

Rob Meyerson,
president of Blue Origin,
has led the growth of
this privately-held space
company from 10 people
in 2003 to almost 1000
people today.

Blue Origin and Washington: Powering the Future of Space Transportation

by Robert E. Meyerson, president Blue Origin

Blue Origin was founded on a powerful vision for the future of space exploration and the possibilities it brings. And we are well on our way to fulfilling our long-term goal of one day having millions of people living and working in space.

Based in Kent, WA, we are driven to invent technologies that will improve the state of space transportation and operations. Fueled by our company motto, Gradatim

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Ferociter (or "step by step, ferociously"), we have followed an incremental development process in our mission to develop reusable space vehicles and the engines that power them. In 2003, we employed 10 professionals. Today, that number has grown to more than 900 scientists, engineers, and builders—all passionate about human spaceflight. This team made history in November 2015, becoming the first organization to launch a rocket booster to space and land it vertically back on the Earth. We then successfully flew that same rocket four more times. But, we don't just build rockets—we've built a unique culture around methodical innovation and exploration that allows us to steadily advance and grow. We're honored to have our headquarters in Washington and we take great pride in our contributions to the state's economy. We've created hundreds of lucrative, high-tech manufacturing jobs—aerospace engineers, software engineers, propulsion designers, robotic laser operators, simulation engineers, machinists, avionics engineers, welders, program managers and so many more. Our employees and their families spend their off hours contributing to our local and state economies through recreational activities, dining, shopping and medical care, to name a few.

Choosing to house Blue Origin in Washington was easy. Washington has one of the most dynamic aerospace environments in the nation. It is home to industry-leading companies, such as Boeing, as well as thousands of aerospace suppliers that play a key role in helping the industry thrive.

Currently, we work with more than 600 companies throughout Washington. About 80 percent of them provide

support and services in construction, facility services, tools, industrial equipment, software and more. The other 20 percent fall into commodity categories such as machine shops, aerospace inspection centers, chemical processing, testing facilities, electronic assembly shops, and fastener and raw metal producers. There is great value in being able to go directly to these local suppliers and interact with them in real time to resolve problems, discuss parts or brainstorm new design concepts. Having them in our backyard saves us immense time in transit, which is critical in a rapid research and development environment.

Our suppliers feel the same way. StagePlan, Inc., is an exhibit space and platform manufacturer located in Enumclaw, WA. The company has been a Blue supplier since 2006, providing many metal-fabricated products, including ground support equipment, rocket assembly and access platforms, launch stand ground equipment and more. We meet with the StagePlan team frequently to examine projects in work and discuss what's on the horizon.

"Blue is a huge part of what we do," said Phill Sumner, StagePlan's business manager. "During and after the 2008 recession, we had very slow periods of business. But, Blue gave us a consistent revenue stream that helped keep us afloat. In fact, partly because of Blue's business, StagePlan now operates a full-service facility that can build nearly any structure. If they were ever to move out of state, I don't think we'd be able to compete with their other suppliers due to shipping costs."

McNeeley MFG is another small business that has profited from its work with Blue Origin. A full-service machining and fabrication company in Auburn, WA, owner Josh McNeeley started the company in 2006 from his garage and now operates a 7,000-square-foot facility and retains 13 employees. For the past five years, McNeeley MFG has supplied machined parts and tooling to Blue Origin for projects including the BE-3 and BE-4 rocket engines, crew

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Blue Origin

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capsule and propulsion module. These are usually small quantity orders that require fast-turnaround parts.

"More than half of our business comes from Blue, and more than half of our employees are dedicated to Blue projects," McNeeley said. "We've been able to make several capital improvements because of Blue's business. We work with them closely, and that close proximity and hands-on time is critical to our business and definitely impacts the bottom line."

While Blue Origin operates facilities in multiple states, Washington is our home. It's one of the most innovative states in the nation and a huge proponent of progress in the aerospace industry. We salute the state policymakers who also recognize this and have taken action over the years. Their business-friendly legislation has allowed us to stay here, and more importantly, supported the rapidly growing commercial space sector.

Now, we aim to expand the discussion. We look forward to engaging with our governor, state legislators and local government officials to show them first-hand how continued business-friendly legislation will help us carry on our mission to ensure America's leadership in the technology and aerospace sectors.

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Bloomberg recently ranked Washington #1 in the US for science, technology, engineering and math (STEM) education concentration. To meet the growing demand for skilled workers, we continue to forge strong public-private alliances to develop and maintain leadership in our most powerful competitive advantage—our people.

A massive, highly skilled tech and advanced manufacturing workforce built upon our aerospace tradition is the proud, shared resource that strengthens communities all over the state.

Raw carbon fiber is produced in Pierce County, precision crafted into composite parts in Sedro Wooley, and recycled in Port Angeles with the help of machines made in the Kent Valley. The largest composite aircraft wing in the world is produced in Everett, more new planes roll off Renton assembly lines than anywhere else in the world while commercial and military aircraft structures are designed, fabricated, maintained, repaired and overhauled in Spokane, and planes are flight tested for FAA certification in Moses Lake. Researchers in a state-of-the-art lab in Frederickson advance the world of composite materials, which may inspire a new unmanned aerial system from Bingen, that will aid a grower in Yakima County or a defense company near JBLM.

Our aerospace sector provides a historical model for collaborative innovation and leadership. It's also a blueprint for future success. In this emerging era of the Internet of Things (IoT), machine learning, augmented/virtual reality (AR/VR) and so many intriguing possibilities, Washington is primed to grow existing and new businesses from all over the world, right here at home.

AEROSPACE IN WASHINGTON

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on educating and nurturing the workforce of tomorrow, as well as re-skilling those that have been laid off. State government leaders should consider supporting expanded class sizes of our higher education and vocational institutions to deliver curriculum in systems integration, software design, coding, and testing, industrial and quality engineering.

Just as seen in the case of the automobile, personal computer or mobile phone manufacturing industries, aerospace is not immune to the inevitable march of commoditization.

Thus, success will be in building better products with more functionality at a lower price point—better before cheaper. In order to maintain our regional aerospace leadership for tomorrow, education matters. The world is watching us. John Naisbitt in his Megatrends book predicted as much.

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