

AEROSPACE INDUSTRIES ASSOCIATION SPACE PRIORITIES FOR THE NEXT ADMINISTRATION AND THE NEW CONGRESS

The Aerospace Industries Association (AIA) is the premier advocate for America's space industry, supply chain, and workforce. Across AIA's over 300 member companies are the suppliers, designers, manufacturers, launch providers, and operators of commercial, civil, and national security satellites and space vehicles. AIA member companies have supported human spaceflight activities since the beginning of the Space Age and have played a part in exploring the Moon and every planet in our solar system. Today, our members continue to provide the space-based capabilities critical to ensuring American leadership in space, growing our economy, and keeping our country safe.

SPACE REQUIRES A WHOLE OF GOVERNMENT APPROACH

For over 60 years, U.S. government and private sector investments in space programs have enabled a \$400 billion per year global economy supporting hundreds of thousands of highly skilled American workers across America. Space activities are essential to modern life: they extend communications to every point on Earth; underpin our digital economy with navigation and timing capabilities; enable critical weather forecasts; provide a deeper understanding of our planet, solar system, and universe; and revolutionize U.S. national security capabilities, providing America's armed forces a significant advantage.

Space provides the U.S. an avenue to apply all instruments of national power – diplomatic, informational, military, and economic. These capabilities are accomplished across three interconnected sectors: civil space, commercial space, and national security space. As the U.S. becomes increasingly reliant on space for economic, security, and scientific endeavors, the interconnectivity of these sectors requires cross-government policies and investment. Both U.S. reliance on space and potential threats to space systems drive the need to ensure safe operation in and through space.

AIA CROSS-GOVERNMENT SPACE PRIORITIES

- ❑ **Maintain the National Space Council and Users' Advisory Group** to coordinate a whole of government strategy with stakeholder input.
- ❑ **Continue COVID-19 recovery contract flexibilities and workforce support** for the aerospace and defense supply chain, which is made up of small and medium sized businesses across the country and employs more than 1.27 million U.S. workers.
- ❑ **Invest in education and workforce development programs** to broaden the size and diversity of the next generation space workforce.
- ❑ **Ensure U.S. government policy and regulation enables the U.S. space industry to remain the global leader** and serve as a backstop against protectionist subsidization by U.S. near-peers and global competitors.
 - Leverage existing commercial capabilities within the U.S. space industry to the maximum extent possible.
 - Invest in space research and development to foster continued U.S. industry leadership.
 - Continuously assess regulations, including licensing and export rules, to ensure the U.S. remains a competitive regulatory environment and the U.S. space industry maintains global leadership.



U.S. Space Force is DOD’s lead service for space. It provides and acquires critical national capabilities and services, such as secure communications, missile warning, intelligence, precision position, navigation, and timing, and targeting. **U.S. Space Command** is DOD’s lead for joint space warfighting. Its role is to deliver combat power from space and deter aggression and conflict in space while protecting and defending America’s space assets should conflict arise.

NATIONAL SECURITY SPACE PROTECTS OUR ECONOMIC PROSPERITY AND NATIONAL SECURITY

National security space includes all military and intelligence community uses of space-based capabilities. While all Department of Defense (DOD) services and combatant commands rely on space and have internal space activities, the U.S. Space Force (USSF) and U.S. Space Command are DOD’s lead service and warfighting command for space, respectively. The National Reconnaissance Office (NRO) provides a similar function for the intelligence community. Other national security space organizations include the Defense Advanced Research Projects Agency (DARPA), National Security Agency (NSA), National Geospatial-Intelligence Agency (NGA), and Space Development Agency (SDA).

AIA NATIONAL SECURITY SPACE PRIORITIES

- ❑ **Maintain bipartisan support and budget stability** for national security space activities, ensuring policies and investments reflect the current and growing threats to our space infrastructure.
- ❑ **Continue to develop the U.S. Space Force** to reform how DOD acquires and operates space platforms and develops and utilizes its cadre of space professionals.
- ❑ **Maintain U.S. Space Command** as the DOD’s lead space warfighting command.
- ❑ **Enhance the acquisition system for space programs.** USSF has the charge from Congress and DOD leadership to create an acquisition system suited for the uniqueness of space programs and to rapidly acquire and field new capabilities.
- ❑ **Assure space supply chain resiliency**, which is dependent on specialized materials, technologies, and workforce, such as the supply of onshore, space-qualified, radiation-hardened microelectronics and carbon fiber composites.
- ❑ **Reduce over-classification** to improve the acquisition process, capability delivery times, and operations information sharing, including removing duplicative classification of the same programs and architectures amongst different DOD and intelligence community organizations.



Commercial space requires regular interaction on a regulatory and policy basis with the Departments of Commerce and State, Federal Aviation Administration (FAA), Federal Communications Commission (FCC), and the Export-Import Bank.

A STABLE REGULATORY ENVIRONMENT ENABLES COMMERCIAL SPACE SUCCESS

Commercial space encompasses a broad set of commercial enterprises, including companies that build satellites, launch vehicles, and ground equipment; launch and operate space vehicles and human spaceflight activities; and provide products or services, such as satellite servicing, Earth imagery, and telecommunications. Commercial space also encompasses the provision of services and hardware to a broad set of U.S. government civil and national security agencies.

AIA COMMERCIAL SPACE PRIORITIES

- ❑ **Preserve spectrum for space applications.** Spectrum is a finite resource with a growing number of uses, including emerging technologies like 5G. The government should lead the way in maintaining and expanding internationally harmonized spectrum access for existing and new space applications.
- ❑ **Establish a space traffic management authority in a civil Executive Branch agency** with adequate resources to maintain a space traffic management framework and ensure sustainable practices for the tracking and management of orbital debris. A recent report by the National Academy of Public Administration provides a detailed assessment of this need.
- ❑ **Establish in-space mission authorization authority in a civil Executive Branch agency** with adequate resources to authorize non-governmental space missions performed by private entities.



Civil space agencies include the National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA), and U.S. Geological Survey (USGS).

CIVIL SPACE SUCCESS DEPENDS ON CONTINUITY ACROSS A BALANCED PORTFOLIO

Civil space includes the exploration of space, advancing space and aeronautics technologies, and observing and understanding our solar system and home planet, including the Earth's climate and weather.

AIA CIVIL SPACE PRIORITIES

- ❑ **Maintain major program continuity.** Space programs require multi-year planning and stable budgets given their complexity. As found by the National Research Council's comprehensive assessment of human spaceflight and evidenced by the continuation of the commercial crew program, continuity and stability will create historic and sustainable achievements in the coming decade. This will be especially important for the return of humans to deep space, the launch of important robotic missions to other planets and their natural satellites, the development and deployment of next generation in-space observatories, and the first U.S. commercial landers to return U.S. astronauts to the Moon. This continuity can also lead to fundamental shifts in our scientific understanding of our planet, Sun, solar system, and the universe through ambitious robotic missions that push the frontiers of technology.
- ❑ **Maintain a balanced NASA portfolio** across its exploration, science, aeronautics, space technology, and STEM programs.
- ❑ **Continue NASA's Artemis Program to the Moon and Mars**, including use of the Space Launch System and Exploration Upper Stage, Orion, Gateway, a new Human Landing System, Gateway resupply capabilities, and spacesuits, as well as scientific discovery through the Lunar Discovery and Exploration Program and Commercial Lunar Payload Services.
- ❑ **Expand U.S. space leadership.** Maintain U.S. international leadership in low Earth orbit through the International Space Station and expand U.S.-led international partnerships through NASA's Artemis program.
- ❑ **Extend International Space Station (ISS) operations to 2030 and fund low Earth orbit (LEO) commercialization.** Maintain a continuous U.S. human presence in space by extending ISS operations, associated cargo and crew transportation programs, and microgravity research programs to ensure human space exploration and scientific research efforts are maximized. Fund efforts to spur US private industry activity in LEO, including commercial use of the ISS and future in-space habitats, as NASA expands US human presence beyond LEO.
- ❑ **Invest in next generation aeronautics technologies.** Complete the supersonic X-59 and hybrid-electric X-57 demonstrators and begin an integrated X-plane program to advance environmental performance. Continue hypersonics and urban air mobility (UAM) research and partnerships. Revisit national aeronautics research priorities since the last National Academies Decadal Survey of Civil Aeronautics in 2006.
- ❑ **Continue decadal survey-based science missions**, which keep the nation on the cutting edge of advancements in fundamental issues such as the search for life and the long-term variability of the Earth weather system. Science missions provide a platform for international collaboration and career opportunities for the next generation of innovators and are executed in direct support of National Academies of Sciences, Engineering, and Medicine Decadal Surveys priorities, including James Webb Space Telescope (JWST), Roman/Wide-Field Infrared Survey Telescope (WFIRST), Mars Sample Return, and Europa Clipper.
- ❑ **Carry out the National Academies' 2017 Earth science decadal survey priorities**, including Earth Venture Class programs, a new line of Explorer-class missions, and an Incubator Program.
- ❑ **Maintain an independent NASA Space Technology Mission Directorate (STMD)** with continued investments in nuclear power and nuclear thermal propulsion systems; solar electric propulsion demonstrations; small satellite technologies; on-orbit servicing, assembly, and manufacturing; in-situ resource utilization; and the Flight Opportunities Program.
- ❑ **Fund NOAA's next generation weather systems** acquisition strategy to develop the next generation of geostationary and low Earth orbit satellite systems beginning in Fiscal Year 2021.
- ❑ **Expand microgravity research** aboard suborbital and orbital research platforms.
- ❑ **Maintain an independent NASA STEM education program** and fund STEM programs across science and space agencies.