

8th quarterly report on the Northeast Ohio Information Exchange: Digital Infrastructure for Drone Services in Cuyahoga County project

Period thru December 31, 2024

Stuart C. Mendel Project Director





Report Contents

TAB 1	Front Matter - December 31, 2024, Cover Letter	
TAB 2	8th Quarterly report Summary	
TAB 3	8th Quarterly Narrative on Performance	
	o Table I Annotated formally scheduled benchmark activities	
	o Table II Operational goals for 2024 (year 2 of the NEOFIX)	
	o Table IIIa Summary Expense items Eighth Quarter	
	o Table IIIb Project to date balances	
	 Table IV An itemized list of project goals to be completed during the 8th quarter. 	
	o Table V Post ARPA Grant Funding Goals and Activities	
TAB 4	Agenda for OAA/AOPA/ORBAA issue briefing	
TAB 5	NEOFIX and the state of Ohio collaboration with the National Association of State Aviation Officials (NASAO) Center for Aviation Research and Education	
TAB 6	Meeting agenda for Interested Party Testimony- Senate Transportation Committee HB 77 Operation of Unmanned Aerial Vehicles in Ohio. November 20, 2024	
TAB 7	Aerial Drone Competition Flyer	

Website content hyperlinks

Here is a short link for this report if needed: tinyurl.com/neofix-q8report

https://bw-centers-tech-partnerships.org/neofix/

 $\underline{https://bw\text{-}centers\text{-}tech\text{-}partnerships.org/members\text{-}supporters/}$

 $\underline{https://bw\text{-}centers\text{-}tech\text{-}partnerships.org/resources/}$

www.OH-FIX.com

Questions directed to Stuart C Mendel, Affiliate Professor and NEOFIX Project Director smendel@bw.edu





December 31, 2024

County's address for notification is: Cuyahoga County Office of the Council 2079 East 9th Street Cleveland, Ohio 44115

Attention: Cynthia Mason, Research and Policy Analyst

CC: Cuyahoga County Department of Law

Attention: Director of Law

Dear Ms. Mason,

This document and attachments comprise the *eighth quarterly* report on the Northeast Ohio Information Exchange: Digital Infrastructure for Drone Services in Cuyahoga County, abbreviated hereafter as the NEOFIX project.

This is the last quarterly report for the NEOFIX grant project whose entire performance period extended from receipt for initial funding through the consecutive calendar years spanning from December 2022 thru December 2024. Due to our careful custodianship of the grant and the additional funding leverage by the County, some expenses will carry forward into calendar year 2025.

As a result, we inform and request the County extend the use of the NEOFIX project funds through the second quarter 2025, at the end of which there will be a *final comprehensive* closeout project report with final outcomes and final expenses submitted no later than June 30, 2025.

The format narrative of this document is drawn from the reporting items listed in section 4 of the agreement between Cuyahoga County and Baldwin Wallace University for funding the NEOFIX:

Recipient shall submit quarterly reports to the Clerk of the Cuyahoga County Council. Reports shall be submitted no later than thirty (30) days after the end of each calendar quarter. In each report, recipient shall provide the following:

- 1. An itemized list of all expenditures made during the preceding quarter.
- 2. An itemized list of project goals achieved during the preceding quarter;
- 3. An itemized list of project goals in progress as of the end of the preceding quarter;
- 4. An itemized list of project goals to be completed during the current quarter and an itemized list of project goals to be completed in the next quarter.

Stuart C Mendel, Ph.D.

Shout Merty

Affiliate Professor and NEOFIX Project Director





Summary

Briefly, the NEOFIX is a public private partnership, where public sector first-in resources will be amplified well beyond a dollar-for-dollar return for an emerging \$10B private industry benefiting residents of the County and the state of Ohio. NEOFIX will provide public safety in Cuyahoga County with a *Common Operating Picture* of drone operations, supporting safe operations and counter-UAS. The NEOFIX puts the County and its airspace within the leading the communities in the nation, applicable as a model program for the state of Ohio.

This eighth quarter report on the progress of the NEOFIX depicts uninterrupted work described in the original proposal to the Cuyahoga County District 2 and County Council in Fall 2022.

The period covered by this report is October 1, 2024, through December 31, 2024.

In addition to the two-year funding provided to Baldwin Wallace University for the NEOFIX project in the amount of \$450,000, the organization Manufacturing Works and the firms CriticalOps, and ATA, LLC and its successor ATA Aviation have contributed in-kind staff time and essential expertise of approximately \$350,000.

As noted in previous quarterly reports, the work of this past *eighth* quarter continues the strategy to align and leverage Cuyahoga County's investment in drone ready critical infrastructure and we are actively working to synchronize the public infrastructure with a drone industry supply chain, centered in the region (support documents are provided under the various TABS of this report. This would comprise a new Northeastern Ohio industry and we are developing project work with partners for specific workforce development application of the concepts previously articulated.

This past quarter we have begun sensors deployment, furthered coordination with regional public safety dispatch functions and actively pursued buy in from likely departments and legislators of the state of Ohio for this critical and essential infrastructure.

This *eighth quarter* report can be accessed by visiting: https://oh-fix.com/index.html clicking "About," and then Government sub-tab of the pull-down menu.





8th Quarterly Narrative on Performance

Past performance -8^{TH} quarter

In the period October 1, 2024, through December 31, 2024, we have continued the process of adding content, scope and engagement with drone stakeholders. We cast this maturation process as a continuing "ripening" and "deepening" of the NEOFIX instrument. The work makes our progress for port the NEOFIX to other Counties in Ohio. We are doing this for two reasons:

- To align and leverage Cuyahoga Couty's investment in this critical infrastructure with the those coalescing in the state of Ohio and in the U.S. regionally.
- To acknowledge that drone operational friendliness requires the infrastructure be connected uninterruptedly beyond Cuyahoga County.

To advance the support of the NEOFIX as critical infrastructure for the Cuyahoga County and beyond, a series of presentations by NEOFIX were made for the purposes of "drone as first responders" (DFR) and drone in medical delivery use-cases for broad adoption. These include regional programs and increasingly throughout the state of Ohio to draw funding and influence to the NEOFIX project.

Table I Annotated formally scheduled benchmark activities

October 2, 2024	TEAM NEO including JobsOhio program in Mansfield Ohio to support	
	work force development among high school students and their teachers.	
October 8, 2024	Meeting NEOFIX stakeholders for sensor uses deployment and locations.	
October 15, 2024	Stage 1 Burke Lakefront sensor equipment deployment.	
October 18, 2024	TeamNEO and Ohio State University SBIR project application	
October 24, 2024	Briefing with Manufacturing Works and for District 2 Council Rep on	
	Drone supply chain centered on the Aerozone District	
October 24, 2024	Ohio Aviation Association meeting and briefing with TEAMNEO (TAB 3).	
October 25, 2024	Stage 2 Testing sensor equipment at Burke Lakefront	
October 28, 2024	NEOFIX Instrument stakeholder training	
October 30, 2024	Ohio Department of Public Safety meeting prep	
November 1, 2024	Cuyahoga County Risk Management Procurement Briefing	
November 6, 2024	JobsOhio briefing after The Ohio Aviation Association (OAA) retreat	
November 11, 2024	Prep for Ohio Sen. Mark Romanchuk on Drone as Medicine delivery and	
	implications for Medicare/Medicaid cost reductions.	
November 13, 2024	JobsOhio meeting with NEOFIX and "REDI" Cincinnati drone use cases,	
	joint applications	
November 20, 2024	Testimony before Ohio Senate Transportation Committee on HB 77.	
November 20, 2024	Meeting with JobsOhio regarding the testimony listed above.	
November 22, 2024	Conference call to Senator Romanchuk.	
November 27, 2024	County Council District 2 and 3 briefing on drone as a first responder held	
	at Manufacturing Works offices.	





December 3, 2024	TEAMNEO panel presentation in Richland County on AAM	
December 3, 2024	Briefing in Springfield Center for Advanced Air Mobility with ODOT	
December 4, 2024	Legislator briefings in Ohio statehouse.	
December 5, 2024	Partnership meeting for statewide AAM in Oxford, Ohio (CVG region).	
December 6, 2024	NASA Glenn Research Center space act agreement concept	
December 14, 2024	Drone familiarization and competition at Magnificat High School.	

Table II Operational goals for 2024 (year 2 of the NEOFIX project)

	0 1 J /	
2024 Goal 1	To establish the NEOFIX and its stakeholders as an authoritative asset and model	
	recognized in the state of Ohio's Fly Ohio programming.	
2024 Goal 2	To add data drawn from dedicated Cuyahoga County-placed ground- sensors and	
	reporting purchased by the NEOFIX for charts and made available via the world	
	wide web for public and private local, regional, and Ohio drone stakeholders.	
2024 Goal 3	To obtain further funding to advance the NEOFIX	
	as public infrastructure in Cuyahoga County, Northeastern Ohio, throughout the	
	state of Ohio and in cooperating states beyond Ohio.	

2024 Goal 1 narrative progress

Eighth quarter work continued prior work throughout 2023 and 2024 with engaged participants from three working groups (Data, design and configuration, sensors integration and planning; and public policy) to deepen the NEOFIX data instrumentation and data collection.

The latest version of NEO-FIX is deployed as of 12/20/2024. We do not anticipate downtime. Updates include:

- data flowing from KBKL's AMS box
- Advisory migration/transfer actions
- Advisory draft retention
- User Admin improvements
- Agency Admin improvements
- API updates
- Various bug fixes

An RFP with technical specifications for sensors will be let in January 2025, to fulfill procurement requirements. There will be a quick turnaround and review process. The equipment bids will enable the deployment of equipment during Spring 2025, for which additional funding has been secured from both the state of Ohio and Cuyahoga County emergency management

2024 Goal 2 narrative progress

Eighth quarter work continued prior work throughout 2023 and 2024 NEOFIX. As mentioned in the prior quarterly report regarding Cuyahoga County Emergency Management. There will be a phased deployment of sensors at or near the Rocky River Metroparks police station and Rocky River terminus in Lake Erie. Deployment will take place as equipment and permits are made available during spring 2025.





2024 Goal 3 narrative progress

Eighth quarter work continued prior work throughout 2023 and 2024. Our overarching goal for 2024 is to receive funding from the grant applications to enable NEOFIX to obtain Cuyahoga County dedicated ground-based sensors.

As we mentioned in the previous quarterly report, with our partner organization Manufacturing Works, we participate in Bi-weekly meetings convened by TEAMNEO to develop funding rationale from JobsOhio and the Ohio department of Economic Development. This gradual and incremental cultivation has the intent to position the NEOFIX as critical regional and statewide infrastructure as the foundation for business development in civilian and commercial Advanced Air Mobility (AAM) industry, training, certification and jobs centered on the Aerozone District of Cuyahoga County.

As noted among the entries in Table 1 above, additional briefings were held with state and regional legislators for concept familiarity, making the case that the NEOFIX as critical public infrastructure will touch every resident and business of Cuyahoga County and throughout the state.

Although our second proposal to the Phase 1 US DOT Smart grant program was unsuccessful, the prospective partners for the medical delivery initiative showed great interest in working together with the NEOFIX, providing leverage opportunities for Cuyahoga County funding to advance the NEOFIX in Northeast Ohio.

Looking ahead into 2025, the Cuyahoga County focused NEOFIX will continue to seek infrastructure project support from multiple State of Ohio (departments of Economic Development and Homeland Security for example).

Table IIIa Summary Expense items Eighth Quarter thru December 14, 2024

Salary&fringe	\$ 18,666.72	\$17,307.72 + \$1359 includes fringe overlap with 3 rd quarter
Non salary	\$ 3,529.47	\$305.91 + \$23.56 + \$3,200 travel, web, and misc.
Indirect cost recov.	\$ 0	Waived by University
<u>Total</u>	\$ 22,196.19	<u>Preliminary numbers</u>

Table IIIb Project to date balances

Tubic 1110 1 Toject to the Summers			
	GL revenue as of 11.5.24		
FY23 Revenue	\$225,000.00	FY23 Expense	\$162,853.11
FY24 Revenue	\$225,000.00	FY24 Expense	\$186,394.48
FY25 Revenue		FY25 Expense	\$40,775.04
Total Revenue	\$450,000.00	Total Expenses	\$390,022.63
Carry forward	As of 12/14/2024		\$ 59,977.37





Budget narrative

2024 expense allocations for the *eighth* quarter include continuing program development and a transition to the second and third phases of the projects. New grant dollars enabled the leverage of the Cuyahoga County ARPA allocation and shifting of expenses to calendar year 2025.

Grant funds received for a complimentary project from the state of Ohio's Onetime Strategic Community Investment Fund (OSCIF) allowed for a pause in the draw of County ARPA Funds for compensation at the budgeted rate of allocation originally proposed, with the non-expended allocation pushed forward into first and second quarter of 2025.

A final accounting of these carryforward funds will be provided to Cuyahoga County in a "final NEOFIX project report" no later than June 30, 2025.

The full allocation for subscription to the "Airdex" software necessary to produce the NEOFIX charting and advisories in real time will be paid in quarter one, 2025

Carryforward funding from the year 2024 is allocated for the deployment of NEOFIX dedicated sensors.

Tabularized progress toward goals

Table IV. An itemized list of project goals to be completed during the *Eighth* quarter.

Table IV.	An itemized list of project goals to be completed during the Eighth quarter.		
Eighth Quarte			
Monthly	Monthly User Group Meeting Ongoing Onboarding of USS/UTM Partners Ongoing onboarding of BW partner agency systems Continued collection, mapping, loading of data assets. Review, extend, update and maintain data mappings and supplemental language. Funded projects development State of Ohio advocacy to secure infrastructure endorsement and funding		
Quarterly Ther	Operations System Maintenance and Security Minimum quarterly release of updated application and new features State of Ohio advocacy to secure infrastructure endorsement and funding		

TABLE V. Post ARPA Grant Funding Goals and Activities

2025	
Quarterly and Thereafter	Sensor integration
	Regional Multi-state AAM collaborative
	System Maintenance and Ongoing Security Compliance
	Minimum quarterly release of updated application and new
	features
	State of Ohio Integration and funding support.







KELLEYS ISLAND

Sandusky

October 3, 2024

Dear Elected Officials as well as Business and Community Leaders,

You are cordially invited to join the <u>Ohio Aviation Association</u> (OAA), the <u>Aircraft Owners and Pilots Association</u> (AOPA), and the <u>Ohio Regional Business Aviation Association</u> (ORBAA) for a briefing on aviation issues of importance to airports, aircraft owners, businesses, and pilots. The details of the event are below, but space is limited.

When: Thursday, October 24, 2024 (9:30a.m.-1p.m.)

Where: The Aviator

Near Cleveland-Hopkins International Airport (CLE)

20920 Brookpark Rd Cleveland, OH 44135

Parking is available directly outside of the building.

The agenda for joint OAA/AOPA/ORBAA issue briefing will be:

- 9:30a.m-11:30a.m. Legislative Briefing
 - Welcome and Introductions
 - Brief overview of AOPA, OAA and ORBAA (background, members, key issues)
 - 1) Key priorities for the associations in the 135th General Assembly
 - 2) NE Ohio airport presentations (each airport has 7-10 mins and 4 slides each)
 - 3) General topics of discussion related to aviation (Q & A)
- 11:30 a.m. 1 p.m. Lunch and discussions with individual airports in NE Ohio area
- 1-3p.m. OAA Board of Directors Meeting

Please RSVP for this event by e-mailing tony@ohioaviation.org.

We will be hosting similar events regionally around the state in the coming months. Therefore, you are welcome to join us at a future event that may be closer to your home or in your legislative district.

Thank you for your time and consideration in attending this event. The airports located in NE Ohio have been invited to attend this regional event.

OAA Contact	AOPA Contact	ORBAA Contact
Tony Fiore	Kyle Lewis	Mike Christie
Executive Director	Regional Manager, Airports and State	Vice President, ORBAA
Ohio Aviation Association	Advocacy, Great Lakes Region	Head of Sales, Americas
65 E. State Street, Suite 1800	Aircraft Owners & Pilots Association	Global Jet Capital
Columbus, OH 43215	o: (301) 695-2229 c: (740) 418-8950	O (614) 542-7284
Office: (614) 462-5428	601 Pennsylvania Avenue NW, North	Email: mchristie@globaljetcapital.com
Mobile: (614) 906-8669	Building, Suite 250	www.globaljetcapital.com
tony@ohioaviation.org	Washington, DC 20004	www.orbaa.org
www.ohioaviation.org	kyle.lewis@aopa.org www.aopa.org	







National Association of State Aviation Officials (NASAO) Center for Aviation Research and Education

NEOFIX and the state of Ohio participate in the NASAO Center's AAM Multistate Collaborative (November 2024)

The NASAO Center's AAM Multistate Collaborative is a work group of state government agencies or instrumentalities focused on the role of states in the development and integration of Advanced Air Mobility into the US National Airspace System. The Collaborative serves as a forum for states to discuss state-level policies and infrastructure needed to support AAM operations, with expert contributions from a variety of private sector stakeholders across this growing sector of the aviation industry.

The Collaborative is conducting a series of conversations whose goal is allowing states to think through a wide range of issues. The Collaborative is working towards developing a series of consensus papers that will help harmonize state efforts, while acknowledging states' unique needs, so that industry can expect consistency across the states and ensure that policies and infrastructure complement federal policy, and Federal agencies will be aware of their state level partners concerns as AAM is deployed and integrated into the NAS.

For administrative purposes, the Collaborative will be housed within the NASAO Center for Aviation Research and Education, a 501(c)(3) organization that recognizes the vital role aviation has assumed in our contemporary society. The Center, through its relationship with NASAO and the states, is in a unique position of being able to support, collect, and share research related to state aviation.

Participation in the Collaborative is open to any state aviation agency and other government and quasi-government bodies with an interest in the advent of AAM and its integration into the National Airspace System. Private sector stakeholders are also welcome to support this initiative though contributing their expertise and perspective.

The Collaborative's activities will be coordinated by a steering committee of state government leaders whose organizations are engaged in planning for AAM integration, supported by NASAO staff. The Steering Committee may invite NASAO Business Partners to participate in the Collaborative's discussions in an advisory capacity so that their expertise in this area will be available to the states.



Transportation
Committee Notice

To: Members of the Transportation Committee

From: Stephanie Kunze, Chair Date: November 15, 2024

Wednesday, November 20, 2024 10:00 AM Finance Hearing Room

AGENDA

Patton	Memorial Highway	2nd Hearing, Proponent/Opponent/ Interested Party
Am. H. B. No. 77 Willis	Regards the operation of unmanned aerial vehicles in Ohio	2nd Hearing, Proponent/Opponent/ Interested Party
Sub. H. B. No. 194 Miller, K.	Authorize private vendor contract for specialty license plates	2nd Hearing, Proponent

Governor's Appointments:

Sandra Barber (Reappointment), Ohio Turnpike and Infrastructure Commission Pamela Boratyn, Director of the Department of Transportation



Interested Party Testimony- Senate Transportation Committee

HB 77 — Operation Of Unmanned Aerial Vehicles In Ohio

November 20, 2024

Chair Kunze, Vice Chair Reineke, Leader Antonio, and members of the Senate Transportation Committee, thank you for the opportunity to provide testimony on House Bill 77.

My name is Dr. Stuart Mendel, Affiliate Professor at Baldwin Wallace University and Project Director for the Northeast Ohio Flight Information Exchange also known as the NEOFIX. The University serves as the focal point for this applied research and community engagement program to fulfill its visioned role as a leading regional comprehensive university impacting learners, businesses, and communities throughout the Great Lakes region.

For years, the drone market was in a nascent phase and had yet to break into the mainstream. Then, in 2016, drone industry growth took flight when the Federal Aviation Administration (FAA) granted hundreds of new exemptions for companies to operate drones in the U.S. through FAA Part 107.

These exemptions included several new use cases in multiple industries, such as insurance, construction, and agriculture — each of which demonstrates the broad range of commercial drone applications.

The FAA helped push commercial drone market growth forward by formulating a regulatory framework with its consumer drone registry. Now, drone manufacturers and tech suppliers are doing all they can to capitalize on this and turn drones into a full-fledged industry.

Sales of US consumer drones to dealers surpassed \$1.25 billion in 2020, according to Statista. Goldman Sachs forecasts the total drone market size to be worth \$100 billion—supported by this growing demand for drones from the commercial and government sectors.

Among the states, Ohio is primed in the leading cohort of early adopters of drone operations. Rest assured it will be this first group of early adopter states that will engage with the FAA to develop the policies, regulations and procedures for the whole country. The NEOFIX is the working model for key elements of the infrastructure depicted and envisioned Chapter 8 of the 2022 Ohio Drive Ohio Advanced Air Mobility (AAM) Report.

House Bill 77, if implemented effectively, can support the safe growth and development of this market in Ohio.

As background, the NEOFIX is public private partnership leading to an integrated system allowing for more overall visibility and awareness of the airspace, the ground space, and drones, creating a safer airspace in the county. The NEOFIX integrates public data to support a common operating picture that public safety

Page 1 of 3

Questions referred to:
Stuart C Mendel, Affiliate Professor and Project Director
Baldwin Wallace University
SMendel@bw.edu





can leverage – both to support public safety operations AND to identify potential bad actors for counter-UAS (unmanned aircraft system). NEOFIX is digital infrastructure that will accelerate use of drones for public safety (Drone as a First Responder) while lowering the costs of these operations.

NEOFIX allows State and Local government to publish key information to UAS Operators and Industry, giving everyone engaged in Commercial and Civilian Advanced Air Mobility a clear, common picture – in the same way that charts do for traditional aviation.

- UAS operators and industry use NEOFIX to understand the local environment before and during operations
- Public safety use NEOFIX to coordinate operations and alert private operators
- State, and Local government use NEOFIX to manage the interaction of UAS for local communities.

Communities with drone ready infrastructure offer strong incentives for manufacturing and testing, business operations, technology development, and workforce training and education.

The rollout for the NEOFIX is ahead of schedule and the web interface is active. It can be accessed by the general public at free of charge through the Baldwin Wallace University Technology Partnership Transfer website or more directly through the <u>NEOFIX platform</u> itself. More advanced features are available to people who request them, also at no charge. As I mentioned when I presented the concept to this committee this past March 21, 2023, the NEOFIX has received \$450,000 in funding from Cuyahoga County over two calendar years ending in December 2024 as well as \$350,000 in private investment.

NEOFIX provides a secure, access controlled central point of access for industry and a governance model for how State, and Local governments publish information, so industry doesn't have to deal with a patchwork of conflicting regulations – improving safety and economic growth.

In a short period of time, the work of drone readiness has included:

- Organizing public and private stakeholders for the purpose of describing and publishing community assets
- Clarifying and publishing local rules and hazards
- Attracting existing AAM business
- Stimulating new manufacturing, data programming and analysis, cyber security and related industry to the region.

NEOFIX stakeholders include participants from the public sector including the FAA and FAA knowledgeable private actors along with each of the categories depicted on the Public Infrastructure Authority Flow Diagram provided. This document reflects the government actors and their relationship to one another in the civilian and commercial advanced air mobility infrastructure. HB 77 fits neatly into this framework, and it our expertise in community outreach and planning through which we view House Bill 77.

Page 2 of 3
Questions referred to:
Stuart C Mendel, Affiliate Professor and Project Director
Baldwin Wallace University
SMendel@bw.edu





For example, in our work in Cuyahoga County, we have worked with public safety and county planning to identify specific risks and hazards for publication through the system. Because of this work, we recommend Section 4561.50 — Subsection A for "Critical Facilities" add "water, sewage, or energy processing or distribution facility" and "any facility which stores chemicals or fuel in an above ground, outdoor holding tank."

In developing the NEOFIX our work has been designed to serve as a regional template adaptable to each of Ohio's 88 counties. Organizing and standing up the NEOFIX as a functioning model aligning with the state's DriveOhio July 2022 AAM Framework Report, (specifically section 8 AAM Strategic Framework). Section 4561.53 is an excellent idea that aligns to successful, existing programs in other states such as Virginia and California and in the work we are conducting under the NEOFIX program in Northeast Ohio. We have talked to the Director at the Ohio UAS Center and are excited and ready to share our public data with the UAS Center so that it can be included in the statewide registry.

I will reiterate our goals guiding the design and implementation of the NEOFIX: to protect critical infrastructure, make sure local rules are clear, consistent, and available, and make these available as a clear, clean easy to use state asset. The next stage of our work is engagement processes with the localities and municipalities. This is a we can make include and publish information on no-go areas, to ensure that localities can create thoughtful rules and share consistent data.

We now have substantial experience with this process in Northeast Ohio and are excited to support the UAS Center and the State of Ohio by bringing our expertise to anywhere in the state where it is needed.

Thank you for your time and the opportunity. I will now take any questions you may have.

Dr. Stuart Mendel Affiliate Professor at Baldwin Wallace University and Project Director for the Northeast Ohio Flight Information Exchange

Page 3 of 3
Questions referred to:
Stuart C Mendel, Affiliate Professor and Project Director
Baldwin Wallace University
SMendel@bw.edu



CRITICAL OPS



Aerial Drone Competition

December 14, 2024 · Rocky River, Ohio

Tomorrow's Leaders Take Flight

Welcome to the Northeast Ohio Aerial Drone Competition, where the spirit of innovation that once powered the steel mills and manufacturing giants of Cleveland, Akron, and Youngstown now fuels the next generation of drone pilots and tech enthusiasts. In the same way that these cities built the nation, our competition builds future leaders by teaching students the essentials of drone technology, flight principles, and programming, all while engaging them in STEM learning.

This is more than just a competition—it's a gateway to exciting drone-related careers, a way to keep the legacy of Northeast Ohio's innovation alive, and a chance for students to take their place among the pioneers of tomorrow's technologies.



Want More?

Consider expanding the experience with our 8-week drone program, offering advanced learning in drone technology and data analysis. Perfect for schools looking to take STEM learning to the next level.

Designed for Students in Grades 5 - 12

Missions









Why Join?

- **STEM Opportunity:** Develop real-world skills in drone technology and teamwork.
- **Grants Available:** We can help you secure grant funding for drones and equipment for your program.
- **Hands-on Learning:** Inspire students in Grades 5-12 with drone technology.
- Qualifying Tournament: Earn a chance to advance to the North Central Regional Championship!

Registration & Competition Information

- **Teams:** 50 teams. Ideal size is 3-5 students. Schools can enter multiple teams.
- **Technology:** Teams provide their own drones, charging hardware, spare parts, and logbook/data (grants available!).
- Fees: \$15 per team.
- Registration Deadline: December 6, 2024, 5 pm.
- Tournament Location: Magnificat High School 20770 Hilliard Blvd., Rocky River, OH 44116

For more information, contact: Scott Ross, Flight Operations Lead scott.ross@criticalops.com Last year was a sellout event – register today!

tinyurl.com/drone-comp24





Stuart C. Mendel Project Director

E-mail: <u>smendel@bw.edu</u>
Cellular: 216-407-2673

Linked In: https://www.linkedin.com/in/stuart-c-mendel/

www: https://bw-centers-tech-partnerships.org/

