



Senator Brenner, Vice Chair O'Brien, Ranking Member Ingram and members of the Senate Education Committee, thank you for the opportunity to testify before you today.

My name is Annemarie Grassi Amefia and I am the President and Chief Operating Officer of Argonaut.

Argonaut is a 501(c)(3) nonprofit corporation that was founded in 2010. In partnership with Davis Aerospace and Maritime High School and Cleveland Metropolitan School District, Argonaut serves as the industry expert and thematic learning lead, connecting students and teachers to hands-on learning experiences that support building career pathways in the fields of aerospace and maritime.

Industry Workforce Challenges

Flight disruptions and workforce issues have been well-documented in recent years. The Federal Aviation Administration estimates that there will be about 18,000 openings per year for airline and commercial pilots this decade, with many of those replacing retirees. However, the FAA issued on average only half that number of pilot licenses from 2017 through 2021.

Private forecasts are dire, too. Consulting firm Oliver Wyman estimates that despite efforts to close the gap, airlines in North America will face a shortage of nearly 30,000 pilots by 2032. The supply of new pilots will grow, but not enough to offset a continuing wave of retirements.

In addition to well-documented pilot shortages, the aerospace industry faces a new looming threat – mechanics shortages. In 2023, Oliver Wyman projects a gap between the North American supply of mechanics and demand for them of 12,000 to 18,000, depending on economic and fleet growth.

On the maritime side, The Seafarer Workforce Report, published by the International Chamber of Shipping, which was last published in 2015, predicted that an additional 89,510 officers would be needed by 2026, based on projections for growth in shipping trade, and said there was a current shortfall of some 26,240 certified officers, indicating that demand for seafarers had outpaced supply in 2021.

To help solve these challenges, Argonaut's core programs include year-round expanded learning programs, year-round work experiences and internships, pre-apprenticeships, CTE credentialing, family engagement programming, teacher professional development, career

immersion programming, and pipeline partnerships with industry leaders. These programs are designed to provide a comprehensive education that prepares students for careers in the aerospace and maritime industries.

Maritime Education Programs

Through partnerships with organizations such as Cleveland Water Alliance, LimnoTech, SeaGrant, and the Port of Cleveland, Argonaut provides immersive on-the-water safety and training programs, paid summer internships and work experience, and marine maintenance operations apprenticeships. These programs not only increase the number of youths who enter careers in the maritime industry but also help them attain financial independence in adulthood through education and employment. Through a partnership with the Port of Cleveland, Argonaut manages the Jetsam Flotsam river cleaning operations, creating 500 hours of training opportunities for students to work alongside the crew, removing approximately 350,000 pounds of debris from the waters annually.

Moreover, Argonaut plays a critical role in providing maritime safety education and training to students at Davis Aerospace and Maritime High School. The organization's Marine Safety Vessel, decommissioned USCG RB-S vessel, is used to assist escorts of deep craft vessels up and down the Cuyahoga River, serve as and provide medical and rescue support for various on-water events on Lake Erie in Northeast Ohio. Argonaut students work alongside the marine safety crew which provides over 700 hours of service on the water annually. This is a testament to Argonaut's commitment to promoting safety and security in the maritime industry.

Aerospace Education Program

In addition to its marine education programs, Argonaut also offers aviation education and training to students at Davis Aerospace and Maritime High School. Through its partnership with United Airlines, Argonaut has provided access to state-of-the-art flight training facilities and expert instructors. The program uses a state-of-the-art simulation lab at Davis A&M High School with Redbird simulators and Guided Independent Flight Training (GIFT) software to provide an intensive ground school course to students, which is co-taught between Davis Aerospace and Maritime's Science teacher and Argonaut's Aviation Instructor.

Once they have mastered the basics, students have the opportunity to take flight in Argonaut's Piper Cherokee airplane to put theory into real-world practice. Argonaut also offers Unmanned Aviation Systems (UAS) educational pathways for students interested in drone technology. Students, who select the aviation pathway, can complete their Part 107 FAA UAS Certification or their private pilots' license ahead of graduation.

In partnership with United Airlines, Kent State and the Aviation Institute Of Maintenance, Argonaut is designing immersive learning experiences that prepare students for careers as airframe and powerplant technicians, allowing them to complete 400 hours of education and

training while still in high school and pass the FAA General Knowledge Exam, the first step in becoming an Aviation Mechanic.

In June, Argonaut will celebrate its' third and largest graduating class of high school students, of which 53% will be entering a four-year college, 10% will be enlisting in the military, and 29% will be joining the workforce.

State Support

To support our efforts to train the next generation of skilled workers, Argonaut respectfully requests \$250,000 per fiscal year from the Career Technical Education Enhancements line item within the Ohio Department of Education.

Thank you and I would be happy to answer any questions you may have.