



WASHINGTON STATE QUARTERLY AEROSPACE BULLETIN



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FEATURE: Washington State Interiors Industry

Washington state boasts over 50 companies specializing in aircraft interiors. These companies design, manufacture and install OEM and after-market interiors in Boeing and Airbus airliners as well as smaller passenger aircraft like Learjets. Washington's aerospace hub based around Boeing plants in Everett and Renton boasts a concentration of highly skilled workers and a local supply chain that allows these companies to excel at what they do.

Interiors is one of the six integral subsectors that make up Washington's aerospace cluster. Although initially hit hard by the recent economic downturn, the aircraft interiors industry has rebounded in the last few years. Airlines are moving away from merely functional passenger cabins and focusing more on look and feel. New interior designs like Boeing's Sky Interior—incorporated into new 737 Next Generation aircraft—and Bellingham-based **Heath Tecna's** new design codenamed Project Amber recently released at the 2011 Interiors Expo in Hamburg are indicative of the current trend. These new design features include improved lighting to provide a more pleasant ambience, roomier cabin space and improved in-flight entertainment and better wireless connectivity to meet passengers rising expectations of an improved flying experience. Airlines are also looking to refit aging cabin interiors in operating aircraft, installing better looking, more durable interiors that incorporate new design features such as overhead pivot bins and LED lighting.

The efficient use of space is critical. Companies like **B/E Aerospace**, located in Marysville, WA, specialize in the design and manufacture of optimized interiors that help airlines maximize their profits both with new OEM installations and by retrofitting older airplanes with new interiors systems to keep them updated and efficient. B/E Aerospace opened a facility in Everett, WA specifically to work with Boeing on brand new interior designs for their new 787 airplane currently in flight testing.

A rapidly growing segment of the Interiors sector is VIP interior completions for business jets like Boeing's BBJs, the new passenger version of the 747-8 which recently made its first test flight and other aircraft destined for heads of state or other government uses. Bellingham's **Heath Techna** and Kirkland-based completion center **Greenpoint Technologies**

and are two of Washington's leaders in this market.

Greenpoint, recently hailed as the 2010 Aerospace Company of the Year by the Pacific Northwest Aerospace Alliance, has been exclusively specializing in interior design and completion of Boeing aircraft since 1988. They have led the way in developing unique interiors designs and products for the Boeing VIP 747-8 airplanes. Prime examples of these designs are the Aeroloft™, private sleeping berths located above the main deck of the airplane and the Aerolift™, a secure ground-to-main deck elevator that can handle up to four passengers or a wheelchair with attendant. Greenpoint, along with many state interiors companies, works closely with local Washington state companies to secure a supply of custom interior elements for the one-off VIP aircraft.

Washington interiors industry is very much on the rise. With the 787 well on its way to certification and Boeing's new 747-8 and highly successful BBJ line driving the local industry, it's no wonder that the 2011 Aircraft Interiors Expo-Americas will be held in Seattle this fall. This Expo will not only allow local interiors companies to showcase their products but will bring potential clients to the area and allow them to see first-hand the advantages of using interiors companies based in the Washington state aerospace cluster.

Company Showcase

The wealth of interiors companies in Washington includes some of the top in the field. Companies include innovative design firms like **Teague** (Seattle, WA) that created the new 787 Dreamliner aircraft interior for Boeing, and **Northwest Aerospace Technologies, Inc.** (Everett, WA), an engineering services company that provides aircraft interior modification, certification and parts manufacturing for large transport category aircraft as well as engineered products for OEM production and aircraft retrofitting.

Companies like **Crane Aerospace-Edec Corp.** (Lynwood, WA) design, manufacture, and support critical aircraft systems and components, and offers innovative solutions for sensing and control, landing systems, fluid management and cabin systems. **General Plastics Manufacturing Co.** (Tacoma, WA) provides flame-retardant, high-density polyurethane foam

FEATURE: Washington State Interiors Industry (cont.)

materials and finished parts for aircraft composite interior structure and finished crash-padding parts for flight deck crew protection applications. **Bucher Aerospace Corp.** (Everett, WA) manufactures airline passenger seats and stowages as well as galleys and trolleys that enhance the in-flight catering ability of any aircraft. (Bucher has also adapted their trolleys for "ground operation" in kitchens, offices and anywhere space and efficiency is at a premium.) **Yokohama Rubber Co.** (Kent, WA) manufactures lavatory modules, water and waste tanks for Boeing and Airbus commercial aircraft in both OEM and retrofit applications.

Washington also features companies that offer services beyond manufacturing and design. **Jamco America** (Everett, WA) provides flammability and laboratory testing and ODA certification services as well as supplying Boeing and Airbus with aircraft interiors engineering design services and products. **Janicki Industries** (Sedro-Wooley, WA) combines full R&D capabilities with leading edge material and production technologies to supply large scale, high precision composite tools, molds, prototypes, jigs and parts for the aerospace industry.

Of course not all of the state's interiors companies are focused solely on airliners. For instance, **Raisbeck Engineering Inc.** (Tukwilla, WA) provides a variety of engineering services and stowage solutions for large airliners as well as smaller aircraft manufactured by companies like Learjet, King Air and Twin Otter. **Lifepoint Inc.** (Woodland, WA) designs, manufactures and certifies both OEM and aftermarket customized interiors solutions for rotary and fixed-wing aircraft including VIP, Head of State, medical and multi-mission capabilities.

Finally, no airliner would be complete without companies like **GM Nameplate** (Seattle, WA), which creates in-cabin graphics and signs along with fly away exterior graphics that are designed to stand up to the environmental conditions that aircraft are exposed to on a day-to-day basis.

Other Aerospace News around the State

The Esterline Corporation, a leading specialty manufacturer that serves aerospace and defense markets, announced in May their [purchase of the Souriau Group](#) for \$715 million; the deal will greatly expand their presence in France. Souriau, based in Versailles, France, is a global supplier of engineered connectors for harsh environments. It serves the aeronautics defense, space, power generation, rail and industrial equipment industries. This follows Esterline's [acquisition in early 2011](#) of Eclipse Electronic Systems for approximately \$120 million. Eclipse is headquartered in Richardson, Texas and specializes in signals intelligence and communications tech-

Recent Interiors News in Washington

Heath Tecna (Bellingham WA) used the 2011 Hamburg Interiors Expo to officially unveil its new interior upgrade system (IUS), codenamed Project Amber, designed to retrofit Boeing 737s and 757s. This IUS features an interior architecture with improved baggage capacity and bin loading, better seat access, new styling and an improved LED lighting system. Heath Tecna also featured its new Xpand Closet System, based on a modular storage design. This system can be adjusted by airlines when they reconfigure their aircraft rather than a more costly renovation by removing and replacing with new equipment.

Greenpoint Technologies Inc. (Kirkland, WA) recently inducted its 17th Boeing Business Jet (BBJ) completion and is currently working on three BBJs for redelivery in late 2011 through 2012. Greenpoint has delivered over one hundred modification programs, including sixteen (16) BBJ completions with an on-time delivery rate of 98%; their last nine (9) modifications delivered early.

Astronics Advanced Electronic Systems (Redmond, WA) was chosen by Iberia Airlines to install its EmPower® in-seat power systems in the economy cabins of seven of the airlines' Airbus 340-300 aircraft. EmPower® systems have been installed in more than 300,000 aircraft seats since its development since 1996.

Aircraft Interiors Expo – Americas 2011 will take place September 12th-14th at the Washington State Convention Center in Downtown Seattle. It is the only event in the Americas that is specifically featuring airline interior design, manufacturing and supply companies. This show will give Washington State interiors companies the home field advantage in showcasing their products and services especially for those who are unable to make the larger Hamburg Interiors Expo in Germany.

nology or SIGINT. Brad Lawrence, Esterline CEO, said Eclipse is, "A highly respected and fast growing company with a broad base of customers...the combination will enable Esterline to develop a broader position in this important and growing market."

After being wooed heavily by other states, Port Angeles's largest aerospace company has decided to [stay in Washington state](#), partly because the Port of Port Angeles decided to build a composite manufacturing campus there. The company, Angeles Composite Technologies Inc., also called ACTI, already

employs 109 and will triple employment in the next five years, said CEO and President Michael Rauch. ACTI makes composite wing parts including leading and trailing edges, and sells them to contractors supporting leading aerospace companies including Boeing, Bombardier and Lockheed Martin.

In April, Washington State Governor Gregoire signed a measure [to promote the production of aviation biofuels](#) from wood waste and mill residue. The new law authorizes the state Department of Natural Resources to work with the Department of Commerce, Washington State University and the University of Washington on a demonstration project for the concept.

Seattle to Host Aircraft Interiors Expo

The world's foremost aircraft interiors event is coming to Seattle on September 12-14. The Aircraft Interiors Expo, which is also held in Hamburg, Germany every year, is the only dedicated aircraft interiors event in the Americas region showcasing airline interior design and airline cabin systems engineering.

Aircraft Interiors Expo Americas provides a unique platform for wide variety of aircraft interiors specialists including airlines, engineers, purchasers, designers, Brand and F&B Managers plus much more. They are all brought together to network, discover and source the latest in cabin interior designs and innovations featuring cabin management systems, seating products, soft furnishings, leathers & textiles, galley equipment, aircraft manufacturers, lighting plus much more.

"With a strong presence of aerospace companies in Seattle, particularly in aircraft interiors and components, it is the ideal location for us to organize Aircraft Interiors Expo Americas", said Jeff Bertholf of Reed Exhibitions, which organizes the event.

The expo will once again be held alongside with the [Airline](#)

In early 2011, the FAA authorized Learjet 60 Pilots to check aircraft tire pressure with [Crane SmartStem Passive Wireless Tire Pressure System](#) to check tire pressure on their own aircraft. SmartStem was developed by Crane Aerospace & Electronics to provide a fast and reliable method of checking tire pressure without gas loss - plus tire pressure can be checked without the removal of the valve stem cap. It is also designed to be easily retrofitted on existing aircraft. "Crane is pleased to offer Learjet 60 operators a simpler and more convenient means to ensure proper inflation of their tires with our SmartStem technology," said Nathan Smith, Business Development Manager at Crane Aerospace & Electronics.



[Passenger Experience Association \(APEX\)](#), formerly the World Airline Entertainment Association, and the [International Flight Services Association \(IFSA\)](#).

Visit www.aircraftinteriorsexpo-us.com for more details, or contact Jeff Bertholf at Reed Exhibitions (jbertholf@reedexpo.com; 203-840-5526).

Commerce Launches New Washington State Aerospace Suppliers Directory

The Department of Commerce recently launched a new aerospace supplier directory that will be used as a global marketing tool to promote Washington's aerospace industry and attract foreign investment into the state.

The directory will be accessible online, on self-updating CDs, and on mobile apps. The directory, being produced by Imagine CDs, will feature a fully searchable and self-updating directory of aerospace suppliers, service providers, and related companies, along with information on Washington State's economy, investment incentives, and other resources.



In addition to distributing the directory at major international events like the [Paris Air Show](#) and Aeromart Montreal, Washington State's network of foreign consultants will use the new Aerospace Directory as a marketing tool and business resource in key aerospace clusters around the world, including France, UK, Germany, Canada, China and Japan.

Visit www.WaStateAerospace.com to learn more about the directory, advertising opportunities, and upgrading your company's listing.

Recap of Toulouse Mission

Six Washington aerospace companies joined Rogers Weed, Director of Commerce for Washington State, on a 5-day business development mission to France beginning November 29.

The goal of the trip was to help companies identify business opportunities in the European aerospace industry and establish relationships with potential customers and partners. In addition, the Department of Commerce had discussions with six European aerospace companies that are considering establishing a presence in Washington State.

Participating companies included Absolute Aviation of Spokane, Avtech of Seattle, Damar Aerosystems of Monroe, Precision Machine Works in Tacoma, National Precision Bearings of Preston, and Cablecraft in Tacoma.

The group made site visits to several major aerospace manufacturers in the greater Paris and Toulouse regions, including Snecma, Aircelle, and Liebherr. All three companies have a presence in Washington State already, mainly to support ongoing Boeing work. Discussions with these companies during the trip focused on current or potential opportunities to supply products and services in support of their European projects. The group also met with the Vice President of Procurement Strategy and Business Operations for Airbus in Toulouse and toured the A320 assembly line.

The focal point of the mission was attendance at the Aeromart Toulouse conference, a major aerospace business-to-business event held every two years. Companies had two days of prearranged one-on-one meetings with potential customers, suppliers, or partners. Absolute Aviation conducted over 20 meetings throughout the course of the event. Over 2,000 people attend the Aeromart Toulouse Conference, with well over 30 other regional aerospace clusters present, all vying for business and looking to attract investment and jobs into their region.

"Airbus suppliers are looking to source more business in dollars to reduce their currency risk – that is benefitting our companies," said Rogers Weed, Commerce Director. "We certainly confirmed that there is a lot of interest in what Washington State has to offer, from companies, industry groups, and even universities in France."



Washington State Aerospace Delegation visits Liebherr Aerospace's facility in Toulouse, France.

During the conference, Rogers Weed provided an overview of the State's aerospace cluster. The presentation emphasized Washington's key assets like the presence of a large, skilled workforce; a focus on cutting-edge R&D; and the interaction between the aerospace cluster and other local industries like software development and life sciences to drive innovation in areas such as advanced materials and aviation biofuels.

The mission is another step forward in Washington State's effort to increase their visibility in the European market and help attract foreign investment into the State. As a follow up to this program, the Governor announced she will be leading a delegation in June to the Paris Air Show, the world's largest aerospace-related event.

The Department of Commerce is currently recruiting for exhibitors and mission delegates to join the Governor and help support the Washington State Pavilion at the Paris Air Show. The Pavilion will focus on several innovative areas of aerospace where the state is a major player including composites and advanced materials and aviation biofuels .

For more information, contact Bill King at bill.king@commerce.wa.gov.

University of Washington's Aerospace Programs Shape the State's Workforce

With top-notch faculty and cutting edge research, the University of Washington has helped produce generations of aerospace workers for the state. The UW started one of the first aeronautical engineering departments in the nation in 1929 to help supply the Boeing Company with qualified engineers. Today, the UW offers flexible aerospace programs for undergraduates up to working professionals, including online master's degree programs:

- [The Master of Science in Aeronautics & Astronautics \(MSAA\)](#) is designed for graduate students and engineering professionals who are interested in earning an advanced degree in the engineering sciences, with a focus in controls, fluids, plasma science or structures.
- [The Master of Aerospace Engineering \(MAE\)](#) is a practice-oriented program designed to expand students' knowledge in specific technical areas and other aspects of aerospace engineering, such as business, management, manufacturing and technical communication.
- [The Master of Aerospace Engineering in Composite Materials and Structures \(MAE-CMS\)](#) explores the critical new area of composite materials and structures and covers essential

aspects of aerospace engineering, including business, management, manufacturing and communication.

Visit www.aa.washington.edu or contact Wanda Frederick at wanda@aa.washington.edu for more information.



UW students at the Kirsten Wind Tunnel on the Seattle campus.

Upcoming Events

Paris Air Show

June 20 – 26, 2011

Le Bourget, France

[Washington State Pavilion & Governor's Mission](#)

Seattle Aircraft Interiors Expo

September 12 -14, 2011

Seattle, WA

www.aircraftinteriorexpo-us.com

For further information on how the Washington State Department of Commerce can assist your company at these events, please contact Bill King at bill.king@commerce.wa.gov.

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Innovation is in our nature.