

U.S. SENATOR MARIA CANTWELL WASHINGTON

The Spokane-Inland NW Aerospace Composites Consortium will be awarded one of only 31 Economic Development Administration (EDA) Regional Innovation and Technology Hubs (Tech Hubs) designations out of almost 200 applicants.

The Tech Hubs program was created by the CHIPS & Science Act, <u>legislation</u> spearheaded and guided to passage by Sen. Cantwell.

As the vote on the final bill approached, it appeared that many of the "science" provisions would be dropped from the bill. At the 11th hour, Sen. Cantwell helped <u>organize a bipartisan coalition to</u> save the science R&D provisions, including the Tech Hubs program.

Tech Hubs are intended to harness and support existing pockets of expertise around the U.S. The program will help boost U.S. competitiveness by ensuring that innovation is happening in regions across the country, not just in a handful of cities.

As Sen. Cantwell <u>said</u> in a floor speech before the final Senate vote on the CHIPS & Science Act: "While we want to grow more technology advancement in the United States, [...] we also want to see it not just in Seattle, but in places like Spokane, or Indianapolis, or West Virginia, or Wichita."

As Spokane is the only Tech Hub designation focused on aerospace, this Tech Hub designation confirms that the Greater Spokane region and Washington state is the country's preeminent center for the future development, commercialization, and manufacturing of advanced aerospace composite materials.

This designation is the next step in further developing the advanced aerospace manufacturing ecosystem that will help the United States lead the world in these light, efficient, rapidly produced, and recyclable aerospace materials technologies. The consortium will next compete with the other 30 Tech Hub designees for full Tech Hub implementation funding.

The keystone of this effort is the planned American Aerospace Materials Manufacturing Center, to be housed at the former Triumph aerospace facility in Spokane. This planned state-of-the-art facility will be able to manufacture large advanced aerospace composite materials faster than any other facility in the U.S.

In partnership with NASA, the Center plans to develop technology the U.S. aviation industry needs to thrive in a net-zero-carbon world.

Next Steps

There will be at least five Tech Hub implementation awards of approximately \$65 million each to a subset of the current 31 Tech Hub designees. EDA plans to release the application for these awards later this year with decisions next year.

As part of that upcoming implementation application, the Spokane hub will propose a series of projects led by consortium members that will collectively accelerate the region's transformation into a world-leading center of development and manufacturing for thermoplastic composite materials for aerospace, including research and development, manufacturing, and workforce development aspects.

These projects will leverage federal funding with significant private sector investment in R&D and manufacturing, as well as research and workforce investments from labor, workforce development, and career and technical education institutions.

Washington State Workforce Development Impacts

The consortium is planning new workforce development activities at facilities across the Inland Northwest and will focus on the recruitment of rural, tribal, minority, and other underrepresented individuals.

This includes establishing and expanding training programs at K-12 school districts, career and technical education programs, new apprenticeship opportunities to provide on-the-job training alongside classroom instruction, and engineering and materials and science degree programs at institutions of higher education included in the consortium.

Why Inland Northwest is an Ideal Location for an Aerospace Tech Hub of Global Significance

With 1,500 aerospace-related suppliers and over 130,000 workers in aviation and aerospace, the region has the world-class workforce needed to meet immediate and next-generation domestic development and production needs to reverse the upward trajectory of American reliance on foreign materials.

The Spokane-Spokane Valley-Coeur d'Alene region is centered on the I–90 corridor and in five years, this region has seen a 12% population increase and 9.5% job increase, outpacing the national job growth rate of 3.8% with projections of an 11.5% increase by 2027.

Together with a group of competent faculty and research scientists and engineers drawn from this region's highly collaborative colleges and universities, the region has the educational expertise to expand offerings and develop training programs for every aspect of the testing and production process.

Spokane-Inland NW Consortium's Aerospace Composites Application

Gonzaga University and Advanced Thermoplastic Composites ("ATC") Manufacturing have formed a broad consortium of industry, academic, workforce, and government partners to pursue federal funding for an American Aerospace Materials Manufacturing Center in Washington state.

The purpose of the effort is to (1) advance U.S. leadership in the development and production of thermoplastic composite materials, and (2) center that leadership in the greater Spokane region. The U.S. is behind European competitors in the development of these technologies, and this center represents a collective push to develop the American supply chain and good-paying jobs at all skill levels in this field of advanced 21st century manufacturing.

With Gonzaga and ATC leading the effort, the consortium is currently consulting with Boeing, the Machinists, Blue Origin, Northrup Grumman, Electroimpact, the University of Washington, Eastern Washington University, Inland Northwest Aerospace Consortium, Spokane Workforce Council, WA Dept of Commerce, and others.

This Tech Hubs designation will also serve to organize the group members and consolidate its plan, which will enable it to be in an advanced state to apply for a full Tech Hub implementation grant and a MUSA Institute.

The consortium has partners across geographies and aerospace manufacturing-connected sectors in the greater Spokane region, North Idaho, Washington state, and the nation. This includes:

Aerospace and Related Industries

• Advanced Thermoplastics Composites (ATC)

- The Boeing Company
- Blue Origin
- Unitech Composites Inc.
- Electroimpact
- Northwest I-90 Manufacturing Alliance
- Avista
- Continuous Composites Incorporated

Educational Institutions

- Gonzaga University (lead)
- University of Idaho
- University of Washington
- Washington State University
- Eastern Washington University
- Community Colleges of Spokane
- North Idaho College
- Heritage University
- Coeur d'Alene Public Schools
- Spokane Public Schools

Labor and Workforce

- Spokane Workforce Council
- International Association of Machinists District 751
- Machinists Institute

Government and Economic Development

- Washington State Department of Commerce
- Idaho State Department of Commerce
- City of Post Falls
- City of Coeur d'Alene
- City of Spokane
- Spokane County
- Greater Spokane Inc
- S3R3 Solutions (West Plains PDA)
- Spokane International Airport
- Greater Spokane Valley Chamber of Commerce
- Coeur d'Alene Chamber of Commerce
- West Plains Chamber of Commerce

Tribal Nations

• Coeur d'Alene Tribe

- Kalispel Tribe of Indians
- Spokane Tribe of Indians

Organizations Focused on Underserved Populations

• Latino Civic Alliance

The American Aerospace Materials Manufacturing Center

A key asset to the consortium's effort is the former Triumph aerospace facility located in the Spokane area, which is now owned by ATC Manufacturing parent company Lakeside Companies.

The Center will repurpose a former manufacturing plant, less than a mile from Spokane International Airport, into a world-class "lab to market" testbed that will house the largest thermoplastic composite (TPC) fabrication and automation equipment in the U.S.

The 386,000 sq. ft. facility will enable hands-on training, classroom education, new technology development and validation, and scalable manufacturing strategies to enable domestic production of immediate and next-generation aerospace enterprise.

The testbed facility will make large TPC aerospace materials like ribs, beams, doors, bulkheads, and stiffened skins. This market-disrupting, high-rate production solution maintains the same performance of most advanced composite aerostructures flying today at low production rates. High production of TPC is a key enabler to accelerate the aerospace industry's goal of net-zero carbon emissions by 2050.

Right now there are no facilities in the U.S. that can make TPC parts of the size planned by the Center. In South Carolina there is a facility at Clemson University that can only make smaller parts at low rates. There are facilities in Europe and Asia that can make larger TPC parts and the Center hopes to make the U.S. more self-reliant and competitive. This facility would house large thermoplastic composite presses, ecosystem partners, and hands-on workforce training and R&D programs.

Advanced thermoplastic composites are light, structurally superior, rapidly produced, and recyclable materials that are poised to make up a significant portion of aircraft components in the near future. Consortium members plan to use the Center to develop technology for <u>NASA's</u> <u>Hi-Rate Composite Aircraft Manufacturing (HiCAM) Project</u> and the <u>NASA-Boeing Sustainable</u> <u>Flight Demonstrator Project</u>, among others.

The consortium aims to provide the research, workforce, and manufacturing base for the United States to be the global leader in the technology.