

Forecasting Advanced Air Mobility

"If you build it... they will come"

Jay Carmel







Aviation Forecasting is Art & Science

"Traditional Commercial Aviation" Forecast Inputs

Historical Helpful to inform the future: Good and bad times Exogenous shock impact "Supply-driv Aircraft O achievabil Near-term

(world crises)

New program

introductions

"Supply-driven" Forecast Elements

- Aircraft OEM build rate achievability
- Near-term orderbook health

"Demand-driven" Forecast Elements

- Macroeconomic trends
- Region- and country-level socioeconomic trends
- Fleet demographics
- Airline operating behaviors
- Aircraft design evolutions
- Passenger expectations
- Etc.

2020 2025 2030 2035+

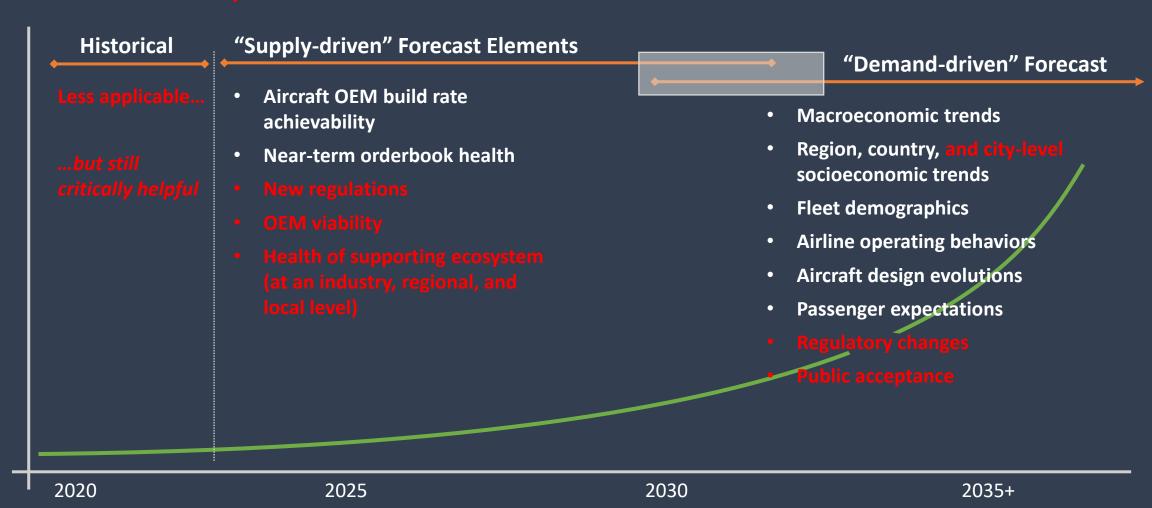
"Grey area"





AAM Forecasting is...messy

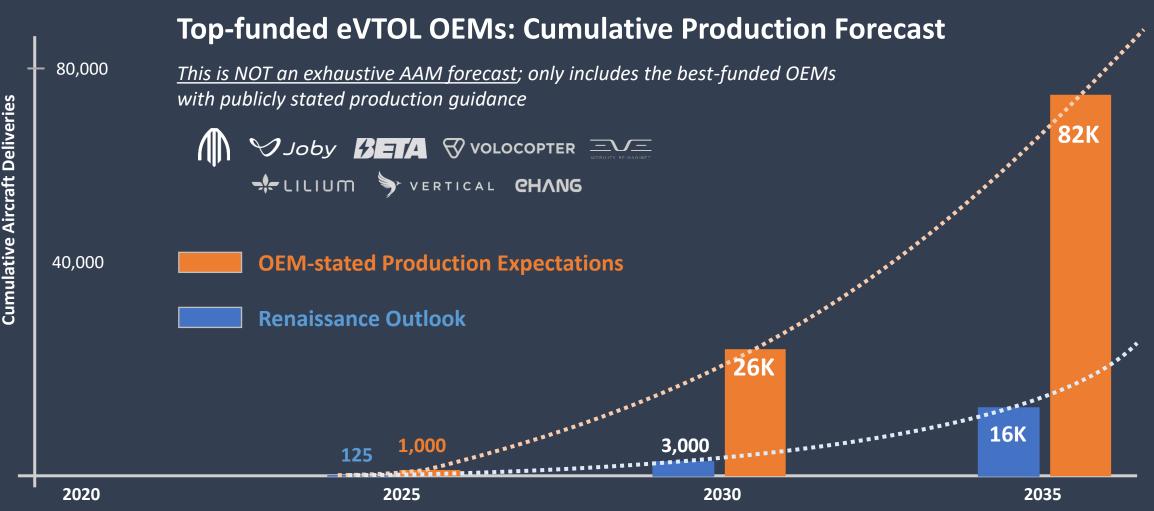
AAM Forecast Inputs







Views of the Revolution

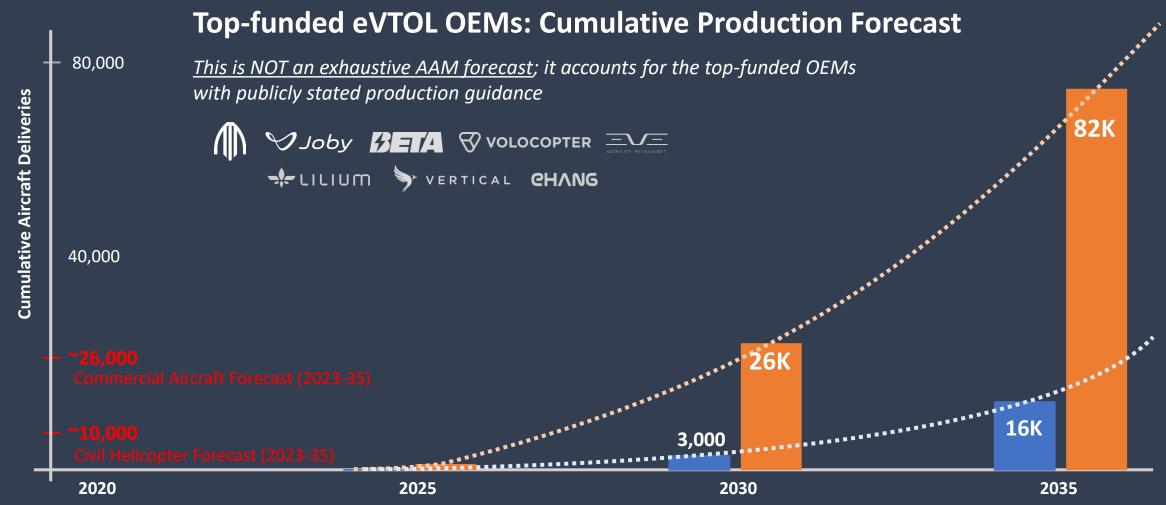


^{*}Based on a synthesis of public financial data, news interviews, launch announcements, etc. Best effort interpretation of production evolution; outyears without explicit info are held constant at the prior year's production rate





20% of the OEM Forecast is still "Revolutionary"



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Historical precedent matters in the near-term

Historical

Still helpful...
...But less
applicable

"Supply side" Forecast

- Program build rate achievability
- Near-term orderbook health
- New regulations
- OEM viability
- Health of supporting ecosystem (at an industry, regional, and local level)

"Demand side" Forecast

- Macroeconomic trends
- Region, country, and city-level socioeconomic trends
- Fleet demographics
- Airline operating behaviors
- Aircraft design evolutions
- Passenger expectations
- Regulatory changes
- Public acceptance

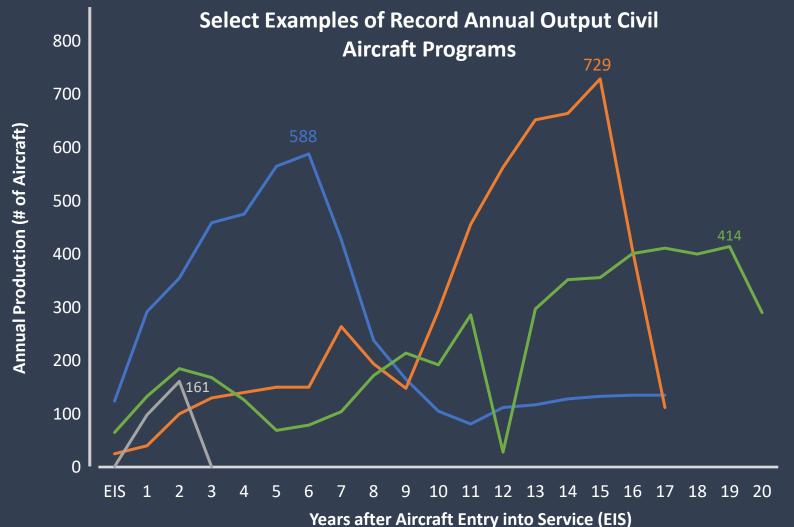
Historical precedent and the immaturity of the AAM ecosystem influence a more tempered near-term outlook





O revolution

Mistorical Context



—Cirrus SR22 (EIS: 2001)

All-composite, part 23 single piston engine

—Robinson R44 (EIS: 1993)

Light helicopter, metallic, single-engine

—Eclipse 500 (EIS: 2006)

Very-light Jet (VLJ); metal airframe; bankruptcy 3 years after EIS

—B737-800 (EIS: 1998)

3rd Generation B737; highest annual production rate for passenger jet





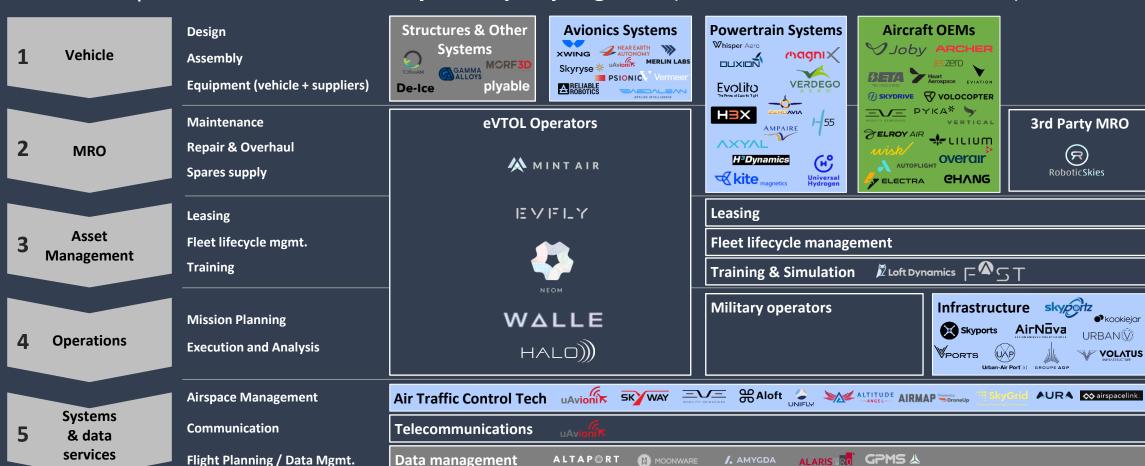
AAM Ecosystem: Startup hot (and cold) spots

Value Chain Components

Key Startups by Segment (illustrative and non-exhaustive)

200+

50 - 200



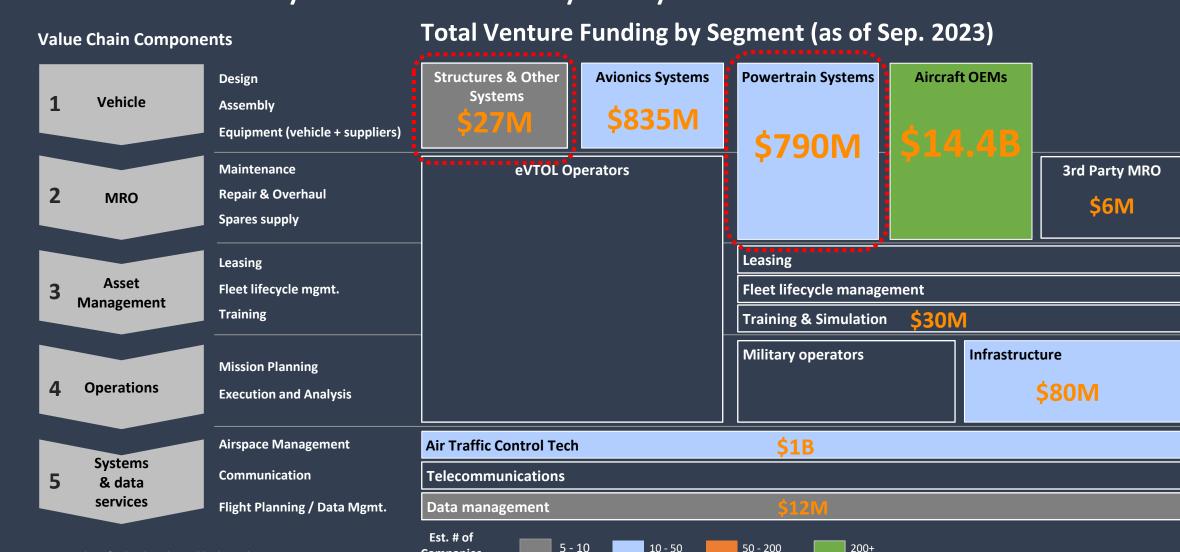
Est. # of

Companies





AAM Ecosystem: Many Layers Unaddressed



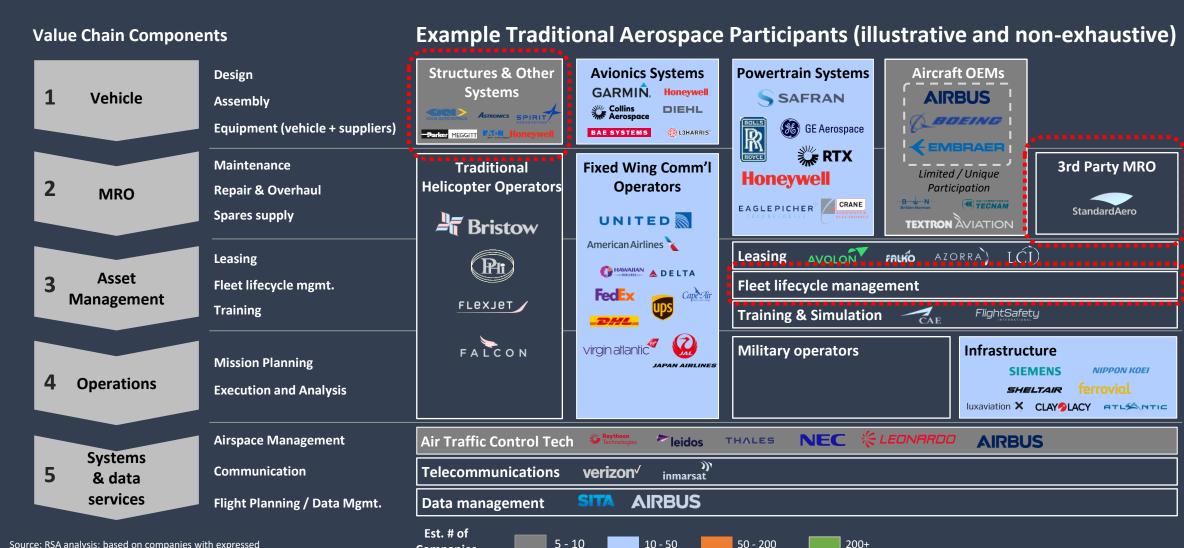
Companies





Traditional Aerospace Has a Critical Role to Play

Companies



Source: RSA analysis; based on companies with expressed agreements, investments, or collaboration pertaining to AAM





Key Takeaways

 With an initial order book in place, the shape of the future forecast curve depends on how well we address "supply-side" ecosystem gaps

 Innovative technologies, capabilities, and perspectives WILL establish a new aviation paradigm, but breakthroughs will only occur if we understand and appreciate historical precedents and lessons learned

 Startups and traditional actors should continue to look for opportunities to collaborate and identify supply chain strategic needs and solutions