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NASA Supply Chain Network Survey Sample Results

Brad Botwin

Director, Industrial Studies

Office of Technology Evaluation

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Office of Technology Evaluation (OTE)

MISSION:

OTE is the focal point within BIS for assessing:

- The effectiveness of export controls
- The capabilities of the U.S. industrial base to support the national defense

OTE Industry Assessments
- Background

- Defense Production Act of 1950 and Executive Order 12656 provide broad authority to analyze:
  - Economic health and competitiveness
  - Defense capabilities and readiness

- Conduct surveys of industry and organizations

- Enable industry and government agencies to:
  - Monitor trends and benchmark industry performance
  - Raise awareness of diminishing manufacturing and technological capabilities

NASA Supply Chain Network

- OTE Survey Assessment
  - Sponsored by: NASA, Exploration Systems Mission Directorate
    - Health and competitiveness of this supplier segment
    - Measure impact of Space Shuttle retirement, Constellation Transition, and projected procurement gap for future Human Space Flight
    - Estimated 28,000 potential job loss nation-wide
    - Understand what suppliers do for NASA/USG agencies
    - 1,300 companies received 40 page survey in July
    - 500 accepted; 200 returned for modification; 500 underway at companies; 100 exempted

Sample Response Data

- 162 surveys from 34 states, with most from:
  - California (32)
  - Florida (14)
  - Alabama (11)
  - New York (11)
  - Ohio (10)

Top NASA Centers Supported	
Kennedy Space Center	63
Marshall Space Flight Center	58
Johnson Space Center	57
Goddard Space Flight Center	50
Glenn Research Center	48
Jet Propulsion Laboratory	47
Langley Research Center	45

Market Segments—162 surveys

- Primary business lines include:
  - Manufacturing (50%)
  - Distribution (25%)
  - R&D, Testing/Evaluation/Validation, Material Finishing, Material Preparation, Maintenance/Aftermarket (15%)
  - Professional Services (10%)

Future Outlook—162 surveys

- 46 respondents (28%) are "dependent" on NASA-related business
- 68 respondents (42%) <u>do</u> <u>not</u> have a plan in place to preserve their capabilities or workforce post-Shuttle/ Constellation
- 49 respondents (30%) will modify business/product lines in response to Shuttle retirements and Constellation Transition

Future Outlook *continued*

- 26 respondents (16%) currently support non-NASA human spaceflight programs
- 88 respondents (54%) plan to participate in commercial human spaceflight programs in the future

Impact across USG—162 surveys

- 16 respondents (10%) reported that loss of Shuttle/ Constellation business will affect other USG business lines

NASA Centers/Non-Human Space Flight Programs	21
Missile Defense Agency (MDA)	8
U.S. Air Force/Space and Missile Systems Center (SMC)	5
U.S. Army/Space and Missile Defense Command (SMDC)	5
Office of Naval Research (ONR)	4
Other (DARPA, FAA, DDR&E, NOAA)	6

Degree of Compatibility—162 surveys

- Respondents were asked if their NASA-related product lines are compatible with non-NASA customers and applications

Near 100%	65
More than 50%	21
Between 25-50%	14
Less than 25%	19
None	13
Not Sure	30

Transition Assistance—162 surveys

- Did respondents receive any guidance on how to best respond to Shuttle retirement and Constellation Transition?
  - From prime contractors affiliated with NASA programs?
    - 13 respondents (8%) received guidance
  - From NASA officials?
    - 6 respondents (4%) received guidance

Main Issues and Challenges—162 surveys

- The main issues and challenges affecting supplier long-term viability include:

Domestic Competition	54%	Government Regulations	36%
Variability of Demand	50%	Export Controls	25%
Foreign Competition	44%	Imports	23%
Healthcare	41%	Environmental	13%
Taxes	40%	R&D Tax Credit	13%
Skills Retention	38%	Other	7%

Employment—162 surveys

Difficult to Hire		Difficult to Retain	
R&D Staff	23%	Production Line Workers, Support Technicians	26%
Sales and Marketing	19%	R&D Staff	19%
Production Line Workers, Support Technicians	18%	Sales and Marketing	15%
Production Managers/ Supervisors/Executives	11%	Production Managers/ Supervisors/Executives	7%
Quality Control, Test Operators	9%	Quality Control, Test Operators	7%

BIS/OTE Contacts

- Brad Botwin
  - Director, Industrial Studies
  - Office of Technology Evaluation
  - 202-482-4060
  - bbotwin@bis.doc.gov

- Jason Bolton
  - Trade & Industry Analyst
  - 202-482-5936
  - jbolton@bis.doc.gov

- www.bis.doc.gov