



# U.S. DEPARTMENT OF COMMERCE BUREAU OF INDUSTRY AND SECURITY

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## NATIONAL DEFENSE INDUSTRIAL ASSOCIATE AND AEROSPACE INDUSTRIES ASSOCIATION JOINT CONFERENCE

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UNCLASSIFIED

David Boylan and Moriah Phillips  
Trade and Industry Analysts  
Office of Technology Evaluation



# Bureau of Industry and Security (BIS)

## Mission:

Advance  
National Security,  
Foreign Policy  
and Economic  
Interests

- Develops export control policies
- Issues export licenses
- Prosecutes violators to heighten national security
- Develops and implements programs that ensure a technologically superior defense industrial base



# 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



# BIS/OTE Industry Surveys & Assessments

## Issues Examined

- Economic health, competitiveness, and financial performance
- Production capabilities and constraints
- Supply chain network, customers and suppliers
- Foreign competition, sourcing, and dependencies
- Sales, exports, market share
- Investment and R&D
- Employment and core competencies
- Cyber security
- Other topics as needed



# BIS/OTE Industry Surveys & Assessments

## Current Projects

- Cleared Facilities Assessment – DSS
- U.S. Bare Printed Circuit Board Assessment – Navy Crane
- Biomedical Cyber Security Pilot
- C-17 Aircraft Supplier Assessment – DOD OEA
- U.S. Rocket Propulsion Supply Chain Assessment – NASA
- U.S. Textile, Apparel & Footwear Assessment – U.S. Senate
- U.S. Integrated Circuit Design & Manufacturing Industry Assessment – DOC
- Section 232 Investigations: Effects of Imports on National Security
  - Steel
  - Aluminum



## Section 232 Investigations – Effects of Imports on National Security

- Section 232 of the Trade Expansion Act of 1962, provides the Secretary of Commerce with the authority to conduct investigations to determine the effects of imports of any article on the national security of the United States
- Criteria reviewed during an investigation include:
  - Requirements for defense and essential civilian sectors
  - Quantity, quality and availability of imports
  - Impact of foreign competition on economic welfare of essential domestic industry
  - The displacement of any domestic products causing substantial unemployment
  - Decrease in USG revenue
  - Loss of investment, specialized skills and productive capacity
- Two active investigations: Steel and Aluminum
- Secretary's report to the President due within 270 days of assessment initiation
  - Focus on whether article in question is imported in such quantities or under such circumstances as to threaten national security
  - If a threat is determined, the President can “adjust the imports of an article and its derivatives” (tariffs, quotas, etc.)



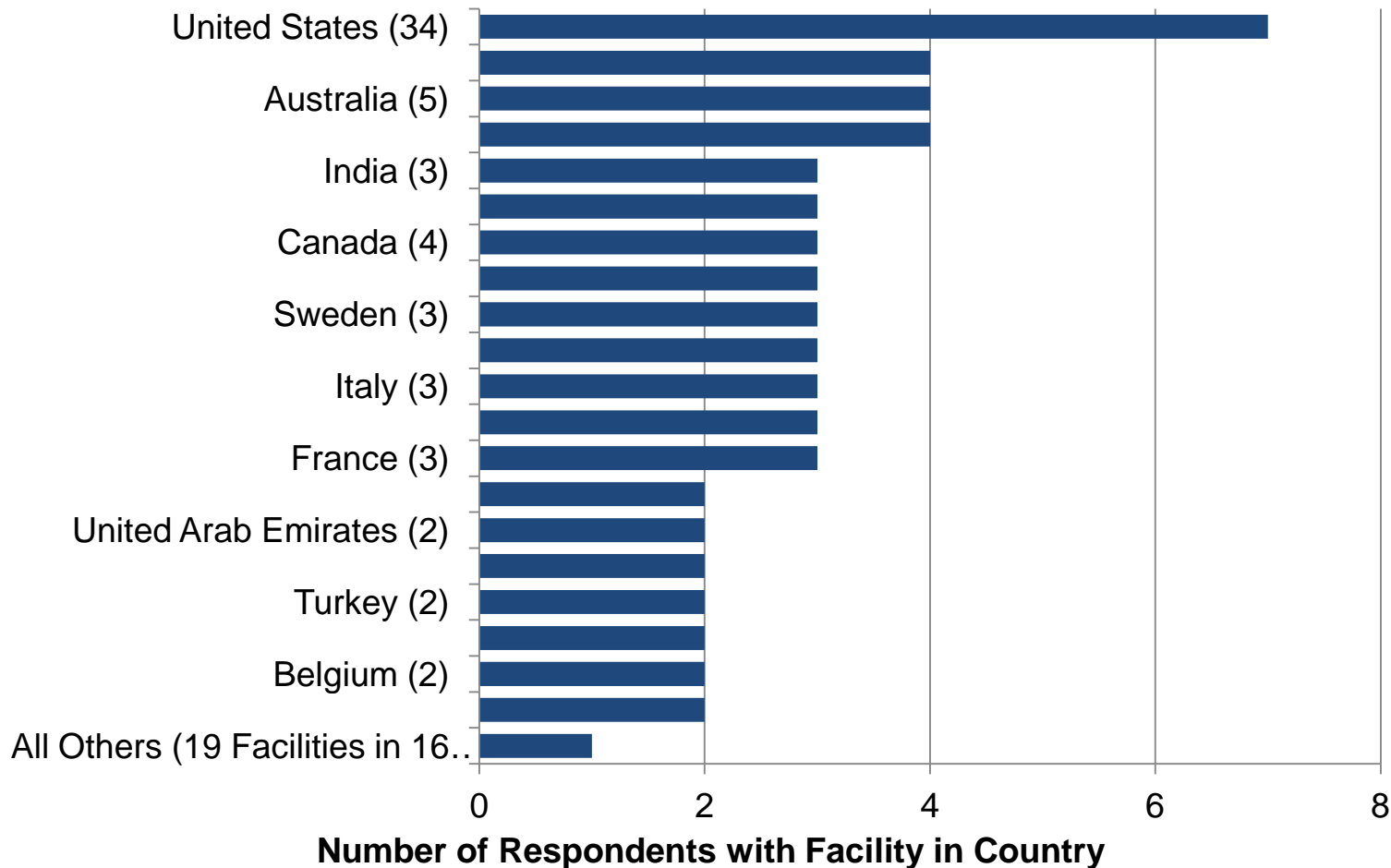
## U.S. Biomedical Industry Cyber Security Pilot Survey: Survey Background

- Initial Discussions in late 2014 led to partnership with the FBI National Cyber Investigative Joint Task Force (NCIJTF)
- Agreement to perform a pilot survey of 10 companies, selected by NCIJTF
- Survey goals:
  - Develop a baseline of the challenges and impacts to industry caused by malicious cyber activity
  - Determine range of preventative measures used by industry to protect Commercially Sensitive Information (CSI)
- With support and input from NCIJTF, BIS conducted site visits/field tests, designed the survey instrument, carried out survey compliance, and tabulated data



## Respondents' Facilities by Country

Total Facilities in Country in Parentheses – 115 facilities in 36 countries



Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED



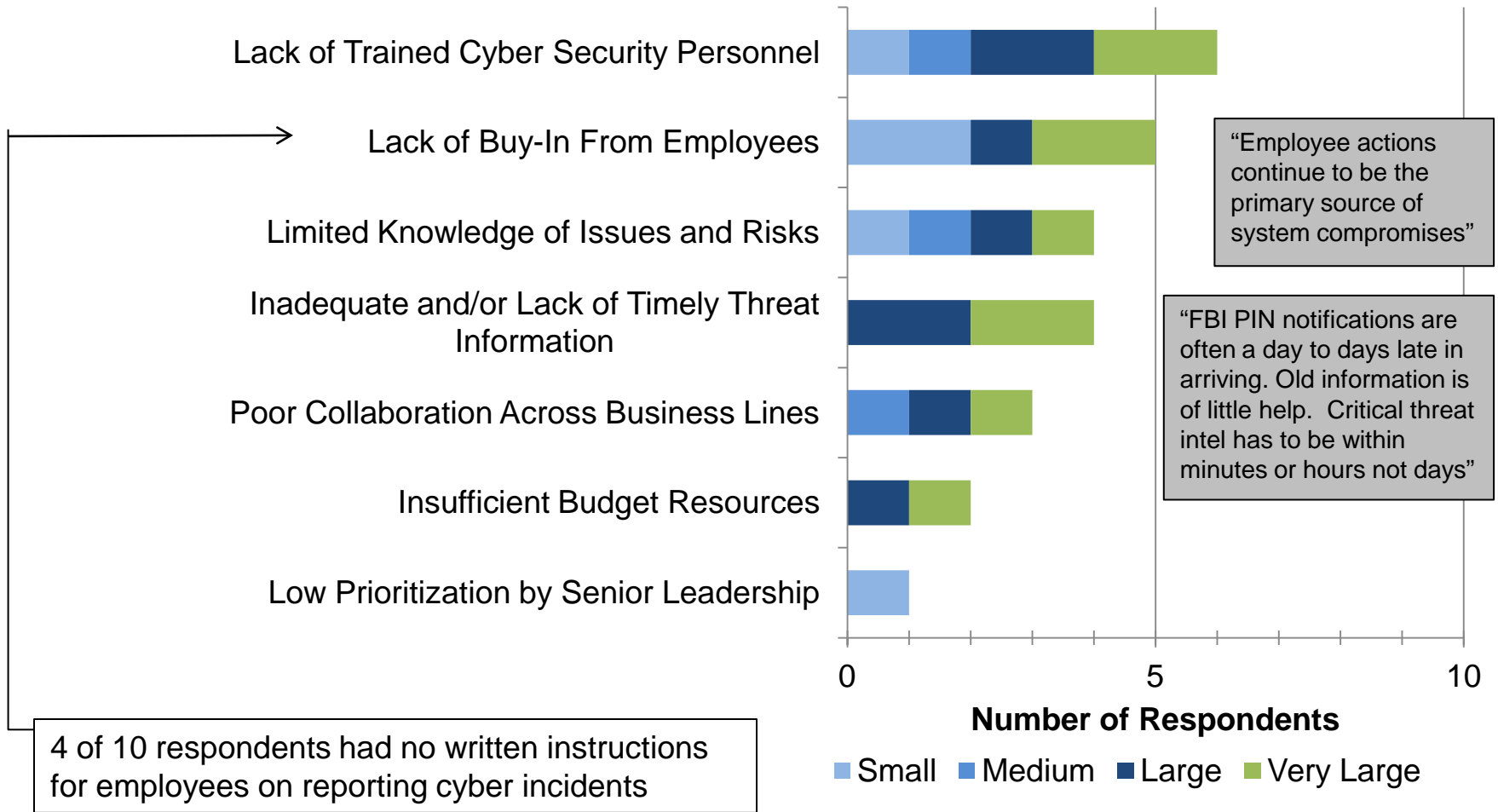


# Malicious Cyber Incidents 2013-2015 and Detection/Prevention Controls and Capabilities

Size	Total Incidents	# of Incident Types Able to Detect & Prevent	# of Critical Cyber Controls in Place by Internal Staff	Are Able to Detect APTs	% of Employees Receiving Cyber Training
Large	2	0	20	No	100%
Large	4	10	18	Yes	100%
Small	4	2	17	No	0%
Medium	15	10	18	No	70%
Small	20	9	10	Yes	100%
Very Large	30	12	14	No	0%
Small	40	0	13	Yes	0%
Very Large	1,157	9	18	Yes	100%
Very Large	62,179	15	20	Yes	100%
Large	320,095	12	20	Yes	95%



# Challenges in Protecting Against Cyber Security Risks





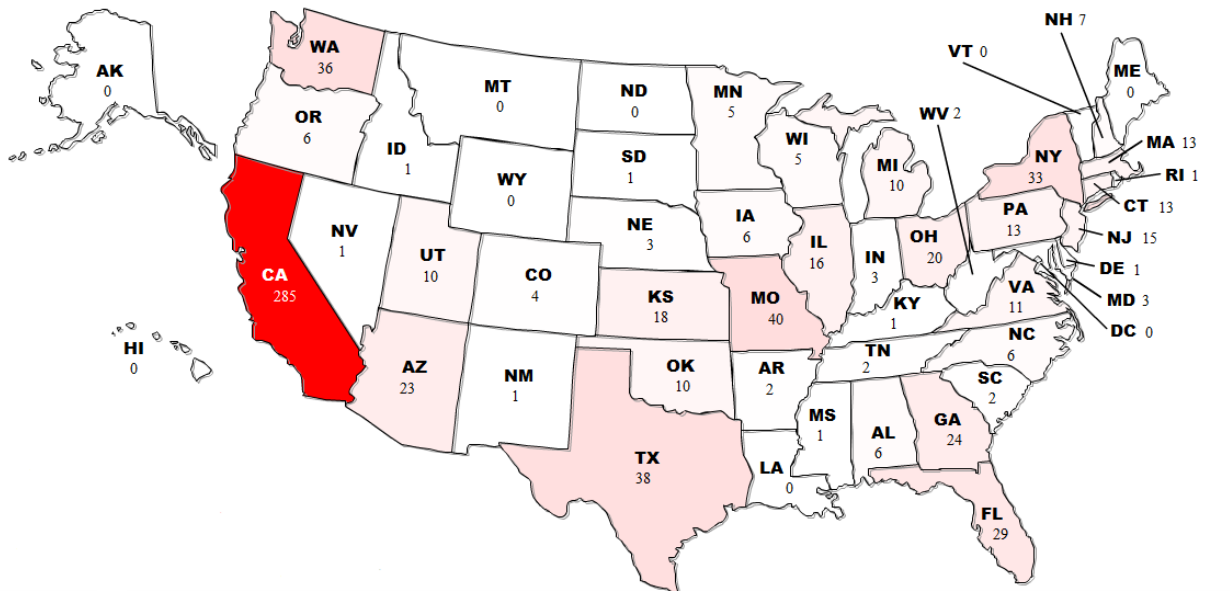
# C-17 Aircraft Supplier Assessment

- Partnership with U.S. Department of Defense, Office of Economic Adjustment (OEA) and City of Long Beach
- Two-year effort to assess the impact on the industrial supply chain of the 2015 shutdown of the Boeing C-17 Aircraft facility in Long Beach, CA
- Coordinated the transfer of excess U.S. Government and Boeing tooling and equipment from the facility to local community colleges and worker training centers





# Phase I: Background and Coordination Status



AK	0	FL	29	LA	0	NC	6	OK	10	VA	11
AL	6	GA	24	MA	13	ND	0	OR	6	VT	0
AR	2	HI	0	MD	3	NE	3	PA	13	WA	36
AZ	23	IA	6	ME	0	NH	7	RI	1	WI	5
CA	285	ID	1	MI	10	NJ	15	SC	2	WV	2
CO	4	IL	16	MN	5	NM	1	SD	1	WY	0
CT	13	IN	3	MO	40	NV	1	TN	2		
DC	0	KS	18	MS	1	NY	33	TX	38		
DE	1	KY	1	MT	0	OH	20	UT	10		

650 C-17 Aircraft Suppliers (728 sites) by state



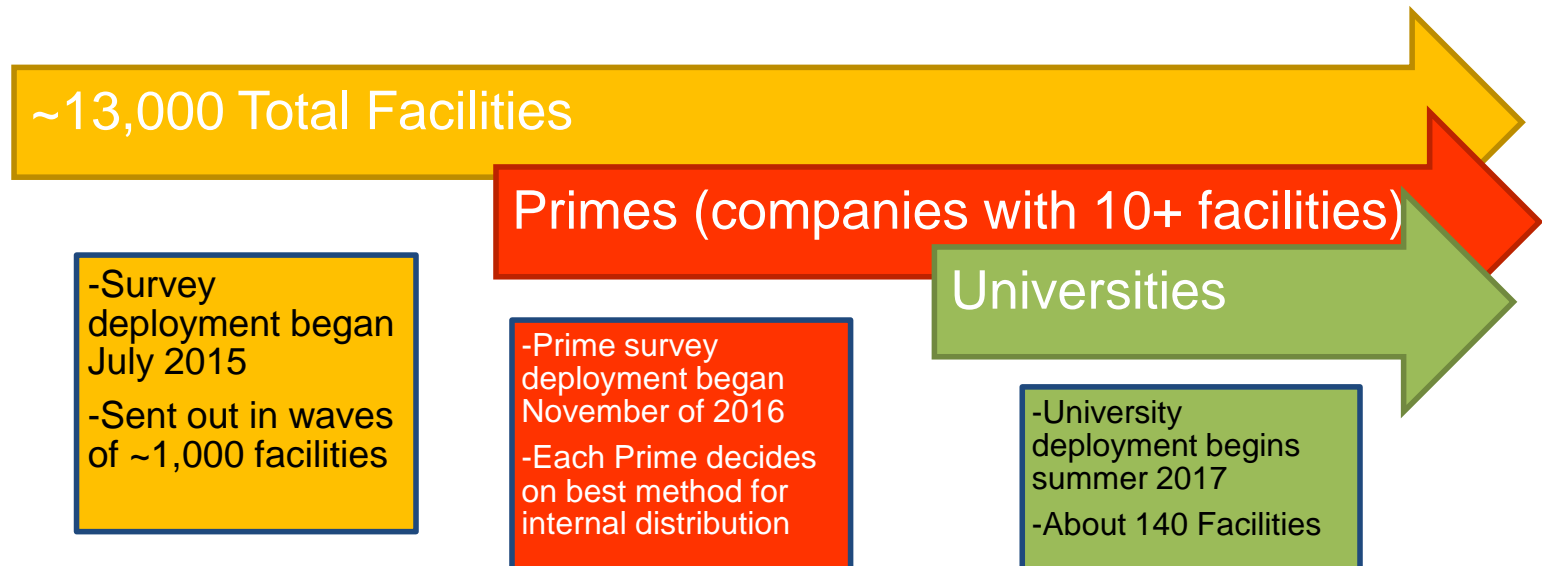
## Cleared Facilities Assessment

- Partnership with U.S. Department of Defense, Defense Security Service (DSS)
- Covers all operations at respondents' locations, including but not limited to DSS cleared areas
- Survey designed to collect data covering 25 product/service categories with 210 product and service areas



# DSS Project Schedule

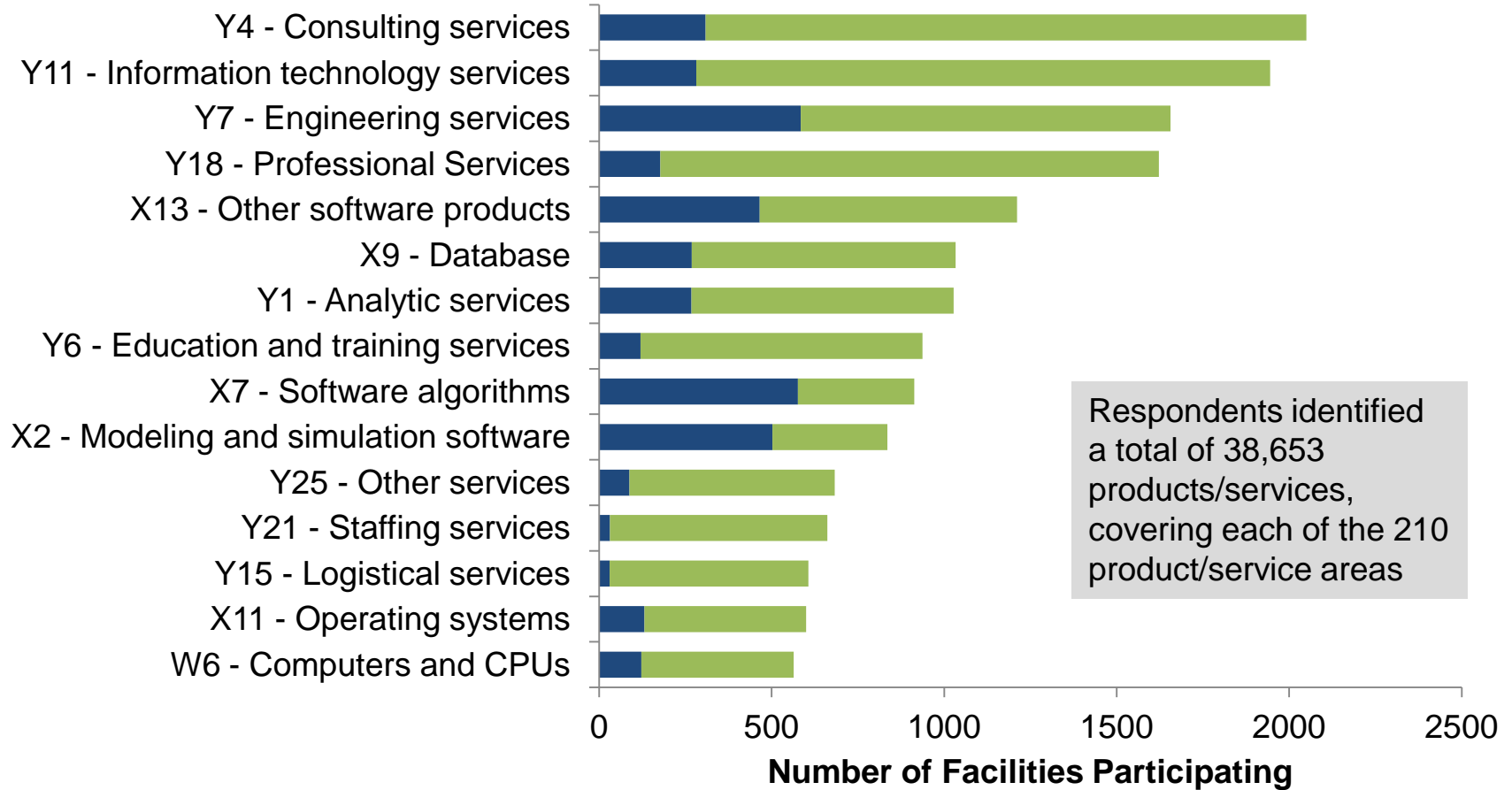
- DSS/BIS coordinated undertaking to survey all DSS cleared facilities
- 10,000 Surveys deployed to date





## Most Identified Product/Service Areas

210 total product/service areas separated into 25 categories



Respondents identified a total of 38,653 products/services, covering each of the 210 product/service areas

■ Provide and Perform R&D    ■ Provide Only (No R&D)



## Foreign Corporate Activity

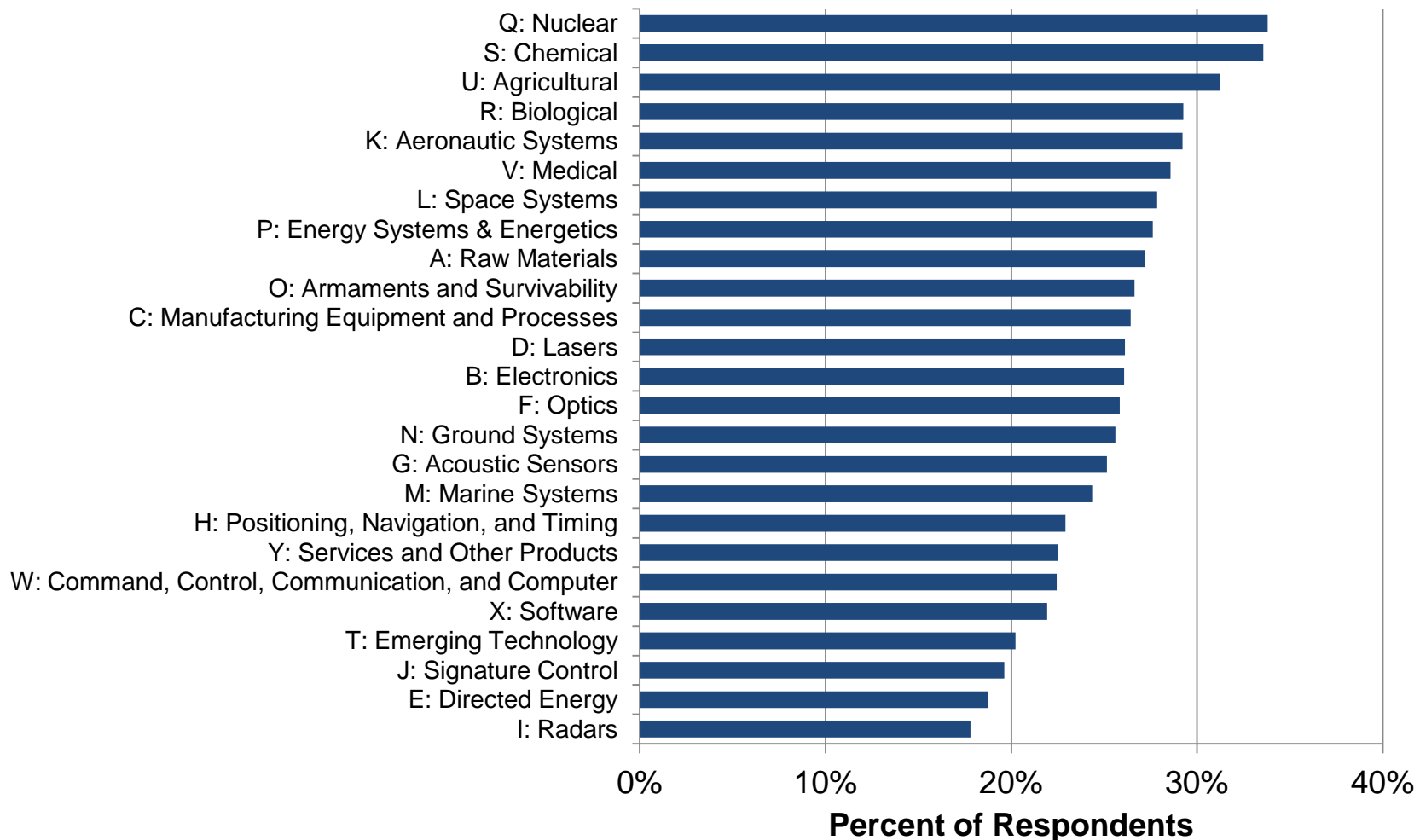
- 212 respondent organizations\* engaged in a total of 477 mergers, acquisitions, divestitures, or joint ventures with foreign entities
  - 184 acquisitions by 113 companies
    - Companies acquired in U.K (44), Canada (28), Australia (13), France (8), 38 others
  - 14 mergers by 8 companies
    - Companies merged with in South Korea (3), U.K. (3), France (2), 6 others
  - 231 joint ventures by 97 companies
    - Joint ventures with entities in U.K (29), Japan (23), China (20), U.A.E. (13), Saudi Arabia (12), Mexico (12), 51 others
  - 48 divestitures by 34 companies
    - From businesses in U.K. (6), Mexico (6), Germany (5), France (4), Canada (3), 21 others
- 35 respondents had foreign parent companies:
  - U.K. (10), Canada (5), France (4), South Korea (4), 8 others

\* Multi-facility organizations typically provided corporate level merger data; as a result not all data is at the facility level





# Percent of Respondents in Each Product/Service Category Engaged in Mergers, Acquisitions, and Joint Ventures



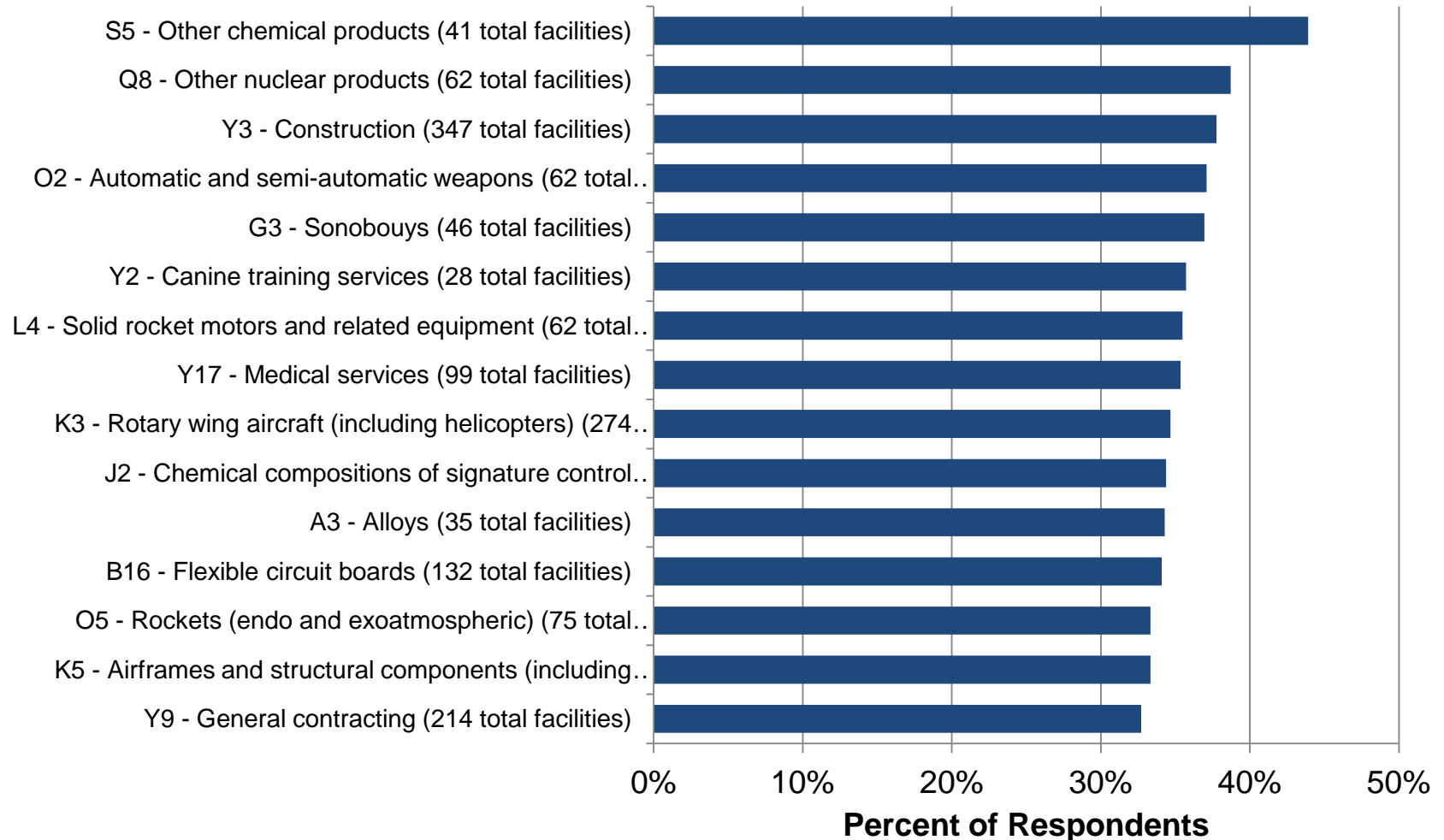
Q2

6,884 respondents

Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED



# Percent of Respondents in Each Product/Service Area Engaged in Mergers, Acquisitions, and Joint Ventures



Q2

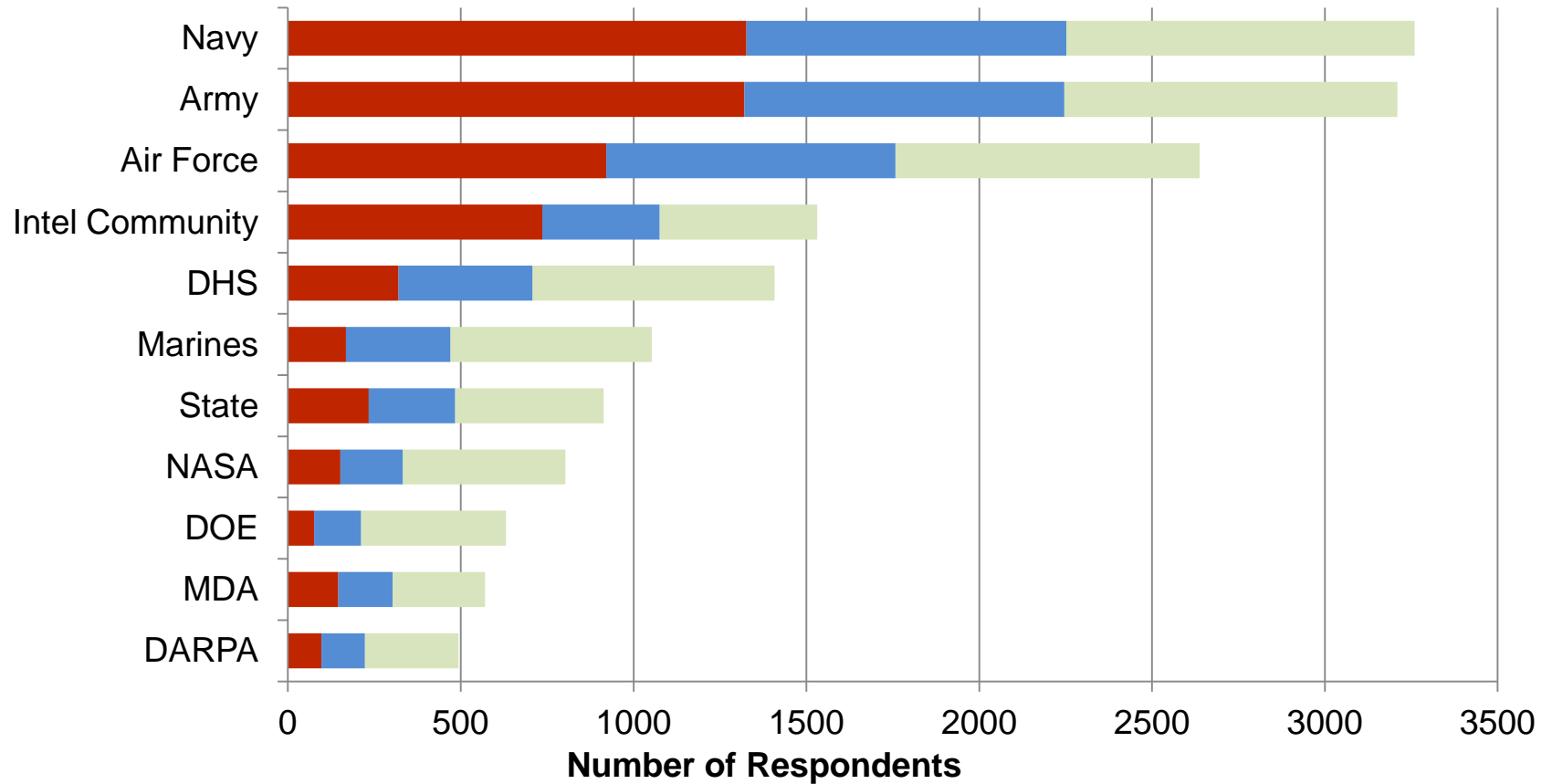
6,884 respondents

Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED



## Support of USG Agencies by Dependence on Agency

Percent of Location's Total Sales that Support USG Agency



**Percent of Total Sales to USG Agency**  
■ 25% or More    ■ 5-25%    ■ Under 5%

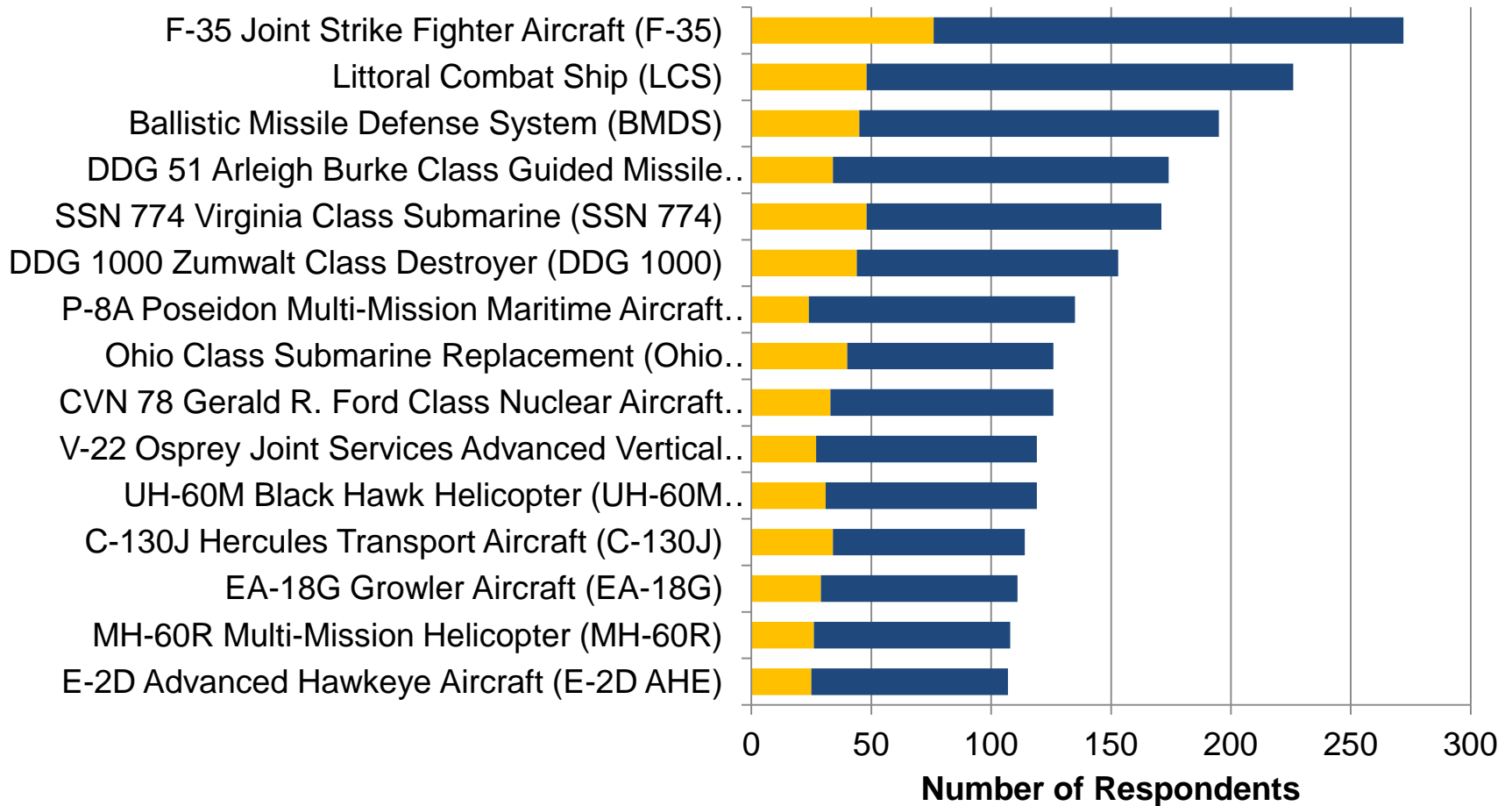
Q4a

6,884 respondents

Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED



# Most Frequently Identified USG Programs

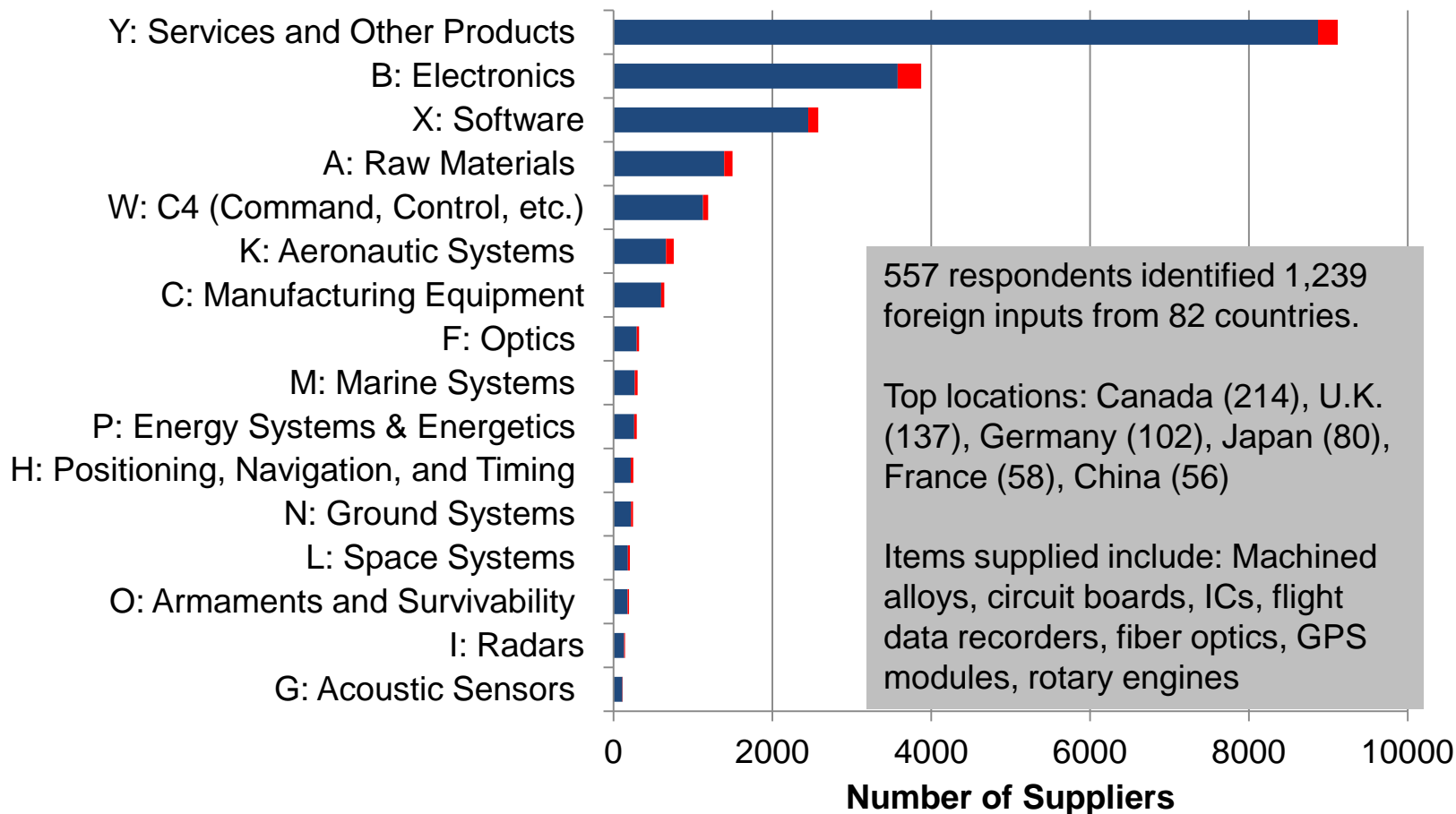


■ Elevated Financial Risk    ■ Low/Neutral Financial Risk

6,884 respondents



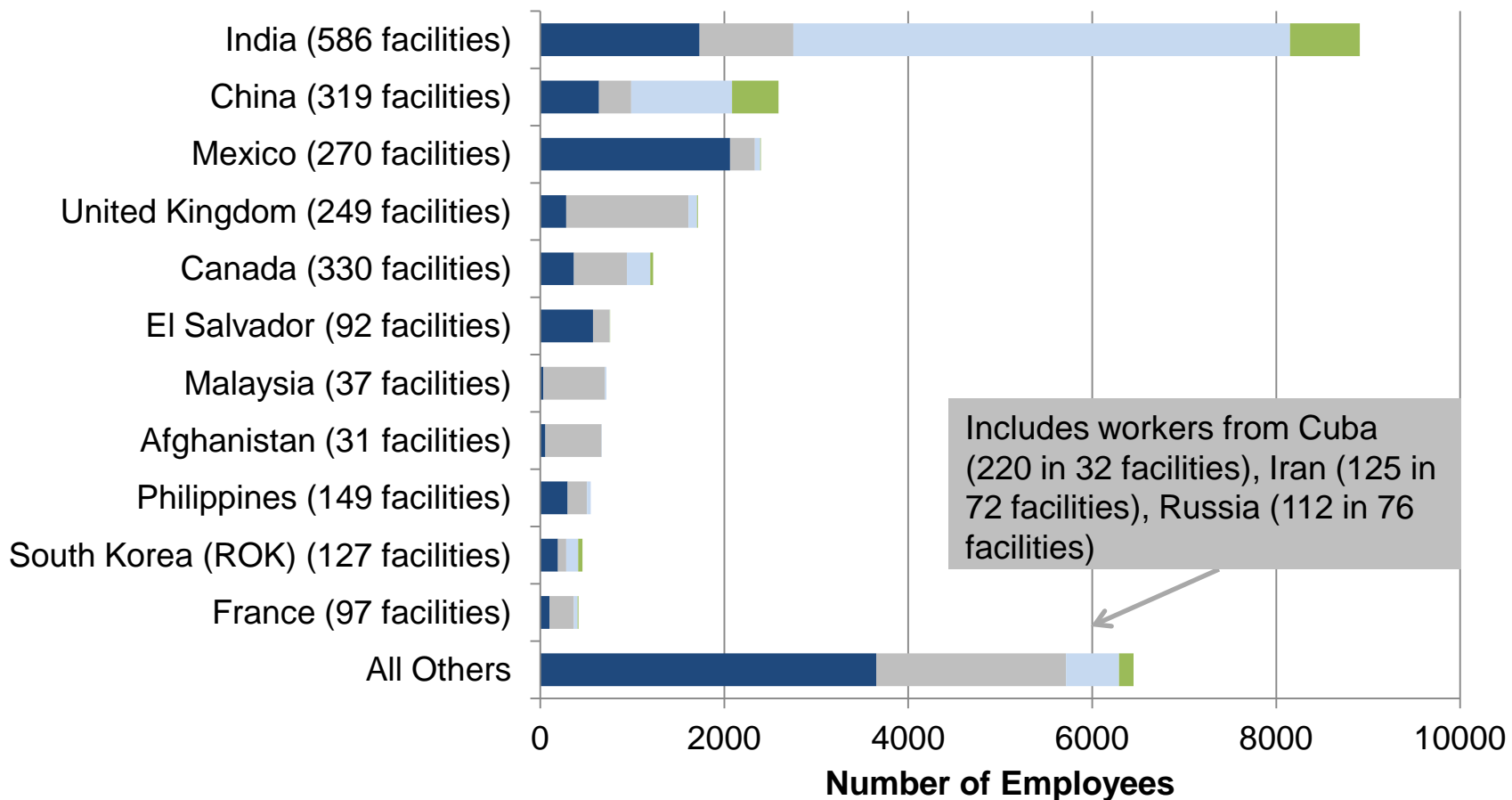
## Type and Location of Critical Suppliers





# Non-U.S. Citizen Employees at U.S. Facilities

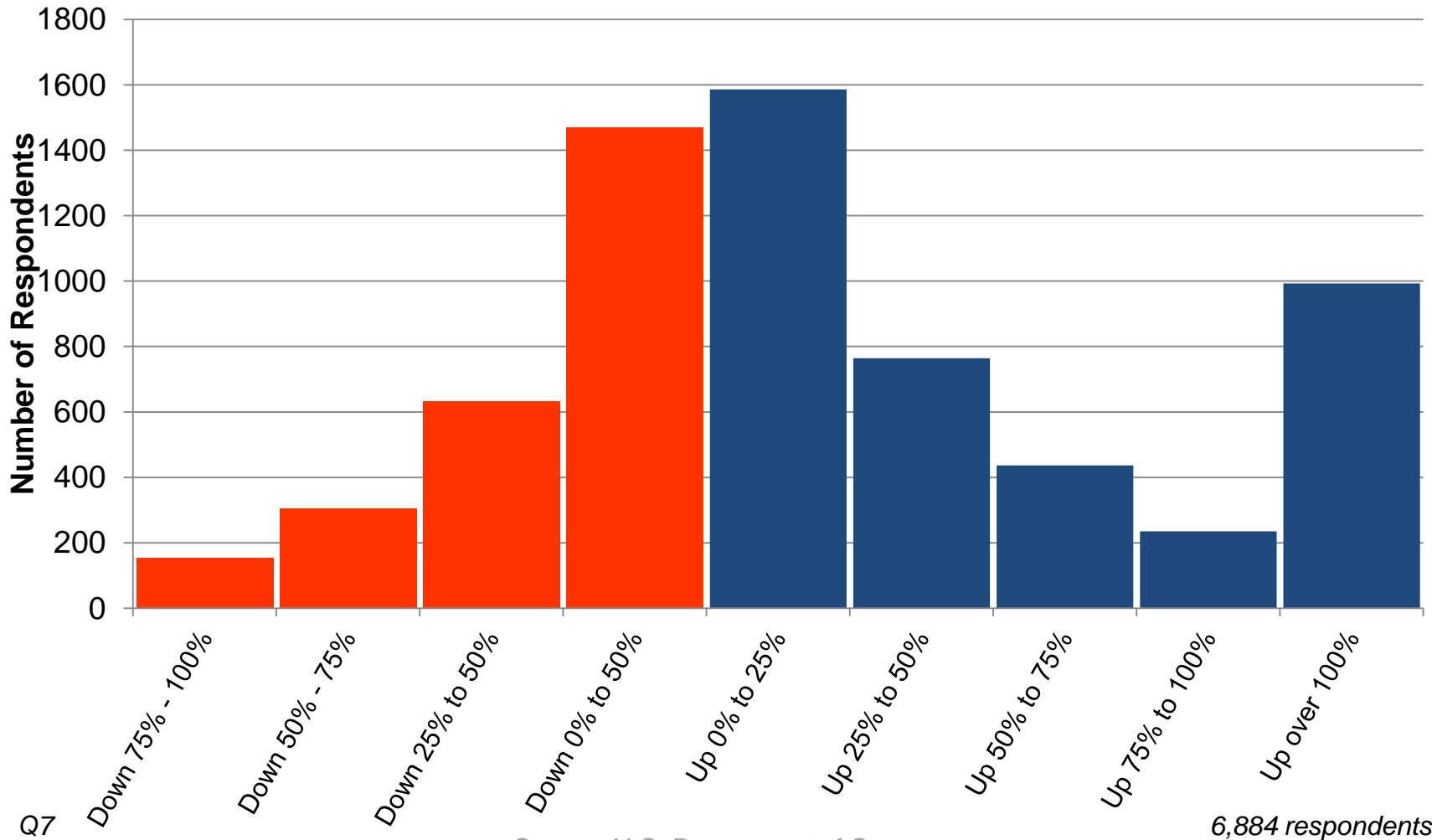
Total of 26,958 non U.S. citizen workers listed by country of citizenship





# Sales Performance

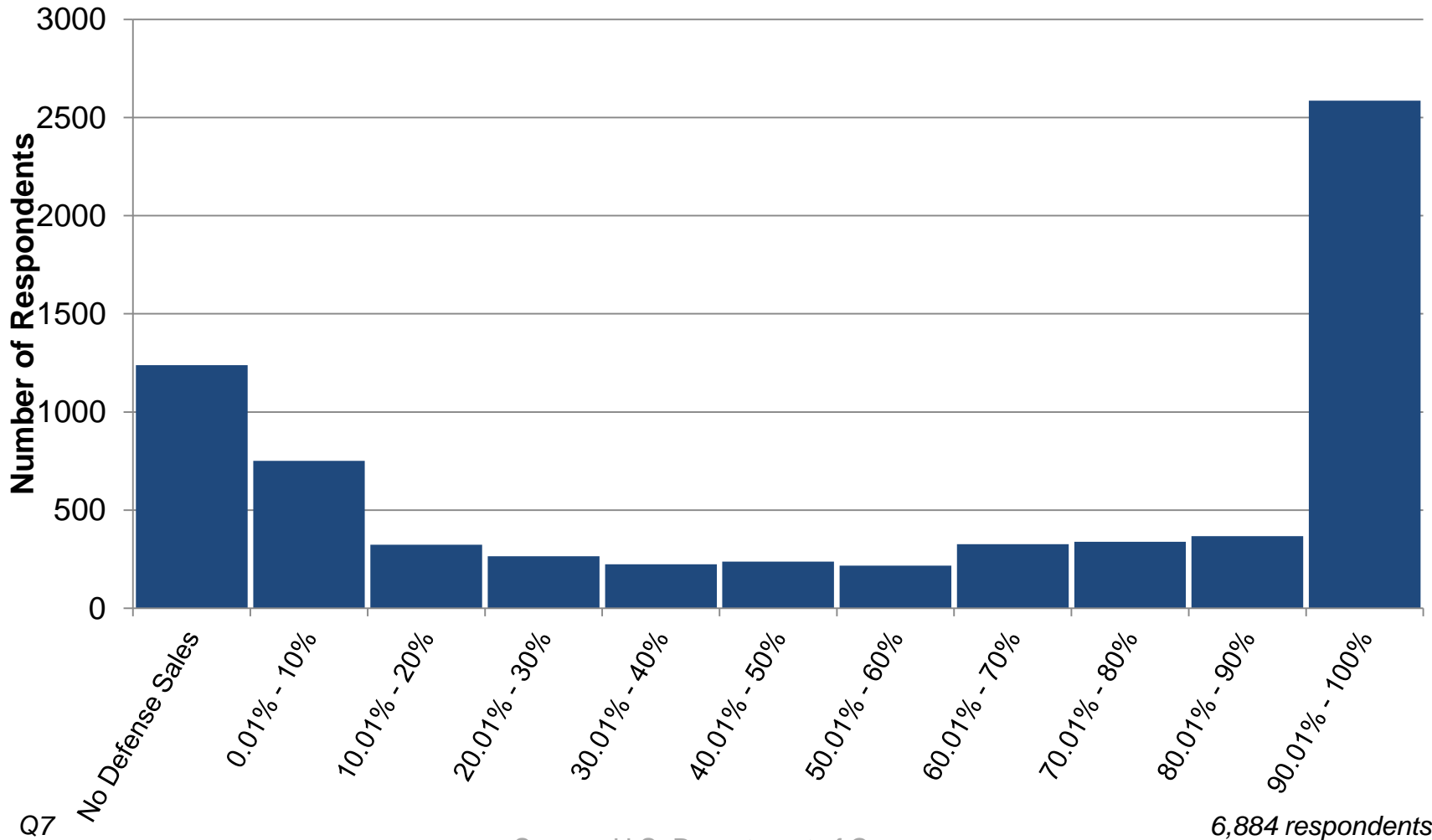
60% of respondents saw sales increase from year 1 to year 3



Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED



# Defense Sales as a Percentage of Total Sales



Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED

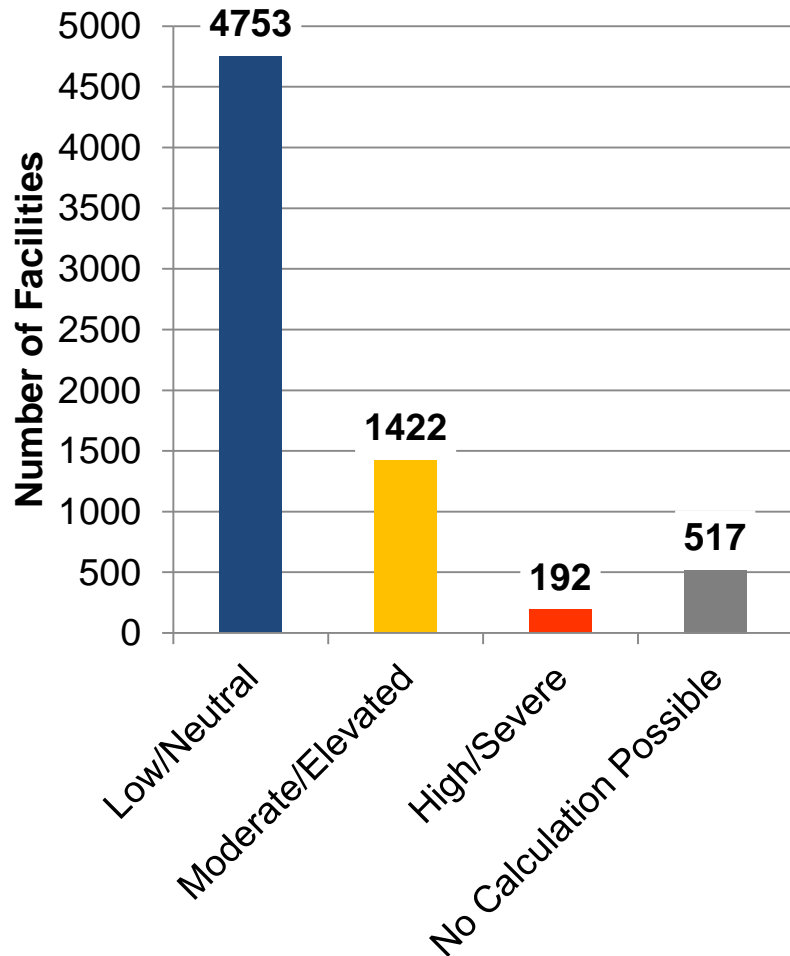
6,884 respondents

Q7





## Financial Risk



- Financial Risk calculation based primarily on profit margins, debt levels, liquidity
- Most of the complete responses allowed for a financial risk measurement
- Reasons for lack of measurement:
  - Source data mismatches (e.g. reporting income statement data at the facility level and balance sheet data at the corporate level)
  - Unavailable or missing data (e.g. no assets or sales listed, newly formed business)



## Cyber Security Measures in Place by Respondent Size

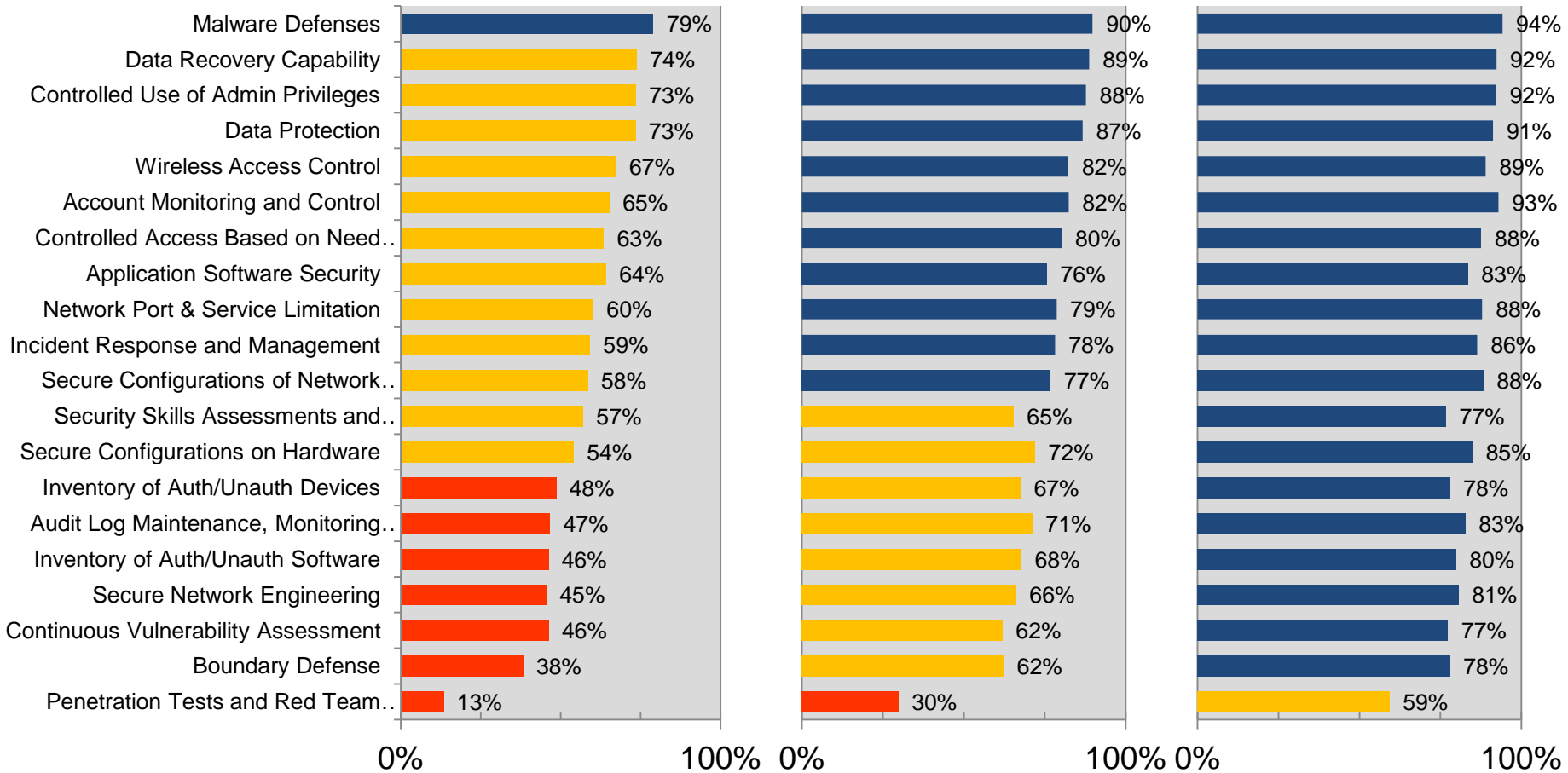
Small: Under \$25M in annual sales; Medium: \$25M - \$100M in annual sales; Large: Over \$100M in annual sales



### Small (5,353)

### Medium (879)

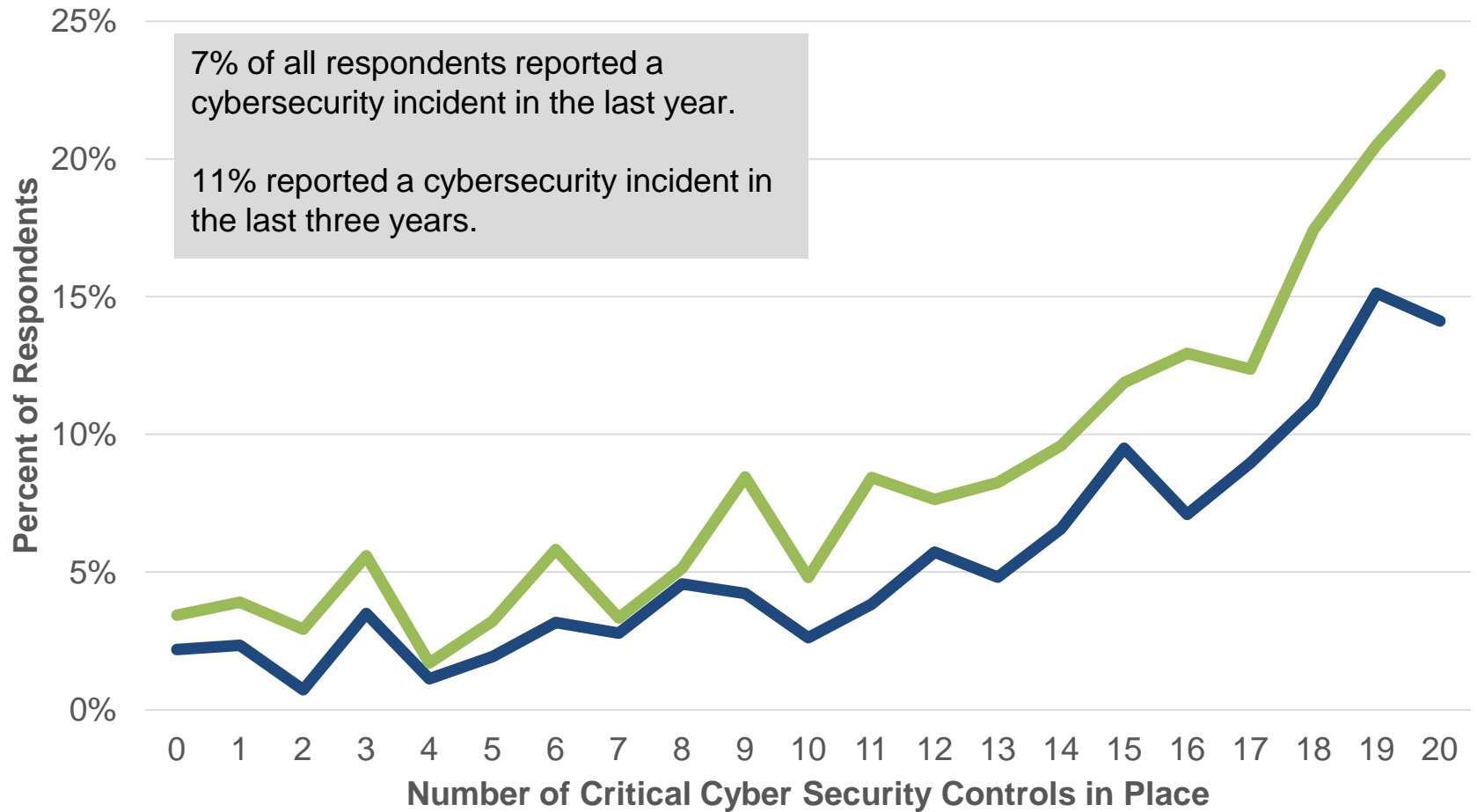
### Large (652)



Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED

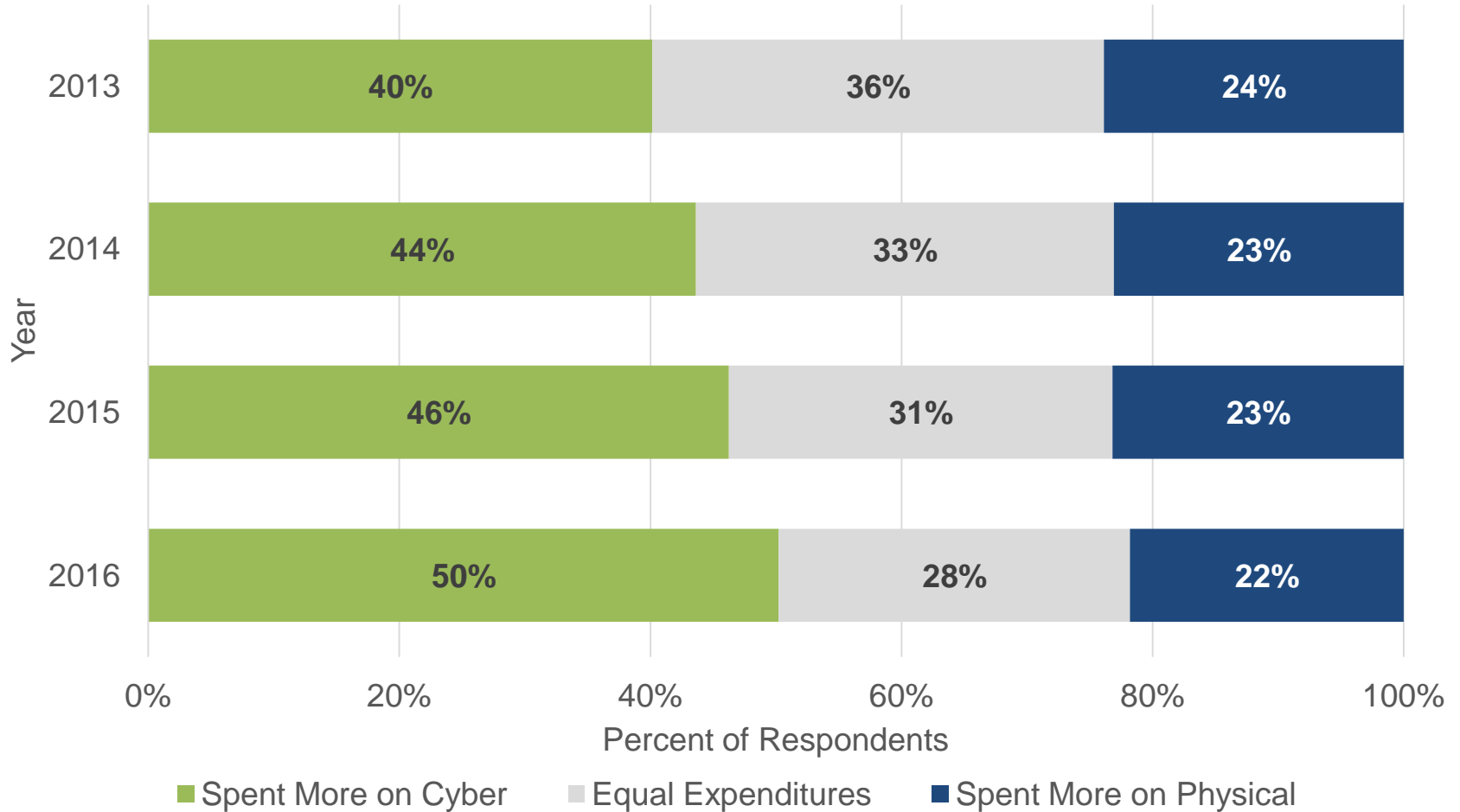


# Percent of Respondents Reporting a Cybersecurity Incident by Number of Controls in Place



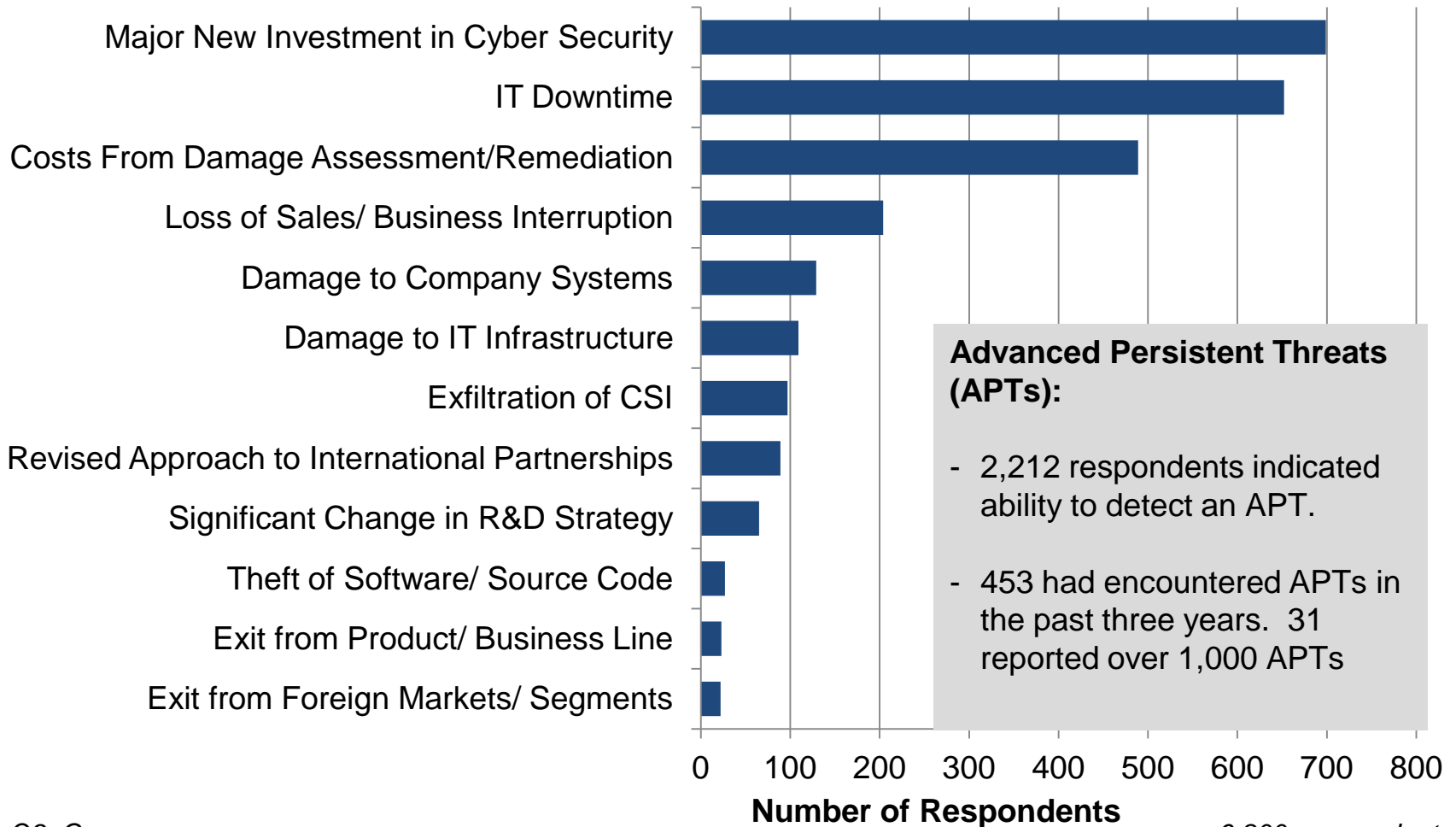


# Trends in Spending on Cyber and Physical Security





# Impacts/Actions from Malicious Cyber Activity

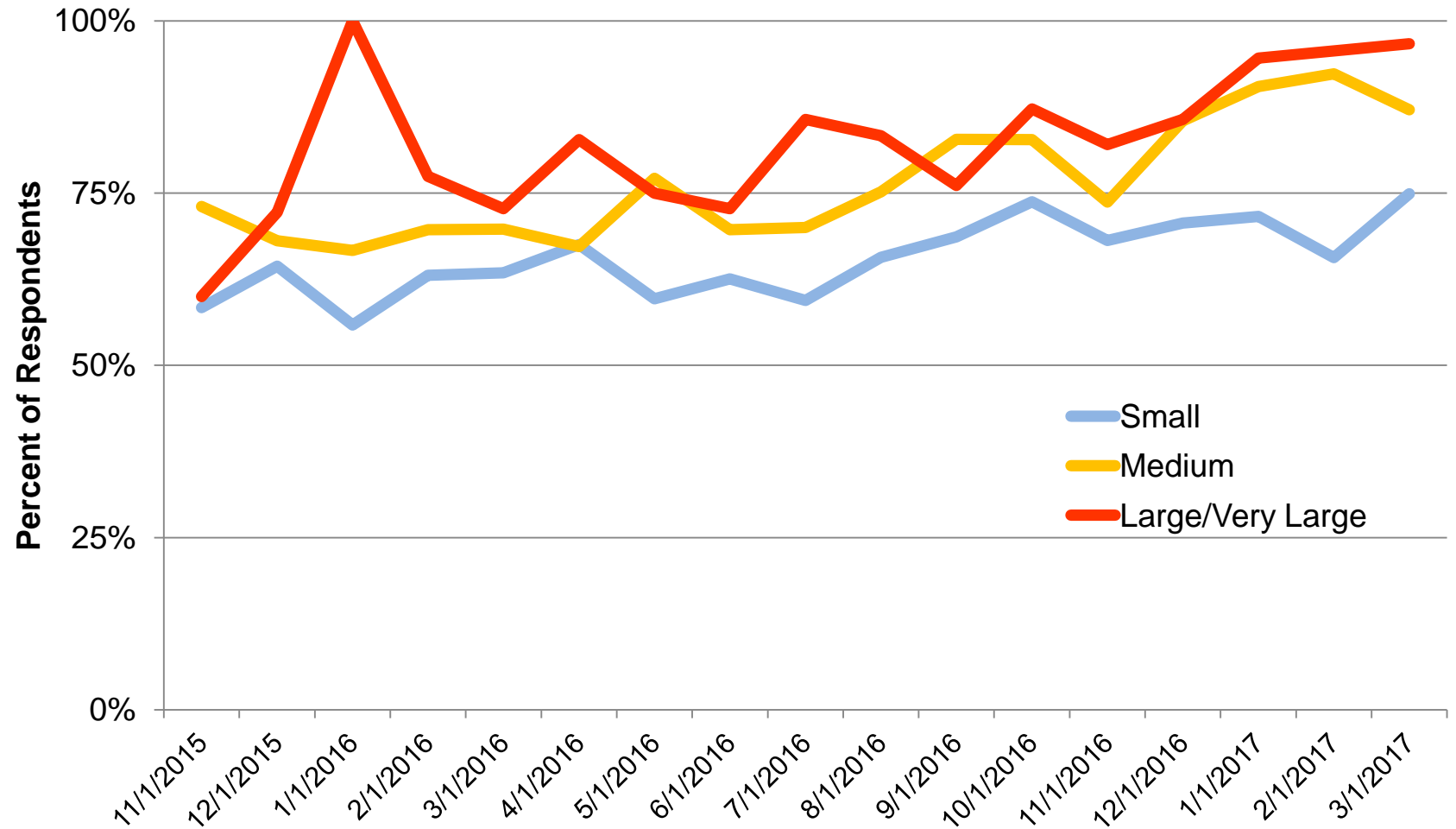


Q9aC

6,800 respondents



# Familiarity with NIST Cyber Framework by Submission Date



Q13a

Source: U.S. Department of Commerce, Bureau of Industry and Security. UNCLASSIFIED

6,884 respondents



## Top Organizational Challenges

Respondents identified all challenges to operations and ranked their top five challenges





# Interest in USG Assistance



Q13B

6,884 respondents

Source: U.S. Department of Commerce,  
Bureau of Industry and Security. UNCLASSIFIED





# BIS/OTE Contact Information

David Boylan-Kolchin  
Trade and Industry Analyst  
(202) 482-7816  
[david.boylan@bis.doc.gov](mailto:david.boylan@bis.doc.gov)

Moriah Phillips  
Trade and Industry Analyst  
(202) 482-2249  
[moriah.phillips@bis.doc.gov](mailto:moriah.phillips@bis.doc.gov)

Erika Maynard  
Special Projects Manager  
(202) 482-5572  
[Erika.Maynard@bis.doc.gov](mailto:Erika.Maynard@bis.doc.gov)

Brad Botwin  
Director, Industrial Studies  
(202) 482-4060  
[brad.botwin@bis.doc.gov](mailto:brad.botwin@bis.doc.gov)

U.S. Department of Commerce  
Bureau of Industry and Security  
1401 Constitution Avenue, NW  
HCHB 1093  
Washington, DC 20230

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