

Modular Open Systems Architecture (MOSA)

A Unique Industry Perspective



2016 Acquisition Insight Days



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Experience that matters...Solutions that count!

MOSA

Observations and Advice

- **MOSA is a technical solution that benefits both government & industry**
 - Potential to share R&D and production with other programs
 - Reduces the SW development and test burdens
 - Minimizes modernization and obsolescence costs
 - Keeps aging weapon systems relevant in a rapidly changing threat environment, in ever restrictive fiscal realities
- **Industry is committed to MOSA solutions**
 - IRAD investment is producing many successes
 - Understood as the way of all future procurement efforts
 - Industry wants to align product lines via MOSA to reduce costs and timelines

MOSA

Observations and Advice

- **Focus on understanding and advocacy in the program office**
 - MOSA is a paradigm change for legacy programs, and requires education and partnership with MOSA SMEs
 - Change starts with the Program Manager and Chief Engineer — industry can help
 - Technical demonstrations can help overcome perceived roadblocks, and give opportunities to collaborate
- **Challenges**
 - Abstraction layer is “easy”, tapping into aircraft mission data bus can be difficult—close coordination is essential here
 - To be effective, a hardware equivalent to MOSA is essential
 - Cyber security must be (and is being) addressed

MOSA

The B-2 Experience



- **A legacy platform**
 - Software intensive / integrated
 - Even small changes require full OFP updates & flight testing
 - Sole source dependence on prime contractor for all integrated software efforts
- **Dec 14, launched initiative within program office to pursue MOSA**
 - Partnered with Lincoln Labs and RCO
 - Contracted with Northrup Grumman for proof of concept
- **Jul 15, MOSA (Open Mission Systems—OMS) successful in-flight demo on (non-integrated) B-2 hardware**
- **Jan 16, OMS study complete with expanded hardware demos**
- **Next step is to introduce OMS along with a major modification**