

Joint Air-to-Surface Standoff Missile (JASSM)



U.S. AIR FORCE

Acquisition Reform In Action

Edith Levin

Long Range Attack Program Office

AAC/YV

11 March 2004

Integrity - Service - Excellence

Overview



- JASSM 101
- Acquisition Reform 101
- JASSM Reform Route
- JASSM Source Selection Process
- Ongoing JASSM Initiatives

JASSM 101



What Is JASSM?



A joint Air Force and Navy Program to provide an autonomous, long range, conventional, air-to-ground, precision missile able to strike highly defended, high value targets



Fills urgent system requirement that will:

- Cost less than \$400K (FY95\$)
- Take out enemy command and control
- Survive advanced threat environment
- Attack target autonomously
- Reduce risk to aircrew
- Operate in adverse weather
- Launch from both fighters and bombers
- Reduce mission planning timelines

JASSM/JASSM-ER System Requirements



Targets

- Air defense sites
- Hardened bunkers
- Large reinforced buildings
- Distributed soft targets
- Bridges
- Other (small hard targets)



Carrier Operable

- Insensitive munitions
- Shipboard handling
- CATS / TRAPS
- Naval environment
- Compatible with "yellow gear"



Supportable

- Complete 15-year warranty
- Wooden round
- Uses existing support equipment
- In-container BIT
- Load from container
- Stack up to 5 high

Aircraft Employment



- F-16 C/D – 2
- B-52 H – 12
- B-1B – 24 - ER
- B-2 – 16
- F-117 – 2
- F-15E – 3
- F/A-18 C/D – 2
- F/A-18 E/F – 2
- S-3 – 2
- P-3 – 4
- JSF – TBD



Mission Planning

- AFMSS / JMPS
- Uses existing intelligence infrastructure
- < 15 min per terminal area model
- < 5 min per weapon planning model



System Performance Specification

- | | |
|--|--|
| <ul style="list-style-type: none"> • Range • Baseline • ER • Missile Mission Effectiveness • Time-on-Target • Off-axis Release | <ul style="list-style-type: none"> >200 nmi >500 nmi approximately 1 missile per target ±5s 180 deg |
|--|--|

JASSM Program Chronology



FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01
▲ TSSAM CNX	MS 0 ▲	MS I ▲		MS II △			
		Hughes Proposal					
		Raytheon/NG Proposal					
		Lockheed Proposal	Lockheed PDRR I				
		TI Proposal		Lockheed PDRR II	Lockheed EMD		
		Boeing Proposal	Boeing PDRR I				

JASSM System Approach

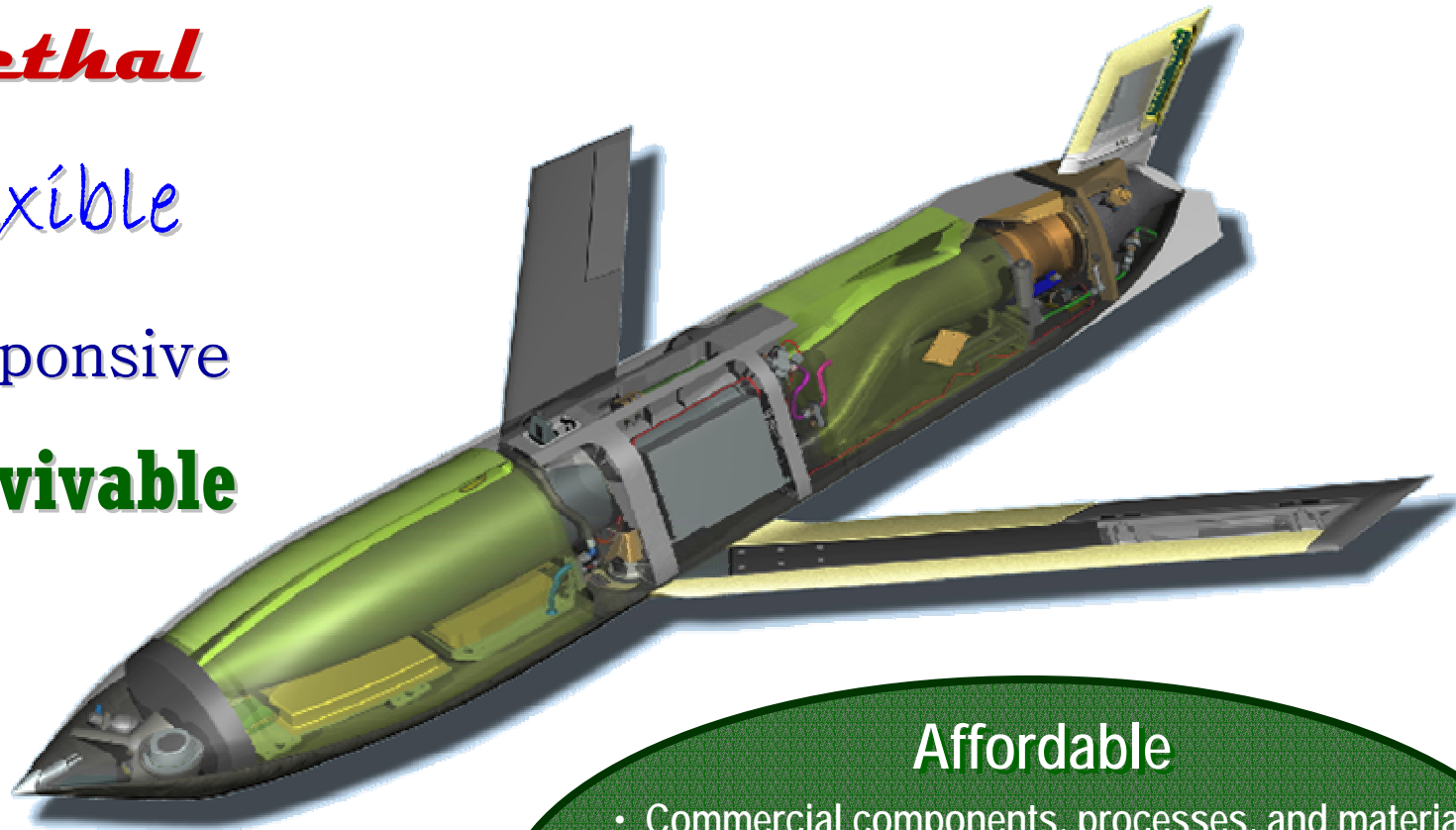


Lethal

Flexible

Responsive

Survivable



Affordable

- Commercial components, processes, and materials
- Highly integrated electronics
- Design for manufacture
- Demonstrated low cost common seeker
- Wooden round

ON GOING

INVENTORY
OBJECTIVE

ON GOING

F-16 Fighting Falcon



ON GOING

B-2 Spirit



RAA

B-1 Lancer



F/A-18E/F Super Hornet



B-52 Stratofortress



Aircraft Integration By Design

P-3 Orion



F/A-18C/D Hornet



F-117A Nighthawk

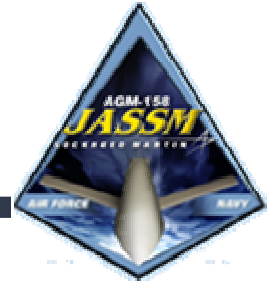


F-15E Eagle



SE - FY06

Sustainment Direction



SAF/AQ letter to AFMC/CV dated 14 Feb 97

- Traditional ALC assignment not appropriate
 - 15 year bumper-to-bumper warranty - powerful motivator for contractor
 - Modest ALC role - SPO will “subcontract” for some functions
- Contractor is sustainment partner
 - Perform depot level repairs - demil piece parts from repairs
 - Configuration management – provide SPO source data changes
 - Warranty administration
 - Maintain LSA database
 - First destination transportation

JASSM-ER P3I Requirements



- Provide range increase >2X over baseline JASSM
- KPPs: Missile Mission Effectiveness (MME), interoperability
- B-1B lead A/C for integration
 - Key element of B-1B reinvestment strategy following termination of Defensive Systems Upgrade Program
 - Provides B-1B with standoff precision engagement through high threat and heavily defended airspace (double digit SAMs)
 - Other JASSM capable A/C could be integrated later
- Production cut-in with JASSM Lot 6 in FY07
- Maintain existing interfaces and missile outer mold line (OML)

JASSM-ER P3I Plan



- Same JASSM with new engine, new fuel tank design and new inlet design
 - Use more efficient turbofan instead of turbojet
 - Increase fuel volume inside existing OML
- Two phase development
 - Phase1: 9 month congressionally funded risk reduction -- system trade studies and initial design
 - Phase 2: 40 month development and test – cut-in in Lot 6
 - Produce JASSM and ER on same production line
 - Test includes subscale and full scale wind tunnel tests, jettison and separation tests and a 5-shot flight test program – seamless verification

A B-2 Spirit stealth bomber is shown in flight against a clear blue sky. Below it, a red cruise missile is also in flight. The background features a range of mountains under a hazy sky.

Acquisition Reform 101

Why Reform?

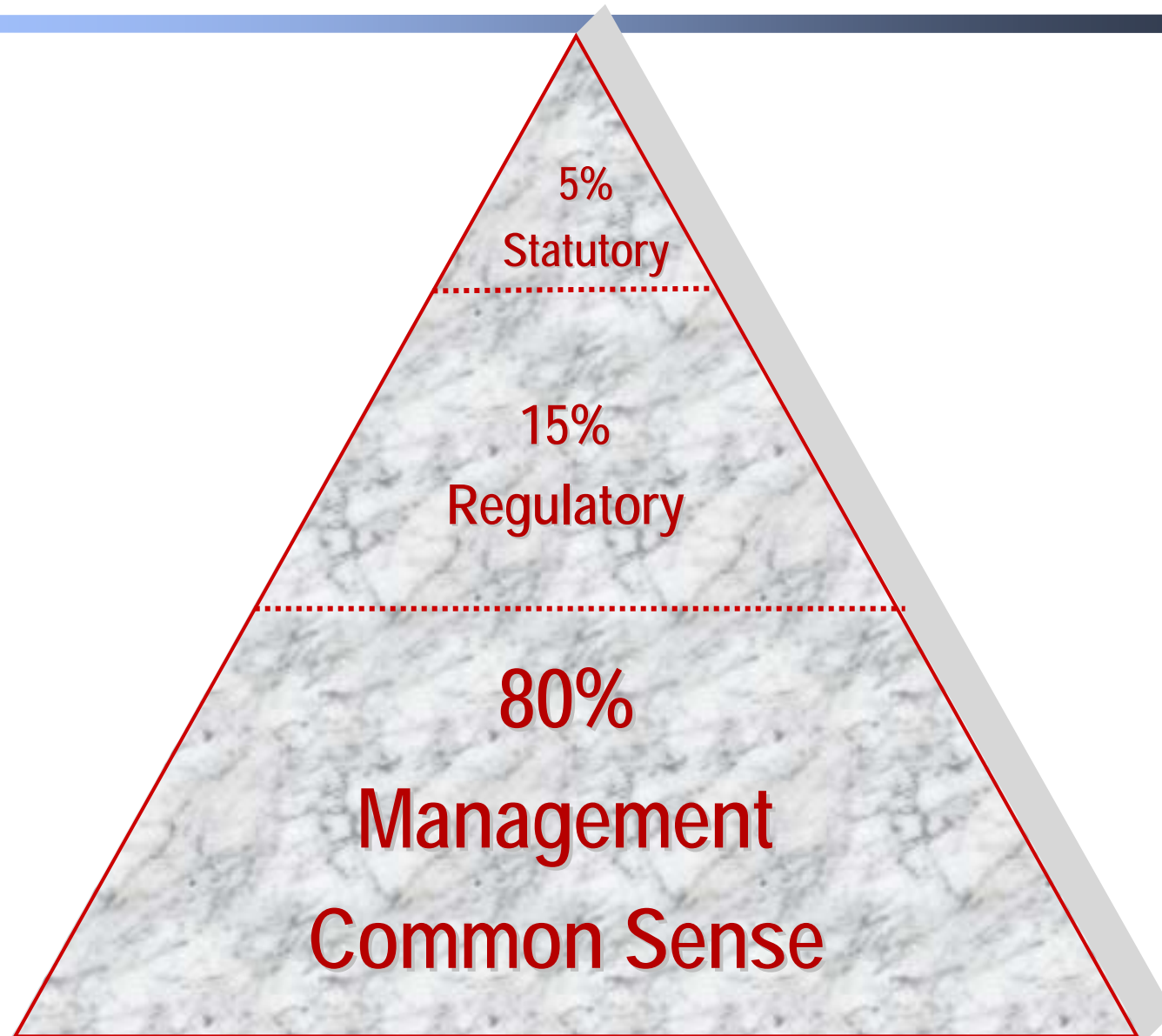
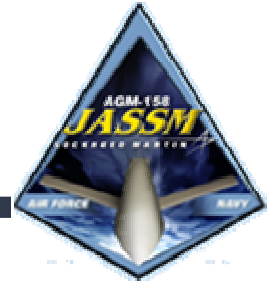


- Save money for modernization
- Expand DoD access to world class technology
- Smaller Government acquisition workforce
- Merge defense and commercial sectors

What Is Acquisition Reform Trying to Do?

- Creating affordability 45-60%
 - Cost/requirement trades (15-20%)
 - Performance-based contracting (15-20%)
 - Other management actions (15-20%)
- Reducing cycle time 50%
- Building customer satisfaction. . . . 100%

Reform Approaches



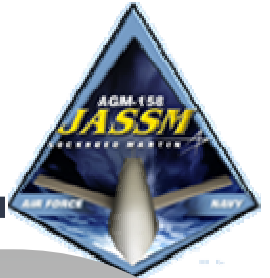
Low Rate Initial Production



- Concept of LRIP is bankrupt because of timing
- Proofing of manufacturing processes, vendor base must be done before design is final - not after
- New process would, as part of design process
 - Proof critical manufacturing processes
 - Verify vendor base capability
 - Facilitate to build test hardware with production processes

*Production Unit One SHOULD be Affordable, Reliable,
and MEET THE USER EXPECTATIONS*

About Risk



*“There is NO approach to reform that is both
Low risk and High payoff*

*Possibility of personal and organizational failure
is Real*

*However, certain outcome of not reforming is worse
Makes Risk Palatable”*

*Terry Little,
AAC Program Director*

Acquisition Reform Road Blocks



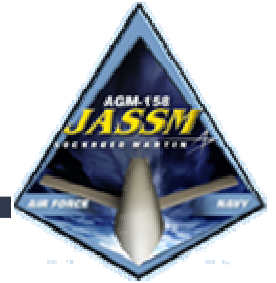
- ✓ "We can't reform until we have cultural change"
- ✓ "We can't act until we get guidance"
- ✓ "Reform is OK for a _____ program but _____ programs are different"
- ✓ "Reform is fine, but we can't throw-out the baby with the bath water"
- ✓ "We can't reform until _____ does"
- ✓ "Reform will go away when we get a new administration"

Acquisition Myth

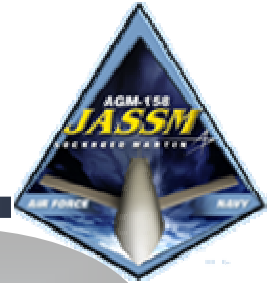


Getting affordable systems is
primarily
a manufacturing, technology
and/or
quantity issue

Acquisition Reform Reality



Getting affordable
systems is primarily
a design, requirement,
timing and
business issue

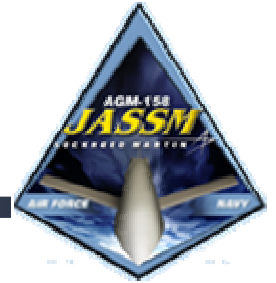


*“Change is the only constant.
Hanging on is the only sin.”*

*Denise McCluggage,
Race Car Driver*

If what you're doing isn't working, stop doing it

Who Endorsed Acquisition Reform?



- Contractors - fully supported with *actions* / provided results
 - Dramatic military value and average unit procurement prices
 - JASSM - revolutionary cruise missile @ < \$400K BY95\$
 - JDAM – superb accuracy to dumb bombs @ < \$14K BY93\$
 - WCMD – superb accuracy to cluster bombs @ < \$12K BY94\$
- Government - fully supported with *words*
 - Many groups not willing to accept the challenge to adapt

Actions, Not Words, Are Key to Success

A photograph of a JASSM (Joint Air Standoff Missiles) cruise missile in flight. The missile is dark grey with yellow and black markings. It is flying over a rugged, mountainous terrain with snow and rocky patches. The text "JASSM Reform Route" is overlaid on the image.

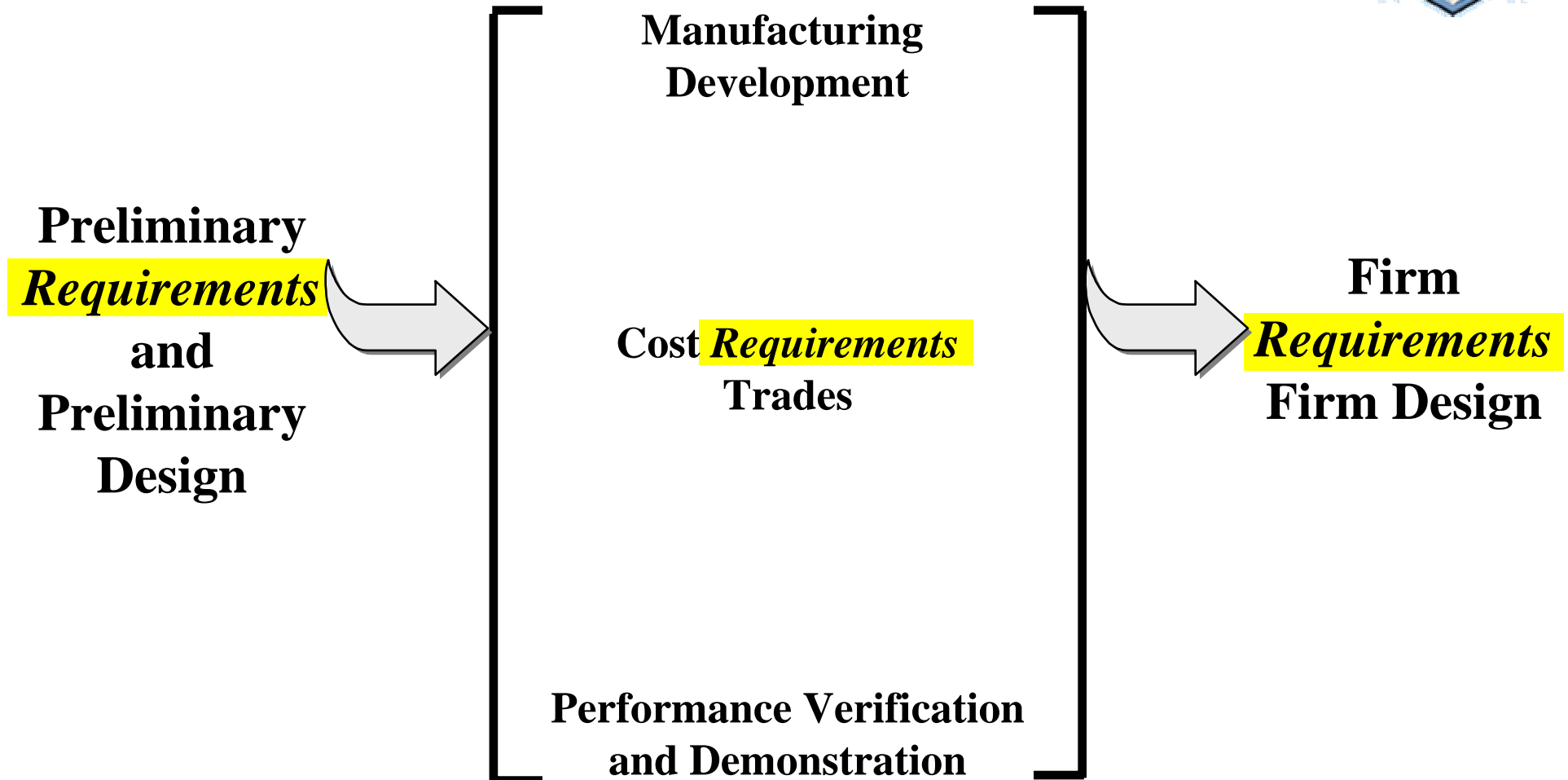
JASSM Reform Route

JASSM Major Reform Initiatives

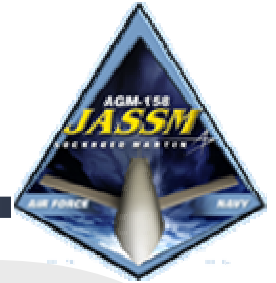
Blue = Extremely positive results
Green = Positive results
Yellow = No positive results
Black = N/A

- ✓ Statement of Objectives (SOO)
- Streamlined Proposals
- Past Performance Value Increased
- ✓ No Mil Specs/Std's Mandated
- ✓ Rolling Downselect
- Call for Improvements
- ✓ Performance Based Specification
- ✓ Contractor Configuration Control
- ✓ Commercial Warranty
- ✓ Contractor Test and Evaluation
- ✓ Affordability Importance
- Cost as an Independent Variable
- ✓ Manufacturing Development
- ✓ Total System Performance Requirement
- ✓ Long Term Relationships
- ✓ Requirements Control Working Group
- ✓ Integrated Product Teams
- ✓ Tailored use of DCMC Support
- ✓ Streamlined Insight of Contractor
- ✓ Reduced Data
- Improved Payment Process
- ✓ Performance Based Payments
- ✓ Price Based Negotiations
- ✓ Alternate Disputes Resolutions
- ✓ Regulatory Waivers
- ✓ Streamlined Approvals/Documents
- ✓ Milestone Decision Tailoring

A New Front End Process



Note: "Requirements" = Performance requirements + Cost requirements + Engineering requirements + Administration requirements + Oversight requirements + Test



“You've got to think about 'big things' while you're doing small things, so that all the small things go in the right direction.”

Alvin Toffler, futurist

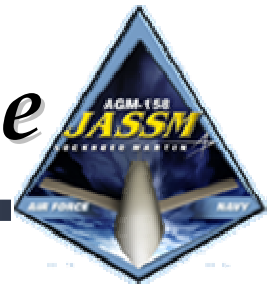
Cost As An Independent Variable (CAIV)



- Established Objective & Threshold unit cost values in ORD
- Established 3 Key Performance Parameters in ORD
 - All other requirements were tradable
 - Trades reviewed by cost performance integrated product team
- Results - lower material costs and reduced cycle time
 - 40-50% savings in airframe, electronics, production support
- Embraced commercial business practices and processes
 - Vacuum assisted resin transfer molding (VARTM) from boating industry for airframe body
 - Core materials from surfboard industry for wings and tail



Affordability - Key Program Objective



BY95\$

**TSSAM
Dec 94**

\$1.6M

**Milestone 0
Sep 95**

\$800K

**Milestone 1
Jun 96**

\$700K

NOW

**Less Than
\$400K**

Affordability Importance



- No “Unaffordable Requirements”
 - Every requirement must have a known and acceptable cost implication before it is firm
 - No potential requirement exempt from cost trades
 - Evolution from “Desired operating characteristics” to “Requirements”
- Acquirers and contractors must learn to deal with fluid requirements

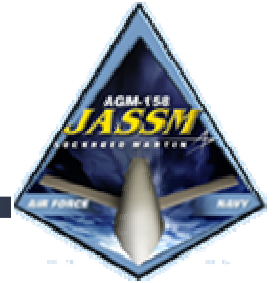
*Basic requirement “to do better” always exists.
Key question is how much (and how long)?*

Cost/Requirements Trades



- “Requirements” means ALL requirements
 - Derived
 - Imposed (not statutory)
 - Cultural or assumed
 - Individual
 - ORD
- Basic tenets
 - No new or changed requirements without knowing and accepting program implications
 - Life cycle cost
 - Challenge everything, “Why not” approach
 - Creating incentive is major challenge

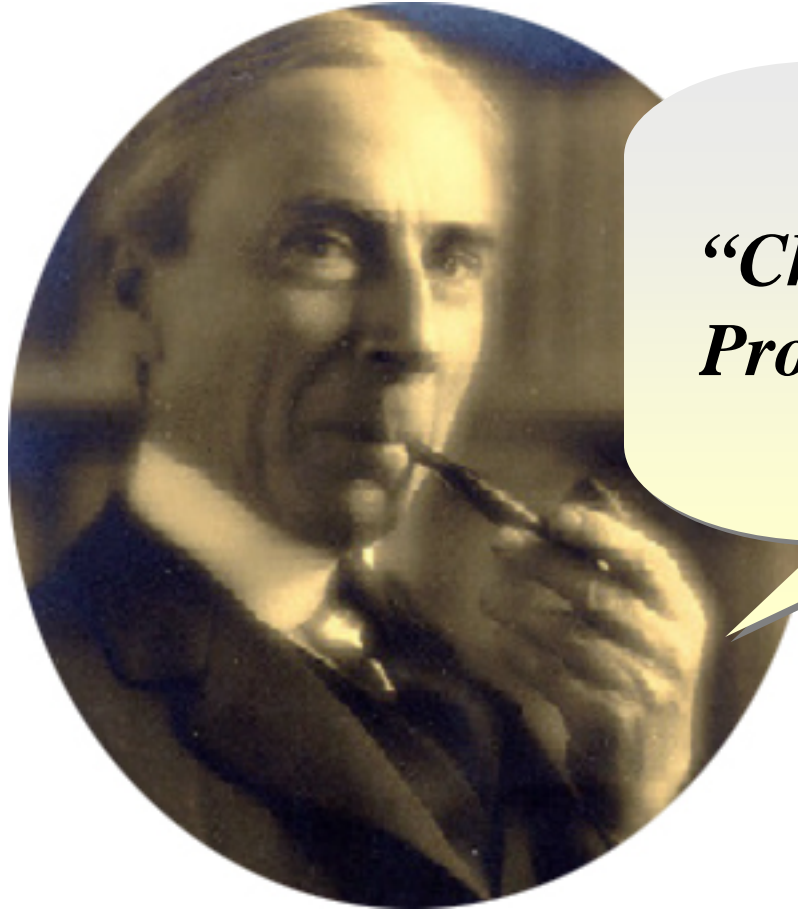
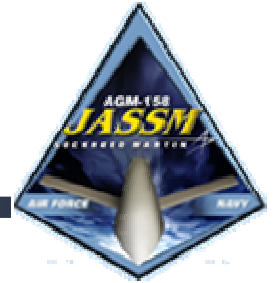
Requirements Change Process



- Formal, bureaucratic process
- General officer review
- Clear understanding of ORD, SPS requirements and impact of changes
- Instills discipline
- Structure to support block upgrade concept



Controlling changes is key
to achieving favorable production prices

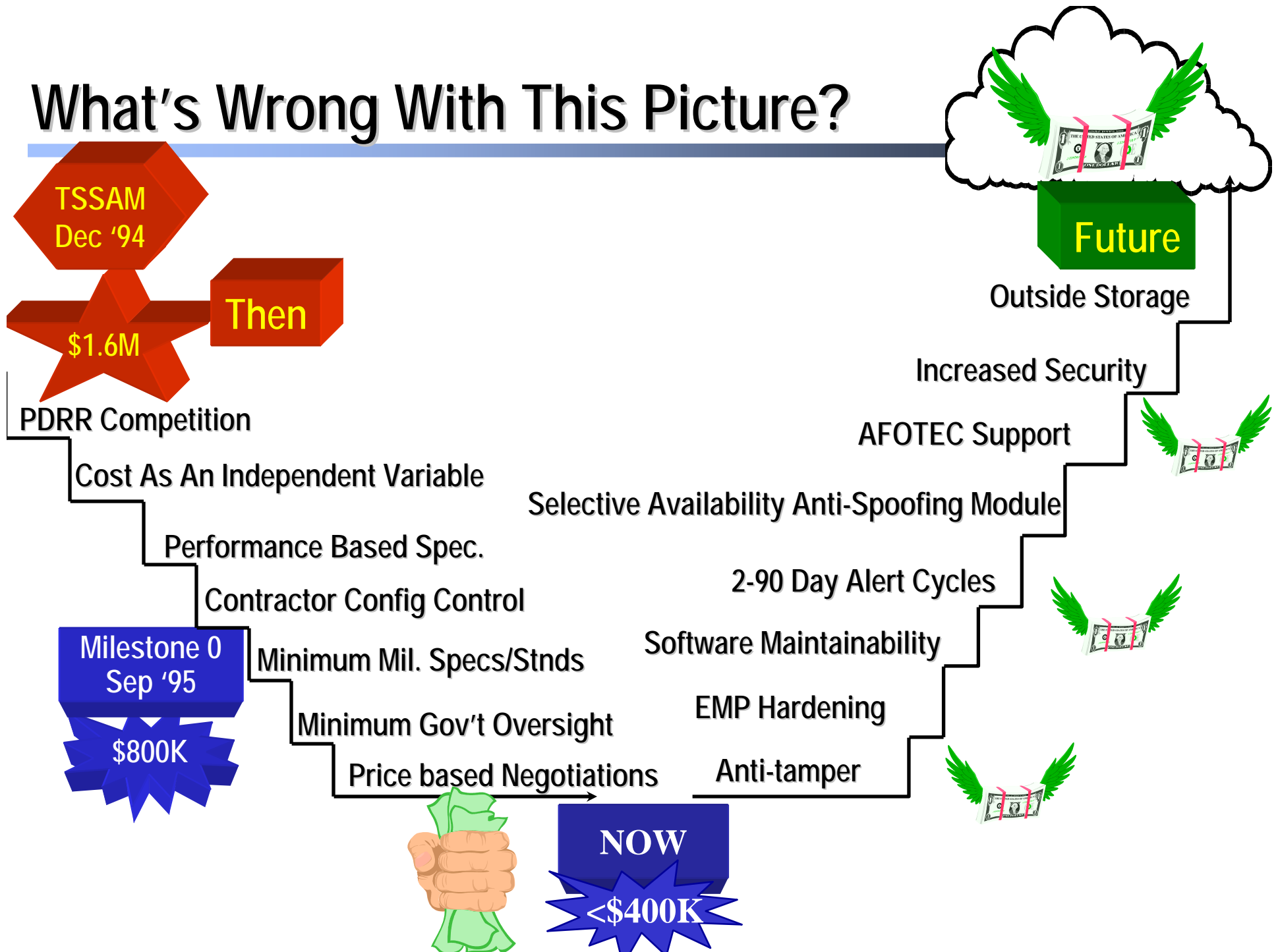


*“Change is indubitable, whereas
Progress is a matter of controversy.”*

Bertrand Russell

Change the right things

What's Wrong With This Picture?

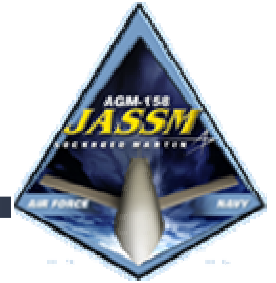


Streamlined JASSM Solicitation



- Request for Proposal
 - Extensive Government / Industry collaboration yields draft RFP
 - FAR/DFARS waivers
 - Limited CDRLs - only 16 for PDRR
- Customized RFP
 - Specific Past Performance programs/contracts
 - All standards provided in Section M of RFP
- Proposals – limited to 320 pages
 - Includes SPS, IMP/IMS, Affordability, Past Performance
 - 10 pages cost data for Total Contract Price
 - Oral Presentations for Technical Description
 - 5 hour video/100 vu-graphs
 - Dress rehearsal briefings
 - Modified 2-step
 - Step 1 - Affordability, Technical, Past Performance
 - Step 2 - Total Contract Price (TCP)

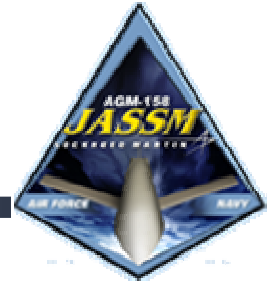
Collaborative Source Selection Plan



- JASSM offerors fully participated in developing Source Selection Plan
- Full knowledge of process, standards, evaluators, etc.
- Agree-to plan was bilateral MOD to on-going contracts
- Benefits
 - Offeror proposals tailored to standards and evaluators - No-Fluff
 - Standards were realistic, relevant, measurable and consistent with program priorities
 - Offerors had ability to affect standards -
felt like team members



Want Great Execution ?

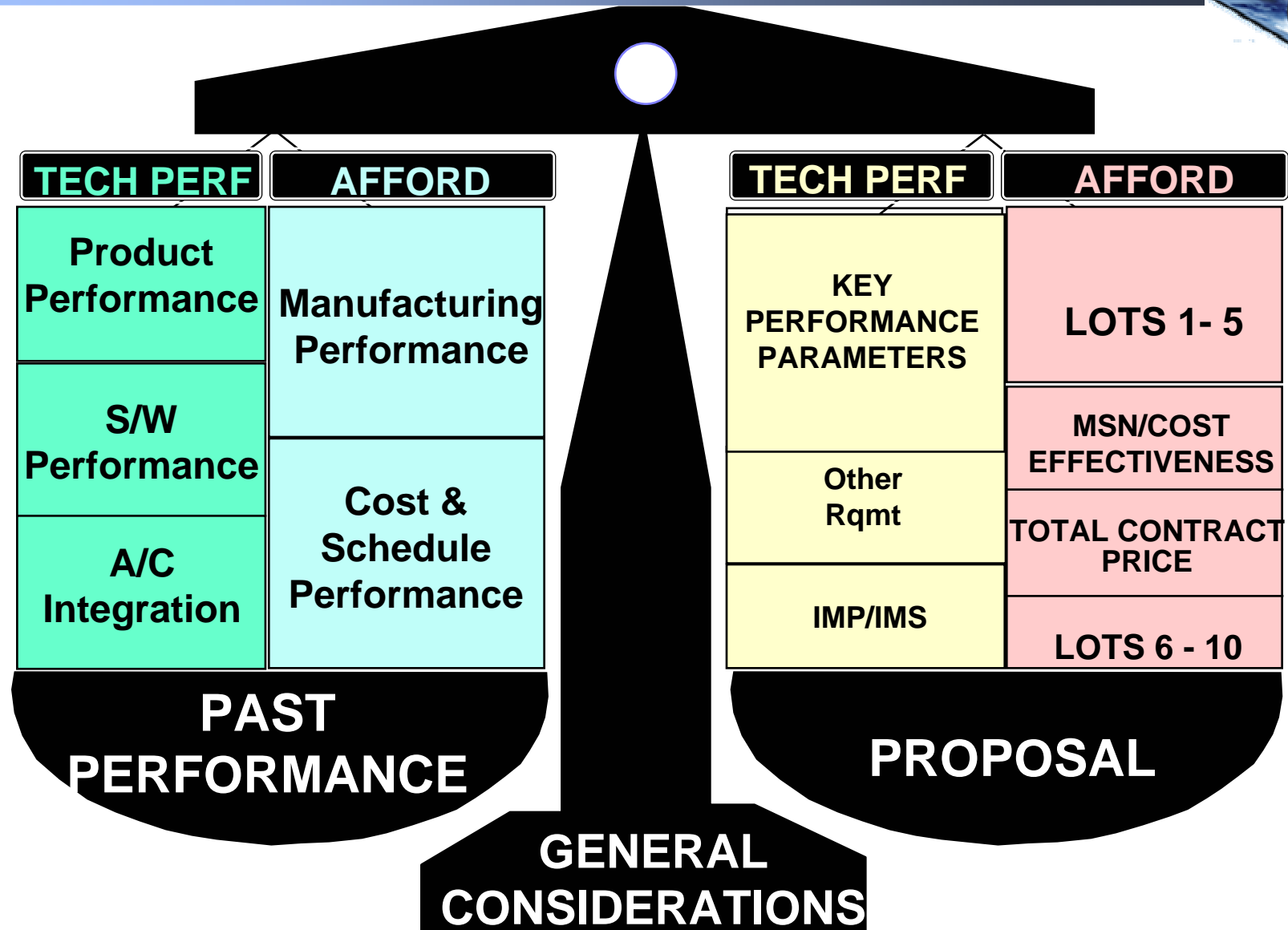


- Elevate the role of Past Performance in Source Selection
 - Major indicator of future performance
 - Focus on key-discriminators critical to program
- Two contract awards provides enormous competitive leverage
 - First team contractor staffing
 - Aggressive affordability work
 - Stimulates innovation in approach
 - Cost/Schedule control incentive



Downplaying the Role of Past Performance or Awarding Only One Contract Would Make Great Execution Unlikely

JASSM Evaluation Criteria





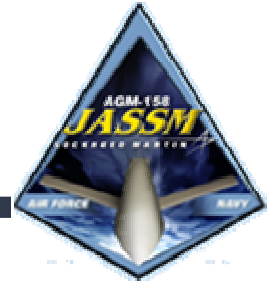
*There's always room for
improvement, you know—it's the
biggest room in the house.*

*Louise Heath Leber
On being chosen Mother of the Year
NY Post May 61*



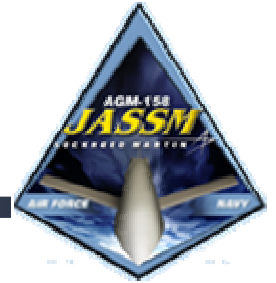
Commit to Improvement

Contractor Help Team



- Concept pioneered in JDAM, refined in JASSM
- Cadre of people assigned to each competing contractor
 - Trusted contractor agents
 - No source selection or oversight responsibility
- Function: Help the contractor win
 - Interface with program office, other government offices
 - Advise, supplement contractor workforce
 - Clear communications, think *out-of-the-box*

JASSM Team Concept



HEAD
SHED



HELPERS



INTERFACERS



RESOURCERS



Results



- Solicitation approach worked
 - Required up-front thought
 - Required continuous interface with offerors
 - 47 days from proposal receipt to contract
- Smaller proposals helped Government and Contractors
 - Ample info available for selection
- Past Performance made a difference in selection
 - Insight into past programs requires research
 - DCMC provided tremendous value
 - Can't rely totally on CPARS (AF only)
- Release of Standards controversial but effective

JASSM Long Term Pricing Strategy



Lockheed Martin bid commercial pricing Lot 1-5

- Very aggressive pricing (FFP) -- Govt realizes great prices early
 - Lockheed based bid on implementing PBA for Lots 6-9
 - Govt accepted Lots 1-5 and Lots 6-9 pricing strategy
 - Aggressive Lots 1-5 with <\$400K for aggregate
- Key suppliers are small businesses -- long term agreements
 - Key suppliers based bid on PBA
 - Financial viability contingent on suppliers earning true value for Lots 6-9
 - Risk: Suppliers might be forced to renege on Lots 1-5
- In the Govt's best interest to implement PBA for all production



THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010



21 DEC 2001

MEMORANDUM FOR SECRETARY OF THE AIR FORCE
SECRETARY OF THE NAVY

SUBJECT: Joint Air-to-Surface Standoff Missile (JASSM) Program Low-Rate Initial
Production (LRIP) Decision

I reviewed the JASSM program on December 19, 2001, and approve program entry into LRIP, including award of the Lot 1 production contract for 76 missiles. I also approve a quantity of 176 missiles for LRIP. I have separately approved the Acquisition Strategy and the Acquisition Program Baseline. I further approve the following entrance criteria for the Full-Rate Production (FRP) Decision:

- Complete combined Developmental Test/Operational Test and Initial Operational Test and Evaluation successfully;
- Demonstrate capability to support FRP; and
- Demonstrate that range, missile mission effectiveness, and interoperability key performance parameters are met, through operational test and analysis.

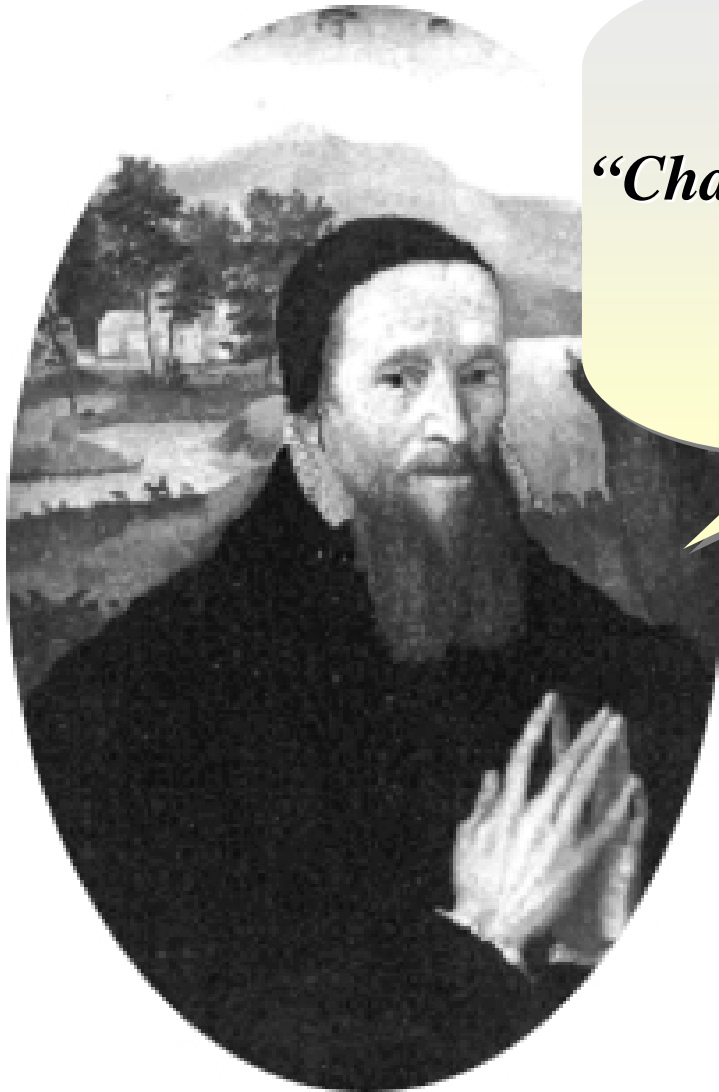
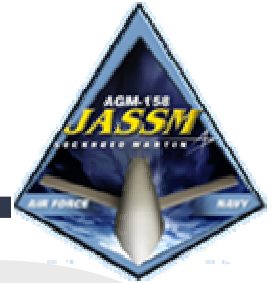
The Air Force will fully fund the program by addressing its FY 2001-2002 Research, Development, Test & Evaluation shortfalls via appropriate reprogramming action, and will further address its FY 2003-2007 Operations & Maintenance funding shortfalls in time for submission of the FY 2003 President's Budget. The Navy will fully fund the integration of JASSM on the F/A-18 E/F.

I support the continued application of Price-Based Acquisition for this program. I designate the JASSM program as an ACAT IC program, with the Air Force continuing as lead service and Milestone Decision Authority for FRP.


E. C. Aldridge, Jr.

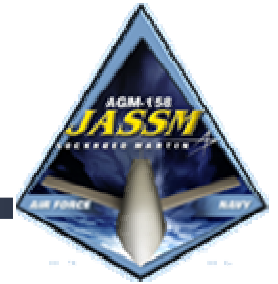
cc:
Secretary of the Navy
DAB Members
DAB Advisors



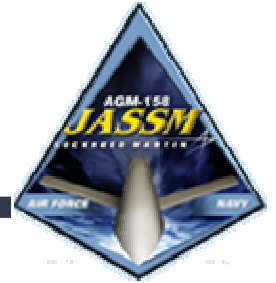


*“Change is not made without inconvenience,
even from worse to better.”*

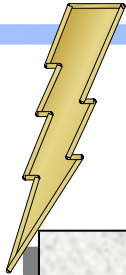
Richard Hooker
(1554–1600), British theologian



Ongoing JASSM Initiatives



Lightning Bolt 99-6



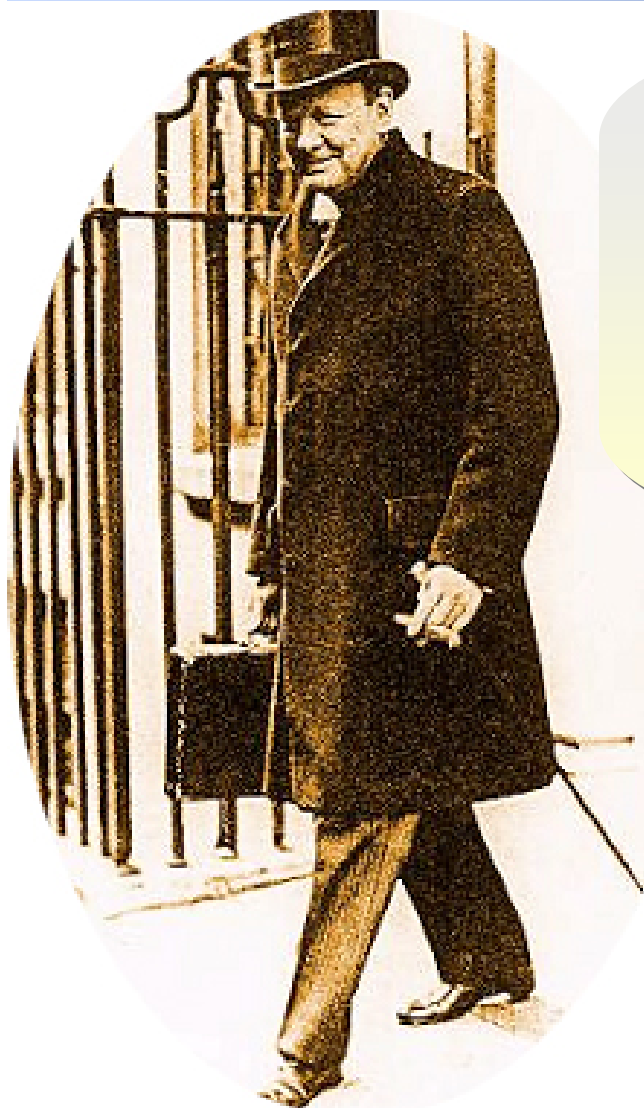
Test of improved contract accounting and payment processes

- **Four processes being tested**
 - Roll up of accounting data
 - IMPAC card as a payment mechanism
 - **Payment pre-validation by the program office**
 - Standardization payment instructions

JASSM Spend Plan Procedures



- JASSM initiative approved by all parties (AF, DCAA, DFAS)
- Negotiated spend plan on contract
- Contractor invoices against negotiated spend plan vice actuals
 - Win / Win
 - Eliminates booking lag in contractor accounting system
 - Improves contractor's cash flow
 - Improves government expenditure rates
 - Quarterly audit by DCAA to reconcile contract spend plan and actual costs



*Although personally I am quite content
with existing explosives,
I feel we must not stand in the path
of improvement*

Winston Churchill

**Of report of the MAUD Committee that it
would be possible to make a uranium bomb.**

Where To From Here?



- Reform is more than an intriguing concept - it is a battle
- If the acquirers and suppliers of systems fail, then the warfighters will be the losers
- Must recognize "Reform" as a continuing journey rather than a discreet set of changes
- Continually challenge the system and never give up

Where JASSM is Today - Procurement



- Lockheed bid commercial pricing strategy
 - Very aggressive (FFP) -- Govt realizes great prices early
 - Government accepted Lots 1-5 and Lots 6-9 pricing strategy
 - Aggressive Lots 1-5 with <\$400K for aggregate
 - Key suppliers are small businesses -- long term agreements
 - Pricing strategy accepted by DAB for MSII and LRIP decisions
 - In the Government's best interest to supply user with effective weapon within ORD cost requirement

Changing Strategy Will Break All Government And Contractor Commitments
To Deliver A Low Cost Cruise Missile Today And Replace Them With Promises In
The Future