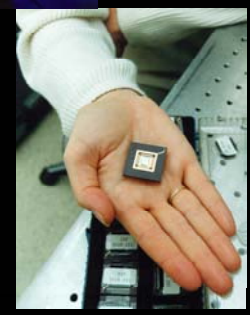

Jet Propulsion Laboratory

California Institute of Technology

A Plan for Growing Non-NASA Reimbursable Programs

Mr. Robert Cox

July '02

PRECEPTA
BY PRECISION

CHALLENGE

- Grow non-NASA, reimbursable contributions to 15% of JPL's annual budget
  - $51M ('02) to $230M ('06)
- Three year horizon ('03-'06)
- Translates to over 60% growth per year

Doable with adequate support and resources

Reimbursable Forecast

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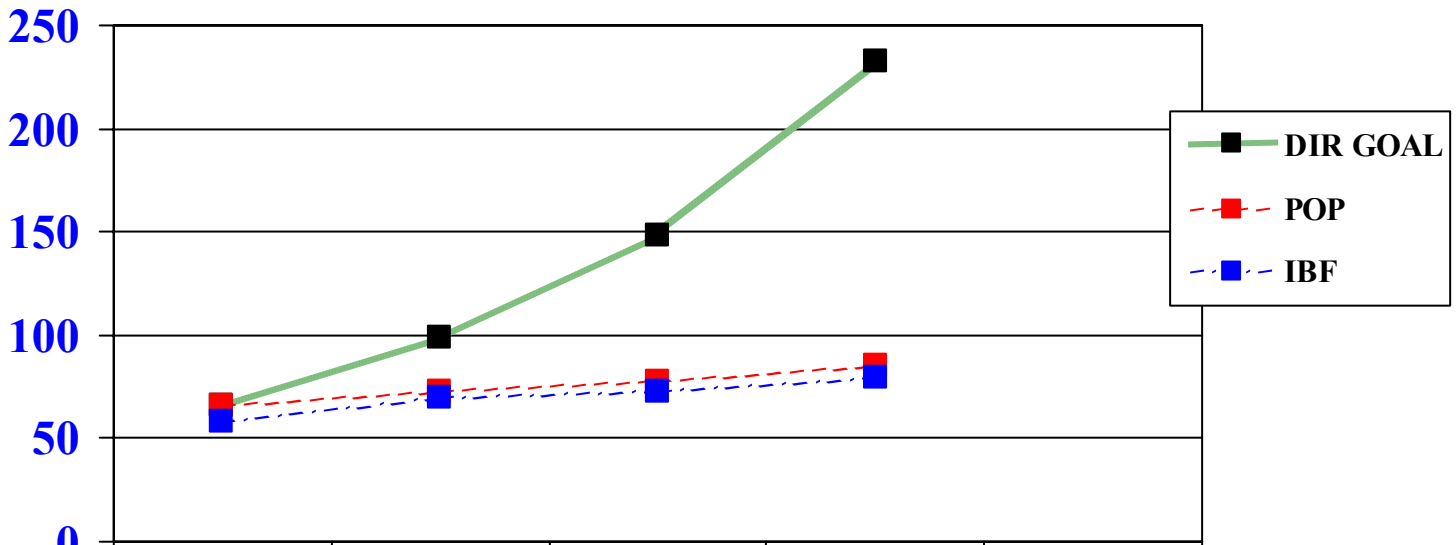
2003 POP / IBF

($ in millions)



	2003	2004	2005	2006	
DIR GOAL	65.7	98.6	147.8	233	
POP	65.7	73	78	85	
IBF	58.4	70.1	73	79.2	

15% Goal in Green

JPL
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Prospects for Space Partnerships -- Technology

- What concepts, technology and systems are hot?
  - DoD Space Sector
    - SBR — Data storage & transformation
    - HSI — New phenomenology
    - Lasercom — Miniature sensors
  - Intelligence Space Sector
    - Continuous Surveillance — Integrated microsystems
    - Spectral Imagery — Information superiority tools
  - Civil Space Sector
    - Advanced Communications
    - Space-based global sampling
    - Robotics, in-situ
  - Commercial Space Sector
    - Sensors, antennas, structures, electronics, propulsion

Support the warfighter and policy maker

DCPO Organization

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8100
Defense and Civil Program Office
(AM) L Gref

8110 Defense Agencies L. Gref, Mgr.	8120 Air Force & NOAA A. Bhanji APM	8130 Army & MDA R. VanSteenburg, APM	8140 Multi-Agencies Programs R. Liang, APM	8150 DARPA & Civil Agencies D. Kurtz, APM
• NRO	**USAF**	**USA**	• MDA	• DARPA
• NIMA	• AFRL	• ACOE	• NASA	**USN/USMC**
• NSA	• SMC	• ARL	• SMDC	• ONR
• CMO	• Aerospace Corp	• CECOM		• MCWL
• Industry	• NOAA	• SMDC		• NRL
		• STRICOM		• SPAWAR
		• MDA		**CIVIL**
		• DISA		• DOE • DOT
		• DTRA		• H&HS • FEMA
				• NSF • NIJ
				• NCS
FY01:$7M	**FY01:$4.5M**	**FY01: $6.3.M**	**FY01: $1.0M**	**FY01: $11.2M**

Retiring summer of '02

Part time from 3X

Serious medical

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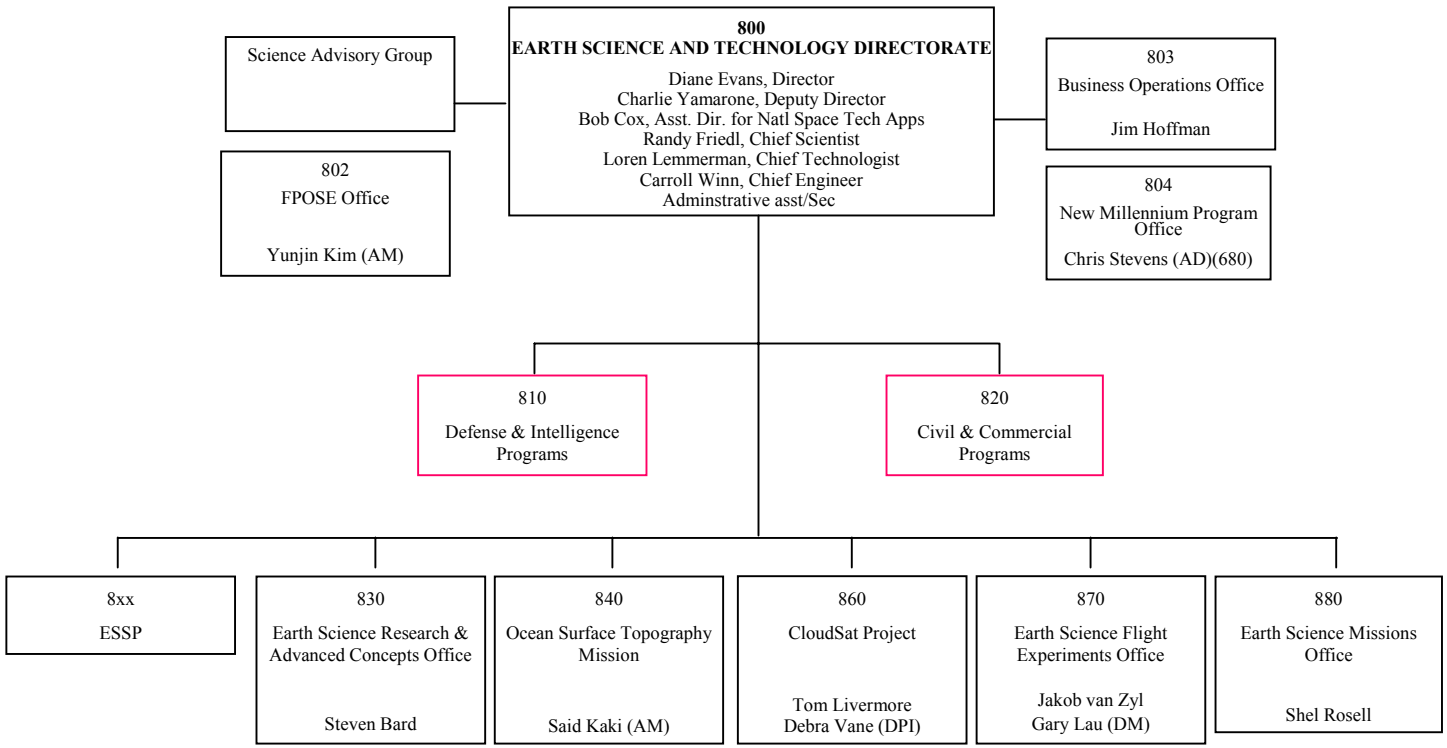
Proposed Organization



AD = Additional Duty
AM = Acting Manager
DM = Deputy Manager
DPI = Dep. Principal Investigator
PS = Project Scientist
(#) = Home Organization

Approved Organization

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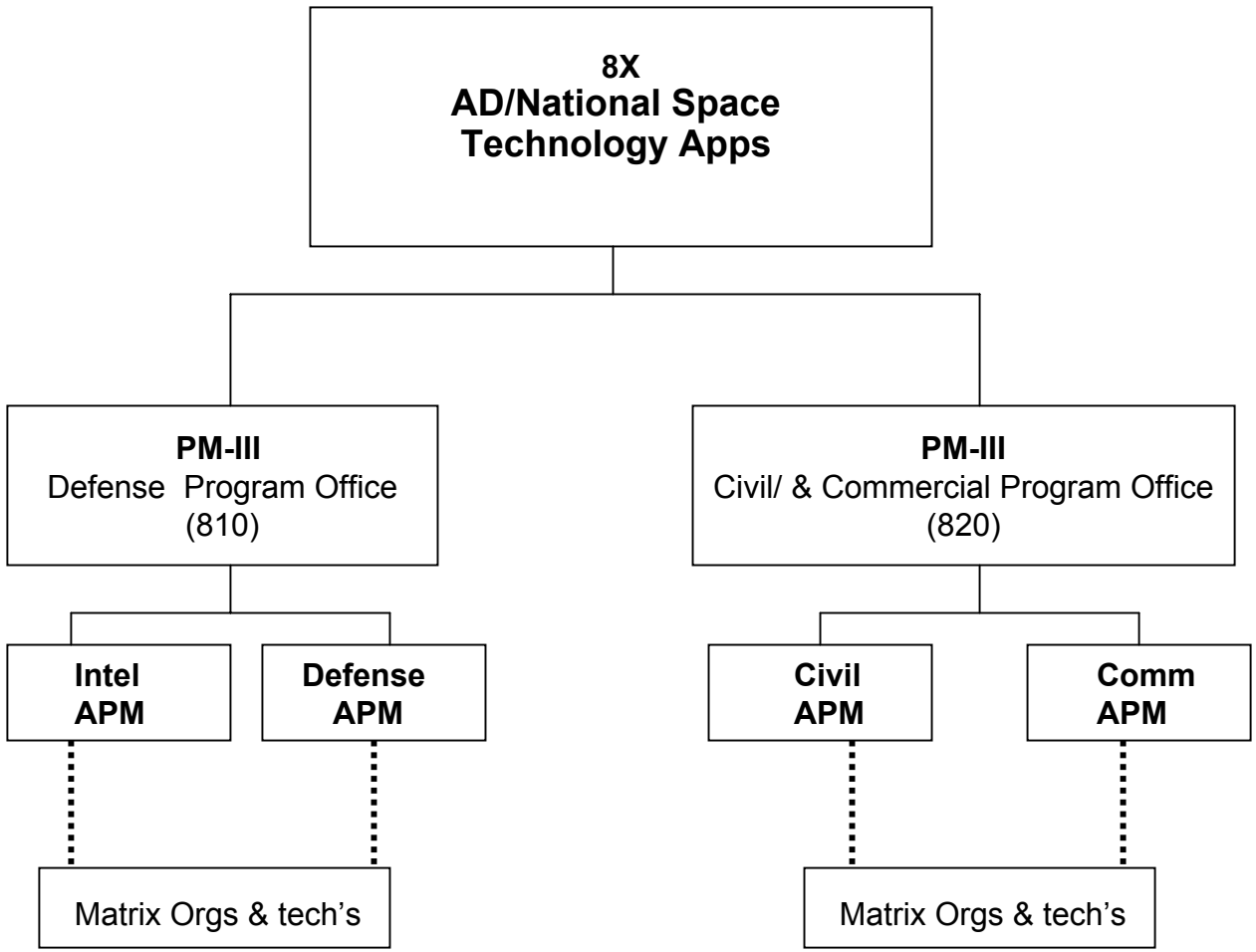

Need EC support to fill with strong team

NSTA Portfolio

8X
Natl Space Technology Apps
B. Cox, Asst Director

810
Defense Space Programs

USAF
- AFRL
- SMC

USA
- ARL
- ACOE
- CECOM
- SMDC
- STRICOM

USN/USMC
- ONR
- MCWL
- NRL
- SPAWAR

- NRO
- NIMA
- NSA
- CMO
- MDA
- DISA
- DTRA
- DARPA
- Aerospace Corp

820
Civil & Commercial Space Programs

- NASA
- DOT
- H&HS
- NSF
- NOAA
- DOE
- FEMA
- USGS
- NIJ
- NCS

- Industry
- Commercial Providers
- System Houses

Functional Flow

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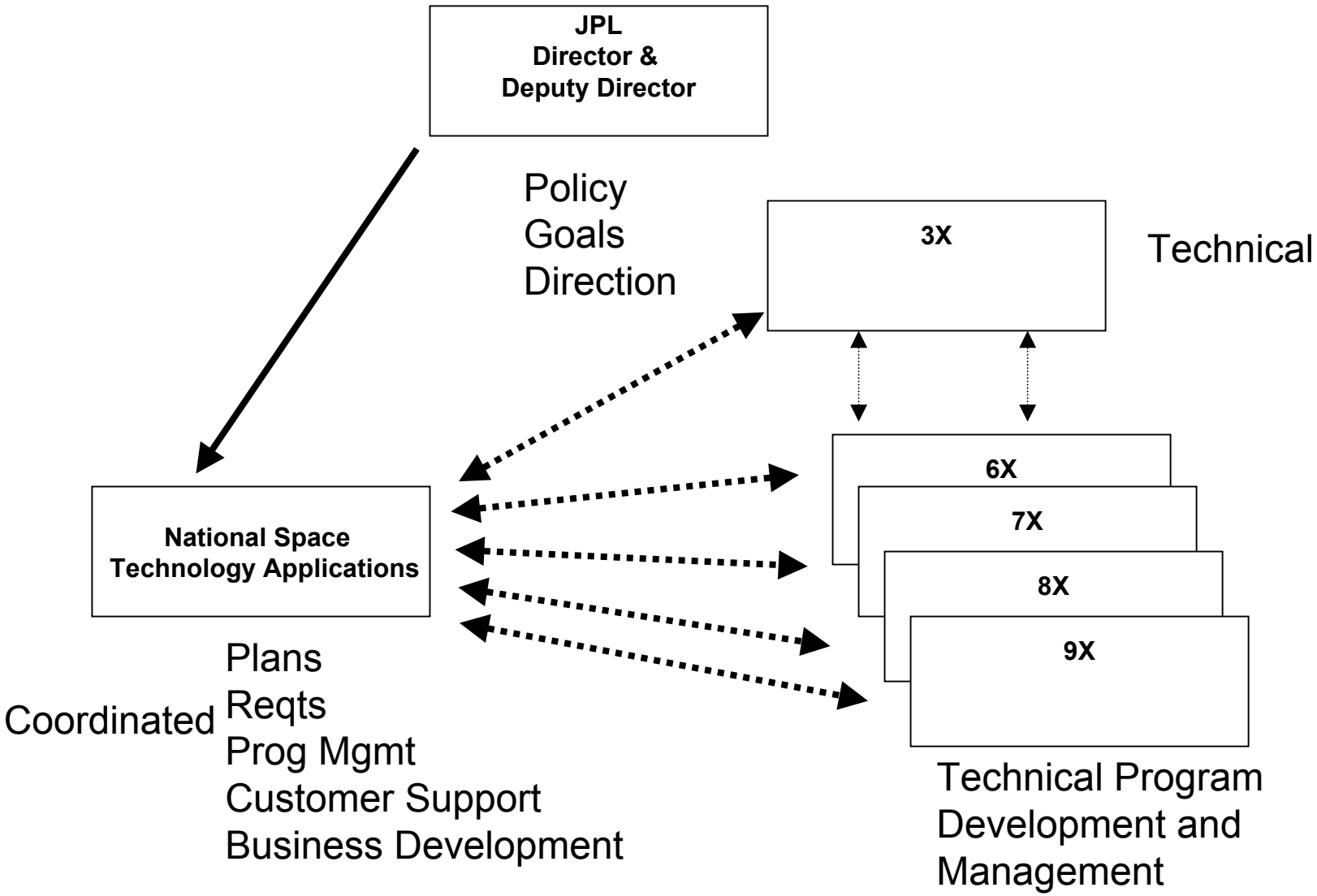

Summary

- Goal is challenging
  - Qualified demo/partnering will require:
    - Sponsor with requirement and the dollars
    - Linkage to NASA technology/mission objectives
    - JPL wants to do the work
  - JPL concerns
    - Skills and management
    - Equanimity with NASA work
    - Strategic commitment to national space activities

Commitment from the Entire Lab

BACKUPS

FY 2003 Reimbursable Funds
By Program Office

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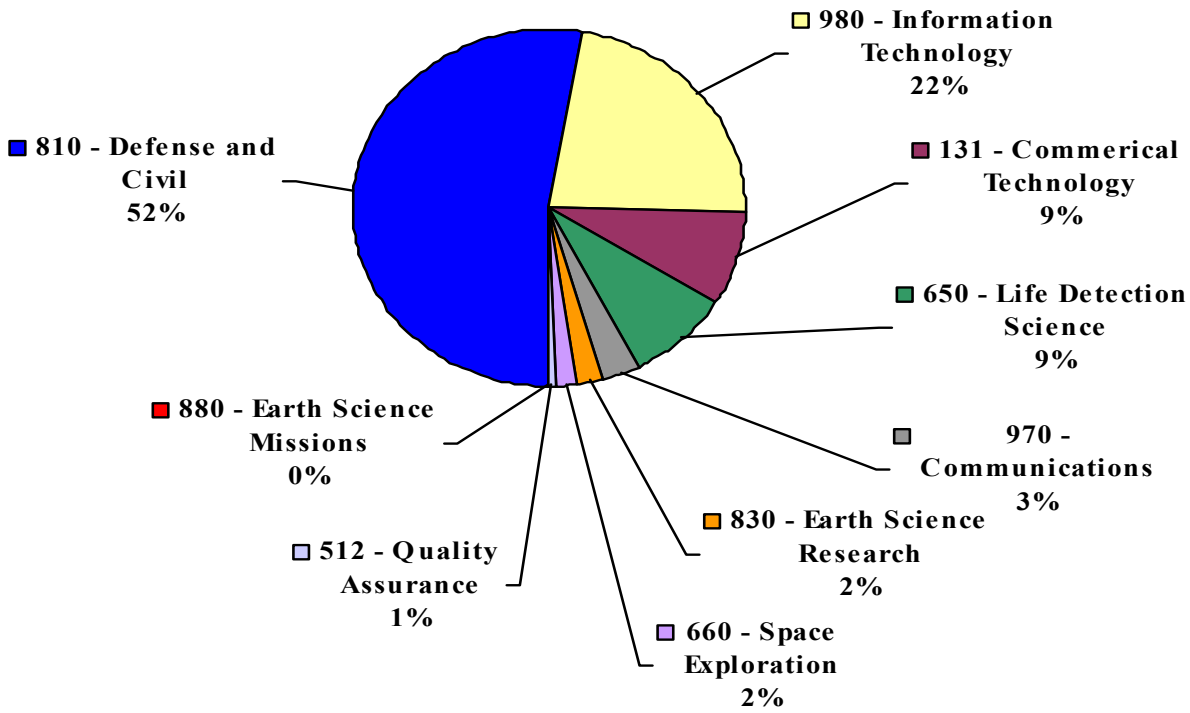
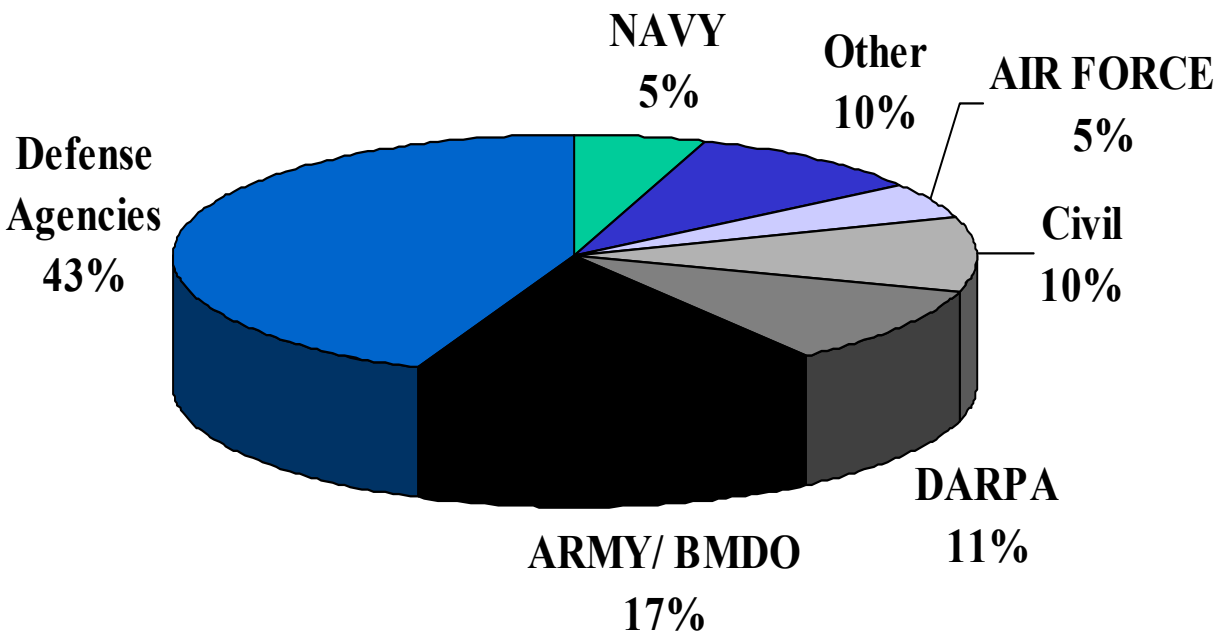
Total Funds Estimated 66M



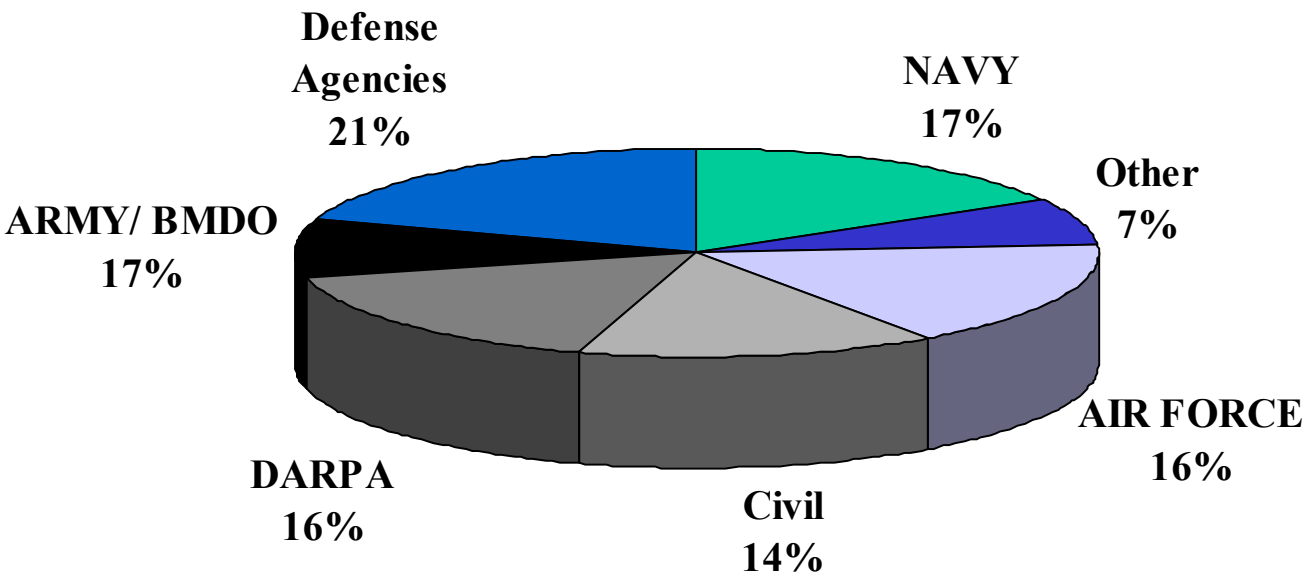
Primarily technology and "PI" work

FY01 $41.8M Estimated Funding by Sponsor

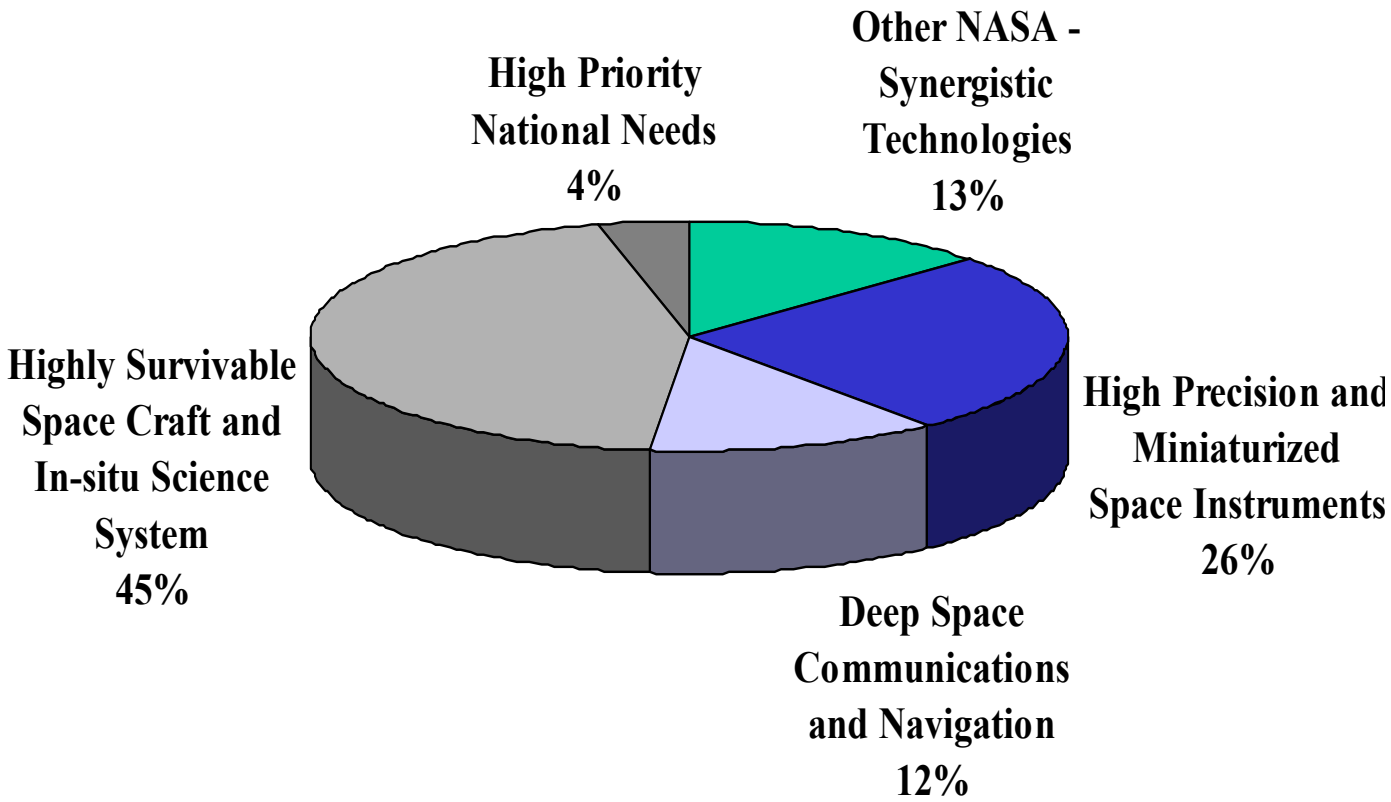


DCPO & TPO

FY01 Active Task Orders (97) By Sponsor



Distributed by Strategic Technologies



Proposed Mission

- The purpose of the reimbursable program is to manage and lead ventures that result in technologies and projects which enable or enhance NASA's mission and the missions of the Defense, Intelligence, Civil and Commercial space sectors .

National Space Technology Applications Office

- NSTA develops and manages strategic relationship, partnerships, and sponsor relationships. NSTA is the office primarily responsible for acquiring and leading reimbursable work with Defense, Intelligence, Civil and Commercial sponsors. It also provides oversight of technical division managed technology tasks.

Thrust Area Managers

- TAM's formulate and manage the implementation of technology demonstration and validation of complex technology tasks. They are responsible for developing and managing the their sponsor relationship.

Prospects for Space Partnerships -- Planning

- What is hot?
  - DoD Space Sector
    - SecDef's Transformational Force
    - Space Commission initiatives & AF CONOPS
    - Missile Defense Initiatives
  - Intelligence Space Sector
    - NRO Commission recommendations
    - Kerr Report
  - Civil Space Sector
    - NASA science and technology
    - Homeland Security/Defense
  - Commercial Space Sector
    - Communications and remote sensing
    - Aerospace contractors

Strong synergy with these functional sectors

Prospects for Space Partnerships -- Fiscal

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- "Where's the beef". Despite record budgets
  - House passed their $393B '03 DoD budget
    - Most increases fund O&M, terrorism and personnel
  - AF budget in '04 will be $93B, space $6-7B
    - AF S&T at $1.2B, Space S&T at nominal $250-300M
  - NRO overruns paid by S&T budget in '02 & '03
  - MDA is plump with $4-5B/year
  - DARPA is plump with $2.5B and space projects
  - NASA science & technology is modest
  - Commercial space is $60B industry
    - FO outpaced wideband, failure of LEO markets
    - Reduced IR&D means industry needs JPL

Key...tie to a product or service that saves lives and increases mission effectiveness

Prospects for Space Partnerships -- Pragmatic

- Let staff do initial spade work with customer
  - Downselect key technologies/programs/demos
  - EC approve “A Team” commitment
  - Director and/or Deputy Director or NASA/AA take it directly to the senior decision maker (SecAF, DNRO, DDR&E, AT&L, D/MDA, et al) for commitment

- Substantial flight demo effort and program commitment will not survive bottoms-up, consensus building initiatives
  - Too many opportunities and process that reward “no”
  - Need to leapfrog and go direct to senior decision maker

Downward directed demonstrations get funding and provide a legacy