

AAM 2024 Day Two Kick Off

Todd Graetz

AEROLANE 



Who am I? Why am I here?

In the UAS industry for 10 years ...

CEO, Co-founder and investor, *Aerolane*

Co-Founder, BNSF Railway UAS Program

Board Member, AUVSI

Member, Flight Rules Chair, FAA BVLOS Advisory and Rule-making Committee

Member, FAA Advanced Aviation Advisory

Member, UAS ID and Tracking Advisory and Rule-making Committee

Founding Member, FAA Drone Advisory Committee (DAC)

Hopelessly Addicted Pilot

Rapid injection of technology to yield *positive outcomes*

For example, the compressed timeline of BNSF UAS Program

2014- Program commences - proof of performance VLOS and initial assisted/extended range VLOS

2015 – FAA / BNSF CRDA signed, Pathfinder Program commences

2015 - First Commercial Beyond Visual Line of Sight (BVLOS) in Lower 48 states (Insitu ScanEagle), 285 miles of BVLOS, no chase plane, no visual observers - *pure BVLOS*

2016 - First railway-specific BVLOS aircraft commenced regular flights + railway specific analytic systems.

2017 - All new 110lbs+ railway specific BVLOS aircraft with normalized flights at ~ 250 miles round trip

2018 - Successful launch of daily BVLOS flight service over 1200 miles of track in three states

2018 - Program's first remote operations of aircraft flying in Montana controlled by a central team of pilots in Texas

2018 - USAF/BNSF civilian long range drone operations in controlled/military airspace

2019 - Nation's first Section 44807 BVLOS Aircraft for Critical Infrastructure

2020 - Nation's first national BVLOS class G COA for BVLOS linear asset inspection

2021 - Over 165 active pilots in 28 states, & systemwide production BVLOS approval for dock-based drones

2022 onward – Dock based BVLOS expansion, more use cases

Aerolane enables
any plane today
to carry a “trailer”
as it flies.



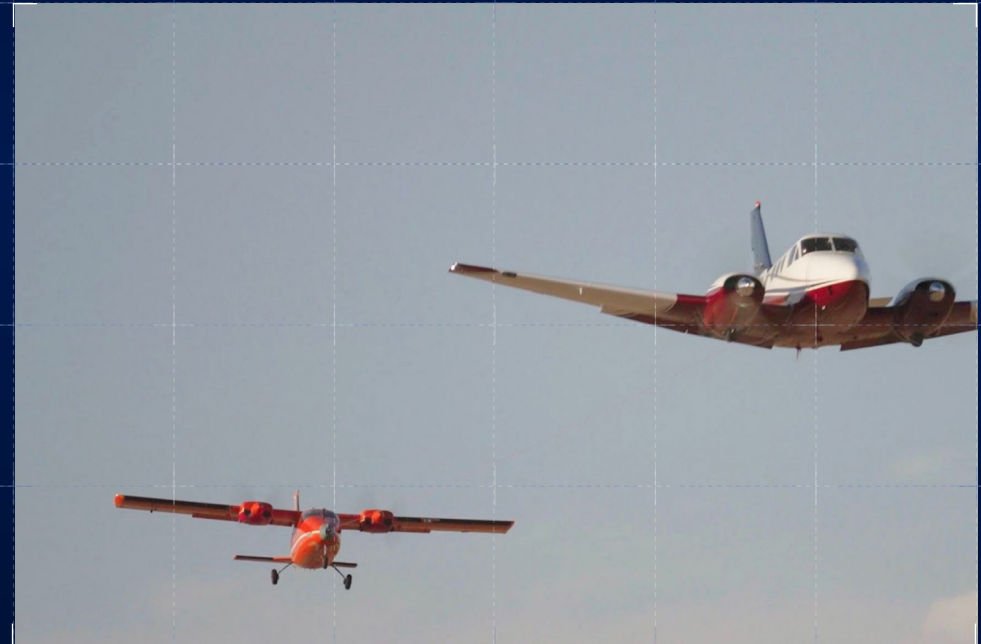
Rapidly approved full-scale demonstrations of a viable commercial solution.

Q1 2023



Aerocart V1 being towed
by American Champion Decathlon
(boosts 400 pound payload to 1500)

Q3 2023



Aerocart V3 being towed
by Beechcraft Queen Air
(boost 1000 pound payload to 3000)

AAM..is upon us



Challenge: Design, Certify, Make and Sell

Getting closer every day



Challenge: Cost

Must drive cost of transport as low as possible to benefit humanity as a whole



Challenge: Environment

Drive costs as low as possible (and) care (in totality) for the environment

From the agenda for the next session:

A new paradigm

Appropriate strategies, policies, integration, local and regional communities. Major societal, government, infrastructure, and transportation interests, complex interdependencies, interests **brought together in a collaborative manner, safely, efficiently and sustainably**

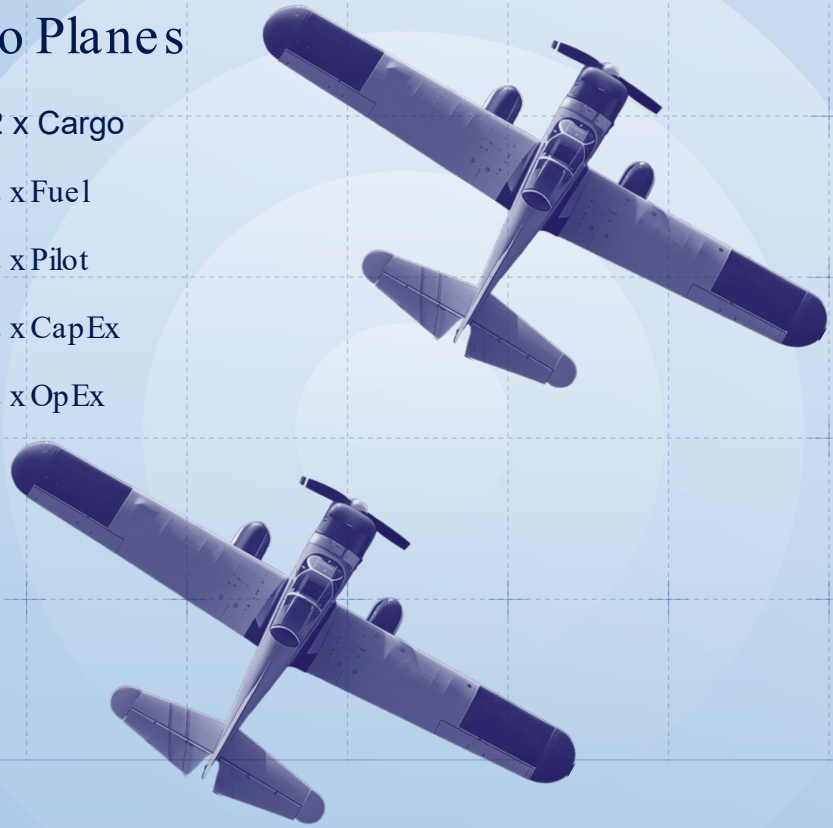
What does this really mean?

We need to support each other – this is why we are here. Humans thrive on association and care for each other's visions, work and creativity and AMM needs cooperation and permissive posture by all (or) we risk derailing the entire effort

Pulling optimized gliders drives significant efficiency

Two Planes

- + 2 x Cargo
- + 2 x Fuel
- + 2 x Pilot
- + 2 x CapEx
- + 2 x OpEx



Aerotowing doubles your capacity with

65% fuel savings (i.e. CO2 & cost)

Plus: it's a universal solution that increases flexibility enormously...

One Plane + One Glider

- + 2 x Cargo
- + 1.35 x Fuel
- + 1 x Pilot
- + 1.2 x CAPEX
- + 1.2 x OPEX





My Montana AAM Epiphany ..and the message for today

