

AEROLANE

FLORIDA
AUTOMATED
VEHICLES



A man in a green flight suit and helmet is seated in the cockpit of an orange aircraft, waving his right hand. The aircraft's fuselage is bright orange, and the word "DIANE" is partially visible in large white letters on the side. The background shows a blue sky with scattered white clouds.

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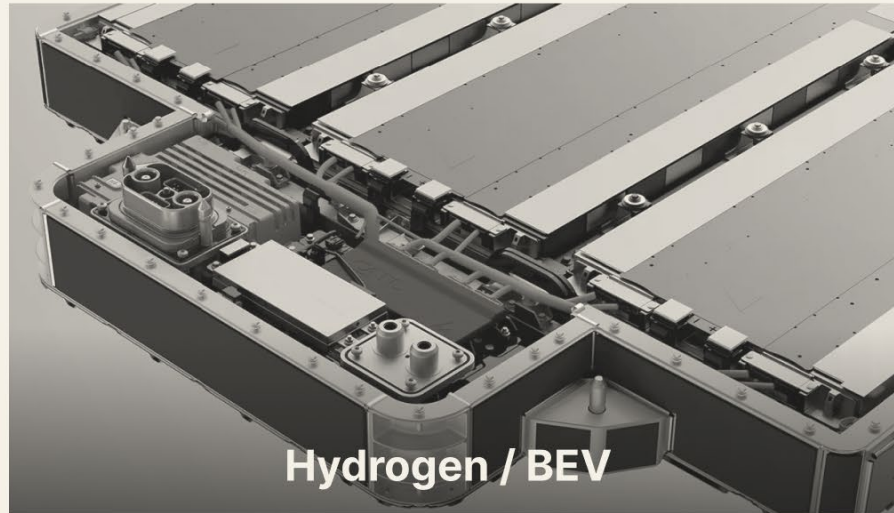
[illegible]

$\frac{1}{\sqrt{m}} \sum_{i=1}^m \left(\frac{1}{n} \sum_{j=1}^n x_{ij} y_j \right) = \Delta \cdot \frac{1}{\sqrt{m}} \sum_{i=1}^m \left(\frac{1}{n} \sum_{j=1}^n x_{ij} \right)$

سفر أسرع وأمان أكبر مع طائرات الجيل القادم



Super/Hypersonic



Hydrogen / BEV



VTOL



Blended Wing-Body

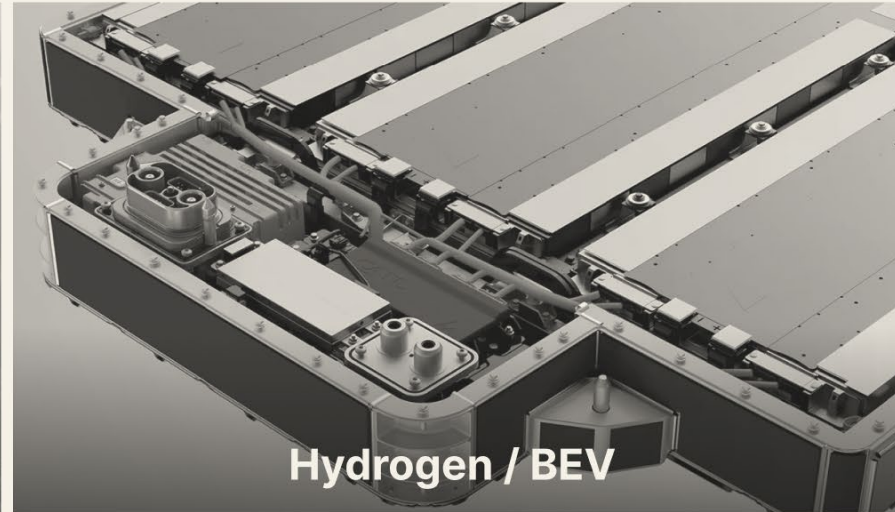


Sustainable AV. Fuel



E-VTOL

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SKY TRAINS

How do you scale what
this airplane can do?



SKY TRAIN

How do you scale what this airplane can do?



WITH ANOTHER
AIRPLANE



WITH A
BIGGER PLANE

SKY TRAINS

Doubling planes will double
your capabilities,

2 X
COST

2 X
CAPABILITIES



...and your costs

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SKY TRAINS

With so little force needed to
keep your SkyTrain cruising...



SKY TRAINS

... drop the engines & fuel tanks, and
design yourself a **hyper efficient glider...**



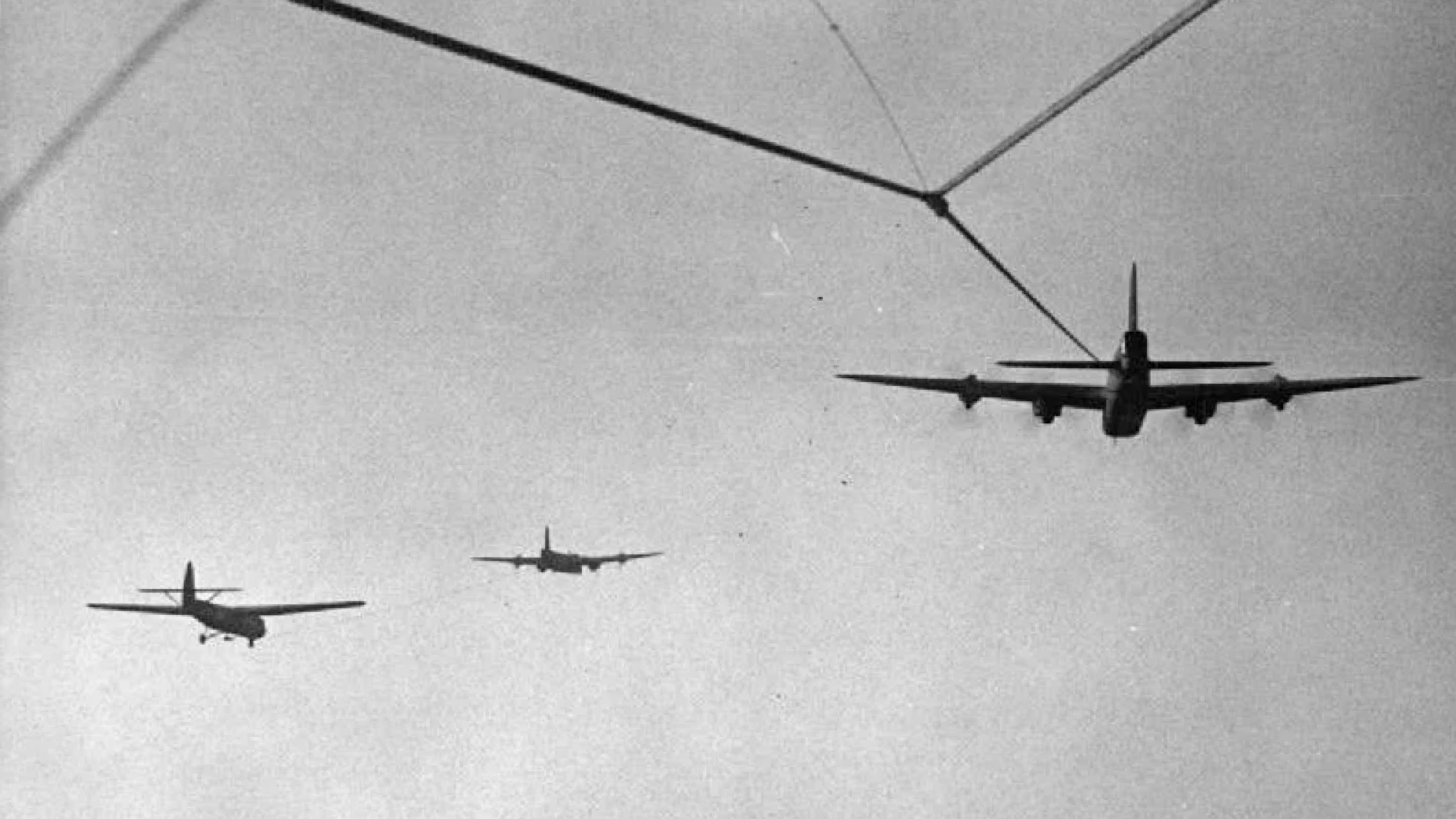


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Cargo/ Distance	400 mi	600 mi	800 mi	1,000 mi	1,200 mi	1,400 mi
7,000 lbs	-31%	-34%	-36%	-38%	-40%	-41%
9,000 lbs	-31%	-34%	-36%	-38%	-40%	
11,000 lbs	-31%	-34%	-36%	-38%	-39%	
13,000 lbs	-31%	-33%	-35%	-37%		
15,000 lbs	-30%	-33%				





An impact of this scale
goes beyond changing
the **air industry...**

Ground Freight

Air Freight



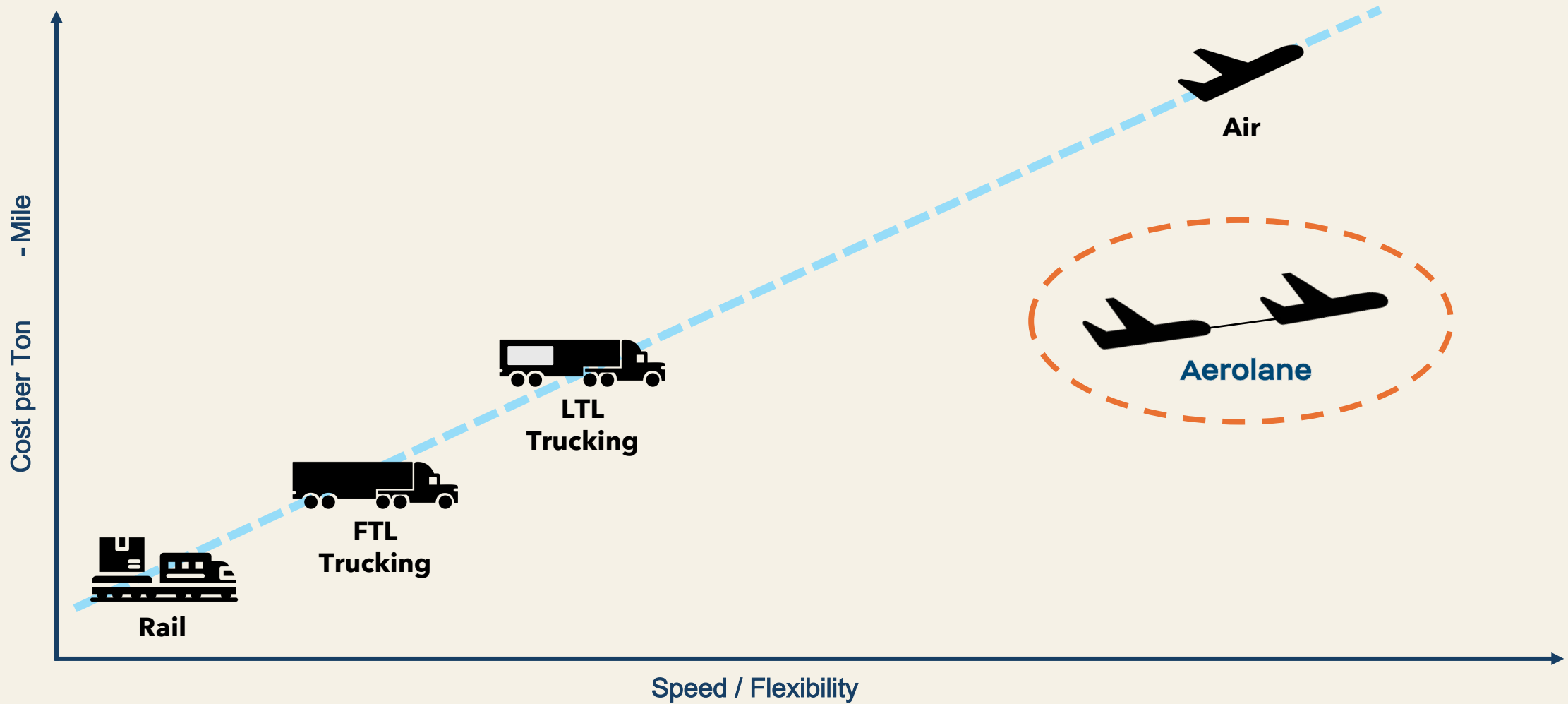
... and small movements
from ground can **redefine**
the air industry

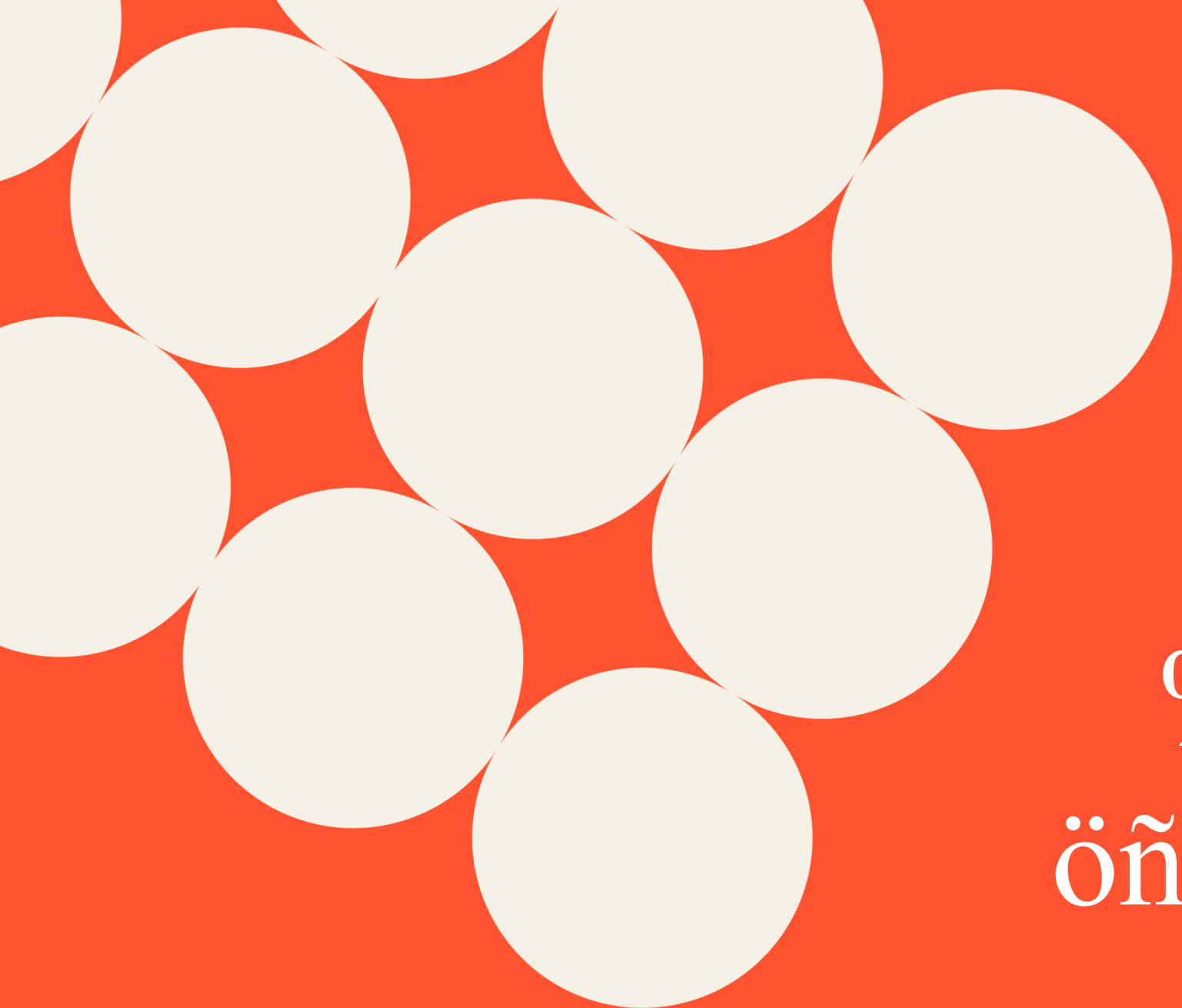
Ground Freight

Air Freight

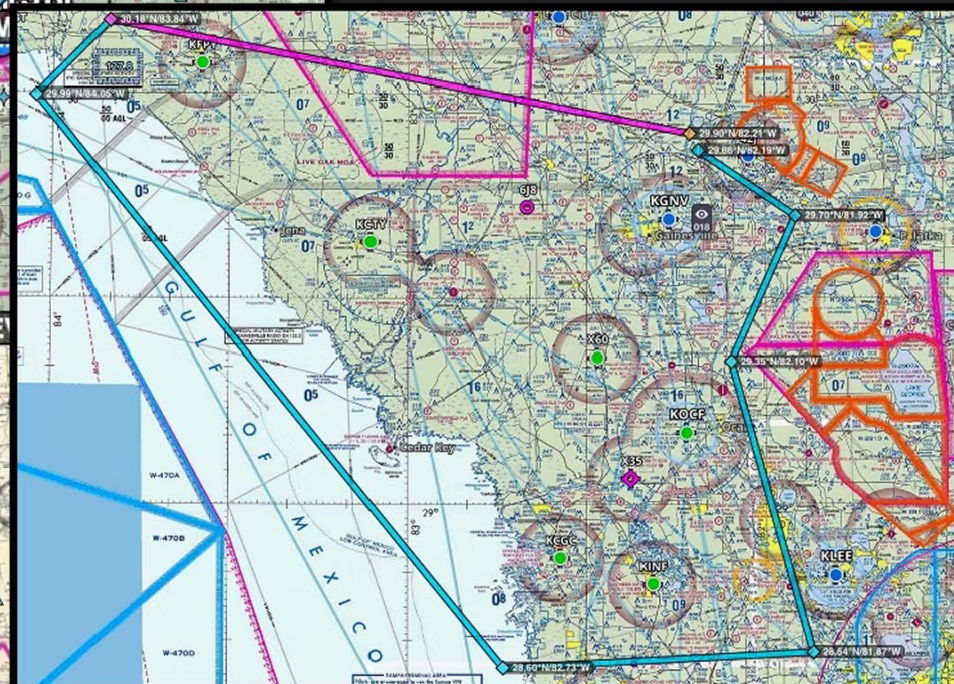
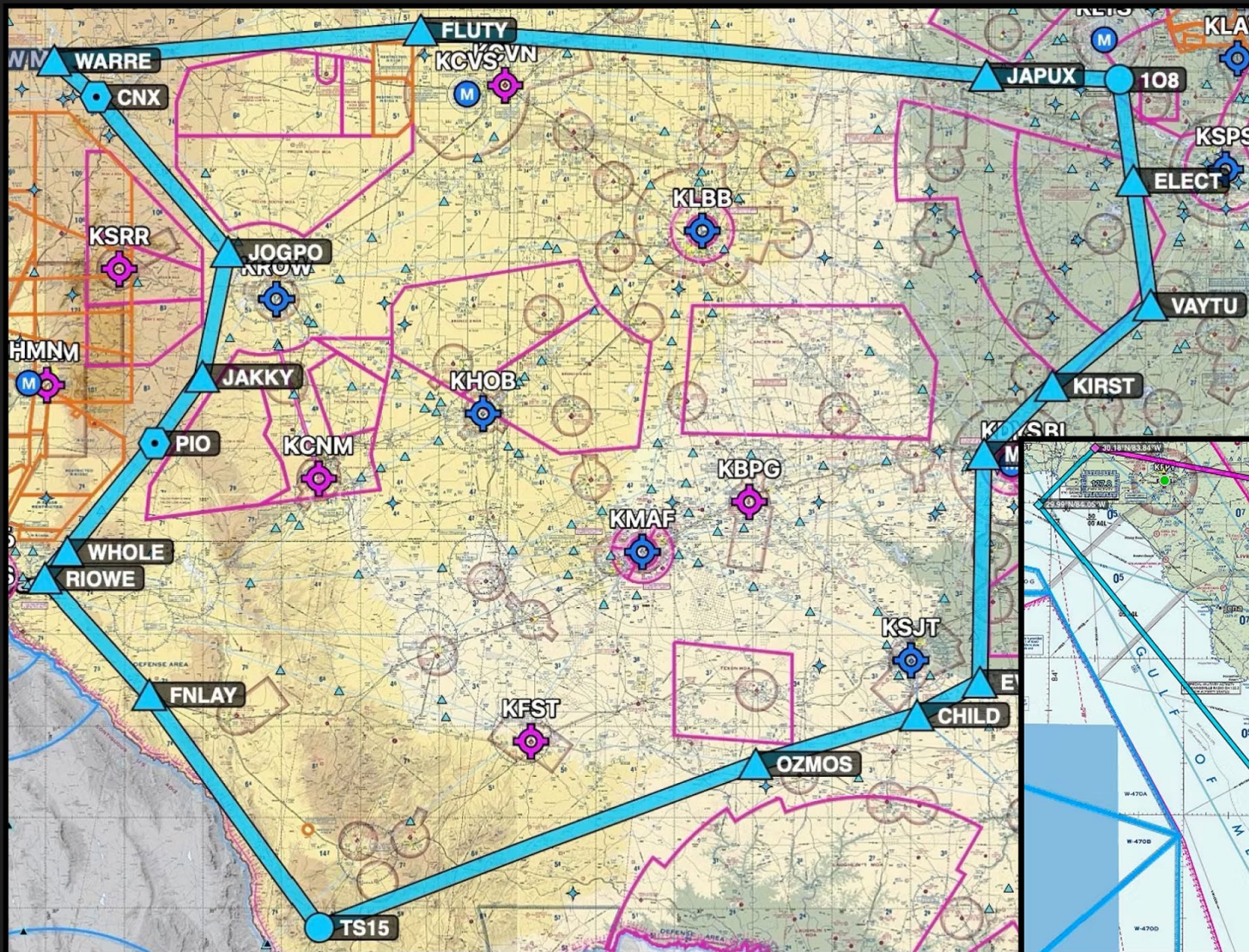


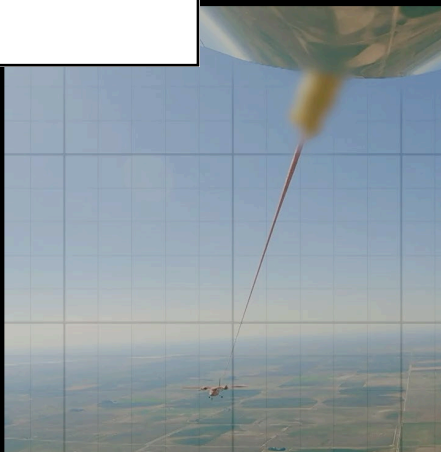
Cost per Ton-Mile vs. Speed / Flexibility





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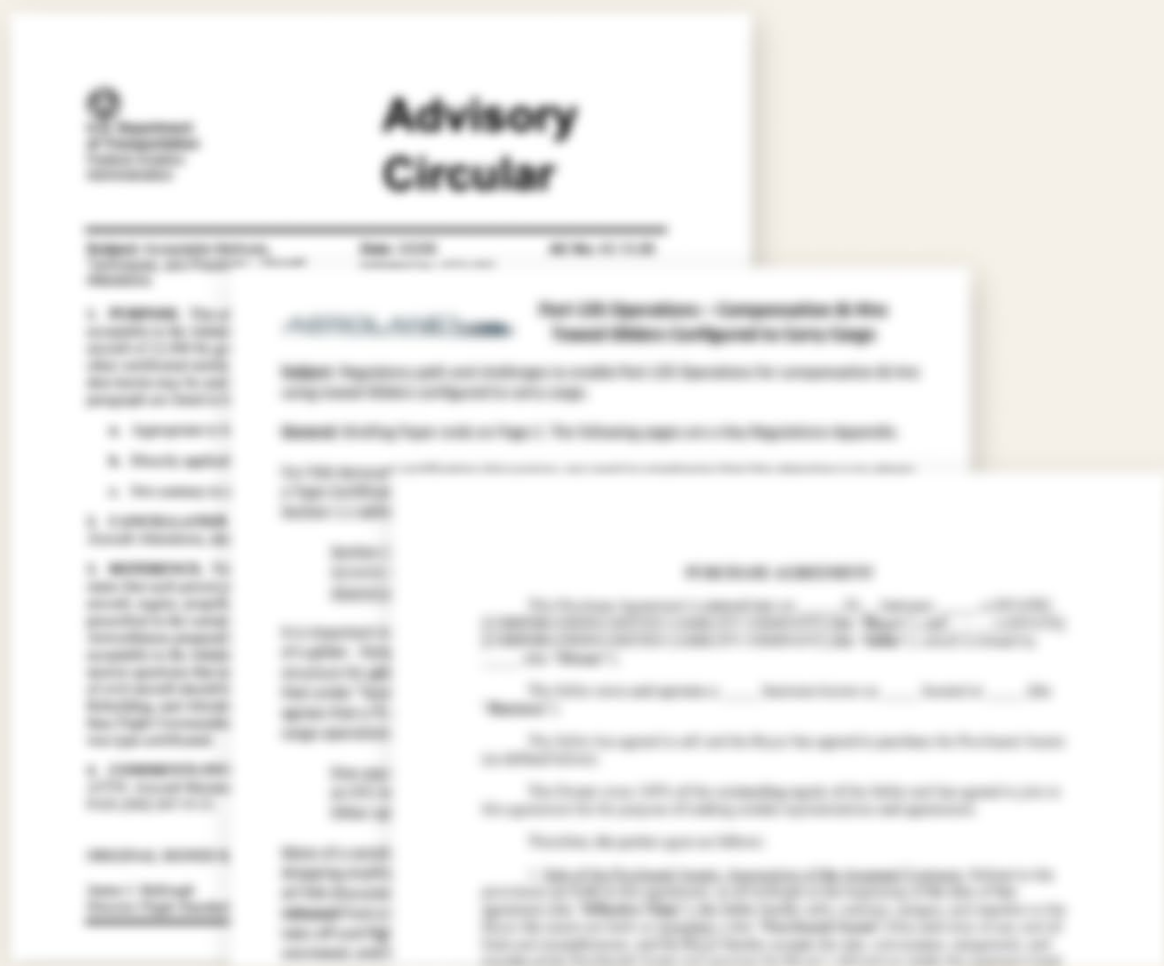
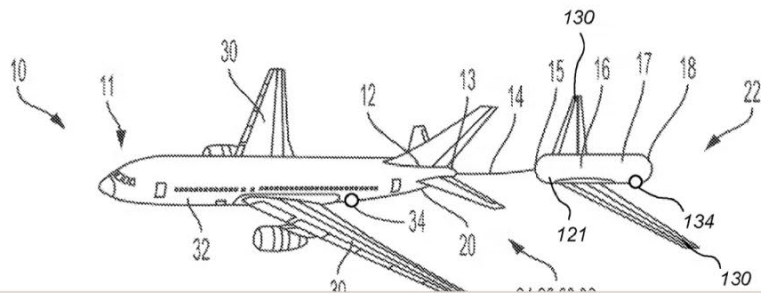
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(12) **United States Patent**
Appelboim

(10) **Patent No.:** **US 11,952,137 B2**
(45) **Date of Patent:** **Apr. 9, 2024**

- (54) **AIRCRAFT TOW SYSTEM**
- (71) Applicant: **Doron Appelboim**, Snoqualmie, WA (US)
- (72) Inventor: **Doron Appelboim**, Snoqualmie, WA (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
- (21) Appl. No.: **17/985,496**
- (22) Filed: **Nov. 11, 2022**
- (65) **Prior Publication Data**
US 2023/0150667 A1 May 18, 2023
- Related U.S. Application Data**
- (60) Provisional application No. 63/303,430, filed on Jan. 26, 2022, provisional application No. 63/278,920, filed on Nov. 12, 2021.
- (51) **Int. CL**
B64D 3/00 (2006.01)
B64C 39/02 (2023.01)
- (52) **U.S. CL**
CPC **B64D 3/00** (2013.01); **B64C 39/022** (2013.01); **B64C 39/024** (2013.01)
- (58) **Field of Classification Search**
CPC B64D 3/00; B64D 5/00; B64C 39/022; B64U 10/60
See application file for complete search history.
- (56) **References Cited**
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(45) **Date of Patent:** **Apr. 9, 2024**
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- OTHER PUBLICATIONS**
International Search Report and Written Opinion dated Apr. 12, 2023, in corresponding International Application No. PCT/US22/49801; 11 pages.
* cited by examiner
- Primary Examiner** — Philip J Bonzell
(74) **Attorney, Agent, or Firm** — Kowert, Hood, Munyon, Rankin & Goetzel, P.C.; Gareth M. Sampson
- (57) **ABSTRACT**
Disclosed is an unmanned, autonomous, cargo transport system comprising at least one towed aircraft coupled to a tractor aircraft for inflight towing.
- 20 Claims, 14 Drawing Sheets**



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Starting 2026, Aerocart technology flies commercially

Across a range of popular regional turboprop class aircraft.



Military Challenges Aerolane Can Solve - Contested Logistics

The ability to provide rapid, global mobility for the military is hampered by logistical constraints:

- Limitations in extending the operations reach in remote or contested areas
- High cost and complexity of in-theatre logistics and resupply missions
- Lack of airframe and pilot resources for critical missions

Aerolane enables rapid and agile logistics by providing a cost-effective, efficient, and fast solution to drive deployments on multiple fronts

- Automated logistics platform designed to function as a force multiplier
- Enhanced cross-country capacity, reducing footprint of ground support

Operational Efficiency and Cost Effectiveness

- Free up other assets such as airframe and pilots for other higher priority missions
- Decrease lifecycle costs and resupply times through innovative logistics solutions
- Improved operational tempo with reduced need for traditional logistical stops

Advanced Autopilot and Automated Functions

- Flight automation & integration with existing aircraft, enhancing their operational capabilities with multi-purpose and sensor payloads
- Reduces risk to pilots and addresses pilot shortage



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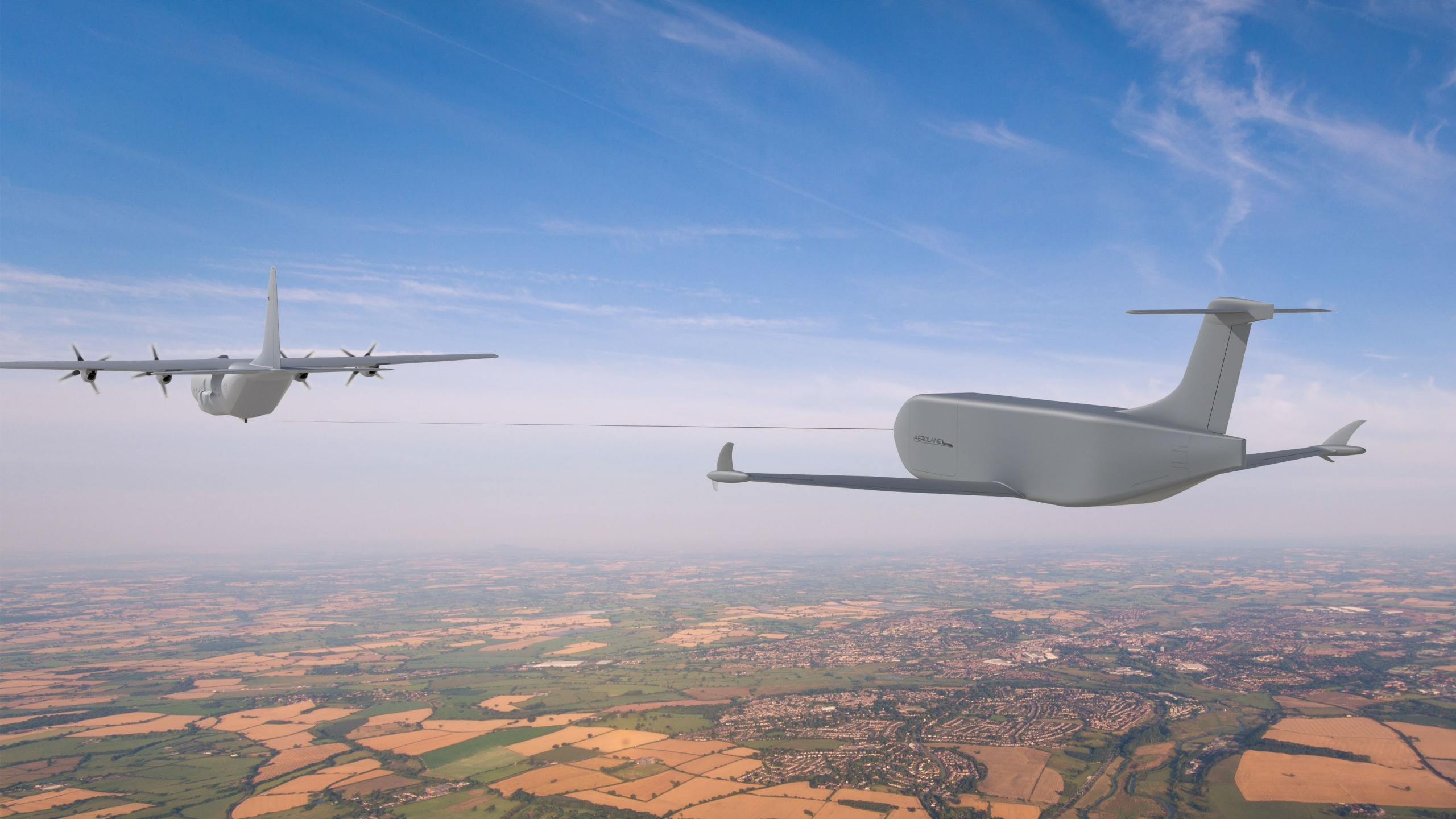
Air fleets across the DoD must sustain or expand capacity in the face of major assets ageing out - without breaking the bank

Problem: 6 million lbs. of annual movement capacity will be lost by 2041 as the fleet ages.

Solution: Aerocart can unlock 9 million lbs. additional movement capacity in this same period.

Opportunity: This is an additional ~800 Aerocart opportunity, rivaling the commercial market.







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The logo for Florida Automated Vehicles features the word "FLORIDA" in a large, white, serif font. A white outline of the state of Florida is superimposed over the letter "O". Below "FLORIDA", the words "AUTOMATED" and "VEHICLES" are stacked in a smaller, white, sans-serif font. The entire text is set against a dark blue background with a subtle, lighter blue circular glow behind the words "AUTOMATED" and "VEHICLES".