



Speed of Air at the Cost of Ground

## Innovating for the Future of Air Mobility

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# Who are we?



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# Company Overview & Senior Leadership

*“Track record of success reduces technical, operations and regulatory risk”*



**Todd Graetz**  
CEO

BNSF Railway field operations & innovation team, Co-Founder BNSF Railway UAS Program & Advanced Train Operations group, FAA Pathfinder 3 (BVLOS), FAA/BNSF CRDA Program, FAA Drone Advisory Committee / AAAC member, multiple FAA Advisory and Rule-making committees, Board of Directors AUVSI, | Active private pilot.



**Gur Kimchi**  
Chairman

Ex. VP and Co-Founder of Amazon Prime Air, Former FAA Drone Advisory Committee member, multiple FAA, NASA, SESAR, ICAO, IETF, ITU-T, ETSI and RTCA standards committees, 5 start-ups, 3 exits, 1 IPO, 5 M&As, 600 Patents.



**Doron Appelboim**  
CTO

Chief UAS Test Pilot, Amazon Prime Air, Thin and Long arcs logistics specialist, Amazon Transportation, Israel Aerospace Industries, Co-author NATO STANAG (NATO UAV standards) Pilot: Israeli Air Force (Fighter, Cargo and UAS)



**Kevin Yuen**  
CCO

Managing Broker (\$500MM+ Sold), Aerospace Engineer, Advisor, Angel Investor, Ex-Boeing (Program Integration Manager, Flight Test Engineer). Ex-Amazon (Flight Operations Engineer). Ex-UTAS (Project Engineer).



**Sean Sweeney**  
Chief Pilot

Pilot since 1979. Airline Captain, Check Airman/Chief pilot. ISR/CAS pilot for 12 years flying L-39 and C-310 for Coastal Defense JTAC training. Lifelong glider pilot. Test pilot for Gemini international and NAWEC. Aircraft design for Global ResQ. Warbird instructor. A&P mechanic, CFII, MEI, ATP with 5 type ratings.

## Highlights:

- **Founded in 2021 (Seattle, WA)**
- **Based in Fort Worth, TX**
- **Seed Stage Company**
- **Raised Over \$11MM**



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# Advisory Board & Key Investors

## Advisors



**Gen. Maryanne Miller**, is a retired four-star USAF general and a pilot, last served as the commander of AMC



**Lt Col Jennifer "JJ" Snow**, ex-AFWERX CTO and SOFWERX CIO, specialized in emerging tech solutions across 43 DoD areas. She's an NPS Defense Analysis graduate and completed the NSA JOCCP internship.



**Dean Wise**, an advisor specializing in transportation and logistics technologies, formerly served as VP of Network Strategy at BNSF Railway



**Myron Wright**, is an aviation attorney and leading expert in the aviation industry with a special interest in UAS and UAM. Founder and first president of UPS Flight Forward Inc., a UPS subsidiary focused entirely on UAS.



**Arpit Mehta**, advisor, has over decade of experience in Autonomous & AI/ML technology within DoD and Commercial Sector. Ex-Amazon, Boeing, Northrop, USAF, General Atomics



**Sara Jones**. Advisor, formerly SVP at New Vista Capital focusing on Aerospace and Defense tech investments and partnerships, and previous Innovation Director of Digital and Emerging Aviation at Boeing HorizonX.



**Marty Schlenker** brings 25 years of railroad experience. Marty held AVP roles at BNSF from 2012 to 2021 in service planning and IT and led BNSF Service Design team. Marty now leads service design for Parallel Systems



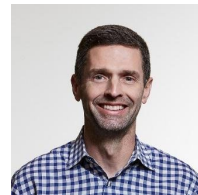
**Fred Lopez**, President of AeroAgility Consulting Group Inc. and former President of UPS Flight Forward Inc. Specialization in Aviation, UAS, AAM, and Management.

## Key Investors



**Dennis Muilenburg**

CEO and Co-Founder, New Vista Capital  
Former Chairman and CEO, Boeing




**Rob Conebeer**

MD and Co-Founder,  
Shasta Ventures  
**SHASTA** 



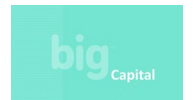
**Kirsten Bartok Touw**

COO and Co-Founder, New Vista Capital.  
Founder, AirFinance  
**NEW VISTA** 



**Kirby Winfield**

Founding General Partner  
Ascend  
**Ascend** 



RedBlue

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# Introducing Aerocart - The Future of Sustainable Aviation

Dual-use towed cargo glider boosts cargo capacity, efficiency, sustainability



## Aerocart Design Highlights

- 7,000 lbs. Payload Capacity
- 4 Unit Load Device-3 Volume
- Up to 65% fuel savings
- Significant emissions reduction
- Crewed and uncrewed derivatives
- Towed or automated landing

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# Aerocart Cargo Platform Family

Designed to carry more than 1, 3 and 10 tons for towing behind small turboprops to large freighters

**Aerocart 1T (conversion)**



**Aerocart 3T (clean sheet)**



**Aerocart 10T (clean sheet)**



<b>Estimated Entry in Service</b>	2023/2024	2026	202X
<b>Payload Weight</b>	1 Ton	~3 Ton (~7,000-lb)	~10 Ton
<b>Payload Volume</b>	Approx. 106 cu ft	~Approx. 776 cu ft (4 ULD3)	~Approx. 2500 cu ft
<b>MTOW</b>	~1,990 Kg (4,387 lbs)	~6.2 Ton	~20 Tons

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# ConOps

All flight phases from Hangar to Hangar



- Optional In-Air release for separate landing
- Land in towed configuration

Normalized

Multi-cart Optimized Flight



Aerocart optimizes for fuel efficiency

Multiple Aerocarts Can be towed at once

Future

Automated Glide and Land



Aerocart lands under tow or disconnects and autopilot navigates to final destination and safe landing

Future

# Significant Emissions Reductions towards Industry Sustainability

**60**

**Million Tons  
CO2 Saved  
Annually<sup>1</sup>**



1) Based on a fleet of 19,330 Aerocarts in service in 2043 and average jet fuel assumptions by aircraft segment.



Thank You!



AEROLANE 





Speed of Air at the Cost of Ground

# Appendix



# Recent Accomplishments

- Developed a **fully automated flight control system in towed configuration** during Climb, Cruise, and Descent.
- Completed flight test campaign in towed configuration accumulating over **110+ hours of total towed time**, and counting.
- **Increase payload with 65% less fuel consumption** when compared to standard flight configuration
- **FAA approvals** to conduct experimental flight testing
- Successfully proven **reduction in operational costs** and established clear ROI for both commercial and military use cases.
- Normalized Hangar-to-Hangar operation in towed configuration.



Recently Flight Test Footage: [Password: Jan2023fly]

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# Commercial and Regulatory Challenges

## Increasing Costs

- Increase payload with 65% less fuel consumption when compared to standard flight configuration

## Emissions Mandates

- Does not use an engine for the towed aircraft

## Labor & Pilot Shortages

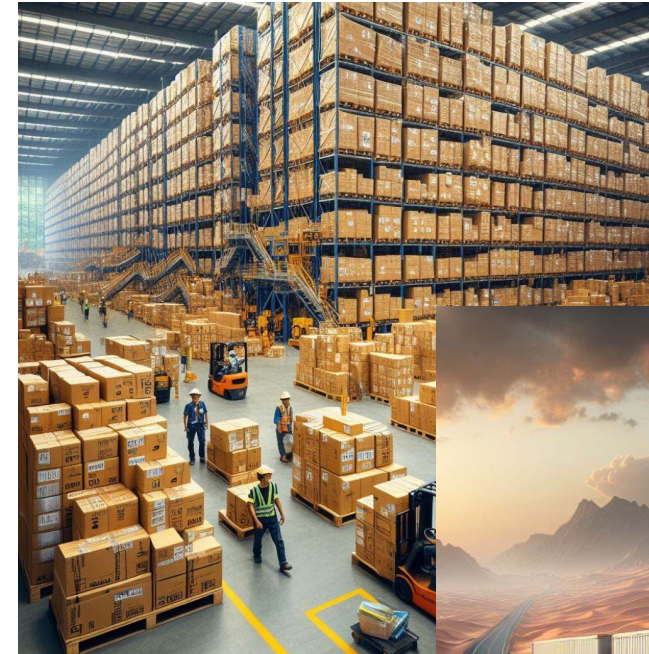
- Towed aircraft is autonomous and does not require additional pilot

## Congested National Airspace

- The tractor aircraft + towed glider reduces congestion compared to 2 individual aircrafts both flying on their own

## Integration of Autonomous Aircraft

- Flight automation & integration with existing aircraft
- Enhancing operational capabilities with multi-purpose and sensor payloads



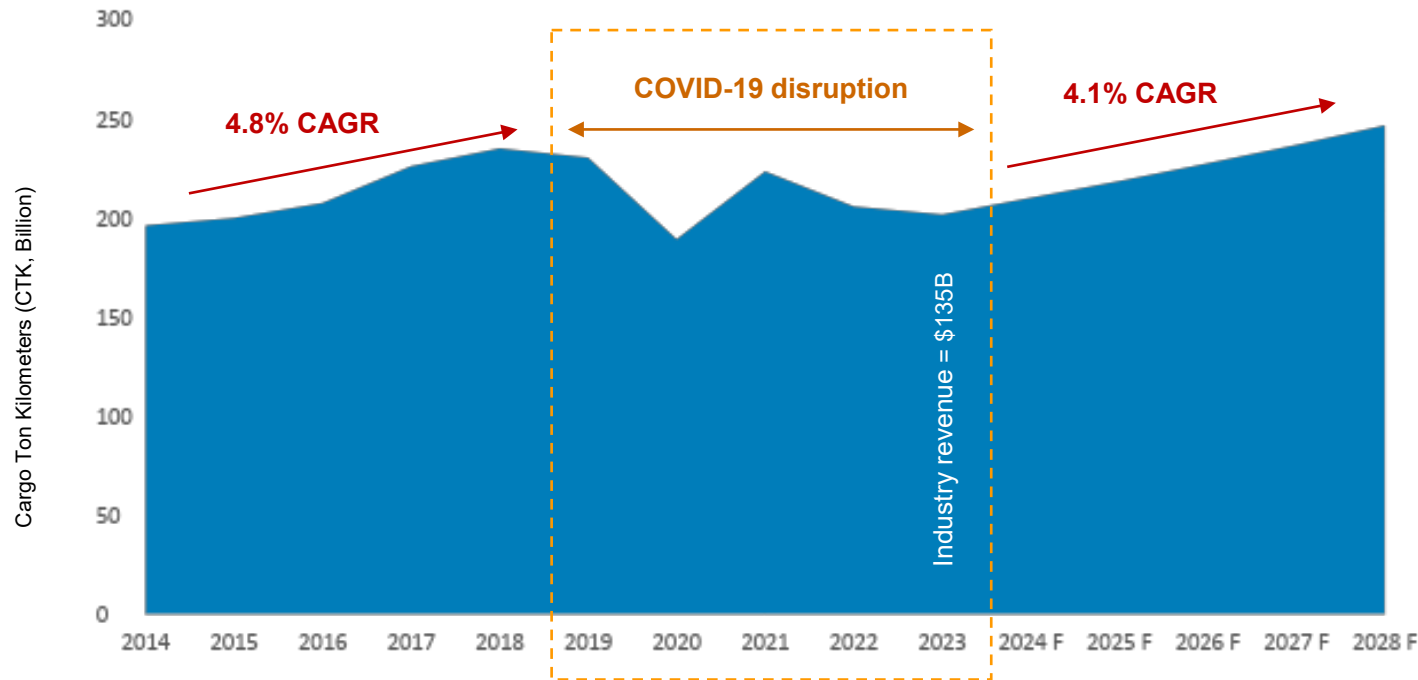
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# Large Addressable Commercial Market

**\$142B**  
Global Air Cargo  
Annual Revenue  
2023 estimate<sup>1</sup>

The market is expected to resume long-term growth as the COVID-19 impact recedes



E-commerce growth and pressure to reduce delivery time

The value of air cargo is improving relative to the rising cost of container shipping

Red Sea hostility providing an incremental boost

Global push for diversified and resilient supply chains

Sustained long-term growth in global GDP, industrial production, and trade

Aerolane solution: Unmanned aircraft being towed by manned aircraft.

- Fastest way to go to market
- Fast, economic, sustainable way

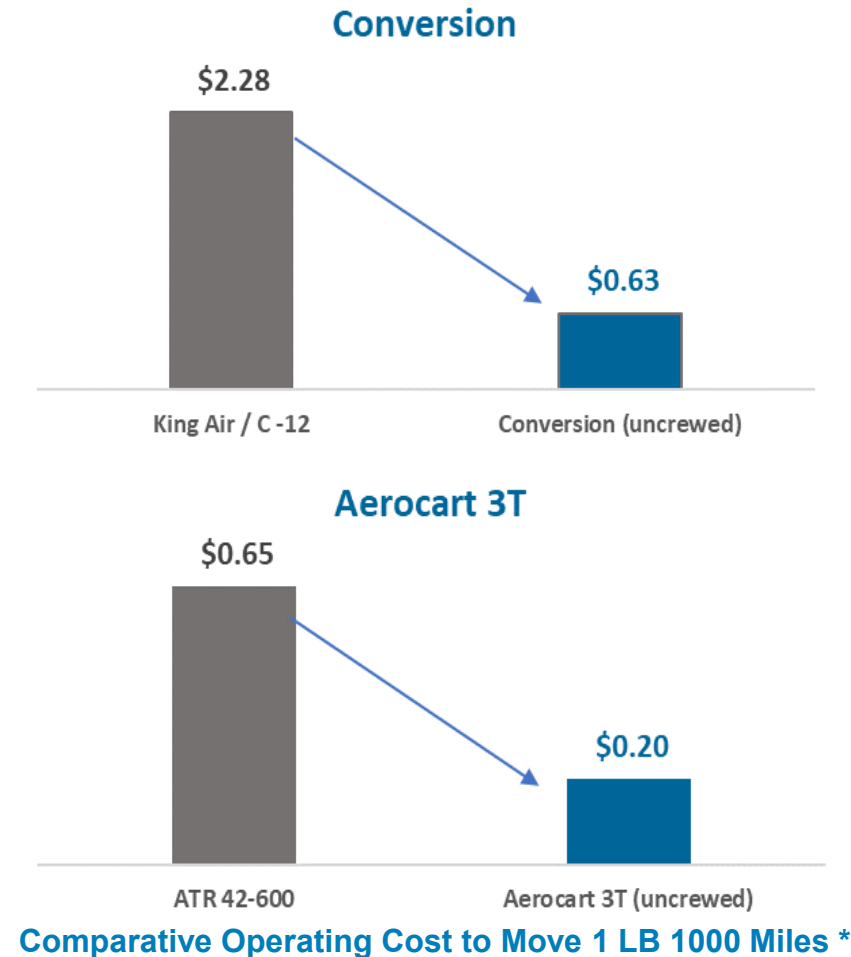
Source: IATA Industry Statistics Fact Sheet (June 2023), Boeing (World Air Cargo Forecast 2022-2041), Statista, Aerolane analysis

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# Envision the future with Aerocart

- **More:** payload capacity, flexibility, safety, speed-to-market
- **Less:** operating and capital costs, procurement time and cost, pollution, complexity
- One King Air or ATR 42-600 with its normal payload of cargo can now transport up to double the amount of cargo.
- No additional non-fuel resources (e.g., a longer runway for takeoff) are required to operate.



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# Aerolane Regulatory Plan

**Within Aerolane, we have a strong team of Leaders, Aviators, and Technical and Regulatory experts with deep aviation experience and decades long connection throughout FAA.**

- Not a New Concept
  - Decades old US Military Operations
  - Decades of Safe Towed Glider Operations World-Wide
  - Aircraft Towing Operations Time Tested & Proven Safe
- Deliberate & logical building Block Approach To Operations
  - Starting with certificated aircraft
  - Incorporating current technology (added)
  - New Design - Test - Learn - Improve Design – Repeat
  - Expanding on existing safe aircraft & tow system designs for new operations
  - Certification, Flight Standards, Airports and Air Traffic, and leadership engagement at FAA HQ
  - Minimal regulatory challenges, well researched regulatory approach
    - SAC/EC for R&D
    - TC
    - Part 135, Part 121
  - **Nothing unique and novel that requires entirely new rules and regulations**



# FAA Adopts Carbon Limits For Airliners

- The FAA has issued a final rule that will require most larger aircraft built after Jan. 1, 2028, to meet new efficiency standards designed to reduce their carbon emissions per passenger mile.
- The new rule will cover all subsonic jets with a maximum takeoff weight of more than 12,500 pounds and turboprops with an MTOW of 19,000 pounds.
- The new rules will bring the U.S. in line with ICAO standards and are part of the U.S. Aviation Climate Action Plan.
- The FAA says the rule covers everything from a Citation to a 787 and includes turboprops like Viking Q400s and ATR42s.
- **Covered Airplanes:** Certain subsonic jet airplanes with a maximum takeoff mass greater than 12,500 lbs. (5,700 kilograms) and certain propeller-driven airplanes with a maximum takeoff mass greater than 19,000 lbs. (8,618 kilograms). Basically Part 25 aircraft.
- **Exceptions:** This Rulemaking excepts from applicability airplanes used for firefighting, amphibious airplanes, airplanes lower than specific masses, reciprocating engine airplanes, non-pressurized airplanes, and certain specialized operations airplanes.

## How can Aerolane apply this Rule:

- The exclusions include airplanes that are initially designed, or modified and use for specialized operations (including the presence of unique design features to carry out those operations).
- One of several examples of such airplanes is one that “could include specialized cargo features.”

