

Section 2

Meeting Objectives



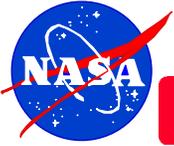
Agenda

- 8:30** ***Introduction***
- 8:45** ***Meeting Objectives***
- 9:00** ***NMP Perspective***
- 9:15** ***Overview of the EO-1 Mission***
- 9:45** ***Technology Transfer and Infusion Process***
- 10:15** ***Break***
- 10:30** ***Advanced Land Imager***
- 11:30** ***Lunch***
- 12:30** ***Hyperion***
- 1:30** ***Atmospheric Corrector***
- 2:00** ***Science Validation Process***
- 3:00** ***Break***
- 3:15** ***Overview of EO-1 Spacecraft Technologies***
- 4:15** ***Next Steps and Near-Term Schedule***
- 5:00** ***Adjourn***



Meeting Objectives

- ◆ *Familiarize attendees with the EO-1 Mission and its technologies*
- ◆ *Explain the NMP technology validation process and the subsequent technology transfer and infusion into future missions like the LDCM*
- ◆ *Present background technical data on all three EO-1 instruments*
- ◆ *Review the science validation process associated with the instruments*
- ◆ *Summarize the background and status of the spacecraft technologies*
- ◆ *Characterize the technology infusion opportunities for each technology*
- ◆ *Identify those parties interested in using the EO-1 technologies*
- ◆ *Describe tasking opportunities potentially available later in the EO-1 mission*

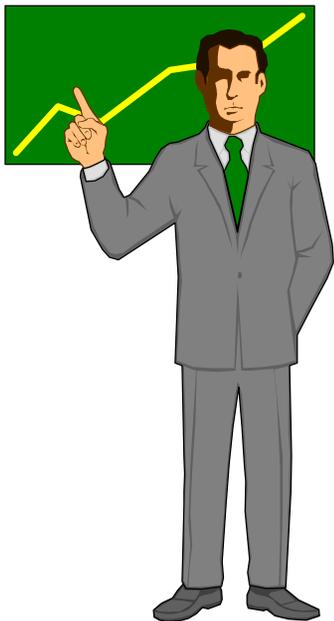


NASA New Millennium Program Perspective

*... Christopher Stevens
California Institute of Technology, JPL*



New Millennium Goals

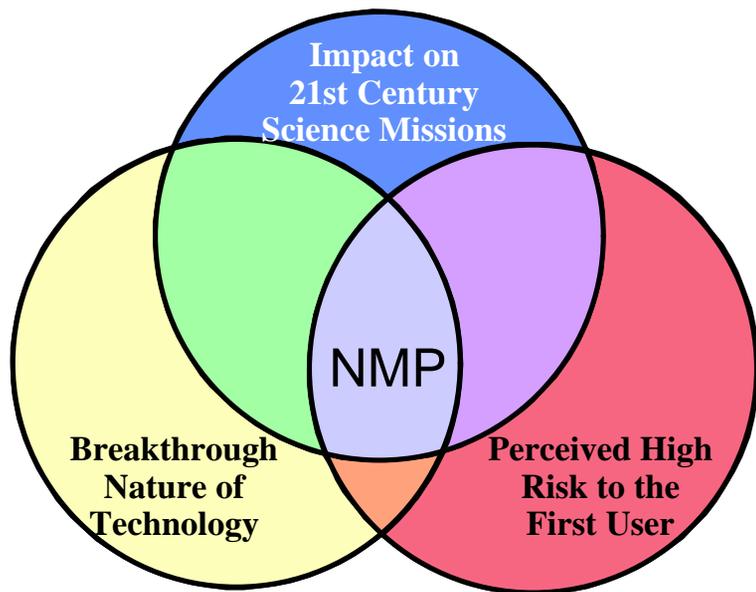


- ◆ *The New Millennium Program (NMP) was established in 1994 to revolutionize NASA's Space and Earth science programs to achieve more capable, less costly missions in the 21st Century by:*
 - *Developing and flight-validating revolutionary technologies*
 - *Reducing development times and life cycle mission costs*
 - *Enabling highly autonomous spacecraft*
 - *Promoting nationwide teaming and coordination*



NMP ROLE

Flight Validation of Breakthrough Technologies to Benefit Future Earth Science Missions

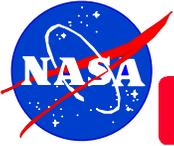


Breakthrough technologies

- Enable new capabilities to meet Earth Science needs
- Reduce costs of future missions

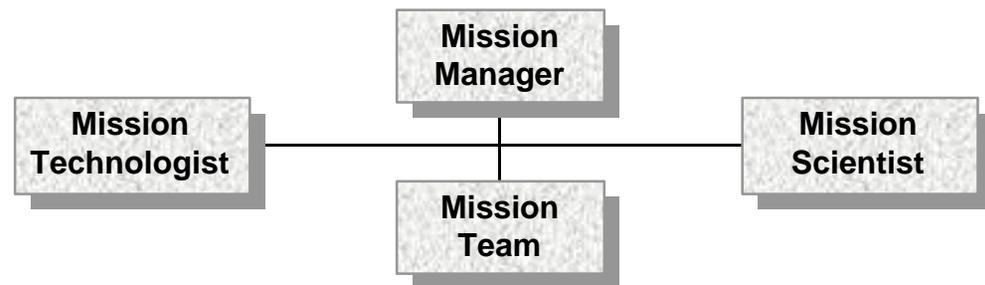
Flight validation

- Mitigates risks to first users
- Enables rapid technology infusion into future missions



NMP Mission Implementation

- ◆ *Mission Team established in early definition*
- ◆ *Selection process extends through Confirmation Review*
- ◆ *NMP missions are NOT small science missions and cannot be treated as such -- inherently more risky*
- ◆ *Keys to success:*
 - *Resilient “Category” Architecture*
 - *Comprehensive, aggressive risk management*
 - *Adequate reserves in schedule and budget*
 - *Critical role of mission technologist*
 - *Management approach:*





Technology Transfer and Infusion

- ◆ **Validation Plans are executed for each assigned technology**
- ◆ **Each validation plan has two parts:**
 - *Technical*
 - *Science*
- ◆ **After flight validation, the Mission Technologist and Technology Provider prepare Technology Transfer documentation based on:**
 - *Basic design features and planned performance*
 - *Ground-based calibration and characterization*
 - *On-orbit technical and science validation*
 - *Operational experience*
 - *Likely applications*
 - *Technology Infusion opportunities*
- ◆ **NMP workshops, technology fairs, etc. are used to disseminate the Technology Transfer documentation**
- ◆ **NMP works closely with Earth and Space Science Program Offices to facilitate technology infusion into future science missions**

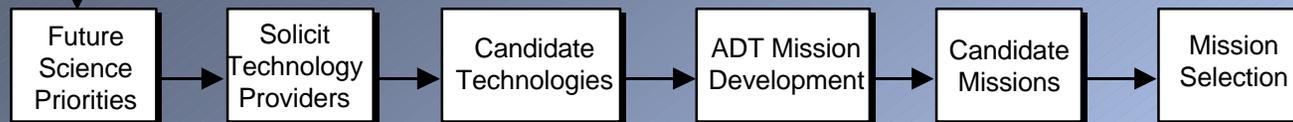


NMP Technology Evolution

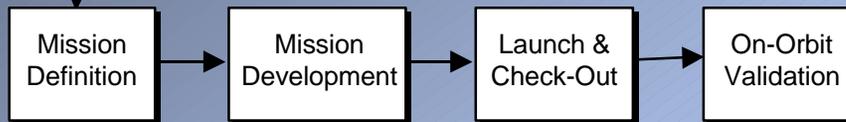
SEEDING



SELECTING



DEVELOPING



VALIDATING



End-to-End Continuity Ensures Future Savings



NMP Summary

- ◆ ***NMP provides the processes to:***
 - *Reduce the cost and enhance the performance of future missions*
 - *Leverage our investments in advanced technology*
 - *Encourage teaming within U.S. Aerospace industry*
- ◆ ***NMP provides the process to explore more effective use of emerging technologies to enable future missions***