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DEFENSE INDUSTRIAL BASE ASSESSMENT:
U.S. Space Industry 'Deep Dive'

U.S. Government Survey

SCOPE OF ASSESSMENT

The U.S. Department of Commerce, Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE), in coordination with the U.S. Air Force, the National Aeronautics and Space Administration (NASA), and the National Reconnaissance Office (NRO), is conducting an industrial base survey and assessment of the U.S. space industry. Your organization has been identified as a direct and/or indirect supplier of products and/or services to the U.S. Government for space-related applications.

The principal goal of this assessment is to gain an understanding of the intricate supply chain network supporting the development, production and sustainment of products and services across the defense, intelligence, civil and commercial space sectors. The data will also be used to understand the multi-tier structure of the U.S. space industry, its interdependencies, and the commonality of suppliers and products across programs and agencies. Historically, the U.S. Government has had limited visibility into the issues and challenges facing the lower tiers of the space industrial base. Through the data collected in this survey, agencies will be better informed in order to develop targeted planning, acquisition, and investment strategies to ensure the ability of the industry to support critical defense and civil missions and programs. In addition, this survey will allow you to highlight your organization's unique skills and capabilities to the U.S. Government.

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law (50 U.S.C. app. Sec. 2155). Failure to respond can result in a maximum fine of $10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C App. Sec. 2155). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Not withstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUEST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 14 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. 0694-0119), Washington, D.C. 20503.

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Important Note:
The drop-down menus in Sections 3-6 are based on your responses to prior sections. In order for them to work properly, you must complete Sections 3-6 in order.

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Section I	GENERAL INSTRUCTIONS
A.	Your organization is required to complete this survey using an Excel template, which can be downloaded from the U.S. Department of Commerce, Bureau of Industry and Security (BIS) website: www.bis.doc.gov/SpaceDeepDiveGovt. At your request, survey support staff will e-mail the Excel survey template directly to your organization. For your convenience, a PDF version of the survey is available on the BIS website to aid internal data collection. DO NOT submit the PDF version of your organization's response to BIS.
B.	Respond to every question. Surveys that are not fully completed will be returned for completion. Use comment boxes to provide any information to supplement responses provided in the survey form. Make sure to record a complete answer in the cell provided, even if the cell does not appear to expand to fit all the information. **DO NOT COPY AND PASTE RESPONSES WITHIN THIS SURVEY.** Survey inputs should be made manually, by typing in responses or by use of a drop-down menu. The use of copy and paste can corrupt the survey template. If your survey response is corrupted as a result of copy and paste responses, a new survey will be sent to you for immediate completion.
C.	**Do not disclose any classified information in this survey form.** However, aggregated employment, R&D expenditures, etc. are permitted.
D.	If information is not available from your organization's records in the form requested, you may furnish estimates.
E.	In some questions on this survey, definitions of terms are included in comment boxes. These are noted by the small red triangle in the upper-right corner of a relevant box. To see the definition, move your mouse over the box with the red triangle.
F.	Questions related to this Excel survey should be directed to: SpaceDeepDiveGovt@bis.doc.gov (E-mail is the preferred method of contact). You may also direct your questions to: Jason Bolton, Trade and Industry Analyst, (202) 482-5936 Justyna Modzelewska, Trade and Industry Analyst, (202) 482-5415
G.	Upon completion, review and certification of the Excel survey, transmit the survey via e-mail attachment to: SpaceDeepDiveGovt@bis.doc.gov. Be sure to retain a copy for your records.
H.	For questions related to the overall scope of this Industrial Base assessment, contact: Brad Botwin, Director, Industrial Studies Office of Technology Evaluation, Room 1093 U.S. Department of Commerce 1401 Constitution Avenue, NW Washington, DC 20230 To contact Mr. Botwin, please call (202) 482-7808. DO NOT submit completed surveys to Mr. Botwin's postal or personal e-mail address; all surveys must be submitted electronically to SpaceDeepDiveGovt@bis.doc.gov

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Section II	Definitions
Term	Definition
Applied Research	Systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met. This activity includes work leading to the production of useful materials, devices and systems or methods, including design development and improvement of prototypes and new processes.
Authorizing Official	Executive officer of the organization or business unit or other individual who has the authority to execute this survey on behalf of the organization.
Basic Research	Systematic, scientific study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts.
Commercial and Government Entity (CAGE) Code	Commercial and Government Entity (CAGE) Code identifies companies doing or wishing to do business with the U.S. Federal Government. The code is used to support mechanized government systems and provides a standardized method of identifying a given facility at a specific location. Find CAGE codes at http://www.logisticsinformationservice.dla.mil/BINCS/begin_search.aspx
Component	Any raw material, substance, piece, part, software, firmware, labeling, or assembly which is intended to be included as part of the finished, packaged, and labeled device.
Cost-Plus Contract	A contractor is paid for all of its allowed expenses to a set limit plus additional payment to allow for a profit. Also referred to as a cost reimbursement contract.
Counterfeit	For the purpose of this survey, a counterfeit is a part, material, or other product that is not genuine because it 1) is an unauthorized copy; 2) does not conform to original design, model, and/or performance standards; 3) is not produced by the original manufacturer or is produced by unauthorized contractors; 4) is off-specification, defective, or used product sold as "new" or working; or 5) has incorrect or false markings and/or documentation.
Customer	An entity to which an organization directly delivers the product or service that the facility produces. A customer may be another company or another facility owned by the same parent organization. The customer may be the end user for the item but often will be an intermediate link in the supply chain, adding additional value before transferring the item to yet another customer.
Data Universal Numbering System (DUNS)	A nine-digit numbering system that uniquely identifies an individual businesses. Find DUNS numbers at http://fedgov.dnb.com/webform
Distributor	An entity that buys noncompeting products or product lines, warehouses them, and resells them to retailers or direct to the end users or customers.
Finished Product	Any product, or accessory to any product, that is suitable for use or capable of functioning, whether or not it is packaged or labeled.
Firm-Fixed-Price (FFP) Contract	Contract price is the price bid, with no incentives or fees added. Cost responsibility is placed wholly on the contractor.
Full Time Equivalent (FTE) Employees	Employees who work for 40 hours in a normal work week. Convert part-time employees into "full-time equivalents" by taking their work hours as a fraction of 40 hours.
Indefinite-Quantity Contract	A contract that provides for furnishing an indefinite quantity, within stated limits, of specified supplies or services, during specified contract period, with deliveries to be scheduled by the timely placement of orders upon the contractor.
Indefinite-Delivery Contract	A type of contract used when the exact time of delivery is not known.
Labor-Hours Contract	A variation of the time-and-materials contract, differing only in that materials are not supplied by the contractor.
Manufacturer	An organization that uses labor and capital to convert raw materials into finished or semifinished goods. For the purpose of this survey, manufacturing includes integration and assembly.
Manufacturing Material	Any material or substance used in or used to facilitate the manufacturing process, a concomitant constituent, or a byproduct constituent produced during the manufacturing process, which is present in or on the finished device/product.
North American Industry Classification System (NAICS) Code	North American Industry Classification System (NAICS) codes identify the category of product(s) or service(s) provided by your organization. Find NAICS codes at http://www.census.gov/epcd/www/naics.html
Precious Metals	Metals that have high economic value due to their rarity. Most commonly gold, silver, platinum, and palladium.
Product/Process Development	Conceptualization and development of a product prior to the production of the product for customers.
Rare Earth Element	A category that includes element numbers 57-71 of the periodic table (lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, and ytterbium) as well as yttrium (39) and scandium (21).
Requirements Contract	An indefinite-delivery type contract that provides for filling all actual purchase requirements of specific supplies or services of designated activities during a specified contract period with deliveries to be scheduled by the timely placement of orders upon the contractor.
Service	An intangible product (contrasted to a good, which is a tangible product). Services typically cannot be stored or transported, are instantly perishable, and come into existence at the time they are bought and consumed.
Single Source	An organization that is designated as the only accepted source for the supply of parts, components, materials, or services, even though other sources with equivalent technical know-how and production capability may exist.
Sole Source	A organization that is the only source for the supply of parts, components, materials, or services. No alternative U.S. or non-U.S. based suppliers exist other than the current supplier.

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Space-Related	Any product, service, or object that is a) used in or launched into space; b) used to directly or indirectly support space applications from Earth; and/or c) used to manufacture any product that is used in space or directly supports space applications. The product, service, or object does not have to be specifically intended to support space applications.
STEM	STEM stands for Science, Technology, Engineering and Mathematics.
Supplier	An entity from which your organization obtains inputs. A supplier may be another firm with which you have a contractual relationship, or it may be another facility owned by the same parent organization. The inputs may be goods or services.
Time-and-Materials Contracts	A time-and-materials contract may be used only when it is not possible at the time of placing the contract to estimate accurately the extent or duration of the work or to anticipate costs with any reasonable degree of confidence.
United States	The "United States" or "U.S." includes the 50 states, Puerto Rico, the District of Columbia, the island of Guam, the Trust Territories, and the U.S. Virgin Islands.
Utilization Rate	The fraction of an organization's potential output that is actually being used in current production, where potential output is based on a 7 day-a-week, 3x8-hour shift production schedule.
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Section III **Respondent Profile**

Your organization has been identified by the United States Government as a direct or indirect supplier of products and/or services used for space-related activities.

For the purposes of this survey, a product is a tangible good. A service is an intangible item or process which includes, but is not limited to, distribution, inspection, maintenance, management, material preparation, design, research and development, testing, etc.

If you feel your organization should be exempt from this survey, please e-mail your request, with your reasoning, to SpaceDeepDiveGovt@bis.doc.gov.

A.	Select the description that best identifies your organization:	
B.	From the list below, identify any of the market segments that your organization currently serves:	
	Aircraft	
	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)	
	Electronics	
	Energy	
	Ground Vehicles (Military)	
	Healthcare	
	Missiles	
	Ships	
	Space	
	Other (specify)	

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Section 1.a	Organization Information	
A.	Provide the following information for the level at which your organization is responding to this survey (Corporate/Whole Organization or Business Unit/Division).	
	Organization Name	
	Business Unit/Division Name (if applicable)	
	Street Address	
	City	
	State	
	Zip Code	
	Website	
	Phone Number	
	Primary DUNS Code for this Level (nine-digit number with no dashes)	

B.	Point of Contact regarding this survey:				
	Name	Title	Phone Number	E-mail Address	State

Comments	

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Section 1.b **Organization Information (cont.)**

Please provide the following identification codes (see definitions), as applicable, to your organization.

*Find your organization's Commercial and Government Entity (CAGE) Codes at http://www.logisticsinformationservice.dla.mil/BINCS/begin_search.aspx

**Find your organization's North American Industry Classification System (NAICS) codes at http://www.census.gov/epcd/www/naics.html

A.	Commercial and Government Entity (CAGE) Code(s)*		NAICS (6-digit) Code(s)**	

Comments:

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Section 1.c	Organization Information (cont.)	
A.	From the list below, select all applicable business lines your organization currently performs. Select **one** business line as your "primary business line." Identify all other business lines your organization currently performs as "additional business lines."	
	Distribution/brokerage/reseller/retail	
	Inspection and quality control	
	Integration (product, systems integration)	
	Information technology (software, hardware, installation)	
	Maintenance/aftermarket/repair/refurbishing services	
	Manufacturing (including assembly)	
	Manufacturing systems development and management	
	Material finishing (machining, coating, plating, heat treating, etc.)	
	Material preparation (casting, forming, molding, forging, etc.)	
	Product and design engineering (tooling, new processes, etc.)	
	Professional services (legal, accounting, consulting, etc.)	
	Research and development	
	Raw materials provider	
	Testing/evaluation/validation	
	Provider of services not specified on this list	

Comments	

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Section 2 **Mergers, Acquisitions, Divestitures and Joint Ventures**

A. Identify your organization's five most recent **space-related U.S.** mergers, acquisitions, and divestitures from 2009 to date, if applicable. Record the merged/acquired/divested organization's name(s) and location, the year the merger/acquisition/divestiture occurred, and the primary objective of the merger/acquisition.

	Organization Name	Type of Activity	State	Year	Primary Objective
1.					
2.					
3.					
4.					
5.					

B. Identify your organization's five most recent **space-related non-U.S.** mergers, acquisitions, and divestitures from 2009 to date, if applicable. Record the merged/acquired/divested organization's name(s) and location, the year the merger/acquisition/divestiture occurred, and the primary objective of the merger/acquisition.

	Organization Name	Type of Activity	Country	Year	Primary Objective
1.					
2.					
3.					
4.					
5.					

C. Identify your organization's current **space-related** joint venture relationships, including public/private R&D partnerships. Provide the name of the organization/entity involved, indicate whether it is a U.S. or non-U.S. enterprise, and provide a description of the joint venture's purpose (e.g. patent licensing, co-production, product integration, after-market support, etc.).

	Organization/Entity Name	U.S./Non-U.S.	Primary Objective of Relationship
1.			
2.			
3.			
4.			
5.			

Comments:	

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Section 3.a Space-Related Product and Service Segments

In Section 3, your organization will be asked to identify the products and services it manufactures, distributes, and/or provides. For the purpose of this survey, space-related products and services have been divided into 16 general segments, as detailed below. To ensure the accurate documentation of your organization's capabilities, products that your organization manufactures for integration into other items (that you do not sell separately to external customers) **should be identified** in the appropriate section.

Please note that your organization may be indirectly supporting space-related applications even though you may not consider your products and/or services space-related. In these circumstances, you must still identify the products and/or services that you manufacture, distribute, and/or provide in the subsequent section.

Finally, if your organization's specific product and/or service is not listed in our survey, please identify it in the 'Other' boxes provided in the most appropriate product and/or service segment.

The list below contains clickable links that can move you to a particular product and/or service segment. You may skip to the section with the products/services that pertain to your organization, but be sure to review all segments to ensure you do not omit any required information.

A	Spacecraft & Launch Vehicles
B	Propulsion Systems & Fuels
C	Navigation & Control
D	Communications Systems
E	Space Survivability, Environmental Control/Monitoring, and Life Support
F	Payload Instruments & Measurement Tools
G	Ground Systems
H	Non-Earth Based Surface Systems
I	Power Sources & Energy Storage
J	Electronic Equipment
K	Computer Hardware & Robotics
L	Software
M	Materials, Structures, and Mechanical Systems
N	Manufacturing Tools & Specialty Equipment
O	Services
P	Research & Development

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Section 3.b **Products and Services**

Identify any of the products and/or services your organization manufactures or distributes below. For each product/service area selected, provide a brief description of the specific items your organization manufactures or distributes. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global manufacturer/distributor of any specific items in each product/service area. If so, describe them in the appropriate box.

Note: Services and reserach & development areas are listed in Section 3.i.

A: Spacecraft & Launch Vehicles

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
A1	Astronomical satellites				
A2	Atmospheric balloon packages				
A3	Atmospheric probes				
A4	Communications satellites				
A5	Earth observation satellites (excluding meteorological, remote sensing, and imaging)				
A6	Landers				
A7	Manned spacecraft				
A8	Meteorological satellites				
A9	Microsatellites				
A10	Navigation satellites				
A11	Remote sensing and imaging satellites				
A12	Satellite or spacecraft buses				
A13	Search and rescue satellites				
A14	Space habitats				
A15	Surface penetrators				
A16	Surface rovers				
A17	Unmanned space exploration spacecraft				
A18	Small launch vehicles (<2,000 kg payload)				
A19	Medium launch vehicles (2,000 - 20,000 kg payload)				
A20	Heavy launch vehicles (20,000 - 50,000 kg payload)				
A21	Super-heavy launch vehicles (50,000 kg+ payload)				
A22	Other spacecraft/launch vehicles				

B: Propulsion Systems & Fuels

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
B1	Casings				
B2	Chambers				
B3	Cold gas propulsion systems and their components				
B4	Cryo fuel transfer, storage, and equipment				
B5	Hybrid rocket motors, engines, and their components (including HTPB-based systems)				
B6	Igniters				
B7	Ion propulsion systems and their components				
B8	Liquid rocket motors, engines, and their components				
B9	Non-Toxic Monopropellant propulsion systems and their components				
B10	Nozzles				
B11	Nuclear thermal electric propulsion systems and components				
B12	Propellant tanks				
B13	Solar electric propulsion systems and their components				
B14	Solid rocket motors, engines, and their components				
B15	Thermal electric propulsion systems and their components				
B16	Thrusters not specified above				
B17	Other space-related propulsion systems				
B18	Cutting, lubricating, and hydraulic oils and greases				
B19	Fuel oils				
B20	HTPB (Hydroxyl-Terminated Polybutadiene) fuel				
B21	LO2/LCH4 (Liquid Oxygen/Liquid Methane) fuel				
B22	LOX/LH2 (Liquid Oxygen/Liquid Hydrogen) fuel				
B23	Other liquid propellants and fuels - petroleum-based (and constituent ingredients)				
B24	Solid fuels (and constituent ingredients)				
B25	Other space-related fuels				

Comments:	

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Section 3.c **Products and Services (cont.)**

Identify any of the products and/or services your organization manufactures or distributes below. For each product/service area selected, provide a brief description of the specific items your organization manufactures or distributes. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global manufacturer/distributor of any specific items in each product/service area. If so, describe them in the appropriate box.

Note: Services and reserach & development areas are listed in Section 3.i.

C: Navigation & Control

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
C1	Accelerometers				
C2	Actuators				
C3	Altitude determination and control equipment and components				
C4	Altitude determination and control sensors (including altimeters)				
C5	Earth sensors				
C6	Entry, descent, and landing systems				
C7	Gimbal systems and equipment				
C8	GPS equipment				
C9	Guidance, navigation, and control equipment and components				
C10	Gyroscopes				
C11	Hazard detection and avoidance systems				
C12	Inertial navigations systems				
C13	Light Detection and Ranging (LIDAR) systems				
C14	Radar systems				
C15	Reaction/momentum wheels				
C16	Rendezvous and docking systems				
C17	Space object capturing systems				
C18	Star trackers				
C19	Sun sensors				
C20	Telemetry equipment and components				
C21	Thrust control systems				
C22	Other space-related navigation and control equipment and components				

D: Communications Systems

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
D1	Antennas/antenna systems				
D2	Communications security/cryptologic equipment				
D3	Delay tolerant networking				
D4	Lunar wireless network				
D5	Microwave systems				
D6	Multiplexers and demultiplexers				
D7	Optical communications systems and components (excluding fiber optic cables)				
D8	Relay equipment				
D9	Routers				
D10	Signal amplifiers				
D11	Signal converters				
D12	Signal receivers and transmitters				
D13	Transponders				
D14	Other space-related communications equipment and components				

Comments:	

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Section 3.d **Products and Services (cont.)**

Identify any of the products and/or services your organization manufactures or distributes below. For each product/service area selected, provide a brief description of the specific items your organization manufactures or distributes. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global manufacturer/distributor of any specific items in each product/service area. If so, describe them in the appropriate box.

Note: Services and reserach & development areas are listed in Section 3.i.

E: Space Survivability, Environmental Control/Monitoring, and Life Support

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
E1	Ablative armor/plating				
E2	Atmospheric monitoring				
E3	Biocides				
E4	Bonding systems				
E5	CO2 removal and recovery systems				
E6	Cooling systems				
E7	Cryogenics/cryo-coolers				
E8	Damage protection systems				
E9	H20 removal and recovery systems				
E10	Heat shields				
E11	Heaters and radiators				
E12	High pressure oxygen supplies				
E13	Hygiene and waste removal and recovery systems				
E14	Insulation				
E15	Oxygen supply systems (including recovery and filtration equipment)				
E16	Pressure control equipment				
E17	Radiation shielding systems				
E18	Space safety/abort systems (destruct receivers, escape systems, etc.)				
E19	Space suits and related equipment				
E20	Spacecraft airlocks				
E21	Thermal monitoring				
E22	Other space survivability systems or components				

F: Payload Instruments & Measurement Tools

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
F1	Atomic clocks				
F2	Bulk plasma				
F3	Chemical analysis instruments				
F4	Cosmic ray sensors (1 MeV)				
F5	Electric field sensors				
F6	Electrical and electrical properties testing and measurement instruments				
F7	Energetic neutral imaging systems				
F8	Environmental chambers and related measuring equipment				
F9	Filtered photometers				
F10	Gas chromatograph				
F11	Geophysical instruments				
F12	Heavy atom detectors				
F13	High energy particle sensors (30 KeV - 2 MeV)				
F14	Hyper-spectral detectors				
F15	Infrared detectors				
F16	Low energy particle sensors (100 eV)				
F17	Low noise high frame rate detectors				
F18	LWIR detectors				
F19	Magnetic field sensors and magnetometers				
F20	Meteorological instruments and apparatus				
F21	Microwave detectors				
F22	Miscellaneous laboratory equipment and supplies				
F23	Multi-spectral detectors				
F24	MWIR detectors				
F25	Near-IR visible detectors				
F26	Nuclear detectors				
F27	Physical properties testing and inspection equipment				
F28	Radiometers				
F29	Single photon detectors				
F30	Spectrometers				
F31	SWIR detectors				
F32	Synthetic aperture radar systems				
F33	Telescopes				
F34	Visible detectors				
F35	X-ray optics				
F36	Other space-related instruments or sensors				

Comments:	

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Section 3.e **Products and Services (cont.)**

Identify any of the products and/or services your organization manufactures or distributes below. For each product/service area selected, provide a brief description of the specific items your organization manufactures or distributes. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global manufacturer/distributor of any specific items in each product/service area. If so, describe them in the appropriate box.

Note: Services and reserach & development areas are listed in Section 3.i.

G: Ground Systems

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
G1	Ground antennas				
G2	Ground-based communications equipment (terminals, relays, etc.)				
G3	Ground tracking, telemetry, and control equipment				
G4	Simulation and/or training machines				
G5	Other space-related ground systems				

H: Non-Earth Based Surface Systems

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
H1	Dust management systems (mitigation and removal)				
H2	Dust tolerant connectors				
H3	Lunar excavation				
H4	Mineral mapping systems				
H5	Oxygen and water extraction from regolith				
H6	Regolith excavation and handling				
H7	Surface habitation systems and equipment				
H8	Volatile (H, C, N, He) extraction from regolith				
H9	Other non-Earth based surface systems and equipment				

I: Power Sources & Energy Storage

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
I1	Batteries (lithium ion, nickel hydrogen, nickel cadmium, silver zinc, etc.)				
I2	Electrical converters				
I3	Fuel cell power units and components				
I4	Generators				
I5	Other energy storage devices				
I6	Nuclear fission power systems				
I7	Radioisotope thermoelectric generators				
I8	Radioactive materials for use in power generation				
I9	Solar electrical power systems, equipment, and components				
I10	Transformers				
I11	Wires and cables (electrical)				
I12	Other space-related power sources/energy storage systems				

Comments:	

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Section 3.f **Products and Services (cont.)**

Identify any of the products and/or services your organization manufactures or distributes below. For each product/service area selected, provide a brief description of the specific items your organization manufactures or distributes. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global manufacturer/distributor of any specific items in each product/service area. If so, describe them in the appropriate box.

Note: Services and reserach & development areas are listed in Section 3.i.

J: Electronic Equipment

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
J1	Application-specific integrated circuits (ASICs)				
J2	Attenuators				
J3	Capacitors				
J4	Charge couple devices				
J5	Circuit boards				
J6	Circuit breakers				
J7	Coils and transformers				
J8	Connectors				
J9	Diodes				
J10	Electrical insulators				
J11	Electron tubes				
J12	Fiber optics (conductors, cables, switches, assemblies, etc.)				
J13	Field programmable gate arrays				
J14	Filters and networks				
J15	Fuses, arrestors, absorbers, and protectors				
J16	Inductors				
J17	Integrated circuits/semiconductors (excluding ASICs)				
J18	Large format focal plane arrays				
J19	Lasers and laser systems				
J20	Lugs, terminals, and terminal strips				
J21	Memory				
J22	Modulators/demodulators				
J23	Non-volatile memory				
J24	Optoelectronic devices and associated equipment				
J25	Oscillators and piezoelectric crystals				
J26	Radiation hardened/tolerant electronics				
J27	Relays and solenoids				
J28	Resistors				
J29	Signal/function generators (radio frequency, microwave, etc.)				
J30	Switches (coaxial, radio frequency, video, etc.)				
J31	Synchros and resolvers				
J32	Transistors				
J33	Traveling wave tubes, amplifiers				
J34	Other space-related electronic equipment				

K: Computer Hardware & Robotics

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
K1	Computers and data processing equipment				
K2	Data handling and input/output storage devices				
K3	Data terminal equipment				
K4	Displays/monitors				
K5	Fault tolerant computing				
K6	High dexterity manipulation systems				
K7	High performance super computers				
K8	Robotics and autonomous systems				
K9	Other space-related computer hardware and robotic systems				

L: Software

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
L1	Communications software				
L2	Data mining and knowledge management software				
L3	Environmental control and monitoring software				
L4	Ground system software				
L5	Mission automation and execution software				

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Section 3.g **Products and Services (cont.)**

Identify any of the products and/or services your organization manufactures or distributes below. For each product/service area selected, provide a brief description of the specific items your organization manufactures or distributes. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global manufacturer/distributor of any specific items in each product/service area. If so, describe them in the appropriate box.

Note: Services and reserach & development areas are listed in Section 3.i.

M: Materials, Structures, and Mechanical Systems

	Product Area	Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
M1	Bars and rods (specify materials to the right)				
M2	Plates, sheets, etc. (specify materials to the right)				
M3	Pipes and tubes (specify materials to the right)				
M4	Precious metals (specify materials to the right)				
M5	Rare Earth Elements (specify materials to the right)				
M6	Carbon fiber materials				
M7	Other fiber based materials (including rayon, nylon, etc.)				
M8	Composite materials				
M9	Dust resistant coatings				
M10	Optical coatings				
M11	Protective coatings				
M12	Thermal coatings				
M13	Other types of coatings				
M14	Adhesives				
M15	Chemicals				
M16	Gases and pressurants (N, He, etc.)				
M17	Inks				
M18	Resins				
M19	Sealants				
M20	Solvents				
M21	Substrates				
M22	Struts				
M23	Fairings and skirts				
M24	Spacecraft panels				
M25	Cover glass				
M26	Spacecraft windows or window materials				
M27	Beryllium-based structures				
M28	Carbon fiber-based structures				
M29	Composite-based structures				
M30	Other lightweight material-based structures				
M31	Glass fabricated structures not specified elsewhere (glass laminates, nanostructures, etc.)				
M32	Plastic fabricated structures not specified elsewhere (plastic moldings, cellular materials, etc.)				
M33	Rubber fabricated structures not specified elsewhere (moldings, foam, etc.)				
M34	Structures created through additive manufacturing processes				
M35	Bearings				
M36	Castings				
M37	Compressors and vacuum pumps				
M38	Couplings, connectors, and fittings				
M39	Dampers				
M40	Fasteners (screws, nuts, bolts, clips, brackets, rivets, etc.)				
M41	Forgings				
M42	Gaskets (o-rings, washers, etc.)				
M43	Gears and gear boxes				
M44	Hydraulics, valves, actuators, pumps				
M45	Landing gear or systems				
M46	Magnets				
M47	Mirrors				
M48	Precision machined parts				
M49	Pyrotechnics, cartridge and propellant actuated devices				
M50	Semi-finished machined parts				
M51	Specialty storage devices or containers				
M52	Springs and wire forms				
M53	Wire and cables (non-electrical)				
M54	Other space-related materials, structures, or mechanical systems				

Comments:

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Section 3.h **Products and Services (cont.)**

Identify any of the products and/or services your organization manufactures or distributes below. For each product/service area selected, provide a brief description of the specific items your organization manufactures or distributes. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global manufacturer/distributor of any specific items in each product/service area. If so, describe them in the appropriate box.

Note: Services and reserach & development areas are listed in Section 3.i.

N: Manufacturing Tools & Specialty Equipment

Product Area		Manufacture/ Distribute?	Product Description(s)	Sole Manufacturer/ Distributor?	Sole Manufactured/Distributed Product(s)
N1	Bending and forming machines				
N2	Boring, broaching, drilling, and tapping machines				
N3	Chemical production machinery				
N4	Clean work stations, controlled environments and related equipment				
N5	Computer Numerical Control (CNC) systems				
N6	Electrical and ultrasonic erosion machines				
N7	Filament winding machines				
N8	Five-axis machine tools				
N9	Forging machinery				
N10	Foundry machinery				
N11	Gear cutting and finishing machines				
N12	Grinding machines				
N13	Hydraulic, pneumatic, and mechanical presses				
N14	Lathes				
N15	Lubrication and fuel dispensing equipment				
N16	Metal heat treating and non-thermal treating equipment				
N17	Milling machines				
N18	Rocket maintenance, repair, and checkout specialized equipment				
N19	Rolling and drawing machines				
N20	Semiconductor, microcircuit, and printed circuitboard manufacturing machinery				
N21	Space vehicle maintenance, repair, and checkout specialized equipment				
N22	Test stands				
N23	Thermal vacuum chambers				
N24	Tooling kits and equipment				
N25	Welding, soldering, riveting and brazing equipment				
N26	Wind tunnels				
N27	Wire and ribbon forming machines				
N28	Other machinery utilized for space-related manufacturing/servicing				

Comments:	

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Section 3.i **Products and Services (cont.)**

Identify any of the services your organization provides below. For each service or R&D area selected, provide a brief description of the specific items your organization provides. To the best of your knowledge, indicate whether your organization is the sole U.S.-based or global provider of any specific items in each product/service area. If so, describe them in the appropriate box.

O: Services

	Service Area	Provide Service?	Service Description(s)	Sole Provider?	Sole Service(s) Provided
O1	Analysis, fusion, or visualization of data derived from space (including electro-optical imagery, data from satellite sensors, etc.)				
O2	Calibration of space-related equipment				
O3	Coating services				
O4	Commercial satellite operation				
O5	Communications and broadcast services				
O6	Data storage and handling services				
O7	Encryption and secure communication services				
O8	Friction stir welding and spun form domes				
O9	Ground support and operations services				
O10	Heat treatment services				
O11	Information and software assurance (including verification and validation)				
O12	Launch support services				
O13	Logistics services				
O14	Machining services (includes cutting, boring, grinding, etc.)				
O15	Maintenance, repair, and rebuilding services				
O16	Materials testing				
O17	Plating services				
O18	Priming and painting services				
O19	Product assurance, quality control services				
O20	Professional services				
O21	Program management and support services				
O22	Program review/development services				
O23	Provision of data derived from space (including electro-optical imagery, remote sensing, etc.)				
O24	Safety and mission assurance services				
O25	Software and algorithm development services				
O26	Space crew operations and training				
O27	Space launch services				
O28	Space medicine				
O29	Space vehicle handling and servicing				
O30	Space-related design and engineering services				
O31	Specification development services				
O32	Systems engineering				
O33	Testing or inspection of space-related equipment (includes inspection, simulation, vibration testing, acoustics testing, etc.)				
O34	Other space-related services				

P: Research & Development

	R&D Focus	Provide R&D?	R&D Description
P1	Atmospheric/suborbital research		
P2	Biomedical research		
P3	Communications and navigation		
P4	Entry, descent, and landing systems		
P5	Ground and launch systems processing		
P6	Human exploration destination systems		
P7	In-space propulsion		
P8	Launch propulsion systems		
P9	Materials		
P10	Mechanical Systems		

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P11	Modeling, simulation, information technology, and processing			
P12	Nanotechnology			
P13	Payloads, science instruments, and sensor systems			
P14	Propellants and fuels			
P15	Robotics and autonomous systems			
P16	Space power and energy storage			
P17	Space survivability, life support, and habitation systems			
P18	Structures			
P19	Theoretical and scientific R&D			
P20	Thermal management systems			
P21	Other space-related research & development area			

Comments:	

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Section 4 **Participation in U.S. Government Space Programs**

From the list provided below, identify all the U.S. Government, space-related programs your organization has directly and/or indirectly participated in **since 2009**. Participation (as a prime contractor, sub-contractor, or other type of support) includes the manufacture/integration of products, distribution of products, performance of manufacturing processes on products, provision of services, the provision of research & development, etc. Next, list the top five product and/or service codes your organization provides for each program you participate in. The product/service drop-down list is based on your responses to Section 3. If your product or service does not appear in the drop-down, ensure that you have identified your organization as a manufacturer, distributor, and/or provider of that product or service in Section 3.

If you participate in a space-related program that is not listed below, you may enter it in the 'Other' section at the bottom. In these cases, identify the relevant agency in the 'U.S. Government Agency' column and then identify the program name in the 'Space Program Name' column.

If your organization is not sure of its participation in any U.S. Government space-related programs and has reviewed the list below as confirmation, select "Not Applicable" from the box to the right and skip this section.

Not Applicable?

Note: For your convenience, you may utilize the built-in filters to isolate particular U.S. Government agencies or programs from the list (press the down facing arrow in the top right corner of the relevant column below).

	U.S. Government Agency	Space Program Name	Participation	Product/Service List Code Supporting Space Programs				
				1	2	3	4	5
1	Air Force	ADAP - Advanced Digital Antenna Production						
2	Air Force	AEHF - Advanced Extremely High Frequency						
3	Air Force	AEP - Architecture Evolution program						
4	Air Force	AFCPT - Air Force Command Post Terminals						
5	Air Force	AFSCN ESD - Air Force Satellite Control Network Electronic Schedule Dissemination 2.7						
6	Air Force	AFSCN ESD - Air Force Satellite Control Network Electronic Schedule Dissemination 3.0						
7	Air Force	AFSCN RBC - Air Force Satellite Control Network Remote Tracking Station Block Change (RBC)						
8	Air Force	AFSSS - Air Force Space Surveillance System						
9	Air Force	AFWET - Air Force Wideband Enterprise Terminals						
10	Air Force	AITG - Airborne Integrated Terminals Group						
11	Air Force	ARS - Archival Recorder Systems						
12	Air Force	ARTS - Automated Remote Tracking Station						
13	Air Force	BMEWS - Ballistic Missile Early Warning System						
14	Air Force	CCS - Counter Communications System						
15	Air Force	CCS-C - Command & Control System-Consolidated						
16	Air Force	CCS-C Block 1 - Command and Control System						
17	Air Force	DAGR - Defense Advanced GPS Receiver						
18	Air Force	DMSP - Defense Meteorological Satellite Program						
19	Air Force	DSCS - Defense Satellite Communications System						
20	Air Force	DSP - Defense Support Program						
21	Air Force	DWSS - Defense Weather Satellite System						
22	Air Force	EELV - Evolved Expendable Launch Vehicles						
23	Air Force	EELV Delta IV - Evolved Expendable Launch Vehicles						
24	Air Force	Eglin Radar						
25	Air Force	Eglin Radar SLEP						
26	Air Force	EPS - Enhanced Polar System						
27	Air Force	FAB-T - Family of Advanced Beyond Line-of-Sight Terminals (Inc 1)						
28	Air Force	GBS - Global Broadcast Service						
29	Air Force	GBS DECC Transition - Global Satellite Broadcast System Defense Enterprise Computing Center Transition						
30	Air Force	GEODSS - Ground-Based Electro Optical Deep Space Surveillance						
31	Air Force	Globus II						
32	Air Force	GMT - Ground Multiband Terminals						
33	Air Force	GPS Block IIF						
34	Air Force	GPS Block IIR						
35	Air Force	GPS IIA						
36	Air Force	GPS IIIA						
37	Air Force	HUSIR - Haystack Ultra-Wideband Satellite Imaging Radar						
38	Air Force	JETSS - Joint Execution and Training System for Space						
39	Air Force	JMS - Joint Space Operations Center (JSpOC) Mission System (JMS)						
40	Air Force	LADO - Launch, Early Orbit, Anomaly, & Disposal Operations						
41	Air Force	LIONS - Logistics Information Operations Systems						

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42	Air Force	LTRS - Launch Test Range System						
43	Air Force	MAGR-2K - Miniaturized Airborne GPS Receiver 2000						
44	Air Force	MARK IVB - Meteorological Data Station						
45	Air Force	MGUE-GPS User Equipment: Modernized UE						
46	Air Force	Milstar Satellites						
47	Air Force	Milstar/DMU II Terminals						
48	Air Force	Miltar SMCS Satellite Mission Control Subsystem						
49	Air Force	Minotaur-SMC/SDTW Launch Vehicle						
50	Air Force	MMP-Minuteman MEECN Program						
51	Air Force	MMSOC-GSA - Multi-Mission Space Operations Center Ground Support Architecture						
52	Air Force	MOSS - Moron Optical Space Surveillance						
53	Air Force	NAVSTAR GPS - Navigational Signal Timing and Ranging Global Positioning System						
54	Air Force	NAVSTAR MUE						
55	Air Force	NDS - Nuclear Detonation Detection System						
56	Air Force	NPOESS - National Polar-orbiting Operational Environmental Satellite System						
57	Air Force	OAS - Orbital Analysis Systems						
58	Air Force	OCS - GPS Operational Control Segment						
59	Air Force	OCX - Next Generation Operational Control System						
60	Air Force	OSR - Operational Switch Replacement						
61	Air Force	PARCS - Perimeter Acquisition Radar Attack Characterization System						
62	Air Force	PAWS-PAVE Phased Array Warning System						
63	Air Force	RAIDRS - Rapid Attack Identification Detection Reporting System						
64	Air Force	RSLP - Rocket Systems Launch Program						
65	Air Force	RSS - Receiving Set Satellite						
66	Air Force	RSTN - Radio Solar Telescope Network						
67	Air Force	S2E2 - SBIRS Survivable Endurable Evolution						
68	Air Force	SBIRS - Space Based Infrared Systems						
69	Air Force	SBIRS Fixed Sites						
70	Air Force	SBIRS High-Space Based Infrared System						
71	Air Force	SBIRS Mobile Vehicles						
72	Air Force	SBIRS Space Segment						
73	Air Force	SBSS Blk10 - Space Based Space Surveillance Block 10						
74	Air Force	SCAMP - Single Channel Anti-Jam Man Portable Terminal						
75	Air Force	SMART-T - Secure mobile Anti-Jam Reliable Tactical Terminal						
76	Air Force	SOON - Solar Observing Optical Network						
77	Air Force	Space Fence						
78	Air Force	SSAEM-Space Situational Awareness Environmental Monitoring						
79	Air Force	TacSat-3						
80	Air Force	VTS-A - Vandenberg Tracking Station-A						
81	Air Force	WGS Block I - Wideband Global SATCOM						
82	Air Force	WGS Block II - Wideband Global SATCOM						
83	Air Force	WGS Block III - Wideband Global SATCOM						
84	Army	JTAGS - Joint Tactical Ground Station						
85	Missile Defense Agency	STSS Demonstrators - Space Tracking and Surveillance System						
86	Missile Defense Agency	STSS-ATRR - Space Tracking and Surveillance System Advanced Technology Risk Reduction						
87	NASA	21st Century Ground Systems						
88	NASA	ACRIMSat - Active Cavity Radiometer Irradiance Monitor Satellite						
89	NASA	AIM						
90	NASA	AMMOS						
91	NASA	Aqua						
92	NASA	Aquarius						
93	NASA	ARSG - Advanced Stirling Radioisotope Generator						
94	NASA	ASCENDS - Active Sensing of CO2 Emissions over Nights, Days, and Seasons						
95	NASA	ASPERA-3						
96	NASA	Astro-H (SXS)						
97	NASA	Astrophysics Research Program						
98	NASA	Aura						
99	NASA	Cassini						
100	NASA	Cassini-Huygens						

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101	NASA	CCDev - Commercial Crew Development						
102	NASA	Chandra X-ray Observatory						
103	NASA	CINDI						
104	NASA	CLARREO						
105	NASA	CloudSat						
106	NASA	Commercial Crew and Cargo Program						
107	NASA	Constellation Program						
108	NASA	Dawn						
109	NASA	DESDynI						
110	NASA	Earth Science Multi-Mission						
111	NASA	Earth Science Technology						
112	NASA	EO-1 - Earth Observing-1						
113	NASA	EPOXI (Was Deep Impact)						
114	NASA	Fermi Gamma-ray Space Telescope						
115	NASA	GALEX						
116	NASA	GEMS - Gravity and Extreme Magnetism						
117	NASA	Genesis						
118	NASA	Glory Mission						
119	NASA	GPM - Global Precipitation Measurement						
120	NASA	GRACE						
121	NASA	GRACE FO						
122	NASA	GRAIL						
123	NASA	Heliophysics Research						
124	NASA	Herschel Space Observatory						
125	NASA	Hinode						
126	NASA	Hubble Space Telescope						
127	NASA	IBEX						
128	NASA	ICESat-II - Ice, Cloud, and land Elevation Satellite						
129	NASA	International Space Station Program						
130	NASA	IRIS - Interface Region Imaging Spectrograph						
131	NASA	Jason-1						
132	NASA	Jason-2						
133	NASA	Jason-3						
134	NASA	Juno						
135	NASA	JWST - James Webb Space Telescope						
136	NASA	Kepler						
137	NASA	LADEE						
138	NASA	Launch Services Program						
139	NASA	LBTI - Large Binocular Telescope Interferometer						
140	NASA	LCROSS - Lunar Crater Observation and Sensing Satellite						
141	NASA	LDCM - Landsat Data Continuity Mission						
142	NASA	LRO - Lunar Reconaissance Orbiter						
143	NASA	Mars 2018						
144	NASA	Mars Exploration - 2016						
145	NASA	Mars Global Surveyor						
146	NASA	Mars Reconnaissance Orbiter						
147	NASA	MAVEN						
148	NASA	MER - Mars Exploration Rover						
149	NASA	MESSENGER						
150	NASA	MMS - Magnetospheric Multiscale Mission						
151	NASA	MSL - Mars Science Laboratory						
152	NASA	Mulit-purpose Crew Vehicle						
153	NASA	MUSES-C - Hayabusa-U.S.						
154	NASA	New Horizons						
155	NASA	New Millennium						
156	NASA	NPP - NPOESS Preparatory Project						
157	NASA	NuSTAR						
158	NASA	NuSTAR - Nuclear Spectroscopic Telescope Array						
159	NASA	OCO						
160	NASA	OCO-2						
161	NASA	Odyssey						
162	NASA	OSTM						
163	NASA	PACE - Pre-Aerosol, Clouds, and Ecosystem Mission						
164	NASA	Phoenix						

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165	NASA	Planck Physics of the Cosmos (POCS)						
166	NASA	Prometheus						
167	NASA	QuikSCAT - Quick Scatterometer						
168	NASA	RBSP - Radiation Belt Storm Probes						
169	NASA	RPS - Radioisotope Power Systems						
170	NASA	SAGE III - Stratospheric Aerosol and Gas Experiment on the ISS						
171	NASA	SCaN - Space Communications and Navigation						
172	NASA	SDO - Solar Dynamics Observatory						
173	NASA	SIM PlanetQuest						
174	NASA	SIRTF - Spitzer Space Telescope						
175	NASA	SLS - Space Launch System						
176	NASA	SMAP - Soil Moisture Active and Passive						
177	NASA	Solar Orbiter						
178	NASA	Solar Probe Plus						
179	NASA	SORCE - Solar Radiation and Climate Experiment						
180	NASA	Space Shuttle Program						
181	NASA	Spirit and Opportunity						
182	NASA	Stardust NexT						
183	NASA	STEREO						
184	NASA	Stratospheric Observatory For Infrared Astronomy (SOFIA)						
185	NASA	Strofio						
186	NASA	SWOT - Surface Water and Ocean Topography						
187	NASA	TDRSS - Transmission and Data Relay Satellite System						
188	NASA	Terra						
189	NASA	TGO - ExoMars/Trace Gas Orbiter						
190	NASA	THEMIS						
191	NASA	TRMM						
192	NASA	TWINS						
193	NASA	Venture Class Missions						
194	NASA	Voyager						
195	NASA	WISE						
196	Navy	MUOS - Mobile User Objective System						
197	NOAA	GOES-N: Geostationary Operational Environment Satellite						
198	NOAA	GOES-O: Geostationary Operational Environment Satellite						
199	NOAA	GOES-P: Geostationary Operational Environment Satellite						
200	NOAA	GOES-R: Geostationary Operational Environment Satellite						
201	NOAA	GOES-S: Geostationary Operational Environment Satellite						
202	NOAA	IJPS/MetOp-B: Initial Polar-Orbiting Operational Satellite System						
203	NOAA	JPSS: Joint Polar Satellite System						
204	NOAA	POES NOAA-N Prime: Polar Orbiting Operational Satellite						
205	NOAA	POES NOAA-N: Polar Orbiting Operational Satellite						
Other								
Other								
Other								
Other								
Other								
Other								
Other								
Other								
Other								
Other								

Comments:	

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Section 5.a **Critical Suppliers**

For each Product and Service segment (A-P), identify your organization's critical suppliers. Only identify suppliers that support products/services mentioned earlier in the survey (in Section 3). Please list as many suppliers in each section as possible. **Each critical supplier should be indicated in the Product and Service segment for the product/service they supply to your organization** - not the segment you utilize their product/service for. For example: a supplier who provides semiconductors should be identified in segment J: Electronic Equipment, not the segment that the semiconductor integrated into.

Once you have located the appropriate segment for a supplier, identify the supplier's name, the product/service area they provide (from the drop-down menu), and a short description of the specific product/service. Next, identify the product/service area that each item supplied is utilized for (this should be one of the products/services your organization manufactures or provides). In addition, identify the city, state, and country of the supplier and whether this supplier is a single and/or sole source of the product/service in question (see definitions). Finally, identify any U.S. Government space-related programs that each supplier and product/service is used to support by your organization, if applicable.

If a supplier provides more than one product/service area, complete the supplier information on two separate rows and alter the product/service area accordingly.

For the purposes of this survey, a supplier may be, but does not have to be, considered critical if it meets any of the following criteria:

- Is used to support multiple U.S. Government programs;
- Is a sole and/or single source supplier;
- Contributes a significant portion to the end product's value;
- Provides a product/service that has a long lead-time;
- Provides an important obsolete or out of production part; and/or
- Meets any other criteria for criticality that your organization utilizes.

A: Spacecraft & Launch Vehicles

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

B: Propulsion Systems & Fuels

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

C: Navigation & Control

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

D: Communications Systems

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Comments:

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Section 5.b **Critical Suppliers (cont.)**

For each Product and Service segment (A-P), identify your organization's critical suppliers. Only identify suppliers that support products/services mentioned earlier in the survey (in Section 3). Please list as many suppliers in each section as possible. **Each critical supplier should be indicated in the Product and Service segment for the product/service they supply to your organization** - not the segment you utilize their product/service for. For example: a supplier who provides semiconductors should be identified in segment J: Electronic Equipment, not the segment that the semiconductor integrated into.

Once you have located the appropriate segment for a supplier, identify the supplier's name, the product/service area they provide (from the drop-down menu), and a short description of the specific product/service. Next, identify the product/service area that each item supplied is utilized for (this should be one of the products/services your organization manufactures or provides). In addition, identify the city, state, and country of the supplier and whether this supplier is a single and/or sole source of the product/service in question (see definitions). Finally, identify any U.S. Government space-related programs that each supplier and product/service is used to support by your organization, if applicable.

If a supplier provides more than one product/service area, complete the supplier information on two separate rows and alter the product/service area accordingly.

For the purposes of this survey, a supplier may be, but does not have to be, considered critical if it meets any of the following criteria:
- Is used to support multiple U.S. Government programs;
- Is a sole and/or single source supplier;
- Contributes a significant portion to the end product's value;
- Provides a product/service that has a long lead-time;
- Provides an important obsolete or out of production part; and/or
- Meets any other criteria for criticality that your organization utilizes.

E: Space Survivability, Environmental Control/Monitoring, and Life Support

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported 1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

F: Payload Instruments & Measurement Tools

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported 1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

G: Ground Systems

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported 1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

H: Non-Earth Based Surface Systems

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported 1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Comments:	

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Section 5.c **Critical Suppliers (cont.)**

For each Product and Service segment (A-P), identify your organization's critical suppliers. Only identify suppliers that support products/services mentioned earlier in the survey (in Section 3). Please list as many suppliers in each section as possible. **Each critical supplier should be indicated in the Product and Service segment for the product/service they supply to your organization** - not the segment you utilize their product/service for. For example: a supplier who provides semiconductors should be identified in segment J: Electronic Equipment, not the segment that the semiconductor integrated into.

Once you have located the appropriate segment for a supplier, identify the supplier's name, the product/service area they provide (from the drop-down menu), and a short description of the specific product/service. Next, identify the product/service area that each item supplied is utilized for (this should be one of the products/services your organization manufactures or provides). In addition, identify the city, state, and country of the supplier and whether this supplier is a single and/or sole source of the product/service in question (see definitions). Finally, identify any U.S. Government space-related programs that each supplier and product/service is used to support by your organization, if applicable.

If a supplier provides more than one product/service area, complete the supplier information on two separate rows and alter the product/service area accordingly.

For the purposes of this survey, a supplier may be, but does not have to be, considered critical if it meets any of the following criteria:

- Is used to support multiple U.S. Government programs;
- Is a sole and/or single source supplier;
- Contributes a significant portion to the end product's value;
- Provides a product/service that has a long lead-time;
- Provides an important obsolete or out of production part; and/or
- Meets any other criteria for criticality that your organization utilizes.

I: Power Sources & Energy Storage

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

J: Electronic Equipment

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

K: Computer Hardware & Robotics

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

L: Software

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Comments:

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Section 5.d **Critical Suppliers (cont.)**

For each Product and Service segment (A-P), identify your organization's critical suppliers. Only identify suppliers that support products/services mentioned earlier in the survey (in Section 3). Please list as many suppliers in each section as possible. **Each critical supplier should be indicated in the Product and Service segment for the product/service they supply to your organization** - not the segment you utilize their product/service for. For example: a supplier who provides semiconductors should be identified in segment J: Electronic Equipment, not the segment that the semiconductor integrated into.

Once you have located the appropriate segment for a supplier, identify the supplier's name, the product/service area they provide (from the drop-down menu), and a short description of the specific product/service. Next, identify the product/service area that each item supplied is utilized for (this should be one of the products/services your organization manufactures or provides). In addition, identify the city, state, and country of the supplier and whether this supplier is a single and/or sole source of the product/service in question (see definitions). Finally, identify any U.S. Government space-related programs that each supplier and product/service is used to support by your organization, if applicable.

If a supplier provides more than one product/service area, complete the supplier information on two separate rows and alter the product/service area accordingly.

For the purposes of this survey, a supplier may be, but does not have to be, considered critical if it meets any of the following criteria:

- Is used to support multiple U.S. Government programs;
- Is a sole and/or single source supplier;
- Contributes a significant portion to the end product's value;
- Provides a product/service that has a long lead-time;
- Provides an important obsolete or out of production part; and/or
- Meets any other criteria for criticality that your organization utilizes.

M: Materials, Structures, and Mechanical Systems

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

N: Manufacturing Tools & Specialty Equipment

	Supplier Name	Product Area Provided by Supplier	Product Description	Product Area that the Supplied Product is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

O: Services

	Supplier Name	Service Area Provided by Supplier	Product Description	Product Area that the Supplied Service is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

P: Research & Development

	Supplier Name	R&D Area Provided by Supplier	Product Description	Product Area that the R&D is Utilized For	Supplier City	Supplier State (if applicable)	Supplier Country	Single/Sole Supplier?	U.S. Government Program Supported				
									1	2	3	4	5
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Comments:	

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Section 6 **Top Customers**

Identify your organization's top 20 U.S. and non-U.S. **direct space-related customers** by sales for the 2009-2012 period. A direct customer is the immediate entity you are selling your product/service to. Indicate the type of customer, their location, and whether or not you consider the customer a competitor to your organization. Finally, identify the top five products and/or services your organization provided to each customer.

As a reminder, for the purpose of this survey, space-related is defined as any product, service, or object that is a) used in or launched into space; b) used to directly or indirectly support space applications from Earth; and/or c) used to manufacture any product that is used in space or directly supports space applications. The product, service, or object does not have to be specifically intended to support space applications.

If your organization does not have any space-related customers, you may select "Not Applicable" from the box to the right and skip this section.

Top U.S.-Based Customers

	Customer Name	Type of Customer	Customer City	Customer State	Competitor?	Product/Service Codes Provided to Customer				
						1	2	3	4	5
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										
16.										
17.										
18.										
19.										
20.										

Top Non-U.S. Based Customers

	Customer Name	Type of Customer	Customer City	Customer Country	Competitor?	Product/Service Codes Provided to Customer				
						1	2	3	4	5
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										
16.										
17.										
18.										
19.										
20.										

Comments:	

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Section 7 — Top Competitors

A. Identify your organization's leading U.S. and non-U.S. competitors for **space-related products and/or services**. Indicate their name, the type of competitor, location, and corresponding Product and Service Segment relating to the competition. Note: U.S. Government agencies and centers may be considered competitors.

If your organization does not have competitors for space-related products and/or services, you may select "Not Applicable" from the box to the right and skip this section.

U.S. Competitors				Product/Service Segment		
	Competitor Name	Type of Competitor	State	1	2	3
1.						
2.						
3.						
4.						
5.						

Non-U.S. Competitors				Product/Service Segment		
	Competitor Name	Type of Competitor	Country	1	2	3
1.						
2.						
3.						
4.						
5.						

B. Has your organization been adversely impacted by competition from Federally Funded Research and Development Centers (FFRDCs) and/or U.S. Government agencies? Explain below. If this question is not applicable to your organization, select "Not Applicable" from the box to the right.

Comments:

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Section 8.a	Manufacturing Operations

Section 8 asks questions related to your organization's manufacturing operations.

If your organization manufactures/assembles/integrates one or more of the products in Section 3, you must complete this section.

Based on your responses to Section 3, if your organization is **only** a distributor of products or a service/R&D provider, select "Not Applicable" in the box to the right. You may then skip this section and proceed to Section 9.	

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Section 8.b **Manufacturing Operations**

A.	Estimate your organization's current "Make/Buy" ratio. In other words, estimate the percentage of dollars spent for work done by your organization's employees ("Make" percentage) vs. the dollars spent for work done by outside contractors ("Buy" percentage). Note: "Make" includes internal organization purchasing.	Make %	
		Buy %	
B.	Does your organization maintain an inventory for **space-related** components, manufacturing materials, and/or finished products? (See definitions)		
	On average, how many months supply of **space-related** finished, manufactured products are normally maintained in inventory?		
	On average, how many months supply of **space-related** components and manufacturing materials products are normally maintained in inventory?		
C.	What is the average amount of time it takes to approve or officially certify a new supplier for **space-related** applications, assuming one was available?		

D. Does your organization use any of the elements identified below in its **space-related** production process or as a component of final products? Identify each.

Aluminum		Praseodymium	
Antimony		Rare Earth Phosphors	
Carbon graphite		Rare Earth Polishing Agent	
Copper		Samarium	
Dysprosium		Samarium-Cobalt Magnets	
Europium		Tantalum	
Gadolinium		Terbium	
Gold		Tin	
Mercury		Titanium	
Neodymium		Tungsten	
Neodymium-Iron-Boron Magnets		Yttrium	
Other Rare Earth Oxide or Chemical (specify)		Other Rare Earth Metal or Alloy (specify)	

E. Identify whether your organization's **space-related** operations have been adversely impacted by any of the following factors related to the elements identified above. Explain your response, identifying the specific elements concerned.

Factor	Yes/No	Explain
Increase in U.S. demand		
Increase in non-U.S. demand		
Decrease in U.S. availability		
Decrease in non-U.S. availability		
Sharp changes in market price		
Other (specify)		

F.

Estimate the capacity utilization rate (see definitions) for your organization from 2009-2012.	2009	
	2010	
	2011	
	2012	
Estimate the minimum level of capacity utilization necessary to keep your production costs from changing disproportionately to order volume. Explain your response below.		

Comments:	

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Section 9	General Business Operations		
A.	Does your organization maintain an internal preferred sub-contractor/supplier program? If "Yes," what percentage of suppliers have preferred status?	Preferred Program?	
		Percentage:	

B.	From the drop-downs below, select the predominant type of contract your organization enters into with suppliers and customers for **space-related** products and/or services (See Definitions for an explanation of each type of contract).			
	Suppliers:		Customers:	

C.	From the drop-down below, identify the top three support operations that present challenges when utilizing outside/third-party suppliers for space-related operations. Explain each. Challenges may include lack of qualified vendors, pricing, quality issues, environmental regulations, etc.	
	Type of Business Support Operation	Explanation of Challenges

D.	From 2009-2012, did your organization encounter counterfeits for any of the following types of products? (see Definitions) Select all that apply.				
	Electronics (integrated circuits, circuit boards, discrete electronic components, etc.)		Software		
	Fasteners		Systems/sub-systems (navigation, communications, propulsion, etc.)		
	Materials (metals, alloys, elements etc.)		Testing procedures and/or documentation		
	Mechanical systems (hydraulics, gear boxes, etc.)		Other types of counterfeits (specify)		
	Power sources or energy storage equipment		Other types of counterfeits (specify)		

E.	Does your organization have a formal, written protocol for handling, documenting, and reporting incidents of counterfeits?	

Comments:	

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Section 10 — Relationships Other Government Agencies

A. To the best of your knowledge, identify any U.S. Government agencies your organization directly and/or indirectly supports from the list below. For each, indicate whether this support is space-related, non-space related, or both.

Agency			Agency	
Central Intelligence Agency (CIA)			National Geospatial-Intelligence Agency (NGA)	
Defense Advanced Research Projects Agency (DARPA)			National Oceanic and Atmospheric Administration (NOAA)	
Director, Defense Research and Engineering (DDR&E)			National Aeronautics and Space Administration (NASA)	
Department of Energy (including the National Nuclear Security Administration)			National Reconnaissance Office (NRO)	
Federal Aviation Administration (FAA)			National Security Agency (NSA)	
Missile Defense Agency (MDA)			U.S. Air Force (including the Space and Missile Systems Center and AFRL)	
Other (specify)			U.S. Army (including the Space and Missile Defense Command)	
Other (specify)			U.S. Navy (including the Office of Naval Research and Naval Research Laboratory)	
Other (specify)			Other Department of Defense Organizations	

B. Does your organization consider itself dependent upon **current U.S. Government space-related programs** for its continued viability? Explain your response below.

C. Estimate the percentage range of compatibility of your current U.S. Government space-related product/service lines with current commercial space applications, if applicable.

D. Estimate the percentage range of compatibility of all your space-related product/service lines (U.S. Government and commercial) to your non-space related product/service lines, if applicable.

Comments:

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Section 11.a	Demand and Production	
A.	How vulnerable is your organization to variability in **U.S. Government demand**, on a scale from 1 to 5 (1 = no vulnerability; 5 = very high vulnerability). Explain your reasoning below. If this is not applicable to your organization, select 'Not Applicable' from the drop-down.	
B.	How vulnerable is your organization to variability in **commercial demand**, on a scale from 1 to 5 (1 = no vulnerability; 5 = very high vulnerability). Explain your response below. If this is not applicable to your organization, select 'Not Applicable' from the drop-down.	

C. From the list below, select the potential impacts that a sudden decrease in direct and/or indirect U.S. Government **space-related** demand would have on your organization:

Decreased capital expenditures			Pursuit of new product/service lines		
Decreased research & development expenditures			Pursuit of other non-U.S. customers		
Disproportionate reduction in sales revenue			Pursuit of other U.S. customers		
Elimination of all participation in U.S. Government contracts			Reduced participation in U.S. Government contracts		
Increased product/service costs			Reduction or elimination of particular product lines		
Loss of organization viability or solvency			Sale of key production equipment		
Loss of personnel with key skills			Other (specify)		
Other (specify)			Other (specify)		

Comments:	

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Section 11.b Demand and Production (cont.)

A.	Has variability of demand from U.S. Government organizations for **space-related** products/services **adversely impacted** your organization's desire to continue to directly or indirectly serve these customers? Explain your response below.	

From 2009-2012, indicate if your organization experienced an increase, decrease, or no change in **space-related** customer demand for the following business lines you selected in Section 1.c, if applicable. Explain your response below.

	Your Response From Section 1.c	Change in Customer Demand
Distribution/brokerage/reseller/retail	0	
Inspection and quality control	0	
Integration (product, systems integration)	0	
Information technology (software, hardware, installation)	0	
Maintenance/aftermarket/repair/refurbishing services	0	
Manufacturing (including assembly)	0	
Manufacturing systems development and management	0	
Material finishing (machining, coating, plating, heat treating, etc.)	0	
Material preparation (casting, forming, molding, forging, etc.)	0	
Product and design engineering (tooling, new processes, etc.)	0	
Professional services (legal, accounting, consulting, etc.)	0	
Research and development	0	
Raw materials provider	0	
Testing/evaluation/validation	0	
Other services not specified elsewhere on this list	0	

B.

Comments:

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Section 12 — Sales

Provide your organization's 2009-2012 U.S. and non-U.S. sales information and projected 2013-2017 sales trend information. Calendar year data is preferred. Estimates are acceptable.

Note: Ensure your source of sales data is **consistent with your response in the Respondent Profile Section**. In other words, if you have declared this to be a Business Unit/Division-level response, this section should contain Business Unit/Division-level data.
Note: For the purpose of this survey, Foreign Military Sales (FMS) should be considered as U.S. Government Sales and/or U.S. Government Space-Related Sales.

Source of Sales Data:	
Reporting Schedule:	

"U.S." means U.S. domestic sales; "Non-U.S." means export sales from U.S. locations		Record in $ Thousands, e.g. $12,000.00 = survey input $12									
		2009		2010		2011		2012*		2013-2017	
		U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.
A.	Total Sales, all Customers (in $)										
B.	Total Non-Government Sales (as a % of part A)										
C.	Total Government Sales (as a % of part A)										
D.	Total Space-Related Sales (in $)										
E.	U.S. Government Space-Related, Defense Sales (as a % of part D)										
F.	U.S. Government Space-Related, Non-Defense Sales (as a % of part D)										
G.	Commercial Space-Related Sales (as a % of part D)										

* Furnish full year **estimates** for 2012.

Comments:	

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Section 13 — U.S. Export Control Regulations

A.	Do you utilize the U.S. export control system (ITAR or EAR) for the export of **space-related** products and services? Indicate to what extent from the drop-down menu. If you do not utilize U.S. export control licenses for **space-related** products or services, select "No, Not at All" in the box and skip the rest of this section.	

B.	Has your organization lost export sales opportunities of **space-related** products or services to non-U.S. competitors because of U.S. export controls (ITAR or EAR)? If "Yes," select the total dollar amount of lost export sales opportunities from 2009-2012.	Yes/No	Lost Export Sales Estimate

C. To the best of your knowledge, have U.S. export control regulations had any of the following impacts on your organization? If "Yes," explain in the box provided.

Impact	Yes/No	Explanation
Altered your organization's space-related research and development expenditures.		
Avoided the export of space-related products or services that are subject to EAR-related controls.		
Avoided the export of space-related products or services that are subject to ITAR-related controls.		
Caused your organization to abandon or alter the composition of your space-related business lines.		
Caused your organization to locate or relocate space-related production/R&D facilities outside the United States due to regulatory burdens.		
Contributed to the creation of non-U.S. companies/business lines in direct competition with your space-related products or services.		
Incentivized non-U.S. organizations to "design-out" or avoid buying U.S. origin space-related products or services.		
Incentivized non-U.S. organizations to offer "ITAR-free" space-related products or services.		

Comments:	

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Section 14

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Section 15.a **Research and Development**

In Question A, record your organization's total research and development (R&D) dollar expenditures and type of R&D expenditure. In Question B, identify your organization's R&D funding sources, by percent of total R&D dollars sourced.

Note: If your organization's annual Total R&D Expenditures and Total R&D Funding Sources do not match, explain the discrepancy in the comment box.
Note: Ensure your source of R&D data is **consistent with your response in the Respondent Profile Section**. In other words, if you have declared this to be a Business Unit/Division-level response, this section should contain Business Unit/Division-level data.

Source of R&D Data:	
R&D Reporting Schedule:	

		R&D Expenditures	Record $ in Thousands, e.g. $12,000.00 = survey input of $12			
			2009	2010	2011	2012*
A.	1.	Total R&D Expenditures				
	2.	Basic Research (as a percent of 1)				
	3.	Applied Research (as a percent of 1)				
	4.	Product/Process Development (as a percent of 1)				
	5.	Total of 2 - 4 (must equal 100%)	0%	0%	0%	0%
	6.	% of Total R&D Expenditures supporting space-related business lines				

		R&D Funding Sources	Record $ in Thousands, e.g. $12,000.00 = survey input of $12			
			2009	2010	2011	2012*
B.	1.	Total R&D Funding Sources				
	2.	Internal/Self-Funded/IRAD (as a percent of 1)				
	3.	Total Federal Government (as a percent of 1)				
	4.	Total State and Local Government (as a percent of 1)				
	5.	Universities - Public and Private (as a percent of 1)				
	6.	U.S. Industry, Venture Capital, Non-Profit (as a percent of 1)				
	7.	Non-U.S. Investors (as a percent of 1)				
	8.	Other (specify)				

* Furnish full year **estimates** for 2012.

Comments:	

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Section 15.b	Research & Development (cont.)	
A.	From 2009-2012, have your organization's R&D expenditures been adversely impacted by reductions in U.S. Government space-related spending?	
B.	Do you anticipate your organization's R&D expenditures to be adversely impacted in the future by reductions in U.S. Government space-related spending? Explain your response below.	
Comments:		

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Section 16 — Capital Expenditures

Record your organization's capital expenditures corresponding to the select categories below.
Note: Ensure your source of capital expenditure data is **consistent with your response in the Respondent Profile**. In other words, if you have declared this to be a Business Unit/Division-level response, this section should contain Business Unit/Division-level data.

Source of Capital Expenditure Data:	
Capital Expenditure Reporting Schedule:	

		Capital Expenditure Category	Record in $ Thousands, e.g. $12,000.00 = survey input of $12			
			2009	2010	2011	2012*
A.	1.	Total Capital Expenditures				
	2.	Machinery, Equipment, and Vehicles (as a percent of 1)				
	3.	IT, Computers, Software (as a percent of 1)				
	4.	Land, Buildings, and Leasehold Improvements (as a percent of 1)				
	5.	Other (specify)				
	6.	Other (specify)				
B.		% of Total Capital Expenditures supporting space-related business lines				

C.	From 2009-2012, have your organization's capital expenditures been adversely impacted by reductions in U.S. Government space-related spending?	
D.	Do you anticipate your organization's capital expenditures to be adversely impacted in the future by reductions in U.S. Government space-related spending? Explain your response below.	

E. Identify any unique or critical equipment, infrastructure, and/or facilities owned and/or operated by your organization (e.g. space environmental simulation facilities, wind tunnels, rocket test equipment, etc.) for **space-related** applications. Provide a brief description of each.

	Type of Equipment, Infrastructure, or Facility	Description
1.		
2.		
3.		
4.		
5.		

* Furnish full year **estimates** for 2012.

Comments:	

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Section 17.a **Employment**

Record the total number of full-time equivalent (FTE) employees in your U.S.-based operations for the 2009-2012 period. Then, estimate the percentage of these employees that perform the professional occupations indicated in parts b-j.

Do not double count personnel who may perform cross-operational roles. Estimates are encouraged.

Note: Ensure your source of employment data is **consistent with your response to Respondent Profile**. In other words, if you have declared this to be a Business Unit/Division-level response, this section should contain Business Unit/Division-level data.

Source of Workforce Data:	
Reporting Schedule:	

		Professional Occupations	2009	2010	2011	2012*
A.	a.	Total Full Time Equivalent (FTE) Employees				
	b.	Administrative, Management, & Legal Staff (as a % of a)				
	c.	Facility & Maintenance Staff (as a % of a)				
	d.	Information Technology Professionals (as a % of a)				
	e.	Marketing & Sales (as a % of a)				
	f.	Engineers, Scientists, and R&D Staff (as a % of a)				
	g.	Production Line Workers (as a % of a)				
	h.	Testing Operators, Quality Control, & Support Technicians (as a % of a)				
	i.	Other (specify)				
	j.	Other (specify)				

B.	Estimate the percentage of your total FTEs that currently work on **space-related** products/services:	
C.	Estimate the percentage of your total FTEs that perform functions that are Science, Technology, Engineering, and Mathematics (STEM)-related:	

* Furnish full year **estimates** for 2012.

Comments:	

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Section 17.b **Employment (cont.)**

A. Provide the number of your organization's current engineers, scientists, and R&D staff that fall within the functions and age ranges listed in the table below.

		< 30 Years Old	30 to 40 Years Old	40 to 50 Years Old	50 to 60 Years Old	> 60 Years Old
a.	U.S. Citizens - Engineers, Scientists, and R&D Staff					
b.	Non-U.S. Citizens - Engineers, Scientists, and R&D Staff					

B. Indicate how many unfilled vacancies your organization currently has for the following types of positions:
- Engineers, Scientists, and R&D Staff
- Production Line Workers
- Testing Operators, Quality Control, & Support Technicians

Please explain any difficulties in filling these vacancies below.

C. Identify any unique **space-related** skills and/or competencies that your organization may have. Identify the general type of skill and/or competency from the drop-down menu then describe it in the right hand box.

	Type of Skill or Competency	Explanation
1.		
2.		
3.		
4.		
5.		

Comments:

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Section 18 — Obstacles Affecting Long-Term Viability

A. Identify the top five issues and challenges affecting the long-term viability of your organization's product line(s) or service(s). Select five of the issues/challenges below, ranking them 1 to 5, with 1 being your top concern.

Barriers to entry in the commerical space market		Labor Costs		
Buy American Act Waivers		Pension Costs		
Counterfeit Parts		Proposed cuts to U.S. Government space programs		
Difficulty presenting new, innovative products to the U.S. Government		Proximity to Customer		
Domestic Competition		Proximity to Supplier		
Environmental Regulations/ Remediation		Qualifications/Certifications		
Export Controls/ITAR Regulations		R&D Costs		
Foreign Competition		Skills Retention		
Foreign Subsidies/Import Restrictions		Taxes		
Government Acquisition Process		U.S. Material Availability		
Government Purchasing Volatility		U.S. Supplier Reliability		
Government Regulatory Burden		Variability of Demand		
Healthcare		Other (specify)		
Non-U.S. Material Availability		Other (specify)		
Non-U.S. Supplier Reliability		Other (specify)		

B. There are many federal and state government programs and services available to assist your organization to better compete in the global marketplace. If your organization would like more information regarding these government programs, select the specific areas of interest below. The Commerce Department will follow-up with your organization regarding your selections.

Business development (joint ventures, new markets, etc.)		Patents and trademarks		
Energy and environmentally conscious manufacturing		Product/service development (including manufacturing standards, processes, and practices)		
Export licensing (ITAR/EAR)		R&D programs		
Financing (access to capital, loans, etc.)		Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) contracts		
Global export opportunities		Training Opportunities		
Government procurement guidelines and e-commerce		Country Commercial Guides (specify countries in box)		
Manufacturing technology development (including acquiring, licensing, and/or commercializing federally developed technologies)		Other (specify)		
Marketing assessment skills		Other (specify)		

Comments:	

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Section 19	Certification
The undersigned certifies that the information herein supplied in response to this questionnaire is complete and correct to the best of his/her knowledge. It is a criminal offense to willfully make a false statement or representation to any department or agency of the United States Government as to any matter within its jurisdiction (18 U.S.C.A. 1001 (1984 & SUPP. 1197))	
Organization Name	
Organization's Internet Address	
Name of Authorizing Official	
Title of Authorizing Official	
E-mail Address	
Phone Number and Extension	
Date Certified	
In the box below, provide any additional comments or any other information you wish to include regarding this survey assessment.	
How many hours did it take to complete this survey?	

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