
 - M&S Activities
 - Infrastructure

There is a sixth section – Funding; breakdown of funding for effort

Executive Summary

- Describe plan contents
- Describe M&S purpose
- High level description of modeled system

Range of context:

From concept, exploration, requirements, analysis, training, and test events, to a formal acceptance

Strategy / Approach

- Describe M&S role in supporting Life Cycle process of the program
- Identify method / approach to be used and any special needs
- Describe the process to field the products to be used

Reference any know processes or procedures already in place

M&S Management

■ Program responsibility

- Program level description – who will lead overall M&S effort down to individual components
- Description of Boards and Committees
- Identify expected skill sets / skill mixes

All roles and responsibilities should be described

M&S Management (cont)

■ CM/DM

- Describe CM process – throughout the life cycle (program most likely will have CM plan)
- Describe DM process – throughout the life cycle
- Should include
 - Process to verify consistency / correctness of data
 - Appropriate representation
 - Process to certify data

Reference any know processes or procedures already in place

M&S Management (cont)

■ V&V

- Specific to M&S components
- Accreditation – V&V must be explicitly identified
 - (Direct connection to Accreditation Plan)
- Other program plans most likely to be affected

Identify process for comparing M&S against real data & criteria for acceptance

M&S Activities

- Development – software development plan may exist
- Data identification – data flows, constructs, metadata
- Releases – process of M&S release; include security and legal aspects (if applicable); include approval process & procedures, authority for a release
- Events – run for record, program milestones; include external activities
- Tools – what program teams need (analysis and/or event perspective); day-to-day operation, test

Describe and identify as much as possible of the above activities

Infrastructure – 2 parts

■ Organizational

- Support – internal and external
- Expertise, training, connectivity

■ Facilities

- Space, floor plans/layouts
- Power/HVAC
- Computers, test equipment, spare parts
- Security – physical and/or logical

Should include technology development (road maps) and/or strategies

Conclusion

- M&S can end up being a mini-program of its own
- Processes same as if it is a program
- This approach to capture these items provides focus on M&S

The hinge to continued future success is in the appropriate use of M&S