Lessons Learned

A Shared Experience in

Project Leadership
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Point of Reference

- Organizations & Career Path
  - Engineering & MBA Degrees, AMP @ HBS
  - Air Force-7 years, NASA-22 years, Industry-13 years
  - Consultant-15 years
  - Flight Test Engineer, Systems Engineer& Project Manager
  - Resident Engineer @ LTV On Scout Missile
  - Launch Conductor @ WTR on Scout Missile
  - Deputy Project Manager on Viking Mission to Mars
  - Project Manager on Research Helicopter & Large Space Structures Technology
  - Director, Planetary Programs @ NASA Headquarters
  - Deputy Director, Ames Research Center
  - VP - NASA Programs, Lockheed Martin
  - CEO @ COB, nVIEW Corporation
  - Consultant to NASA on Project Management, X-37, JWST & CLARREO
  - Advisor to W&M MBA Program & Virginia Technology Advocacy

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Presentation will utilize the experience of resource management of a large space science project to illustrate the techniques critical to managing resources of PI Led space science projects. The techniques successfully applied on Viking stand as a model for application to smaller science space projects. The conclusion will provide participants with a list of Lessons Learned that can be applied to future space science programs.

Organize to Win

- Get a clear understanding of Project Objectives
- Remember, People make things happen select the best to implement the project
- Spend time giving each team member clear assignments
- Get an early understanding of all tasks
- Your first decisions on team assignments are not always right---do not hesitate to make changes
- Better to train outstanding people into new areas than to accept marginal people with some skills

Organize to Win (Cont'd)

- Make sure everyone carries a share of the load

- Watch for overlapping assignments

- Establish an early meeting where each team member describes their assigned responsibilities

  - fix duplications

  - repair holes

  - settle interfaces

  - build the team for high performance

- Change the assignments to fit the challenge

Assign Performance Accountability

- Make sure all team members understand the objectives
- Become process oriented
  - make sure process matches product or services
  - assign ownership
- Promote open communications
  - create a communication and reporting network
  - encourage the strong
  - support the marginal
  - replace the non-performer

Effective Communications

- Good leaders are good communicators
- Operate on a "No Surprises" Philosophy
- Establish parameters to be measured and goals to be achieved
- Do not get lost in trivia
- Make it visible
- Talk about the What? And the Why?
- Make decisions to affect performance
- Apply sufficient pressure or heat to get performance
- Know when you have solved the problem and move on to the next major issue

- Establish adequate reserves in schedule
- Develop alternate performance plans
- Make individual team members responsible for performance
- Have a problem oriented review system
  - utilize outside help
- Real time communications are the key to controlling the work and completing the project on schedule

Developing Alternate Plans

- Prepare for change

- Look for alternative ways to accomplish the task

- Remember the goal is more important than the process

- Train team members to be goal oriented and to think about being part of a high performance team

- Be ready to implement alternatives

- A back-up plan is your best insurance for success

Creating Customer Value

- Convert your objectives to an understanding of value to the:
  - Nation
  - NASA
  - Scientific Community
- Determine the drivers in the project that create value
- Prioritize decisions to optimize project success and value satisfaction
- Make sure that every project review sustains a clear value chain to all stakeholders

Lessons Learned

- Never lose your capacity for enthusiasm

- Never lose your capacity for indignation

- Never judge or classify people too quickly: First assume that she or he is good

- Never be impressed with wealth or thrown by poverty

- If you can not be generous when it is hard to be, you will not when it is easy

- The greatest builder of confidence is the ability to do something, almost anything, well

Lessons Learned (cont'd)

- When the confidence comes, then strive for humility; you are not as good as all that

- And the way to become truly useful is to seek the best that other brains have to offer.Use them to supplement your own, and be prepared to give credit to them when they have helped

- The greatest tragedies in work and personal events stem from misunderstanding

- Answer----Communicate