



Open Avionics System Integration Study (OASIS)

Mid-Term Status Summary

20 March, 2000

Boeing Phantom Works

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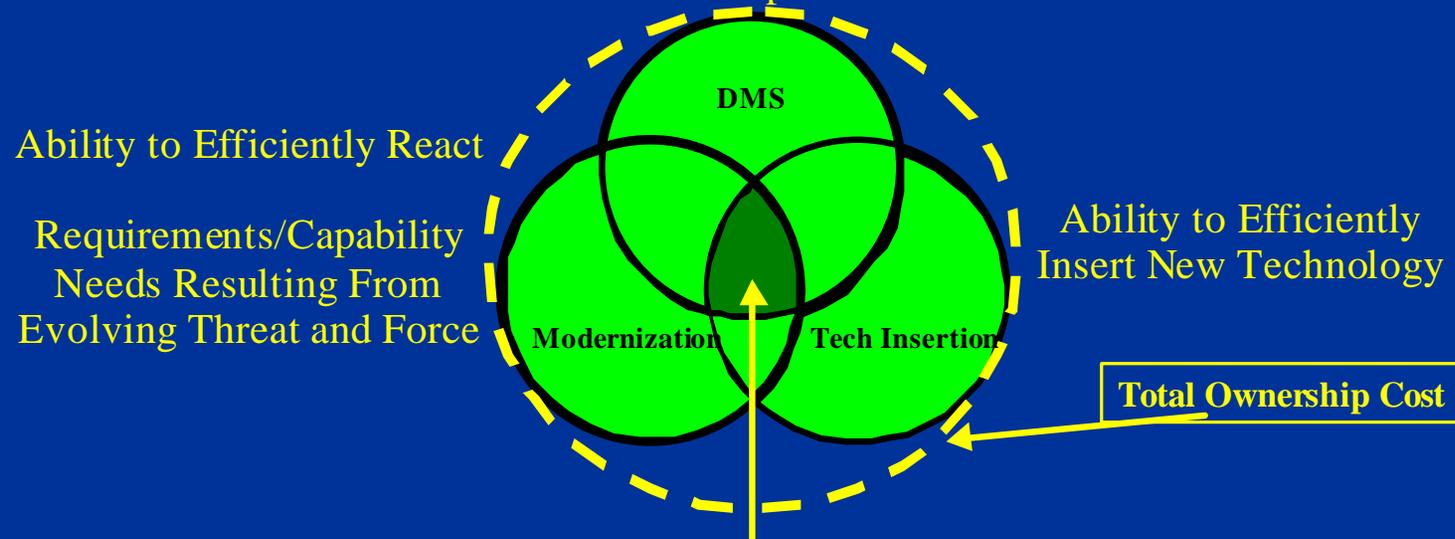




Scope of the Problem

Birthplace, Home and Future of Aerospace

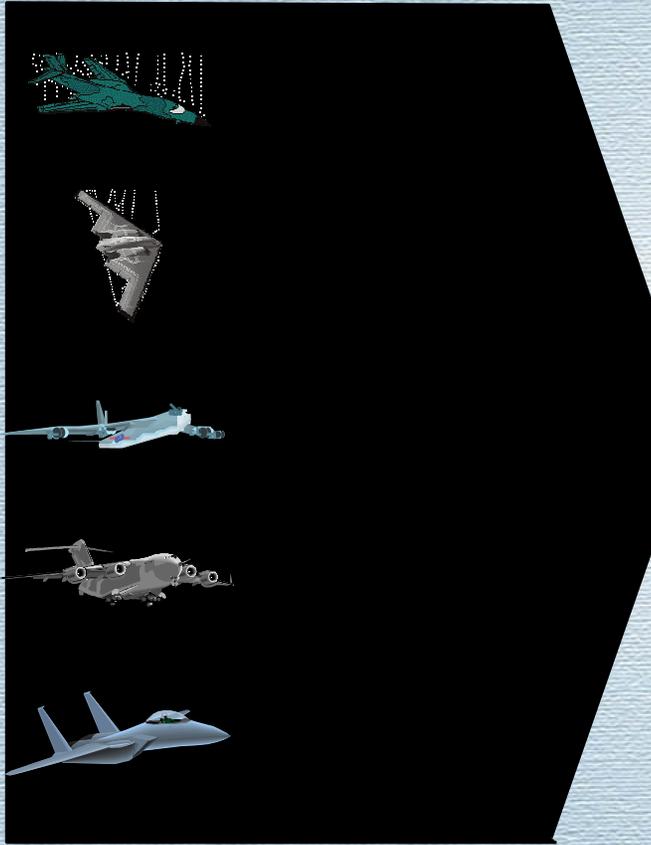
Ability to Efficiently Respond to Loss of Supplier Base or
Discontinuance of Specific Product Line



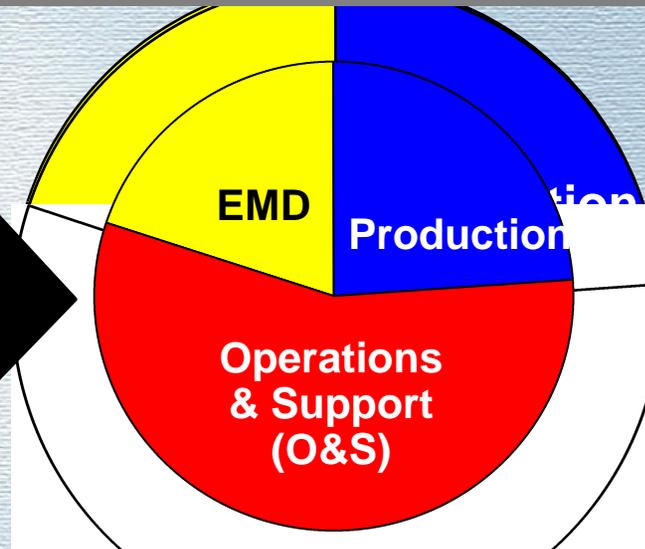
**Goal is to Leverage Affordable Solutions Which Respond to All
Three Concerns Across Multiple Platforms**

OASIS

A Multi-Platform Open System Solution



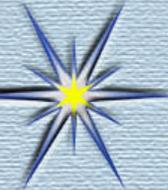
Limited Funding and Rising O&S Cost
Constrains Modernization and Readiness



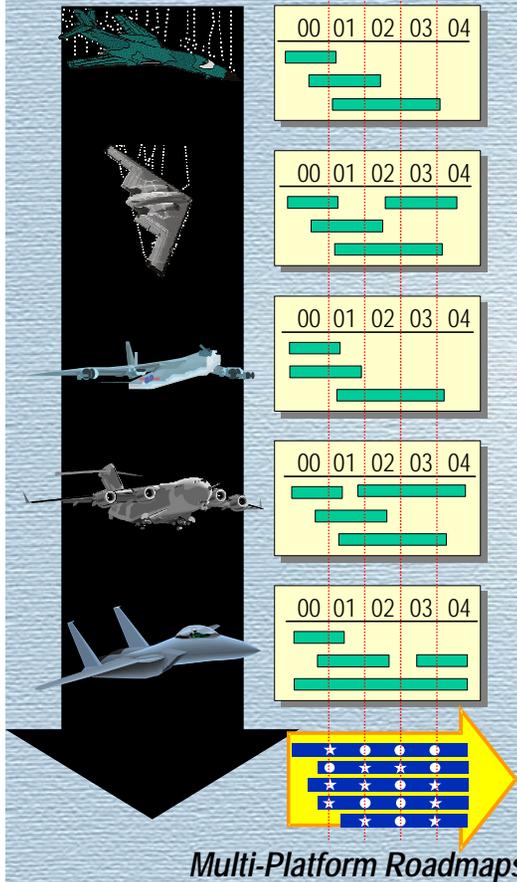
Multi-Platform Open System Solutions
Enable Affordable Modernization and
Reduced Ownership Costs



OASIS Approach



Roadmaps

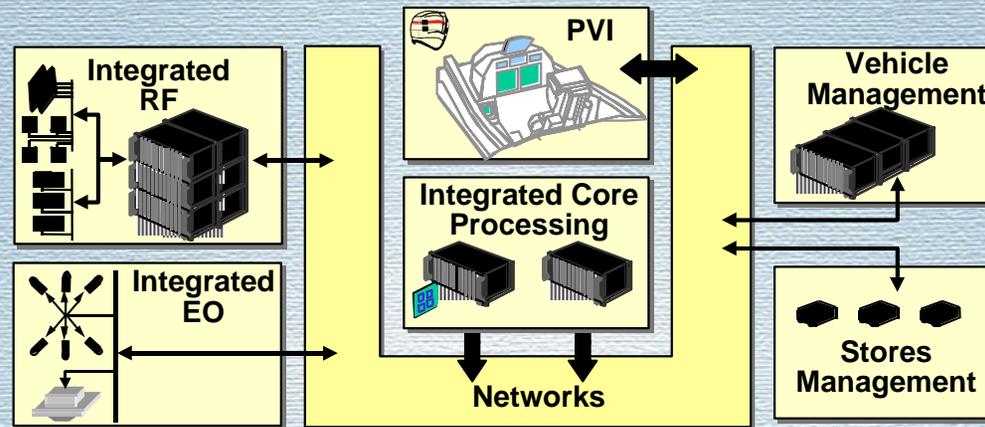
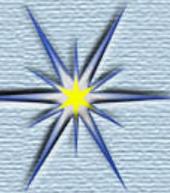


- Survey Platform Roadmaps & Funding
- Identify Opportunities for Open Systems
- Identify Cross Platform Opportunities
- Perform QFD to Select Opportunities

Multi-Platform Open System Opportunities

- Core Processing Infrastructure
 - Displays & Video Processing Architecture
- Electronic Warfare (EW)
 - Radar Warning Receiver & Jammers
- Communication/Navigation/Identification (CNI)
 - Global Air Traffic Management (GATM)
 - Beyond Line Of Sight (BLOS) Comm
- Electro-Optic Sensor
 - Advanced Targeting FLIR (ATFLIR)

OASIS Migration to Open Systems

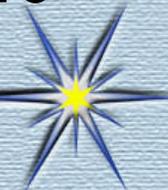


- **Core Infrastructure: Processors, Networks and Displays**
Sensors & Electronic Warfare
Communications Navigation and Identification

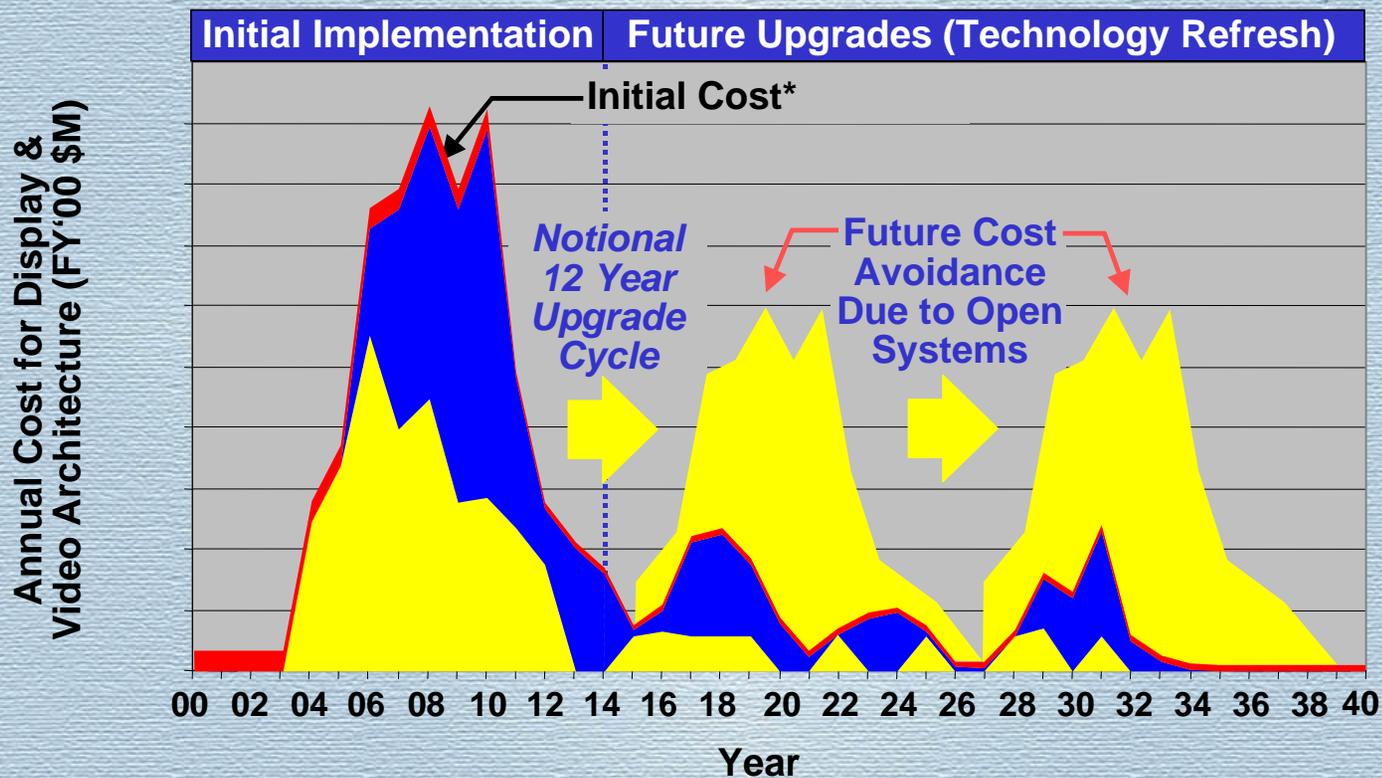
Incremental Approach for Affordable Open Systems Avionics



OASIS Display & Video Architecture - A Technical Imperative -



■ 3600 (EMD)
 ■ 3010 (Production)
 ■ 3400 (O&M)

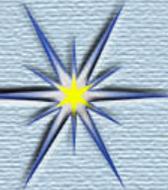


* Includes EMD and Production Costs, Excludes F-15 MSIP



OASIS Phase I

Lessons Learned



Platform Roadmaps & Planned Funding

- POM Funding Does Not Address Long Term Program Needs
- Need Stable Long Term Modernization & Funding Plan (20 Yrs)

Open System Architecture Migration Plans

- Platforms are Beginning to Migrate to Open Systems
- Need Consistency in Long Term Open Systems Migration Plans
- Need Integrated Strategy for Affordability (Modernization & O&S)

Avionics Cost Data

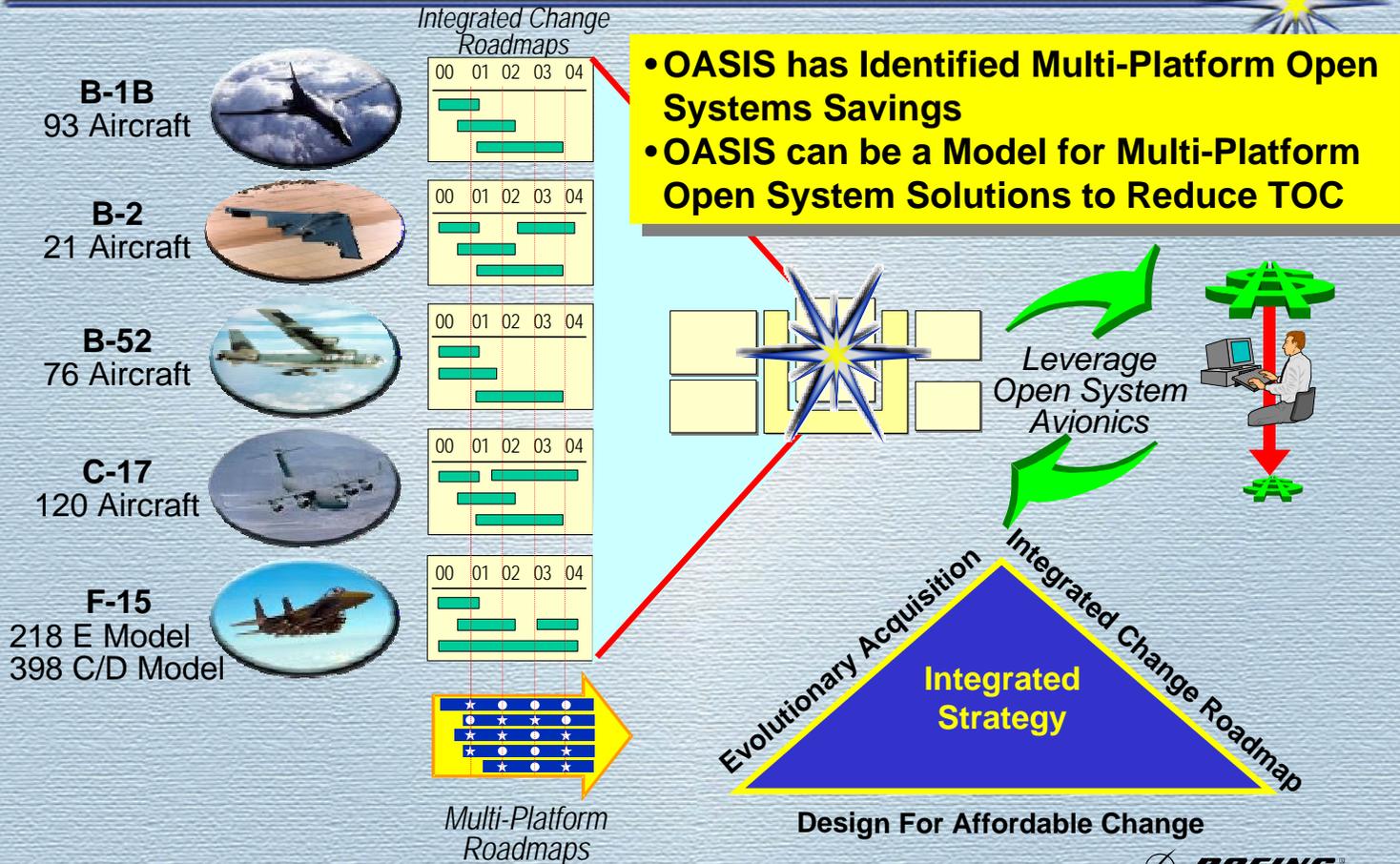
- Difficult to Obtain Defensible Cost Data for TOC Analysis
- Block Upgrades Make Funding Analysis Difficult
- Difficult to Quantify Defensible Current & Future DMS/OP Costs
- Need USAF Support to Address O&S Manning (Public Law 50/50)

Multi-Platform Opportunities

- Difficult to Fix a Moving Train (\$7B Ongoing Programs Excluded)
- Future Opportunities Exist, But are Currently Unfunded
- Program Synchronization Can Save Money & Reduce Cycle Time



Open Avionics Systems Integrated Solutions (OASIS)



- OASIS has Identified Multi-Platform Open Systems Savings
- OASIS can be a Model for Multi-Platform Open System Solutions to Reduce TOC