

Testimony of  
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Chair Baker, Vice Chair Terhar, Ranking Member Driehaus and Committee members, thank you for inviting me here today. I truly appreciate the opportunity to tell you about the Air Force Research Laboratory and give you our perspective on the Aerospace and Technology Study Committee.

At the Air Force Research Laboratory, AFRL, we create the air, space and cyberspace future for the United States Air Force, and we do it while also addressing the immediate needs of our fighting forces. A large part of the work we do occurs at Wright-Patterson Air Force Base, OHIO; making AFRL and Ohio mutually dependent upon each other for success.

It is a tremendous challenge to meet the current and future needs of the women and men who defend this great nation. We've seen our budgets reduced, just like everyone else. Even so, AFRL is poised to come out leaner and more focused than ever. We are more than ready to take on the future challenges of our fighting forces and our nation.

Approximately 29,000 military members, civilians, and government contractors are employed at Wright-Patterson, making it the largest single-site employer in the state. Wright-Patterson's economic impact

on the greater Dayton region cannot be overstated; experts put it at about \$5.1 billion per year.

AFRL, headquartered at Wright-Patterson, spends nearly \$5 billion annually in air, space and cyber research across our great nation. AFRL employs 10,000 people, most of them scientists and engineers. And of that 10,000, approximately 5,600 work in the Dayton region.

Though AFRL is blessed with many of the best and brightest of the nation, we do not engage in our work alone. AFRL partners extensively with universities, small, and large business, on a wide range of basic and applied research. A large part of our \$5 billion investment is in such research. AFRL spends approximately \$260 million with universities and \$400 million with small business annually. Many of these grants are to Ohio universities and businesses. It is through these collaborations and partnerships that the toughest problems facing the Air Force find their solutions.

We value partnerships. We encourage collaboration. This is entirely pragmatic, especially in today's environment. Not only do research dollars go farther when they are combined, the diversity gained by putting more minds on a problem is critical. With this as our goal, the state of Ohio, the Air Force, and the Wright Brothers Institute created an Innovation "Collaboratory" called Tech^Edge, where Air Force, industry, and academia can meet to share ideas and develop better solutions. AFRL benefits from the treasure-trove of knowledge industry

and academia brings to the table and industry and academia reap a harvest of new ideas and transferred technologies from AFRL.

AFRL was instrumental in the establishment of the National Additive Manufacturing Innovation Institute, NAMII. NAMII is a public-private partnership with member organizations from industry, academia, and the government, collaborating with a singular, shared vision. Based in Youngstown, Ohio, NAMII's goal is to transition additive manufacturing technology to the mainstream U.S. manufacturing sector and create an adaptive workforce capable of not only meeting industry needs but increasing domestic manufacturing competitiveness. AFRL is actively engaged in this partnership, providing technical expertise, research topic development and program management.

AFRL also has a cooperative agreement with the Ohio Aerospace Institute to seek solutions to tough technology challenges by tapping into the talent within Ohio and regional engineering schools.

Undergraduates submit proposals to AFRL-initiated topics; AFRL provides mentorship and funding for these student efforts. A similar cooperative agreement is in place at Wright State University, in which high school and college students are recruited to work collaboratively on AFRL technology problems. The students gain experience with real-world challenges; AFRL gains insight from outside its workforce. Again, everybody benefits!

As you can see, collaborations between the military, academia, and private industry are the life-blood of many of the cutting edge research

efforts AFRL is engaged in. We have a number of vehicles for establishing and nurturing collaborations with industry and academia, but we are excited about the greater possibilities created by the Aerospace and Technology Study Committee.

I see enormous mutual benefits to be derived from increased collaboration with with the State of Ohio, Ohio's universities, and industries. AFRL is the Air Force's only organization wholly dedicated to leading the discovery, development, and integration of technologies for our air, space and cyberspace forces. But we desperately need the genius and diversity that is found in Ohio's universities and industries to help us solve the nation's toughest technology challenges. I see our state of the art facilities and equipment, coupled with our collaborations with the public and private sectors, continuing to enhance our ability to develop advanced technology that helps our men and women in harm's way. But the State, industry and academia also profit, because much of the science and technology we develop finds its way into civilian applications, benefiting the greater public and our economy.

Thank you for the opportunity to communicate the Air Force Research Laboratories' perspective on the Aerospace and Technology Study Committee. And I welcome your questions.