Project Planning: Getting it Right the First Time

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Introduction

- In the past JPL planned and implemented 3-5 large projects at a time
- JPL now plans and implements 40-50 projects at any given time
- New institutional support systems are being deployed to support the projects and enhance institutional oversight
- Faster/Better/Cheaper makes project planning even more important

Project Planning: Laying the Foundation for Success

- The fundamental characteristics of projects are defined during the early planning phases; cost, budget profile, schedule, technical performance, and implementation approaches

Project Planning: Laying the Foundation for Success, cont'd

NASA Phases		FORMULATION	APPROVAL	IMPLEMENTATION				
JPL Life Cycle Phases	**Pre-Phase A:** Advanced Studies	**Phase A:** Mission & Systems Definition	**Phase B:** Preliminary Design	**Phase C:** Design & Build		**Phase D:** ATLO		**Phase E:** Operations
Major JPL Reviews *(Review Cluster Includes a Director's GPMC)*	Concept Review [1] STEP 1 TMC [2,3]	Preliminary Mission & Systems Review PMSR [1,4] STEP 2 TMC [2] PMSR [2]	Project PDR	Project CDR	Assembly Test & Launch Operation Readiness Review ARR	Operations & Mission Readiness Reviews ORR & MRR	Post Launch Assmnt Review PLAR	Critical Events Readiness Review CERR [6]
Major NASA Enterprise Reviews	Concept/ Proposal Review	Initial Confirmation Review ICR	Confirmation Review CR			Mission Briefing		
Major Events	Down Select for STEP 1	Commitment, Select for STEP 2	Contract			Launch		

(1) Program driven projects
(2) AO driven projects
(3) Not a GPMC review
(4) A PMSR is equivalent to what Code S refers to as a combined Mission Definition Review and SRR
(5) For Earth Science Missions, a PDR may be combined with a Mission Design Review
(6) CERRs are established at the discretion of Program Offices

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Project Planning: Laying the Foundation for Success, cont'd

- Decisions made during project planning lay the foundations, good or bad, for implementation of the project
- Experienced Project Managers and studies state that project success or failure is often determined in the project planning phases

The Project Formulation Support Team

- Key part of JPL's new infrastructure support for Projects
- Assists Projects during Pre-Phase A and Phase A, JPL's planning phases
- Not mandatory for Projects, but is encouraged
- Support is tailored for each Project

The Project Formulation Support Team, cont'd

- PFST Products, developed and maintained by Subject-Matter Experts, are product templates for: Project Plans; Project Implementation Plans (which includes many subsidiary plans); Work Breakdown Structure and Dictionary; Compliance Matrices for JPL Design Principles and Flight Project Practices; etc.

The Project Formulation Support Team, cont'd

- PFST Services are provided by Subject-Matter Experts: project planning processes, systems engineering, cost estimating, scheduling, acquisition, information systems engineering, launch systems engineering, configuration management, etc.

The Project Formulation Support Team, cont'd

- PFST institutional roles include: identification and flow-down of external requirements; review and comment on proposed external requirements; development and maintenance of JPL institutional requirements; training to implement external and institutional requirements.

Future Trends

- Continued large number of simultaneous projects
- Continued competition for new missions
- Increasing applications of information networks
- Continued multi-national project partners and team members

Summary and Conclusions

- Continuing or increasing need for project planning support
- Increasing emphasis on cost control creates demand for insight to projects' status and progress
- PFST is good mechanism for capturing valuable knowledge and experience and applying it to new projects