

APPENDIX C

Modular Open System Approach (MOSA) Implementation Questions

The OSJTF has developed the following set of indicators, in the form of MOSA implementation questions, to help assess the extent to which MOSA is implemented in an acquisition program, and also to identify actual or potential MOSA implementation issues. These questions are representative of the actual questions used in the MOSA Program Assessment and Review Tool (PART), which is an automated analytical tool that relies on objective, data evidence-based judgments to assess and evaluate MOSA implementation. The MOSA PART is an adaptation of the OMB Program Assessment Rating Tool (PART), which is a questionnaire designed to provide a consistent approach to rating programs across the Federal government. The MOSA PART can be found on the Open Systems Joint Task Force website at <http://www.acq.osd.mil/osjtf>.

SECTION A: BUSINESS INDICATORS

Question A1: To what extent is MOSA incorporated into the program's acquisition planning?

Question A2: To what extent did the program plan for its implementation of MOSA?

Question A3: To what extent is the program's MOSA implementation based on systems engineering principles and processes?

Question A4: To what extent are responsibilities assigned for implementing MOSA?

Question A5: To what extent is the program staff trained on, or have relevant experience in MOSA concepts and implementation?

Question A6: To what extent does the program's configuration management process encompass changes to key interfaces and corresponding standards?

Question A7: To what extent have program requirements been analyzed, and refined as needed, to ensure that design-specific solutions are not imposed?

Question A8: To what extent do the system level functional and performance specifications permit an open systems design?

Question A9: To what extent are modular, open system considerations included as part of alternative design analyses?

Question A10: To what extent are mechanisms established to migrate key interfaces that are proprietary or closed to key interfaces that are open?

Question A11: To what extent are MOSA principles reflected in the program's performance measures?

SECTION B: TECHNICAL INDICATORS

Question B1: To what extent is the system's architecture based on related industry or other standard reference models and architectural frameworks?

Question B2: To what extent is an architectural description language used to define system modules and interfaces?

Question B3: To what extent does the system's architecture exhibit modular design characteristics?

Question B4: To what extent is the system's architecture capable of adapting to evolving requirements and leveraging new technologies?

Question B5: To what extent has the criteria for designating key interfaces been established?

Question B6: To what extent has the program designated key interfaces?

Question B7: To what extent has the program assessed the feasibility of using open standards for key interfaces?

Question B8: To what extent have standards selection criteria been established that give preference to open interface standards?

Question B9: To what extent are open standards selected for key interfaces?

Question B10: To what extent are validation and verification mechanisms established to assure that system components and selected commercial products conform to the selected interface standards?

Question B11: To what extent do system components and selected commercial products conform to standards selected for system interfaces?

Question B12: To what extent do system components and selected commercial products avoid utilization of vendor-unique extensions to interface standards?

Question B13: To what extent can system components be substituted with similar components from competitive sources?