



February 4, 2025

Workforce Grant Technical Review Team
Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591

Re: Project ASCEND

Dear Members of the Grant Review Committee,

On behalf of Choose Aerospace, please find our application for the FAA Workforce Development Grant for Aviation Maintenance Technical Workers.

Over the past five years, Choose Aerospace has dedicated significant effort to making aviation maintenance technical education more accessible in secondary schools. Its aviation maintenance curriculum was conceived as a critical resource to build clear pathways into the aviation industry—a need that has long been recognized but unmet. Despite minimal initial funding, the program has been successfully developed through strong partnerships, the support of numerous volunteers, and industry backing.

With a proven concept in place, grant funding represents a transformational opportunity. The requested grant dollars will support initiatives designed to grow the program toward long-term sustainability and accelerate the implementation of programming that might otherwise take years to achieve. Early investment in these initiatives will drive thousands of individuals to pursue aviation technical career pathways and bolster our dynamic, innovative industry.

Choose Aerospace is well-positioned for rapid growth, with the potential to influence a substantial population of future aviation maintenance technicians at the very start of their careers. Backed by a strong track record of success and robust relationships with industry partners, an award of this grant will enable the development of a vibrant workforce pipeline solution that not only changes lives but also secures the future of American aviation.

Thank you for the opportunity to present this application. Please do not hesitate to contact us if any additional information is required or if there are any questions during the review process.

Sincerely,

Crystal Maguire
Executive Director

Choose Aerospace: Advancing Skilled Careers, Education, and National Development

“Project ASCEND”

The aviation technician workforce must increase by 20 percent to meet industry demand, but critical pipelines are only growing a mere two percent a year.¹ While the existing network of Federal Aviation Administration (FAA) certificated aviation maintenance technician schools (AMTS) has the capacity to nearly double the annual production of mechanic applicants.² The primary challenge is getting prepared students in the door. Nearly half of AMTS cite insufficient career or program awareness as the most significant barrier to program growth and production.

AMTS consistently identify high school partnerships as the most effective way to increase awareness of their programs. The Youth in Aviation Task Force recommends using education programs as a key element to bring young people into the industry. With that in mind, Choose Aerospace (CA) launched a comprehensive national initiative to bring aviation technical education to secondary schools, clearly communicate career pathways to students, and make aviation education more accessible in communities where programs were previously cost-prohibitive or lacked qualified teachers.

CA piloted its Aviation Maintenance Curriculum in 2021 in partnership with veteran AMTS instructors, Clemson University, and Aviation Resources and Consulting Services. Aligned with the FAA Mechanic Airman Certification Standard’s general subject areas, the Curriculum guides learners toward certification from the start. Delivered via a blended approach that integrates computer-assisted instruction, face-to-face teaching, and hands-on labs, it comprises twelve courses, 40 modules, and 159 lessons.

¹ See the Aviation Technician Education Council (ATEC) Pipeline Report at <https://www.atec-amt.org/pipeline-report>

² See ATEC Pipeline Report

Students that complete the Curriculum may continue training at an FAA-certificated AMTS or enter the workforce directly as a non-certificated technician. They are also eligible to take a credential exam administered by ATEC³ which independently validates their mastery of general subject areas. This credential can be used for prior learning credit at participating AMTS, to strengthen job applications, or as a qualification for repairman certification.

To offset initial development and ongoing operational costs, programs pay a \$200 annual license fee per user for access to the web-based learning management system. Instructor access, teaching aids, course guides, lab instructions, and annual in-person teacher training are provided at no extra cost. The hands-on labs are designed to be cost-effective, ensuring the Curriculum is accessible to high schools facing funding challenges, especially in underserved areas. CA estimates initial equipment and material costs at \$10,000, with an additional \$100 in annual consumable costs per learner.

The program has proven effective in deploying aviation maintenance curriculum in low-income and rural areas. Eighty-seven percent of enrollments are in counties with at least one HUD Opportunity Zone, 75 percent are in counties with above average (>11.1 percent) poverty levels, 36 percent are in counties where at least half the population is considered rural, and 22 percent are within federally recognized Indian Nations.

³ The ATEC General Aviation Maintenance Credential was developed as a stopgap for students who complete training in the general curriculum but are ineligible to take the FAA general knowledge exam due to not meeting § 65.77 experience requirements (i.e., 18 months of practical experience or a certificate of completion from an AMTS). Advocacy efforts to modify these regulatory requirements and eliminate the need for a separate credential are ongoing.

While the Curriculum is most often used as the foundation for a two-year high school program, it has shown promising results when deployed in after-school, post-secondary, and employee training/job corps environments.

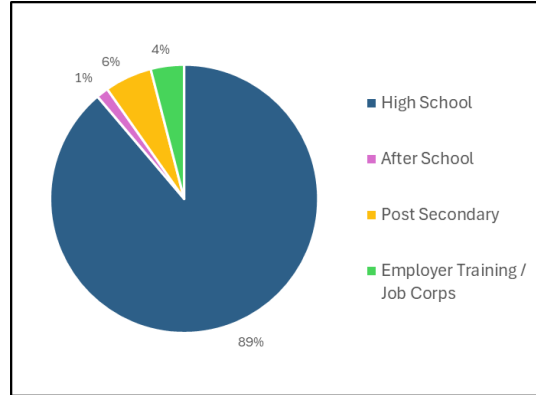


Figure 1: Current User Program Type

Enrollment has steadily grown over the program's first four years, with more than 1,600 unique users participating since the Curriculum's inception.

	Learners	Organizations	States
2021-2022 Academic Year (pilot test)	129	9	8
2022-2023 Academic Year	216	16	9
2023-2024 Academic Year	517	31	15
2024-2025 Academic Year	929	44	18

Table 1: Enrollment Growth

CRITERION 1 - PROJECT PLAN

Project ASCEND builds on past success and momentum through four integrated projects designed to boost Curriculum enrollment and achieve self-sustainability. The initiative aims to enable CA to operate independently by securing targeted funding for long-term viability rather than seeking indefinite support. There are no conflicts of interest, perceived or otherwise, in this project plan.

Project 1. **Building Earn-and-Learn Programs**

Originally designed for secondary education, the Curriculum's alignment with the FAA Mechanic ACS makes it equally valuable for corporate training. The project team will scale early success models to create new airman certification pathways under 14 CFR part 65.

One successful model is the AAR Corp and Putnam City High School summer intern program.⁴⁵ AAR Corp has provided 14 summer internship opportunities, transitioning six into part-time interns during the school year and three interns to full-time employment. With knowledge aligned to the general portion of the mechanic ACS, these employees are strong candidates for repairman or mechanic certification. The Curriculum has also served as the foundation for employer-based apprenticeships. West Star Aviation and Southwestern Illinois College’s part 147 program use the Curriculum to educate apprentices on general subject areas during on-the-job training.

Project ASCEND will collaborate with the Aeronautical Repair Station Association (ARSA) to share and replicate these models, while developing new use cases aligned with national employer training needs and evolving airman certification regulations. The collaboration will focus on military-to-civilian transitions and workforce needs at rural repair stations, supported by research, implementation, and intern/apprentice wages to validate scalability.

Project 1 objectives, responsibilities, and timelines are outlined below:

Objective	Assignee	Timeline							
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Host monthly meetings with project partners.	CA, ARSA	X	X	X	X	X	X	X	X
Create promotional content and resources to support repair station program adoption.	CA, ARSA	X	X	X	X				
Utilize member network to promote program.	ARSA				X	X	X	X	X
Deploy new earn-and-learn programs in at least two rural small business repair stations.	CA, ARSA					X	X	X	X

⁴ See AAR celebrates high school internship graduation at Oklahoma City facility, available at <https://www.aarcorp.com/en/newsroom/aar-news/aar-celebrates-high-school-internship-graduation-at-oklahoma-city-facility/>

⁵ See Oklahoma CareerTech high school students graduate aircraft maintenance summer internship, video available at <https://youtu.be/Ywghg41pjjg?si=TXD3SyNoNIMbsKQF>

Objective	Assignee	Timeline							
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Disburse funds to match employer wage costs for an equivalent of 240 hours of full-time work for 20 participants.	CA							X	X
Secure FAA recognition of the Curriculum, combined with task-specific training, as an acceptable qualification for repairman certification under 14 CFR § 65.101.	CA, ARSA				X				

Project 2. Expanding State-Led Programs

The Curriculum is a central component of the workforce development strategy in Oklahoma⁶ and Kansas.⁷ Although each state adopts a distinct approach, both leverage the Curriculum to build pipelines that meet local aerospace industry demand by: (i) funding school adoption, (ii) leading outreach and marketing efforts, (iii) providing teacher support and training, and (iv) establishing career pathways through matriculation agreements, internships, apprenticeships, and direct-to-work opportunities. These elements have proven critical for creating sustainable workforce pipelines. By leveraging state-funded talent and resources, CA expands without straining its own capacity. Launching a third state-led program will further position CA to replicate this model in other regions, scaling efforts without proportional cost increases.

Building on the successes and lessons from other state-led models, CA will seek partnerships in aerospace-focused regions to demonstrate the return on investment of such initiatives. During the performance period, efforts will center on Alaska, engaging post-secondary institutions, employers, congressional leaders, and state officials. The project aims to

⁶ See Oklahoma CareerTech Funds Aviation Curriculum for High Schoolers, Puts Students on a Path to Aviation Technical Careers to Fill State Workforce Need <https://www.chooseaerospace.org/news/okcareertechpr>

⁷ See Tech Talk with WSU Tech on the Kansas Choose Aerospace initiative at <https://www.youtube.com/watch?v=Maa0-MZFvRE>

promote widespread adoption of the Curriculum in high schools, facilitate credit transfers to area AMTS, enhance early learner programs through collaboration with aviation curriculum providers, and leverage employer-based models to foster local support through training, apprenticeship, and internship programs. The objective, responsibilities, and timeline for Project 2 are as follows:

Objective	Assignee	Timeline							
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Build a coalition of Alaska stakeholders including trade associations, part 147 programs, government agencies, labor unions, members of Congress, high schools, community and veteran-based organizations, and employers.	CA, ARSA, ATEC	X	X						
Hold monthly coalition virtual working meetings.	CA			X	X	X	X	X	X
In partnership with the coalition, develop and document a state-led model that works for Alaska.	CA			X	X				
Host annual face-to-face working sessions to gather, educate, and unite coalition stakeholders and prophesize the model.	CA			X			X		
Develop a state-wide matriculation agreement with Alaska-based AMTS.	CA, ATEC						X	X	
Identify financial sources for program deployment	CA					X	X		
Launch the Curriculum in at least three Alaska-based programs (e.g., high school, community program and/or employer training).	CA, ARSA							X	X

Project 3. Enhancing Teaching Tools and Support

Recognizing the critical role of teacher support in student success, CA will enhance instructional resources, particularly for educators without aviation backgrounds. Updated guides and training videos will equip teachers to deliver engaging, high-quality aviation maintenance instruction and career awareness. The project will also offer synchronous and asynchronous

training, providing on-demand resources to promote student success. These improvements aim to boost teacher confidence in Curriculum subject areas, leading to greater student engagement, improved learning outcomes, and increased interest in aerospace maintenance careers. The objective, responsibilities, and timeline for Project 3 are as follows:

Objective	Assignee	Timeline							
		<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4</i>	<i>Q5</i>	<i>Q6</i>	<i>Q7</i>	<i>Q8</i>
Upgrade and enhance twelve instructor guides to provide lesson plans, additional class activities, and instruction resources.	<i>CA</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
Create “start here” tutorials to provide step-by-step program guidance.	<i>CA</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
Produce asynchronous instructor refresher training for 20 hands-on labs.	<i>CA</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
Provide semi-annual in-person teacher training with plans for industry sponsorship to ensure sustainability beyond the grant cycle.	<i>CA</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
Collaborate with subject matter experts to align Curriculum with other educational resources and integrating content that incorporates social-emotional learning and historical context for aviation maintenance.	<i>CA, TANHM, AEA</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
Align the basic electricity course with the Aircraft Electronics Technician curriculum, supporting stackable credentials and repairman certification.	<i>CA, AEA</i>					<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
Improve learner exit surveys to assess program success and benchmark progress against pre-project data.	<i>CA</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
Achieve 80 percent instructor satisfaction or higher in post-project surveys, reflecting positive feedback on program improvements.	<i>CA</i>							<i>X</i>	<i>X</i>

Project 4. **Removing Financial Barriers**

CA will make targeted efforts to expand aviation technical education and training in economically disadvantaged communities, where aviation maintenance career opportunities can

have a significant impact by offering a path to financial and geographic freedom. To ensure cost is never a barrier, funding packages will provide scholarships for programs that meet criteria for the Willa Brown Aviation Education Program.

CA will collaborate with programs and local stakeholders to develop funding sources for school district costs, supported by intensive donor development efforts to engage industry and charitable sponsors. The objective, responsibilities, and timeline for Project 4 are as follows:

Objective	Assignee	Timeline							
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Award funding packages (license fee, lab kit, or travel scholarships) to 30 programs aligned with Willa Brown Aviation Education Program counties.	CA	X	X	X	X	X	X	X	X
Launch an intensive donor development effort to engage sponsors, highlighting the impact of the program and the benefits of supporting aviation education.	CA	X	X	X	X	X	X	X	X
Establish at least five new partnerships with local stakeholders to fund at least 50% of the schools' program costs.	CA					X	X	X	X

CRITERION 2 – APPLICANT RESOURCES AND CAPABILITIES

The Board of Directors oversees the organization and includes representatives from repair stations, AMTS, airlines, and the FAA. Directors participate in regular update meetings and play a key role in shaping the organization's strategic direction.

The project director is Crystal Maguire, an executive with more than 20 years of experience managing nonprofit organizations. The project director will spend approximately 25 percent of working hours over the grant period on these projects. Ms. Maguire is contracted to provide full-service management for CA, including administrative and financial support services which are handled by Tarra Ruttman, CA's program manager. The management services contract

fee attributable to time spent for the grant is \$25,000, the contract stipulates that these management services will expand as CA continues to grow.

CA employs one full-time staff member, Director of Operations Kelly Filgo. With decades of experience as a certificated mechanic, AMTS department chair, and curriculum advisor, Mr. Filgo provides daily support to schools deploying the program and implements efficiencies to maintain the program's one-on-one support value as CA expands. Mr. Filgo holds an MA in Higher Education Administration and a Graduate Certificate in Higher Education Assessment and Institutional Research.

CA is supported by contract professionals, including a communications coordinator, instructional designer, graphic designer, marketing expert, legal counsel, and AMTS instructors for teacher training. The project team will also rely on ATEC and ARSA personnel for communications and support, as outlined in Projects 1 and 2. The team will rely on TANHM and AEA personnel, as outlined in Project 3.

CA employs a web-based accounting system that independently tracks grant project costs and time allocations separate from other organizational activities. Standardized procedures are in place for recording, tracking, and reporting financial transactions to the board of directors, ensuring compliance with federal regulations and proper documentation, reconciliation, and reporting of all financial activities. CA leadership brings extensive experience in grant management, including board members from the Aviation Institute of Maintenance and AAR, both of which have successfully secured and implemented FAA workforce grants. Additionally, CA played a significant role in the application and execution of the FAA workforce grant awarded to Clemson University last year.

CRITERION 3 – PROJECT IMPACT

Project ASCEND will expand CA’s capacity to serve 1,500 learners in the 2025-26 academic year and 2,500 in 2026-27, with an estimated two-thirds pursuing post-secondary education or going directly to work. The Project Plan enables CA to undertake initiatives beyond current capacity, directly connecting students to aviation maintenance training and employment.

Strategic partnerships with nationally recognized organizations are central to CA's approach, leveraging collaborative expertise to maximize impact. The projects outlined in this proposal specifically target engagement and workforce development in rural areas, aligning with the Willa Brown Aviation Education Program. Project ASCEND aims to introduce and guide individuals—many of whom may not have previously considered aviation maintenance—into rewarding career pathways.

CRITERION 4 – PROJECT ADMINISTRATION AND MONITORING

Project ASCEND will be monitored through quarterly leadership meetings and reports to ensure accountability and transparency. Reports will be shared with project partners, the CA Board of Directors, and filed with the agency as required.

Drawing inspiration from a 100-hour maintenance inspection, CA will use a structured checklist to prepare for these meetings and grant reports. Key tasks will include collecting data on project metrics, auditing financials to generate expense reports, surveying stakeholders for feedback and improvements, and drafting a narrative of activities and progress.

Leadership meetings will review checklist findings, assess outcomes, and outline next steps. Quarterly reports will be prepared in accordance with Section 3 of the NOFO, with a Final Closeout Report submitted within 120 days of the grant award period's conclusion.