

APPENDIX D

Modular Open Systems Approach (MOSA) Acquisition Strategy Template

INSTRUCTIONS: Below is a proposed template for programs to use for addressing MOSA in their acquisition strategy. Programs are encouraged to tailor the following recommended text to better correspond with their overall program and acquisition strategy. The tailorable text is highlighted in *italics*, unless otherwise noted.

[Insert Acquisition Strategy Section No.] **Modular Open Systems Approach (MOSA)**

The *[Insert Program Name]* will employ a modular, open systems approach as an integrated acquisition and technical strategy. This approach is an enabler to achieve the following objectives:

[Please select from the following list and include all that apply to your program]

- *adapt to evolving requirements and threats*
- *promote transition from science and technology into acquisition and deployment*
- *facilitate systems integration*
- *leverage commercial investment*
- *reduce the development cycle time*
- *reduce the total life-cycle cost*
- *ensure that the system will be fully interoperable with all the systems with which it must interface, without major modification of existing components*
- *enhance commonality and reuse of components among systems*
- *enhance access to cutting edge technologies and products from multiple suppliers*
- *mitigate the risks associated with technology obsolescence*
- *mitigate the risk of a single source of supply over the life of a system*
- *enhance life-cycle supportability*
- *increase competition*
- *facilitate modular contracting*

The systems architecture selected for the *[Insert Program Name]* will ensure continued access to emerging technologies and products, and will prevent sole dependence on proprietary technology through the implementation of modular design principles and the use of open standards for key system interfaces.

The candidate system will be assessed at appropriate milestones and depending on program maturity and applicability, the design of the relevant sub-systems (i.e., structural, mechanical,

hydraulic, electrical, electronic and computing) of the **[Insert System Name]** will be based on MOSA principles. The system architecture selected will have the following characteristics:

- application of publicly available standards specifications, and protocols which are established and maintained through a consensus process, preferably by an internationally-recognized governing group
- well-defined, widely-used, non-proprietary interfaces, services and formats
- employment of modular design principles (e.g., cohesion, encapsulation, decoupledness, etc) that facilitate component replacement and the addition of new capabilities
- upgradeable modules that enable the incorporation of additional or more-capable components with minimal impact, requiring little or no changes to the overall system

The standards selected for external interfaces will be consistent with system architectures of peer and higher level systems (e.g., System of Systems architectures), among and within which the **[Insert System Name]** is expected to function and interact.