THE NASA PERSPECTIVE

NASA Academy of Aerospace (AAQ) Expert Users Meeting

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Historical Perspective
2004

- 50+ universities had contracts, grants, and co-operative agreements with NASA to **provide products and services for space flight experiments and payloads**.
- From a NASA perspective the principal focus had been on verifying payloads and experiments were "safe" for flight.
- Audits/visits at multiple universities revealed little, if any, knowledge of basic quality principles.
  - Drawing controls (Configuration Management)
  - Workmanship practices
  - Electrostatic Discharge
- NASA saw an additional opportunity to provide assistance in helping the universities **assure that the payloads were also "successful"** from operations standpoint.
- Since NASA had unique tools, capability, experiences, and perspective that could benefit these universities in development of payloads and experiments, there was a desire to help them to not only **develop successful products** but also **prepare the next generation of aerospace engineers and scientists**.

President's Commission on Implementation if United States Space Exploration Policy (June 2004)

Finding 8

The Commission finds that the space exploration vision offers an *extraordinary opportunity* to *stimulate mathematics,* science, *and engineering* excellence *for America's students and teachers - and* to *engage the public* in *a journey that* will *shape the course* of *human destiny.*

Recommendation 8-1

The Commission *recommends the Space Exploration Steering Council work with America's education community and state and local political leaders* to *produce* an *action plan that leverages the exploration vision* in *support* of *the nation's commitment* to *improve math, science, and engineering education. The action plan should:*

- *increase the priority* on *teacher training;*
- *provide for better integration* of *existing math, science, and engineering education initiatives across governments, industries, and professional organizations; and*
- *explore options* to *create* a *university-based "virtual space academy" for training the next generation technical work force.*

Today's Reality

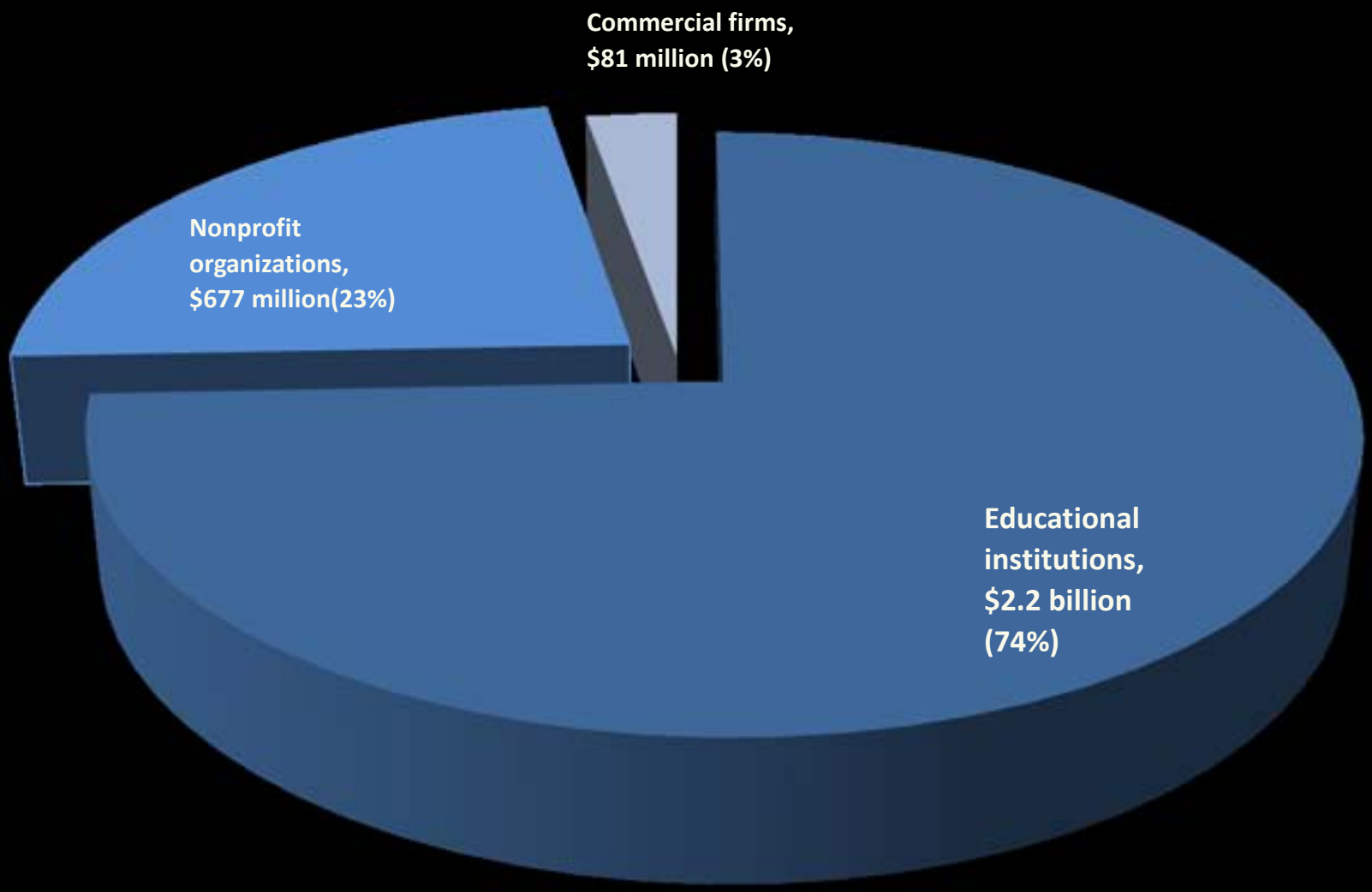
- Limited budget
- NASA FAR Supplement 1846.000 Scope of part

  The Government has a duty to assure that appropriated funds are spent wisely

- REPORT NO. IG-11-026

  NASA does not have an adequate system of controls to ensure proper administration and management of its grant program. Specifically, we identified weaknesses in NASA's oversight of awards and monitoring of grantee performance and financial expenditures.
  Further, in congressional testimony in June 2011 regarding improvements needed for oversight of Federal grants, the GAO stressed the need for effective oversight and internal controls over the grant process to ensure that the goals of the grant are achieved

NASA Grants Awarded between 2006 and 2010



Source: Nasa Annual Procurement Report

Today's Perspective

- Better understanding of your Requirements vs Needs
  - There are some safety requirements to not damage the launch vehicle but no Mission Success or Quality requirements.
  - *Requirement for PDR, CDR, FRR without stating what value they add or a description of what should be accomplished*
- BUT
- Same or at least similar desires
  - **that products will be "successful"** from operations standpoint.
  - that we **prepare the next generation of aerospace engineers and scientists**.
- AND Continue to pursue original initiatives

- *increase the priority* on *teacher training;*
- *provide for better integration* of *existing math, science, and engineering education initiatives across governments, industries, and professional organizations; and*

explore options to *create* a *university-based "virtual space academy" for training the next generation technical work force.*