NASA Advisory Council Meeting

Report of Audit and Finance Committee
KSC

February 5, 2009

Members:
Mr. Robert Hanisee, Chairman
Hon. Ted McPherson
Hon. Michael Montelongo
Mr. Howard Stanislawski

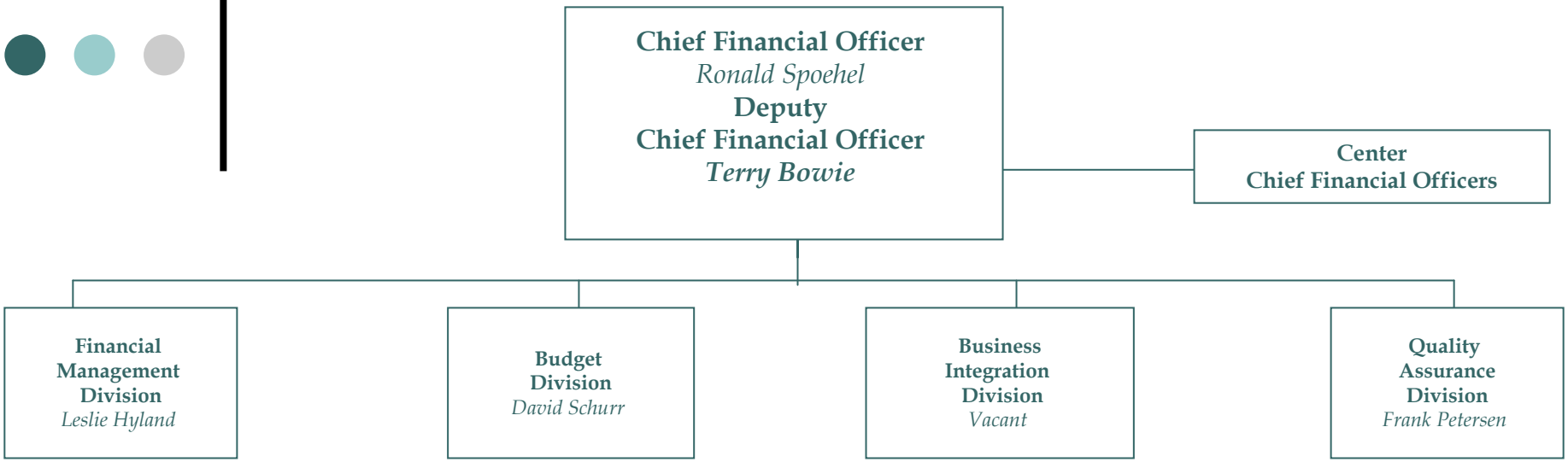
NASA:
Mr. Ron Spoehel
Mr. Terry Bowie

Audit & Finance Committee
Kennedy Space Center Meeting
Bldg: O&C, Room: 3128A
February 3 & 4, 2008
FINAL Agenda

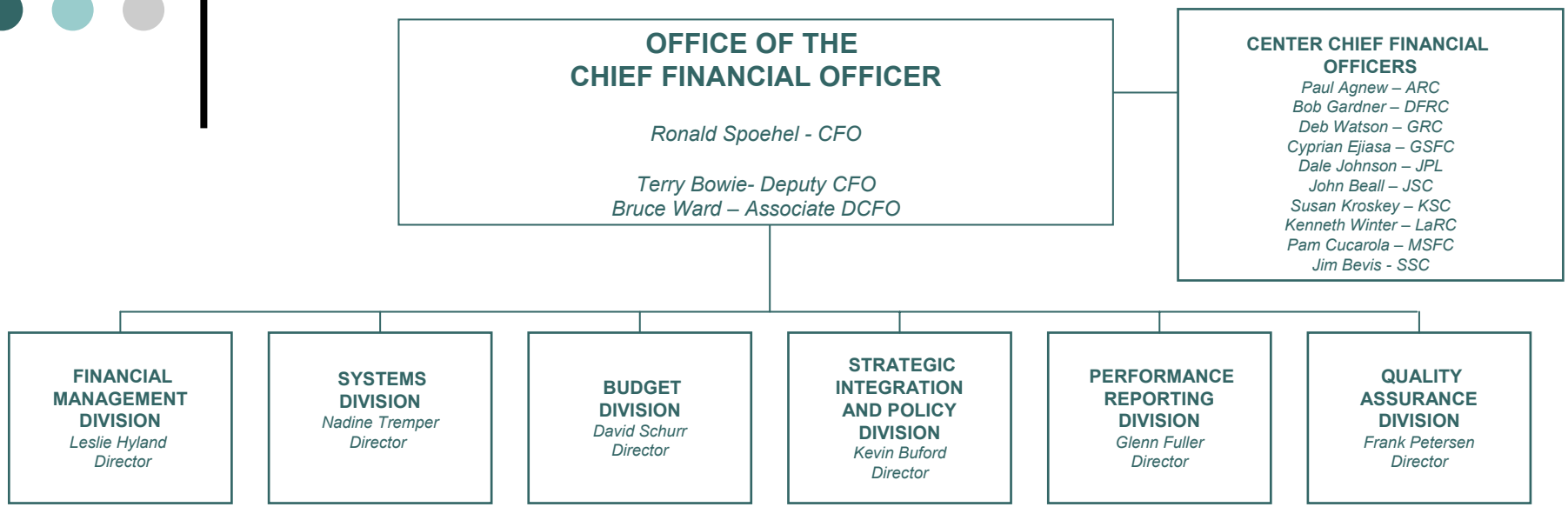
February 3, 2009	
Opening Remarks	**Terry Bowie**
FASAB - Property Update	
Strategic Assessment Team Update	
New Organization Structure	
Strategic Integration & Policy Division	**Kevin Buford**
Roles, Responsibilities and Functions	
Conference Cost Reporting	
Systems Division – Roles,	**Nadine Tremper**
Responsibilities And Functions	
Grant by Grant Accounting	**Ledetria Beaudoin**
Recap FY08 Fin Stmt Audit Result	**Robert Cobb, OIG**
OIG FY09 Audit Plan	
Financial Stmt Audit Firm Update	
OCFO Audit Remediation Underway	**Frank Petersen**
February 4, 2009	
Update on Phasing Plan/Dashboard	**John Scholtz**
Review and Analysis at Program/	
Project Level	
NSSC Update – Efficiency/Learning	**Joyce Short**
Curve Update	
Major Program Cost Estimation	**Brian Rutkowski**
& Containment	
Agency Monitoring of Program Cost	**Julie Pollitt**
Build-up/Original Budget vs. Estimated	
Cost to Complete	

OCFO Reorganization

Pre-Reorganization



Post-Reorganization



Responsible for: Agency-wide financial systems; internal reporting capabilities; standard financial mgmt systems practices; system enhancements; and system performance measurement

Responsible for: Agency-wide financial policies and procedures; monitoring changes in laws and regulations; OCFO representation on Agency initiatives; developing and promoting OCFO strategic direction; supporting integration of financial functions

Responsible for: development & implementation of Agency-wide systems, management status reports, & budget execution metrics that highlight the Agency's resources management & financial operations performance; identification & resolution of issues; initiation of improvements required to ensure the efficient & effective use of NASA's annual budget allocation

OCFO Strategic Integration and Policy Division

- Primary Roles
  - Financial management clearinghouse for policy, training, initiative representation
  - “Go to” division for OCFO strategic direction

- Recent Major Activity – Conference Cost Controls and Reporting
  - Serves as NASA POC
  - Installed new procedures and controls to track attendance and expenditures of all conferences
  - Reports all conference costs to Congress; reports NASA-sponsored conferences to OIG

OCFO Systems Division

- Primary Role
  - Serve as the OCFO IT expert and POC
  - Manage and maintain agency-wide financial systems
  - Standardize and streamline FM systems practices
  - Integrate FM information systems, business practices, and data with Agency counterparts

GFY 2008 Ernst & Young Audit Report

Submitted to NASA in early November 2008

- E&Y Finding – Another Disclaimer i.e., No Opinion.

  "Although significant progress has been made, we continue to identify significant weakness in NASA's Financial Management Processes and Systems."

- E&Y Noted – Two material weaknesses (same two for past 5 years)
  1. Financial Systems, Analysis and Oversight
  2. Control over Property, Plant and Equipment and Materials

- E&Y Recommendation – "NASA [should] continue to refine its financial management systems and processes to improve its financial statement preparation process."

Property, Plant and Equipment

To Review: In GFY07 NASA wrote off $13.3 Billion of legacy assets reclassified as R&D`

Remaining Problem Assets:

Space Shuttle – $1.0 Billion

International Space Station – $13.2 Billion

E&Y Position: No Clean Opinion until legacy asset issue resolved

OIG Position: Cost to recreate audit trail to high to justify While noting that the goal remains "to effectively and efficiently capitalize assets using historical costs at the time of acquisition," but if not feasible to do so, "reasonable estimation methods should be acceptable."

If implemented by FASAB, this ruling could provide a way for NASA to resolve its legacy PP&E dilemma.

NASA Grant Accounting

1. Recent enhancement: NASA now doing grant-by-grant (single grant) accounting and management rather than disbursing a lump sum of cash to and institution.

2. Current Grant Portfolio:
   - 8,000 active single grants with about 1,000 institutions aggregating to $6.93 billion
   - Benefits of more effective focused investing and management

3. Along the way closed 860 previously active institutional accounts and currently reconciling 603 single grant accounts, to be completed by March 31, 2009.

4. NASA Shared Services Center will manage end-to-end grant activities as of February 9, 2009.

Financial Systems, Analysis and Oversight (FSAO)

- E&Y audit report contained many recommendations, most having to do with better implementation of CMP (Continuous Monitoring Program) and financial controls generally. Two legacy issues stand out:
  - Unfunded Environmental Liabilities – (as of Sept. 30, 2005) E&Y is not satisfied that NASA has a replicable, stable and auditable methodology for estimating environmental liabilities, nor that the "Integrated Data Evaluation and Analysis Library" software package is a solution. Note that unfunded environmental liabilities was removed as a reportable condition in the 2006 audit but that it did remain as an item in the FSAO (Financial Systems, Analysis and Oversight) section of the Audit Report.
  - Open Contracts – Both in grant accounting, travel and the Agency overall, there are to many contracts on which the money has been exhausted but the contract is not closed out. Further, sufficient documentation that the deliverables or other products of the contract have been delivered or satisfied is lacking. E&Y is concerned that the large number of open contracts is a threat to the financial integrity of the Agency. The Agency remains on the GAO High Risk List as a result of control and procurement weaknesses.

FSAO (continued)

- Remediation Efforts – In a conference call meeting with E&Y Audit Partner and OIG, they both expressed the view that NASA was on the right track and should continue the ongoing control efforts.

- Both expressed the view that OCFO efforts should be focused on the recommendations in Financial Systems, Analysis and Oversight which is within their control, and not worry about the Legacy PP&E, which is not within their control.

- The Audit & Finance Committee agrees with this advice…..but, remains hopeful that a satisfactory solution can be achieved.

- Note that Ernst & Young has been reappointed (for 5 years) as NASA's External Auditor.

NASA Annual Financial Audit Process
Current and Possible Improvements

I. Current Sept 2008 End of Fiscal Year	Nov. – Dec. 2008 Year end Reporting, Thanksgiving and Holiday Season	Jan. - Mar. 2009 Implement improvements to accounting policy, processes, and information technology systems (90 days only)	Mar. 31, 2009 Data used by external auditor to determine "validity" of September statements
II. Possible Improvement		Jan. – June 2009 Implement improvements to accounting policy, processes and information technology system (180 days)	June 30, 2009 Data used by external auditor to sample validity of interim financial statements
III. Result	Improved process focused on financial statements, internal controls, data integrity rather than episodic inspection of process only		
IV.	Regular engagement of NAC Audit & Finance Committee with NASA Inspector General and Ernst & Young		

Managing NASA Unobligated Carryover of Funds

("Phasing Plan" or "Getting the money invested on-time")

1. NASA has successfully reduced end-of-year unobligated carryover of funds in the past two years;

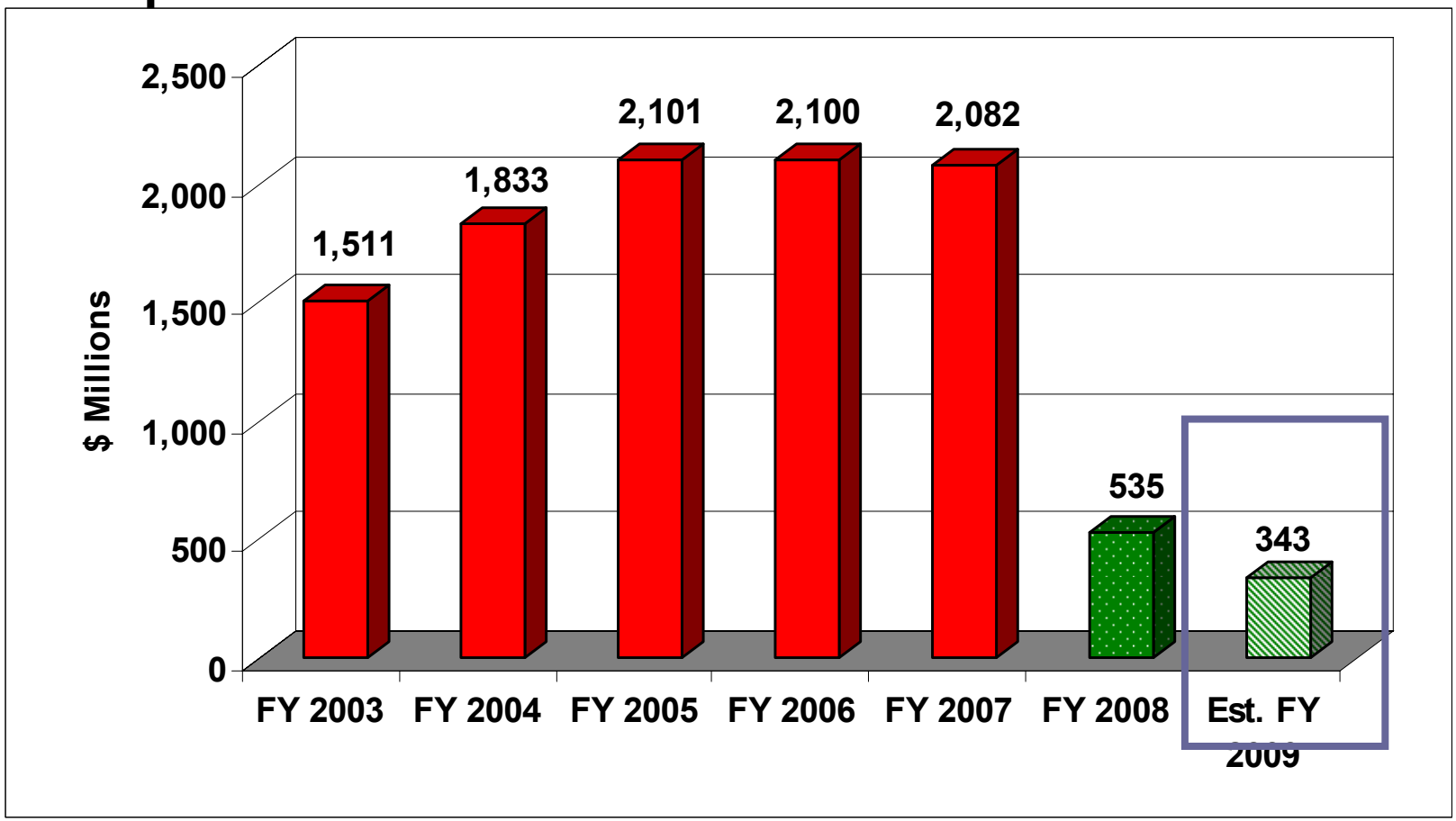
2. Budget versus actual spending reports now available within four days of the end of each month by:

   Mission Directorate
   Theme
   Program
   Project
   Center
   Full Cost Element

3. NASA now has good capability for budget formulation, budget execution, and timely insight from management reporting

…. With more benefits to come.

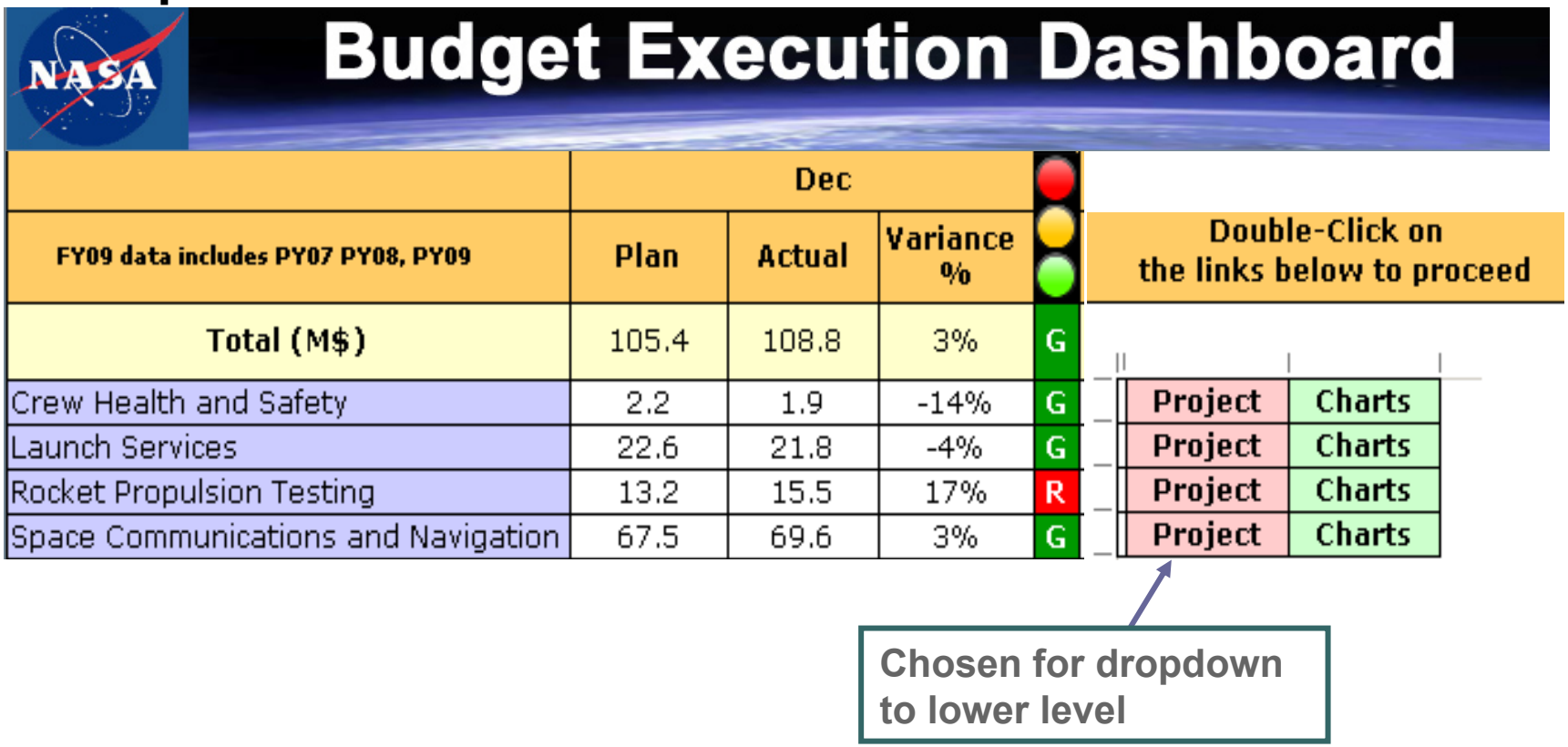
Agency EOY Unobligated Carryover
Based on Agency Phasing Plans



The FY 2009 obligation phasing plans developed by the CAMs and Centers are projecting a continuing improvement in our Agency obligation performance this fiscal year, and a further reduction in our EOY unobligated carryover level into FY 2010.

Program Level for Costs

SOMD>SFS>Programs



Cost/Schedule Growth and Containment at NASA

The Art of Space System Cost Estimating

"The art of space system cost estimating. It involves using incomplete, inaccurate, and changing data for an outmoded & ineffective space system to derive the precise cost of purchasing an unknown quantity of an undefined new space system to satisfy an overly exaggerated & unvalidated requirement at some time in the future, under uncertain conditions, with a minimum of funds."

Summary of Cost & Schedule Growth Reasons from Past Studies

Cost Growth Reasons	1970s	1980s	1990s	2000s
Inadequate definitions prior to agency budget decision and to external commitments	X	X	X	X
Optimistic Cost Estimates/Estimating Errors	X	X	X	X
Inability to execute initial schedule baseline	X	X	X	X
Inadequate risk assessments	X	X	X	X
Higher technical complexity of projects than anticipated	X	X	X	X
Changes in Scope (Design/Content)	X	X	X	X
Inadequate assessment of impacts of schedule changes on cost		X	X	X
Annual Funding instability			X	X
Eroding in-house technical expertise			X	X
Poor tracking of contractor requirements against plans			X	X
Launch Vehicle			X	
Reserve Position adequacy		X		X
Lack of Probabilistic estimating		X		X
"Go as you can afford" Approach				X
Lack of formal document for recording key technical, schedule and programmatic assumptions (CARD)**				X

** CADRe has since been implemented as a requirement of NPR 7120.5

Sources:
GAO Report: Need for improved reporting & Cost Estimating on Major Unmanned satellite projects (NASA)
GAO Report: Financial Status of Major Federal Acquisitions
GAO Report to Congress March 1973 Cost Growth in Major Weapons Systems
Rand Report: Acquisition Policy Effectiveness October 1979
An Analysis of DOD/NASA Cost Growth Profiles for the Congressional Committee of Gov't operations January 1980
NASA Project Management Study January 1981 (Hearth)
Office of Comptroller: New Project Estimates Study August 1985 (Lilly)
Office of Comptroller: Lessons Learned on Cost/Schedule June 1990 (Pine)
NASA Program/Project Planning Study November 1992 (Lee)
NASA Cost Growth: A look at recent performance January 2004 (Hamaker & Schaffer)
GAO Work on DOD Space Acquisitions Dec 2006
GAO Report: NASA: Long Term Commitment to and Investment in Space Exploration July 2006
GAO Report: NASA: Lack of Disciplined Cost-Estimating Processes Hinders Effective Program Management May 2004

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What is NASA Doing About It?

- Strengthened estimating and budgeting policy
  - Require projects to develop and maintain joint cost and schedule probabilistic estimates
  - Budget projects such that the parent program maintains a 70% probability that all projects will be completed within estimated times and costs
  - Fund projects to at least a 50% cost and schedule confidence level
- Established Standing Review Boards and required reconciliation of project and Independent Cost estimates at KDP milestones
- Improved/strengthened disciplinary capability
  - Collecting and disseminating historical and current project programmatic, technical, and cost data (the Cost Analysis Data Requirements Document) to improve quality of estimates
  - Sponsoring research to improve cost and schedule estimating methods and tools
  - Continuing research to better understand and track root causes of cost growth

NASA Cost/Schedule Performance External Reporting

- Congress, GAO, OMB have levied multiple and growing requirements on NASA

- NASA is working to respond with a single tracking and reporting process that:
  - Controls the update frequency
  - Uses common data and formats
  - Serves both internal and external reporting needs

Update on NASA Shared Services Center (NSSC at Stennis)

1. NASA Shared Services Center handles accounts payable, accounts receivable, travel, and coordinates payroll for NASA.

2. **Cost Issue:** High per transaction processing costs due to $50 million annual operating expense and relatively low volume of transactions.

   For example:

   Cost to process a vendor payment: $73 per item based on 100,000 items plus $7 per item or $700,000 in late payment interest costs.

   Solution: Some opportunity for efficiencies by integrating document handling technologies; real need is for higher volumes or further offset of costs in NASA Centers.

3. Further improvement in on-time processing of items needed.

Old Business – Update

NSSC

August 08 – All centers on line

On time payments 96% (98% required for passing grade)

Interest Payments per $1M - $41 (under $200 for passing grade)

Transactions processed – 45K per month following Wave 4

Customer call center – 92 - 93% handled within center to increase transaction volume requires additional capital investment

Old Business – Update

<u>Financial Staff Personnel</u>

Authorized FTE – 103 - No Change

Current FTE	93
Vacancies	10

Hiring freeze lifted; actively recruiting to fill vacancies