

## FLAME-TESTED, HACKER-RESISTANT: AEROBLAZE AND BRAMPORT'S SECURE AI CHATBOT TAKES SHAPE

**ABOUT AEROBLAZE LABORATORY.** Aeroblaze Laboratory and its sister company, Bramport, are family-owned aerospace testing firms based in Burleson, Texas. They specialize in flammability testing, FAA certification, and warehousing for aircraft materials. With a vision to deliver faster turnaround, better customer service, and advanced testing capabilities not typically available in the industry, Aeroblaze partnered with TMAC early in its journey—before the company had even broken ground.

**THE CHALLENGE.** Founder Andrew Feghali's goal was to enter the global aerospace materials testing market with a clear differentiator: faster service, greater affordability, and capabilities beyond what competitors offered. To realize this vision, Aeroblaze began strengthening internal operations by streamlining workflows, reducing errors, and embedding consistency across teams. A cornerstone of this effort has been the intentional capture of “tribal knowledge”—critical expertise held by long-time staff. Documenting and organizing this knowledge ensures consistent performance and compliance and enables efficient onboarding and staff development. These improvements not only enhance day-to-day execution but also create a resilient operational foundation for future growth.

**MEP CENTER'S ROLE.** TMAC helped Aeroblaze launch ahead of schedule by conducting emissions feasibility studies and guiding the company through Clean Air Act permitting. This enabled Aeroblaze to begin testing nearly a year earlier than anticipated. TMAC also supported the development of automated test systems that increased safety and consistency by enabling remote operation from outside the burn room—critical for improving reliability and reducing risk.

That collaboration continues today. TMAC is working with Aeroblaze and Bramport to prototype a secure, AI-powered chatbot that runs on internal company hardware. The system rapidly retrieves technical data from a curated knowledge base, including FAA regulations, CFR content, and proprietary test procedures. It reduces the burden of manual research, improves RFQ response times, and safeguards institutional knowledge. Importantly, this AI initiative directly supports the federal government's strategic priority of maintaining global leadership in artificial intelligence. Aeroblaze and Bramport are embedding AI not as a future vision—but as an operational asset today.

As a certified FAA flammability test laboratory serving both commercial and military aviation, Aeroblaze supports national defense readiness by ensuring material compliance and safety verification. Aeroblaze's early adoption of AI—through a secure, in-house chatbot—has improved response times, reduced research effort, and preserved institutional knowledge. This practical application of AI directly supports the federal government's goal of maintaining global leadership in artificial intelligence. Aeroblaze's growth exemplifies how innovation and hands-on support from the MEP National Network strengthen the Defense Industrial Base.

## RESULTS



Improved response times



Reduced research effort



Preserved institutional knowledge

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"We appreciate TMAC's contributions to the AI chatbot project. The engagement helped deepen our team's understanding of AI applications and informed our strategy for leveraging this technology effectively in the future."

-Andrew Feghali, Lab Manager, FAA D.E.R.