



## STRENGTHENING WASHINGTON'S GLOBAL LEADERSHIP IN AEROSPACE AND STEM JOBS

As Washington emerges from the Great Recession, our aerospace industry continues to be a bright spot. The Boeing Company is in the midst of an unprecedented increase in its production rates across each of its Washington aircraft assembly lines. The company alone added more than 13,000 new employees in the state between February 2011 and October 2012, to reach a company-high of 87,000 workers. This is all the more remarkable as Boeing is also preparing to roll out two new airplane programs, the KC 46A aerial refueling tanker and the 737 MAX, and is in the early stages of launching three new airplane derivatives, the 787-9, 787-10 and 777X.



These incredible manufacturing endeavors are just the latest in Washington's near century of leadership in aerospace innovation that supports a broad and diverse cluster of 1,248 aerospace-related companies employing nearly 128,000 people across the state. In fact, aerospace comprised more than one-third (\$27 billion) of Washington's \$64.6 billion in total international exports in 2011.

Governor Gregoire believes protecting and growing our aerospace industry must be a strategic priority. Building on the successful efforts to win the tanker and 737 MAX for Washington and the significant investments made to broadly support the aerospace cluster. The Governor's proposals will ensure a smooth ramp up and rollout of the new airplane programs that will be built here and make Washington even more competitive when future final assembly decisions are made.

Our deep and talented workforce is an essential reason for Washington's global leadership in the aerospace industry. And one reason that pool is so qualified is the emphasis that the Governor has placed on STEM — science, technology, engineering and math — education, starting in the middle schools. Whether an individual wants to gain skills for exciting employment opportunities or upgrade skills for advancement, having access to STEM training is key to success. Students who graduate from high school and college with STEM competencies are qualified for jobs not just in the burgeoning aerospace sector, but in such fields as information technology, life sciences and global health. In fact, our state has become a hotbed of these and other emerging fields on the forefront of developing technology solutions, fighting disease and improving agricultural yields.

Ensuring a ready and able pipeline of aerospace workers remains a top priority as we prepare for increases in commercial airplane production and the supporting supply chain. The following investments proposed in the Governor's 2013–15 budget reflect her commitment to maintain these vibrant industries and others that Washington innovators may develop.



## K-12 EDUCATION

Washington needs more students to graduate from high school with greater proficiencies in STEM, or science, technology, engineering and math. This means that students not only know math and science content but also how that knowledge connects with technology tools and engineering approaches to spark innovation and generate creative solutions for industry. Students with STEM skills developed in high school have a lifetime foundation for career choices and a head start in programs that prepare them for jobs as well as additional education and training.

The following initiatives are designed to provide high school students with a leg up, whether they are pursuing employment directly after high school and need to demonstrate proficiency in skills to their future employers, or expanding their education pathway before pursuing a career in STEM industries such as aerospace.

- » In the 2011 special session, the Legislature passed the Governor's request legislation (House Bill 2159) and in spring 2012, passed the related budget request (\$700,000) to provide start-up resources for three grant programs to prepare students for careers in STEM and aerospace. High schools across the state applied for and are implementing these programs. A second round of start-up grants are provided with the goal of broadening the reach of STEM education and aerospace skills training throughout Washington, including:
  - Entry-level aerospace assemblers certification training (six grants, \$150,000)
  - Skills center advanced manufacturing skills courses (four grants, \$300,000)
  - Advanced high school coursework in STEM such as Project Lead the Way aerospace engineering (10 grants, \$250,000)
- » Establish the National Career Readiness Certification assessment program for 2,500 students statewide each year. This would provide testing for graduates of the 50 aerospace assembly and advanced manufacturing high school and skill center programs across the state. With these certificates in hand, students will clearly demonstrate to prospective employers that they have the skills necessary to go to work immediately. (\$195,000)

## COMMUNITY AND TECHNICAL COLLEGES

In 2012, the Legislature created the Washington Aerospace & Advanced Manufacturing Workforce Pipeline Advisory Committee to better connect the state's aerospace training programs with industry needs. The committee identified specific areas where additional resources should be focused and the Governor recommends the following:

- » Fund 330 student full-time equivalents (FTE) for STEM and high-demand aerospace training programs, including machine maintenance and testing; composite materials manufacturing, maintenance and repair; and quality assurance. (\$5.0 million)
- » Expand the staffing and resources of the Center of Excellence for Aerospace & Advanced Manufacturing to establish a clear and central entry point for prospective aerospace students and job seekers who need help navigating their way through the large array of training programs and market these resources to students, counselors and job seekers throughout the state. (\$200,000)
- » Develop a multi-institutional, multi-age aerospace training facility proposed by the city of Renton. This facility will add to the aerospace training capacity in the central Puget Sound region and provide hands-on training programs in partnership with high school skills centers, apprenticeship programs, community and technical colleges, and private companies looking for resources to provide incumbent workers with new manufacturing skills and processes. (\$5 million)

## PUBLIC UNIVERSITIES

The Governor is committed to expand upon successful STEM programs instituted earlier and to build upon their track records with the following investments:

- » Create a STEM and aerospace enrollment pool. The six public baccalaureate institutions will be able to compete for enrollment funds in these fields. These programs often cost more to operate, so funding will ensure that the four-year institutions can expand programs with high employer demand. The competitive nature of the pool will reward the best-designed and most cost-effective proposals. (\$11.0 million)

- » Support colleges of engineering. Last year, the University of Washington and Washington State University committed to graduate an additional 425 students each from their respective colleges of engineering. New investment will assist the universities support these enrollments and implement best practices in engineering programs to help them meet these targets. (\$4.0 million)

## GOVERNOR'S OFFICE OF AEROSPACE

We will continue to provide focus, direction, oversight and coordination at the highest level to ensure aerospace competitiveness in Washington. Established in 2012, the Governor's Office of Aerospace advises the Governor and coordinates activities across the state to support the aerospace sector. Its goal is to expand our aerospace industry and ensure that investments are yielding positive results. With direction from the Governor's Office, we will better manage and leverage our aerospace assets. Funding of \$200,000 is included in the Governor's budget to conduct analysis, and develop and implement strategies to retain and grow aerospace related jobs, including future commercial airplane assembly lines and components.