Washington State
Innovation is in our nature.

WASHINGTON STATE QUARTERLY AEROSPACE BULLETIN

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FEATURE: The Role of Defense in Washington's Aerospace Sector

by Brice Barrett, Executive Director of the Pacific Northwest Defense Coalition

Aerospace and Defense. Ask any investment banker and they'll tell you the two go together like peanut butter and jelly. A survey of the landscape in the United States and abroad would seem to confirm the idea that the two industries are inextricably intertwined. A quick look at the Aerospace Industry Association's website says it all: "Aerospace and Defense: The Strength to Lift America." At the Paris and Farnborough Air Shows—the largest of their kind in the world—military aircraft provide some of the most exciting flight demonstrations year in and year out.

Here in Washington state, commercial airplanes garner a great deal of attention. Ask a Washingtonian to define the aerospace industry and the answer will almost assuredly begin and end with consumer-facing projects like the 787 Dreamliner. Given the state of things so far in 2010, it's fair to say that times are definitely changing.

High profile program successes are everywhere this year. Boeing's P-8A Poseidon represents the future of anti-submarine warfare for the U.S. Navy, and 117 of them will roll out of the Boeing assembly building in Renton, WA. Bingen-based Insitu notched a major victory by winning the Navy's Small Tactical Unmanned Air System (STUAS) Tier-II contract, cementing their leadership in the mid-sized UAV market. Finally, there's a little program known as KC-X with around $35 billion at stake for the Air Force's midair refueling tankers, which may very well be decided before the year is out.

These headliners—along with the other players in Washington's defense sector—have a huge impact on the state's economy, and are representative of the changing face of Washington's aerospace industry.

Washington's Defense Economy

The Washington Economic Development Commission (WEDC) recently released a report measuring the impact of the Department of Defense on the state's economy, and the numbers are staggering. In total, Washington received more than $5.2 billion in defense contracts in 2009. The Boeing Company alone brought more than $1.7 billion in defense spending back to the state.

In addition to the work of the Boeing Company, Washington's aerospace manufacturers are busy with other major programs. From Sequim to Spokane, suppliers are developing and manufacturing component parts for advanced military aircraft. In Port Angeles, Angeles Composite Technologies, Inc. is building high quality composite structures for Lockheed Martin's F-22 and Joint Strike Fighter. In Woodland, Lifeport is working on an aircraft occupant ballistic protection system for the US Special Operations Command. These manufacturers, along with so many other defense industry suppliers represent the best the state has to offer.

P-8A Poseidon being assembled in Boeing's Renton facility. (Photo courtesy of The Boeing Company)

The bottom line is that defense spending is an integral component of the Washington state economy. From the WEDC report: "The total defense activity is estimated to have created nearly $12.2 billion in total output in the State. This activity supported approximately 191,600 jobs and nearly $10.5 billion in labor income in the State in 2009."

FEATURE: Defense in Washington State (cont.)

Looking to the Future

Every four years, the Secretary of Defense releases the Quadrennial Defense Review (QDR). This legislatively mandated report provides a high-level assessment of threats facing the nation, and the strategies needed to counter those future challenges. In the 2010 QDR, Unmanned Aerial Systems (UAS) were cited time and again as a critical component in the future of military aviation. UAS will carry out a wide range of future military missions including intelligence, surveillance and reconnaissance operations, and precision strikes. With the phenomenal success of the Boeing/Insitu team, the future for our region looks particularly bright. Insitu grew up here in Washington, and so did a number of their key suppliers, like Silicon Forest Electronics in Vancouver, and Shine Micro in Port Ludlow. As the UAS industry continues to grow, Washington state is well positioned to lead the way.

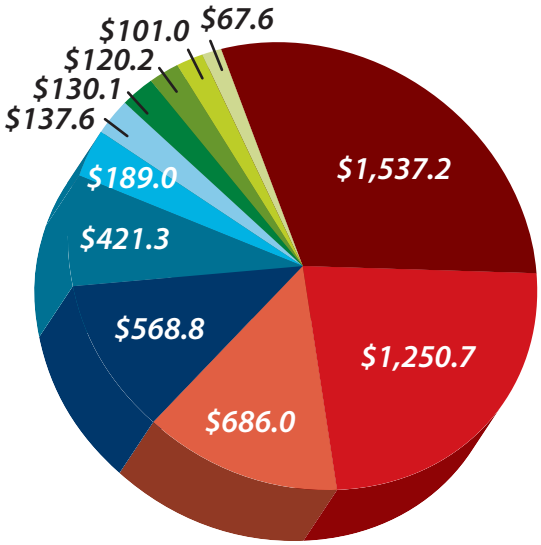
Washington's aerospace manufacturing community built a reputation for building the best airliners in the world, and those same capabilities have served the State well in attracting long term investment from the defense industry. Maintaining and growing the defense component of the aerospace industry will be critical to maintaining Washington's leadership role in aviation in the United States and around the world.

Connectory.com now Features a Northwest Network

Connectory.com, an online database of US industrial and technology companies, recently created a Northwest Network portal. The website is a free tool that aims to link US businesses with each other and allows users to search for suppliers and specific capabilities in a variety of sectors including aerospace and defense. The new Northwest Network currently includes over 1,200 companies from Washington State. Companies should visit http://connectory.com/profile_login.aspx to create or edit your profile. Stakeholders of the Northwest Network include the Pacific Northwest Defense Coation and the Pacific Northwest Aerospace Alliance.

The Numbers

Defense Contract Dollars Obligated in Washington State by Industry, FY 2009 (In Millions US$)



Total: $5,209.7

- 30% *Aircraft Manufacturing*
- 24% *Other*
- 13% *Commercial and Institutional Building Construction*
- 11% *Petroleum Refineries*
- 8% *Engineering Services*
- 4% *Technical Instrument Manufacturing*
- 3% *Ship Building and Repairing*
- 2% *Offices of Physicians, Mental Health Specialists*
- 2% *Facilities Support Services*
- 2% *Other Heavy and Civil Engineering Construction*
- 1% *Industrial Building Construction*

Source: Federal Procurement Data System – Next Generation, 2010; BERK, 2010

Company News

Wenatchee-based **PA&E** has developed a new fiber optic bulkhead for aerospace and defense applications. This new technology allows the use of fiber optics where once unworkable due to hermetic requirements.

Aircraft interior specialists **Heath Tecna** (Bellingham, WA) was chosen by China Airlines to refurbish the cabins of their 747-400 fleet with the "NuLook" line of cabin interiors. The company also won contracts from British Airways to support them in the launch of their new first-class cabins for long-haul transit, as well as ship-sets assemblies for their 747 and 777 fleets.

On September 9, **Boeing** announced it will expand its Seattle-based manufacturing research center into a 900-employee

operation. The immediate task of the center will be to build key components for the 787-9, including the fuselage, wing, and tail sections. Down the road, the center will focus on manufacturing processes for future aircraft designs.

Defense

Janicki Industries of Sedro-Wooley, WA was selected by the Defense Department to manufacture the body panels for the new F-35 fighter based upon the company's long-held composite building expertise. They will manufacture body panels, wings, engine mounts, and internal structures for the fighter. Bellevue-based **Esterline** was awarded a $23.6M contract extension with defense contractor Sikorsky. Esterline produces the flight management systems and emergency control panels for the Black Hawk helicopter platform, and the contract extension illustrates the confidence the U.S. Army has in the Washington-based technology. U.S. Special Operations Command (US SOCOM) has awarded **Lifeport Interiors** of Woodland, WA a contract worth up to $47M for retrofitting armor and a ballistic protection system in their aircraft, contract runs through July 2015.

Bingen, WA-based **Insitu** won a $43.7M Naval contract to develop its Integrator UAV platform that will provide intelligence, surveillance and reconnaissance for the Navy and Marines. The contract will have Insitu mature their design over the next two years to meet Navy program requirements for land and ship-based systems. In other Naval defense news, Boeing's P-8A Poseidon T3 successfully completed its first flight test in Seattle, with a flight time of 2 hours and 48 minutes. The Navy intends to purchase 117 of the aircraft to replace its current P-3 fleet and is projected to achieve operational anti-submarine and surveillance capabilities with the program in 2013.

In September, a research consortium led by the **University of Washington** received a five-year, $7.5 million grant from the Office of Naval Research to study the flight of birds, insects and bats in order to improve the flight of aerial vehicles in a variety of environments and unpredictable conditions.

Export Control Reform

by George S. "Sam" Sevier/Trusted Trade Alliance/MK Technology

This Spring two distinctly different actions, one by the Administration and one by Congress, dealing with the regulation/authorization of United States international trade were put in motion in the nation's capitol. The Administration's effort, dubbed Export Control Reform (ECR), was kicked off by President Obama who directed the National Security Council (NSC) and the National Economic Council (NEC) to undertake an effort to evaluate the effectiveness and relevancy of the present system, which has its roots in the Cold War, from four perspectives: 1) national security, 2) foreign policy, 3) national industrial capability (competitiveness), and 4) impact on trade (our ability to) and to make recommended changes to meet today's challenges and national requirements.
At (nearly) the same time Representative Howard Berman, Chairman, House Foreign Affairs Committee (HFAC), started the effort of re-enacting the Export Administration Act (EAA) which had expired in August, 2001, but has been kept in effect by Executive Order under the International Emergency Economic Powers Act (IEEPA) since then. The HFAC's intent has also been to bring the authority granted to the President under the EAA up to date to meet today's challenges and national requirements.

However, the two perspectives on those challenges and national requirements seem to differ. The Administration's perspective, though couched in terms of greater emphasis on national security and intelligence advantage, are to take controls (controls used here to mean required review and documented export authorization) off of many of the items presently on the United State Munitions List (USML) and the Commerce Control List (CCL). The Congressional perspective, couched in terms of national security and foreign policy, seems to be that tighter controls are warranted under specific conditions on a broader range of items and tougher penalties should be imposed to ensure compliance. The perspective on the Hill appears to be that anti-terrorism activity and anti-boycott issues require more US Government oversight in economic matters as well as national security and intelligence. The Administration team, under the direction of Secretary of Defense Gates and Director of the National Security Council Jones, are working to a schedule of implementing a "bright line" distinction between the USML and the CCL as to which Department (State or Commerce) has management responsibility for the various categories of munitions and dual-use items. This is to be an interim step in an effort to drive to one process (one list) under one Administration export authorization/management organization.

The Department of Commerce's Bureau of Industry and Security (BIS) and the Department of State Directorate of Defense Trade Controls (DDTC) will be tasking their respective Federal Advisory Commission Act (FACA) industry teams to review selected categories from the USML and CCL against the ECR criteria and procedures and evaluate the outcome against the national security and intelligence advantage, foreign policy, human rights and other national policy considerations. BIS has several FACA committees, mainly in specific technical fields, while DDTC has the Defense Trade Advisory Group (DTAG) that will provide the State Department review.

As this is an unfolding matter, the author will be providing updates in subsequent editions of the Quarterly Aerospace Bulletin.
Mr. Sevier is the chairman of the 2010-2012 DTAG.

Spotlight on Washington Aerospace Companies

CDG, a Boeing Company, *Bellevue*

www.cdgnow.com

CDG, a Boeing Company, is an engineering services company dedicated to providing strategic solutions for organizations that develop, support, and maintain complex equipment. With more than 40 years of experience and global delivery teams, CDG provides technical publications content development and delivery software, engineering design services, engineering data conversion services, maintenance and operations support software, digital imaging services, and Lean and technical publication advisory services for the aerospace community and other engineering-focused industries.

CDG's ISO-certified quality management systems and stringent data security provisions ensure the highest standards for efficiency, accuracy and data integrity. Each year, CDG delivers more than 2 million man hours in the development and delivery of engineering and technical publications and manages parts configuration data for more than 14,000 aircraft worldwide.

Fatigue Technology, *Tukwila*

www.fatiguetech.com

Fatigue Technology (FTI) has spent the last 41 years in Washington State serving the worldwide aerospace industry. What started out as a simple wire forming company in a Seattle garage has become a major player in the aerospace community by providing innovative solutions for new aircraft production and aging aircraft refurbishment. FTI's products can be found on almost every major airplane and helicopter program on the market today and continues to push the cold expansion envelope with new and innovative products for tomorrow's advance composite air structures like the Boeing 787, Airbus A350, and the Lockheed Martin F-35.

To support its customers, FTI has offices and representatives worldwide including its 120,000 square foot engineering and manufacturing headquarters located in Tukwila, WA where most of its 150 employees strive everyday to provide its aerospace customers with the very best products and services - a tradition it has held for the last 41 years.

Asko Processing, *Seattle*

www.askogroup.com

Asko Processing has been providing High Quality Metal Finishing since 1967 to the Aerospace, Electronics and Defense industries. From parts finishing for the OEM market to overhauling and repairing worn landing gear and other aircraft assembly parts for both helicopter and fixed wing aircraft, Asko's FAA-certified and Source Quality Control approved shop meets the high standards of virtually all major aerospace companies and repair stations in the world.
Specific services include Hard Chrome, Electroless Nickel, Cad, Ti-Cad, Gold, Silver, Mag Phosphate, HVOF, Grinding and Honing, Wet Paint and Powder Coating, as well as Magnetic and Penetrant Inspection. Asko is ITAR registered and a FAA Repair Station (OKSR369L).

Metaltest Inc., *Kent*

www.metaltest-inc.com

Metaltest Inc. is a world class metal tory located in Kent, Washington. They are the only Nadcap and ISO 17025 accredited, independent, full service lab in Washington State. The company serves the aerospace industry both locally and nationwide. Metaltest is OEM approved to perform military and commercial aerospace testing for a wide range of prime contractors including: Boeing, Bombardier, Cessna, Goodrich, Gulfstream, Hawker Beachcraft and Sikorsky. Since 1990 Metaltest has provided high quality customer service, expert advice and detailed testing reports. Their principle differentiator is their people, and their commitment to serving you and providing the highest quality tests.

To have your company featured in the next edition of the Quarterly Aerospace Bulletin, please contact Troy DeFrank.

Upcoming Events

Governor's Aerospace Summit
October 20-21, 2010
Lynnwood, WA
www.afa-wa.com

Annual British American Aerospace Conference
Nov 3, 2010
Bellevue, WA
http://www.babcpnw.org/event.html

Air Show China 2010
Nov 16 - 21, 2010
Zhuhai, China
Washington State Executive Matchmaking Mission

Business Development Mission to France
Nov 29 – Dec 3, 2010
Paris & Toulouse, France
Washington State Business Development Mission

Pacific Northwest Aerospace Alliance 2011 Aerospace Conference
Feb 8 – 9, 2011
Lynnwood, WA
http://pnaa.net/Pages/Events/Conference/2011/2011Conference.html

US Aerospace Suppliers Mission to Montreal
April 2011
Montreal, Quebec
WA State Delegation

Paris Air Show
June 20 – 26, 2011
Le Bourget, France
http://www.paris-air-show.com/en
Washington State Pavilion

For further information on how the Washington State Department of Commerce can assist your company at these events, please contact Troy DeFrank at (206) 256-6145 or troy.defrank@commerce.wa.gov.

Data inquiries can be sent to:

Washington State Department of Commerce
Business Services Division

Attn: Spencer Cohen
Research Manager
2001 Sixth Avenue, Suite 2600
Seattle, WA 98121-2895
spencer.cohen@commerce.wa.gov
Phone: (206) 256-6100

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