AEROSPACE

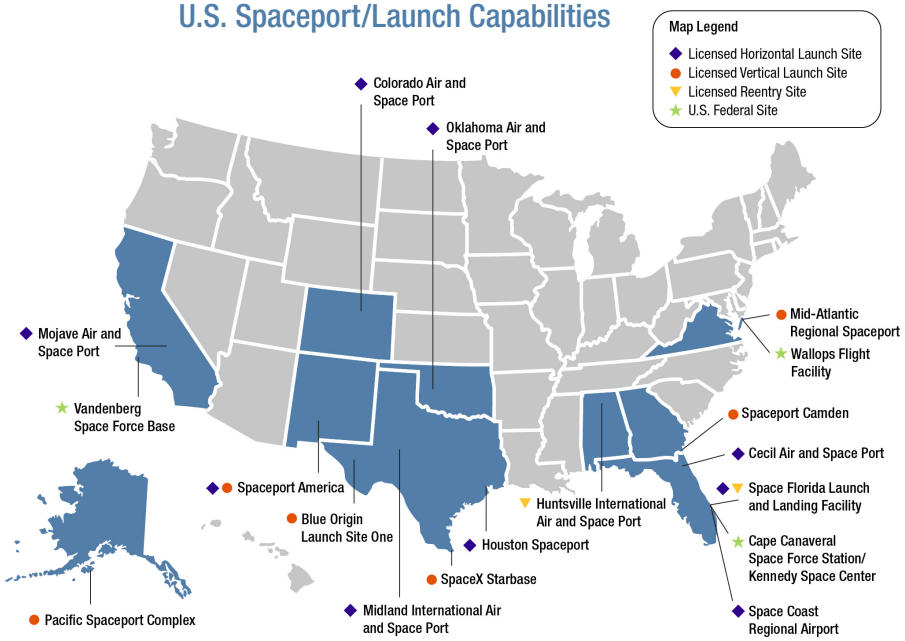
SPACEPORTS

Commercial innovation, new economic opportunities, and U.S. objectives for national security and civil space missions are all driving an exponential increase in both launch frequency and record demand for space launch capacity. Internationally, as humankind expands the use of space for economic or individual purposes, spaceports positioned around the globe will be key for future access to space and point-to-point space travel.

To accommodate this growing need, U.S. stakeholders in the private sector and at all levels of the public sector are galvanizing interest and support for spaceport development in their communities. Though today's rockets are vertically launched near large, open bodies of water, continued growth and innovation in the space sector and the development of increasingly reliable vertical launch vehicles may give rise to more inland spaceports in the future.

The Aerospace Corporation (Aerospace) is the nation's trusted partner for this foundational moment, bringing program and technical expertise honed over more than 60 years of solving the hardest technical problems of the U.S. national security and civil space community, the commercial space sector, and international partners.

U.S. Spaceport/Launch Capabilities



Direct Commercial Programs Office
commercialprograms@aero.org

Aerospace Support to Commercial Space

Aerospace brings proven systems engineering and integration (SE&I) capabilities and space insights directly to the private sector, advancing commercial space innovation and capabilities by helping reduce risk and uncertainty across program and innovation lifecycles. Aerospace does not compete with commercial companies. Our services foster confidence in commercial capabilities among commercial buyers, investors, venture capital firms, and the U.S. government.

Aerospace Corporate Locations

› Chantilly, VA, (headquarters)
› Huntsville, AL
› El Segundo, CA
› Colorado Springs, CO
› Albuquerque, NM
› Houston, TX
› Arlington, VA
› Salford, United Kingdom

Aerospace Locations at Bases and Ranges

› Buckley Space Force Base (CO)
› Cape Canaveral Space Force Station (FL)
› Hill Air Force Base (UT)
› Kennedy Space Center (FL)
› Kirtland Air Force Base (NM)
› Offutt Air Force Base (NE)
› Peterson Space Force Base (CO)
› Schriever Space Force Base (CO)
› Vandenberg Space Force Base (CA)
› Wright-Patterson Air Force Base (OH)

Solving the Hardest Technical Challenges in Space

Spaceport licensing, construction, maintenance, risk mitigation, and recapitalization require deep understanding, a massive amount of capital, and the labor and expertise of a skilled technical workforce. Aerospace's SE&I experience covers the breadth of technical disciplines needed across the entire facilities lifecycle for spaceport instrumentation architectures, ground systems facilities, communication data centers, fixed/transportable stations, antenna/radome systems, and launch and satellite infrastructure.

Aerospace's core competencies and technical services available to spaceport developers and range operators include:

- Instrumentation, communications, and launch facilities/launch complex architecture development
- Data, applications, and infrastructure focused on availability, scalability, and immutability
- System of systems engineering and integration
- System design, development, acquisition, test, mission readiness, operations, and sustainment
- Concept development and prototyping
- Technology assessments, applications, and transitions
- Decision support and integration and dissemination of industry best practices

Infrastructure and Facilities Assurance

Aerospace's customers receive access to the full suite of operations and facilities engineering, product and process assurance, quality engineering, and other capabilities and services available within our technical matrix, including:

- Infrastructure/facility engineering and lifecycle assessment
- Master planning and site surveys
- Acquisition and contract strategy support
- Resiliency planning and risk assessment
- Facilities planning, programming, and cost/schedule analysis/modeling
- Requirements development, validation, and verification
- Design, construction, operations reviews (requirements, codes, safety)
- Infrastructure/facility engineering and lifecycle assessment
- Anomaly (red team) support
- Mobile ground systems (transportables) design assurance

National Vision, Policies, and Strategies for Spaceports of the Future

Image: U.S. Space Force/United Launch Alliance

Space launches require special restricted areas to protect the public, assets, and resources in and around the launch area, including restricted air and sea space. Aerospace provides spaceport-related mission assurance support to federal civil customers, including the Federal Aviation Administration (FAA), NASA, and the Office of Space Commerce. As a member of the Global Spaceport Alliance, Aerospace advances international spaceport standards and best practices.

Aerospace authored a 2020 white paper, *A National Spaceport Strategy,* for Air Force Space Command, which recommended the formation of a national spaceport interagency working group (NSIWG). In 2022, this NSWIG was established, chaired by the FAA's Office of Commercial Space Transportation and featuring members from NASA and the Departments of Commerce, Defense, State, and Transportation. Aerospace supported the NSIWG's charter to develop and draft a national spaceport strategy.

Aerospace also supports the U.S. Space Force Office of the Chief of Space Operations' Spaceport of the Future initiative, which secured $1.3 billion in investment for spaceport infrastructure recapitalization at Cape Canaveral Space Force Station and Vandenberg Space Force Base from 2023 through 2028.

GLOBAL SPACEPORT ALLIANCE MEMBER

The Aerospace Corporation

The Aerospace Corporation is a leading architect for the nation's space programs, advancing capabilities that outpace threats to the country's national security while nurturing innovative technologies to further a new era of space commercialization and exploration. Aerospace's national workforce of more than 4,600 employees provides objective technical expertise and thought leadership to solve the hardest problems in space and assure mission success for space systems and space vehicles. For more information, visit www.aerospace.org.

The Aerospace Corporation | 14745 Lee Road, Chantilly, VA 20151 USA | www.aerospace.org