



Maine Space Corporation

Unleashing the Economic Potential of Maine's Space Industry

Testimony In Support of LD 1863, An Act to Amend the Laws Governing the Maine Space Corporation

Terry Shehata, Ph.D., Executive Director, Maine Space Corporation
May 12, 2025

Senator Curry, Representative Gere, and distinguished members of the Committee:

My name is Terry Shehata. I live in Winthrop and serve as Executive Director of the Maine Space Corporation. I'm here today to express strong support for LD 1863.

The Legislature created the Corporation in 2022 to lead Maine's engagement in the growing space economy. Our mission is to position Maine as a national leader in space-based technologies—especially small satellite development, environmental monitoring, and aerospace manufacturing—and to apply these technologies to strengthen Maine's core industries.

At the center of this mission is the Maine Space Complex—a coordinated statewide platform integrating space data and advanced analytics, space R&D innovation hubs, and land- and sea-based launch infrastructure. The Complex will support the full space innovation lifecycle—from concept to orbit to economic impact.

Equally important is our work to build a future-ready workforce. We are creating education and training pathways that reach across the state, including rural regions, to ensure all Maine people can benefit from new opportunities in the space sector.

Since our formation, we have:

- Recruited Teledyne Technologies as the Space Complex's first anchor tenant, and Promin Aerospace, joining bluShift and VALT as Maine's three small launch providers.
- Opened Maine's first Space Qualification Testing Facility at Brunswick Landing, with plans to expand in Aroostook and Washington Counties and other rural counties.
- Completed a statewide workforce development roadmap.

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- Led a multi-partner proposal to the NSF Regional Innovation Engines program, involving over 50 organizations across Maine and New Hampshire, to compete for up to \$160 million in federal investment.
 - Raised national visibility for Maine as an emerging hub for small satellite and Earth observation innovation—key drivers of rural economic growth.

Despite this progress, we face a major structural challenge: many federal and philanthropic funding opportunities are only available to nonprofits or public instrumentalities. Without clear legal status, the Corporation—and Maine—risk exclusion from these opportunities.

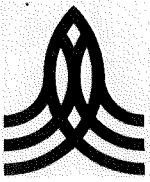
LD 1863 addresses this challenge.

- It codifies the Corporation as a quasi-independent state entity and an instrumentality of the State performing an essential governmental function. This designation ensures we can represent Maine in strategic partnerships with federal agencies, national laboratories, philanthropic organizations, and private investors with clarity and confidence.
- It affirms our alignment with IRS 501(c)(3) requirements which is not only critical for securing federal grants like the NSF Regional Innovation Engines award, where the Corporation is the lead applicant—it opens doors to private capital and philanthropic contributions that are often essential for matching federal funds, supporting pilot initiatives, and sustaining long-term innovation programs. It also signals to potential funders that the Corporation operates under rigorous nonprofit standards, with a clear public mission and strong governance.
- These designations mirror those in the founding legislation of other entities like the Maine International Trade Center and the Maine Technology Institute.

The bill also strengthens our governance by protecting confidential business information, ensuring public benefit if dissolved, and updating board voting rules.

These changes are not symbolic—they are essential to Maine's ability to lead in a high-growth, high-tech sector. On behalf of the Corporation, I respectfully urge you to support LD 1863.

Thank you for your time and leadership.



Maine Space Corporation

Established in 2021 in 5 MRSA c. 393.

www.mainespacecorp.org



Unleashing the Economic Potential of Maine's Space Industry

Legislative Purpose

The corporation shall leverage the State's geographic, rocketry, manufacturing and higher education assets and capabilities to establish the State as a national and international industry destination and an authority in launching small launch vehicles and small satellites into polar orbit.

Governance

The Board of Directors of the Maine Space Corporation consists of 17 directors, of whom 6 directors are ex officio. Non ex officio members are appointed by the Governor and subject to confirmation by the Senate.

Vision

By 2045, Maine will be an integral player in the emerging global network of suborbital and orbital space sector, providing a significant return on investment as an engine of workforce development and economic growth.

Maine Space Complex

To achieve this vision, 5 MRSA c. 393 authorizes the corporation to establish a geographically distributed shared resource-based Maine Space Complex, which is restricted to commercial, research and educational uses, and must include but is not limited to the following business units:

The Space Data & Advanced Analytics Center will be a cloud-based, digital platform resourced to import/downlink, store, cleanse, manage, and analyze satellite data in concert with terrestrial data to solve local business public policy issues in innovative ways.

The New Space Innovation Hub, to be located at Brunswick Landing, with a spoke at Loring Commerce Centre, is envisioned as a knowledge and innovation hub for new business incubation and acceleration, hardware and materials component development facilities, and satellite and launch vehicle manufacturing and testing.

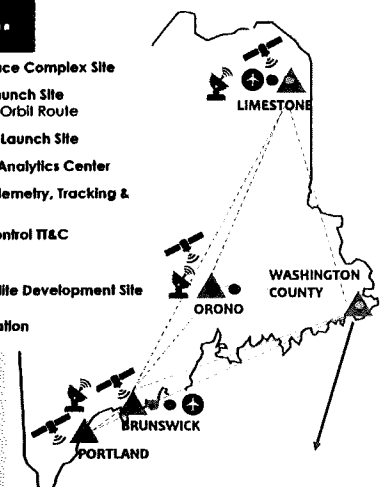
The Launch Sites & Services will include both vertical and horizontal launches at one or more sites along the coast of Maine, as well as horizontal launch capabilities from aircrafts that leverage the long runways at Brunswick Landing and Loring Commerce Centre.

The Vision Is Not Simply About Launching SmallSats and Rockets...

... it is about engaging Mainers in all three segments of the new space economy value chain and the underlying infrastructure needed to support these segments.

- **Upstream segment:** Research, manufacturing, and ground systems; all include fundamental and applied research activities, scientific and engineering support activities, materials and components supply, manufacturing of space systems, subsystems, equipment, telemetry, tracking, and command stations.
- **Downstream segment:** Space operations for terrestrial use and products and services which rely on satellite technology, signal, data to function (e.g., selected GIS, Global navigation satellite system-enabled devices).
- **Space-related segment:** Space applications, products, and services from spin-offs or technology transfer from the space sector, which use satellite technology but do not depend on it.

- ▲ Maine Space Complex Site
- ↓ Vertical Launch Site
Polar/SSO Orbit Route
- ⊕ Horizontal Launch Site
- Data and Analytics Center
- Launch Telemetry, Tracking & Control
- Mission Control IT&C
- R&D Site
- ▲ Nanosatellite Development Site
- Ground Station



Maine's New Space Economy Assets and Applications

New Space Economy Assets

Geographic location for polar orbits

Offers direct and sun-synchronous polar orbit access (inclination angle between 80° and 100° from equatorial plane) for full Earth coverage

Coastline for vertical launches

Lower population density and risk; allowance for a southerly launch.

Physical assets at Loring and Brunswick

Buildings and resources; allowance for horizontal launches.

Small but growing supply chain

Directly and indirectly supplying the new space economy.

Maine-based launch providers

bluShift Aerospace and VALT Enterprises.

Education and public and private R&D assets

UMaine System, Community College System, Roux Institute, private colleges, non-profit research entities, CTEs, and Investment groups.

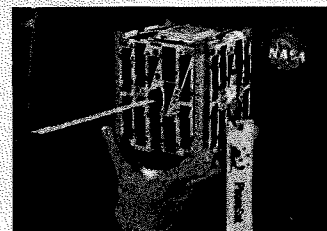
Regional Assets

Higher Education institutions, high tech industries

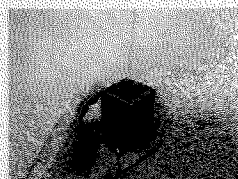
Examples of SmallSats – Maine's Focus



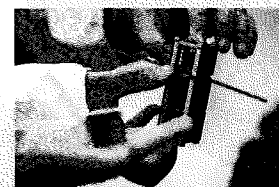
Micro – NASA's Mars Cube 1



Nano - CubeSat



Pico



Femto

Small Launch Vehicles – Maine's Focus

bluShift Red Warf

Height: 78 ft.

Max Alt: polar low-Earth Orbit

Propulsion: Green fuel powered hybrid engine

Fuel: non-toxic, bio-derived solid fuel



Statue of Liberty
305 feet from the ground to tip of torch.



NASA Artemis SLS
322 feet



Developing SmallSat Applications – Economic Opportunity for Maine

- Climate Change Monitoring
- Environmental Monitoring
- Food security
- Land use monitoring
- Natural resource management
- Search and Rescue
- Biological and physical sciences

- Asset tracking
- Air and maritime, AIS, ADS-8
- Agricultural monitoring
- Astronomy/Astrophysics
- Disaster monitoring/response
- Earth Imaging

Major Customers

- Federal agencies
- Telecommunications
- Air & Maritime Transportation
- Research institutions
- Educational Institutions
- Consumer Services
- General public

Outcomes – Talent and Innovation*

- Retain Maine's students and Immigrants with STEM degrees.
- Attract highly skilled workers and their families from out of state.
- Encourage startups and spur development in all seven technology sectors.
- Develop globally based applications for research, commercial and consumer uses.
- Facilitate STEM learning opportunities for Maine high school and higher education students.
- Promote economic aspirations for All Mainers.
- Advance Maine to a new competitive level in a fast-growing Knowledge Economy.

*Contributes to the state's Economic Development Strategy 2020-2029 **TALENT** and **INNOVATION** Goals

Project Summary

Overview

Small satellites (≤ 500 kg) are vital to U.S. security and global leadership in fields like precision agriculture, disaster response, and intelligence. However, long development cycles weaken American preeminence in space and give competitors an edge. The Consortium for the Acceleration of Space Technology in Northern New England (FAST-NNE) will reduce development time from 42 to 12 months, reduce costs per mission, and enhance testing efficiency tenfold through AI and machine learning. Leveraging industry and academic expertise, over 10 years FAST-NNE will expand regional companies, strengthen supply chains, create hands-on education pathways, create high-wage, driving billions in economic impact across 26 counties in Maine and New Hampshire. By accelerating satellite deployment, lowering costs, and improving remote sensing, FAST-NNE will bolster national security, enhance U.S. geopolitical competitiveness, and create new economic and workforce opportunities in rural counties across the region.

High-impact outcomes: Preliminary projections over 10 years suggest that FAST-NNE could create up to 10,000 high-wage jobs, launch 100 new startups, attract \$250M+ in venture capital, and contribute \$4.5 billion annually to the Region's GDP or adding 3% to the GDP. Other potential high-impact outcomes include SmallSats will enable low-latency communication, in-orbit manufacturing, optimized logistics, and advanced materials science. Downstream benefits include national security, resource management, precision agriculture, and disaster response. FAST-NNE will position the region as a global leader in space innovation with transformative societal and economic impact.

Intellectual Merit

The Engine aims to transform the Region of Service into a global hub for accelerating innovations in SmallSats, addressing challenges from design to operation in the SmallSat value chain. It tackles scientific and engineering hurdles such as lightweight, high-performance components, advanced data analytics, AI/ML algorithms, and robust cybersecurity protocols. Leveraging regional expertise in AI, materials, manufacturing, communications, and cybersecurity, FAST-NNE will drive R&D projects, facilitate rapid SmallSat deployment, and translate innovations into commercial products. The Engine will build upon cross-sector partnerships, secure sustainable funding through public-private partnerships, and create innovation hubs to support a dynamic, adaptive innovation ecosystem, ensuring long-term economic growth and technological leadership.

Broader Impacts

FAST-NNE will position the region as a space economy leader, driving \$4.5B in GDP growth and creating 10,000 high-wage STEM jobs over 10 years. It will expand STEM education, workforce training, and industry-aligned curricula to communities across the entire service region to build a skilled talent pipeline. Regional engagement will connect industry, academia, and government and communities to foster innovation and economic growth. Advancements in AI, satellite tech, and data processing will enhance societal well-being. National security will benefit from resilient space technologies supporting defense and cybersecurity. Investments in infrastructure, including testing and launch facilities, will accelerate commercialization. Strategic partnerships with NIST, NASA, MITRE, and others will expand funding and global competitiveness.

- **Overarching Challenges:** Technological and infrastructure limitations; shortage of a highly skilled workforce; and regulatory and licensing issues.
- **Keywords:** Advanced Materials, Artificial Intelligence, Semiconductors & Microelectronics, Cyberinfrastructure & Advanced Computing, and Communications and Wireless Technologies
- **Industry Sectors:** 3364 (Aerospace Product and Parts Manufacturing), 9271 (Space Research and Technology), 5174 (Satellite Telecommunications).