



LuftCar

*a pioneering hydrogen
aviation startup*

H2
inside



Encouraged by



U.S. DEPARTMENT OF
ENERGY



1001 N Orange Ave Orlando FL 32801

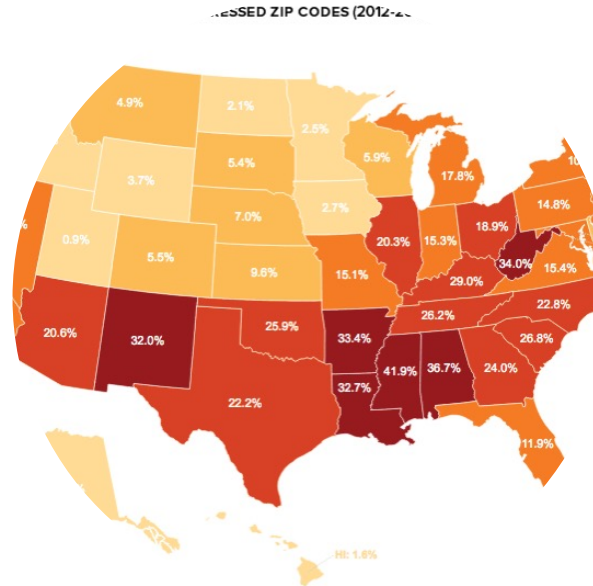
Ph: 408 905 0036

Santh.Sathya@luftcar.com

PROBLEM DEFINITION



no true last-mile, door-to-door delivery solution for air cargo, resulting in higher shipment and logistics cost.



no affordable multimodal (air and road) disaster relief and emergency response vehicles

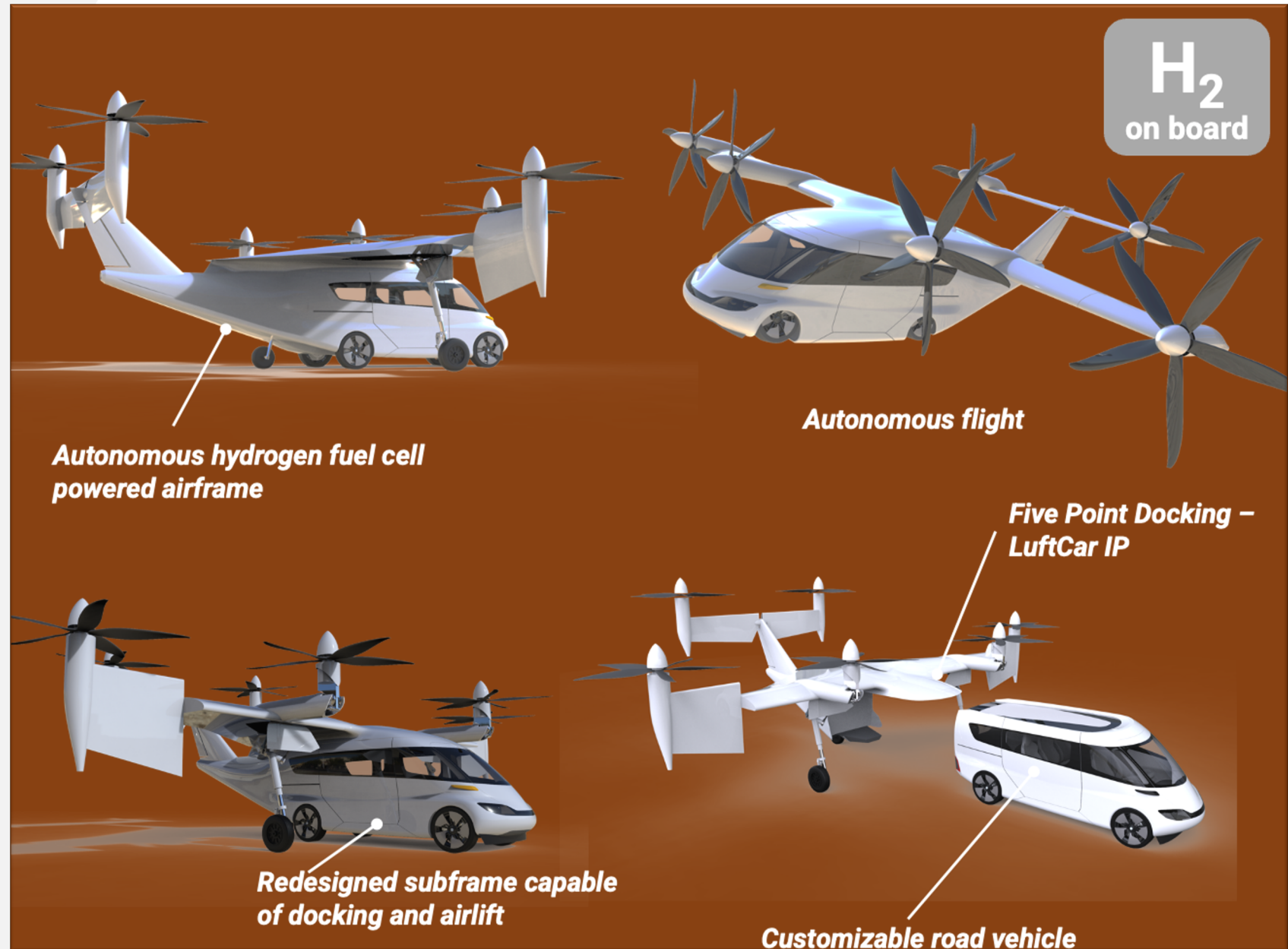


less than 2% of passengers choose air travel to commute 500 miles or less due to longer wait time, cost

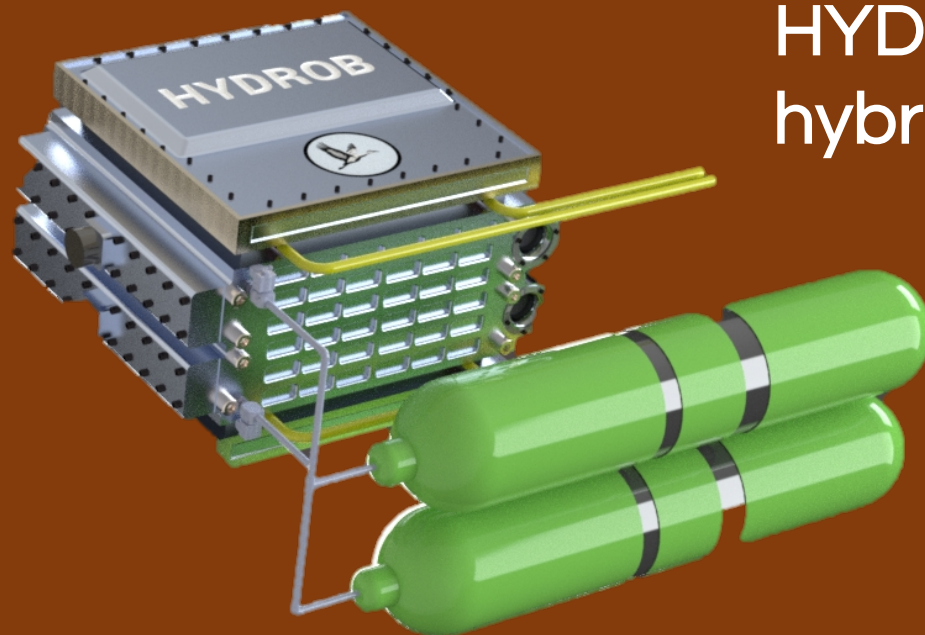
INNOVATION 1 --- TRL 3



We believe LuftCar will change all this by providing clean, fast and low-cost transportation and door-to-door delivery with a hydrogen powered regional air and road mobility eVTOL vehicle with a 300+ mile air travel and 150+ miles road travel



AVIATION GRADE H2 ELECTRIC PROPULSION



HYDROB™ H2 fuel cell – Battery
hybrid propulsion engine

MOU on Balance of Plant



Other partners

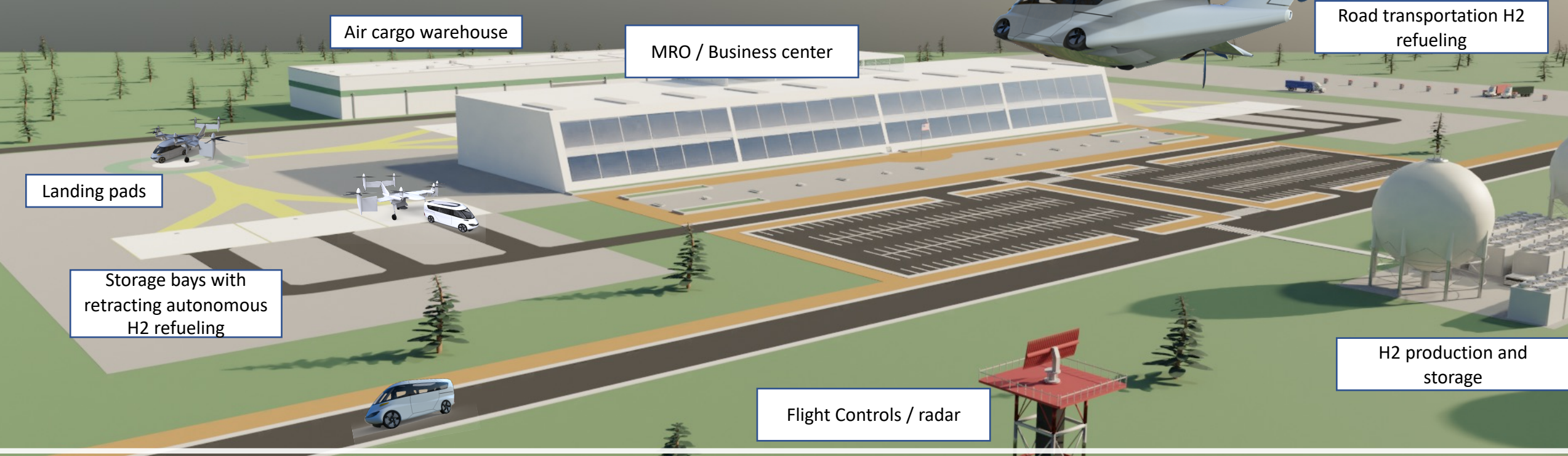


INNOVATION 3 – collaborative H2 eco system – TRL 5

LuftCar airframes can be rented in LuftPads to carry road vehicles. LuftCars and other eVTOLs can be refueled in storage bays through autonomous H2 refueling. One LuftPad every 50 miles



LuftCar



LuftPad Concept – H₂ for air/ road and **UTILITY** back up
Opportunity for Utility companies to sell Hydrogen for transportation in LuftPads

COMPANY HISTORY



LuftCarTM

\$1.5 Million raised (Seed)
\$100M term sheet offer
received for Series A

Jun 2022:
*TechConnect Defense
Award*
TRL3 achieved

Feb 2023:
MoU with DOE NREL

Finalist in Northeast H2
Hub proposal
LOS from Kenworth trucks
NDA with Toyota

Jan 2022:
Pre Seed funding
\$500K complete

June 2021:
*IP for docking
concept filed*

Oct 2022:
MOU with NYSERDA

Oct 2021:
*CleanTech Open
regional award*

April 2021:
LuftCar LLC registered

Other partners



Argonne
NATIONAL LABORATORY



LIVE GREEN



15

vehicles purchase
order (\$5.25M)

3

MOUs with
Airports in EU

10+

MOUs with tech
partners

1

Licensed NASA
technology

3

Patents pending
approval

3

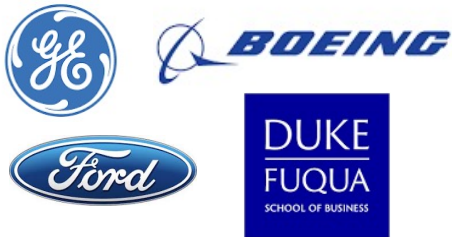
Partnered US
universities

Team



Santh Sathya
Founder/CEO/Chairman

MBA
MS in Engineering



Alan Spring
VP – Engineering



Tiffany Nesbit
Acting CTO



Doug Lampe
VP – Systems



Daphne Dixon
VP – Business Development

LiveGreen CT, Clean Cities
Coalition
UCLA



Suresh Kannappan
VP – Supply Chain

IBM, Pfizer
BS in Engg - Anna
University



LuftCar

ADVISORS



Mini Suri
UBER / AI
MIT Sloan MBA
MS – NJIT



Dr. Gao Liu
Dept. of Energy
Berkeley Labs
PhD – Michigan State
University



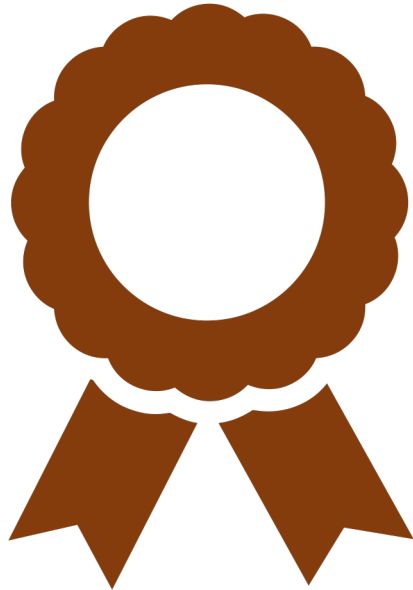
Lisa Sullivan
IDEMIA / L3Harris
MBA – Duke
University



Johnny Doo
Lead - Transformative
Vertical Flight (TVF)
NASA Working Group



AWARDS



1. CleanTech Open 2021 regional award winner
2. Aviation Week Demolition Derby winner for best concept - 2021
3. CADE museum Innovation Prize finalist -2021
4. TechConnect Defense Innovation Award winner – June 2022
5. TechConnect Urban Air Mobility Finalist – Sept 2022
6. Global Health and Pharma – best air ambulance concept – Oct 2022
7. Innovator of the year – Hydrogen Aviation – Live Green CT – Dec 2022

LuftCar encouraged by DOE as part of the Hydrogen hub project submission

LuftCar Milestones



Dec 2023



\$2 M

Scaled functional prototype (200 lb)

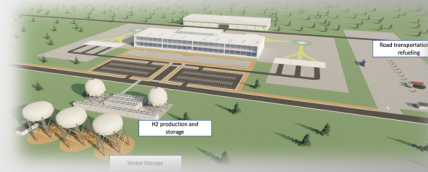
HYDROB or Battery powertrain

July 2024



\$8 M

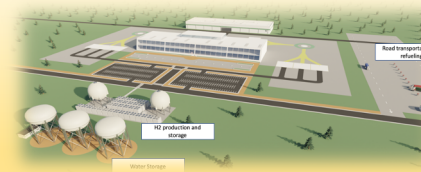
Two-seater functional prototype
H2 refueling infra - LuftPad



July 2025



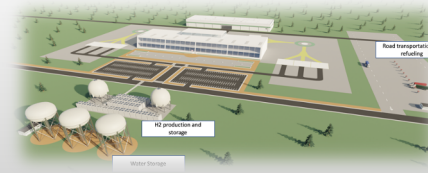
Piloted MVP
Autonomous H2 refueling infra



July 2026



Autonomous MVP

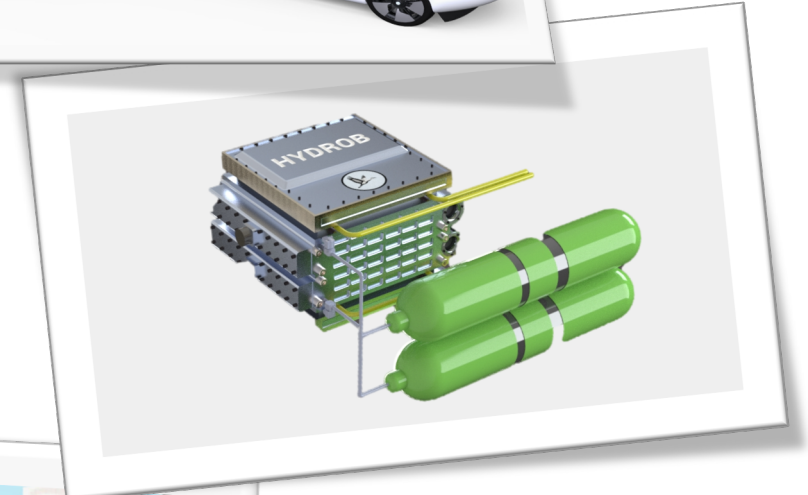


FAA certification
add up to 2 years
for
commercialization

Business challenge



You are doing
too much



Business challenge



Three focus
areas

Multiple Paths
to succeed

Vehicle at TRL 3
HYDROB at TRL 5
LuftPad at TRL 5

Business
challenge

Why air lift
a car?

200+ customer interviews

Last meter delivery of heavy and
live cargo in defense, healthcare,
and in personal mobility

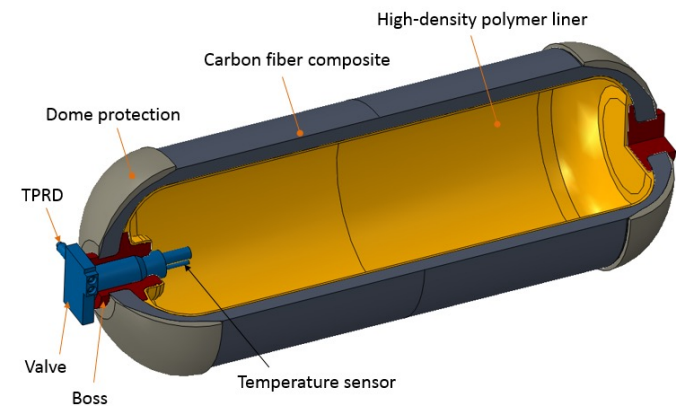


Technology challenge



H2 onboard storage

Engineering the docking



TPRD = Thermally Activated Pressure Relief Device
Credit: Process Modeling Group, Nuclear Engineering Division, Argonne National Laboratory (ANL)

MOU on Balance of Plant



Other partners

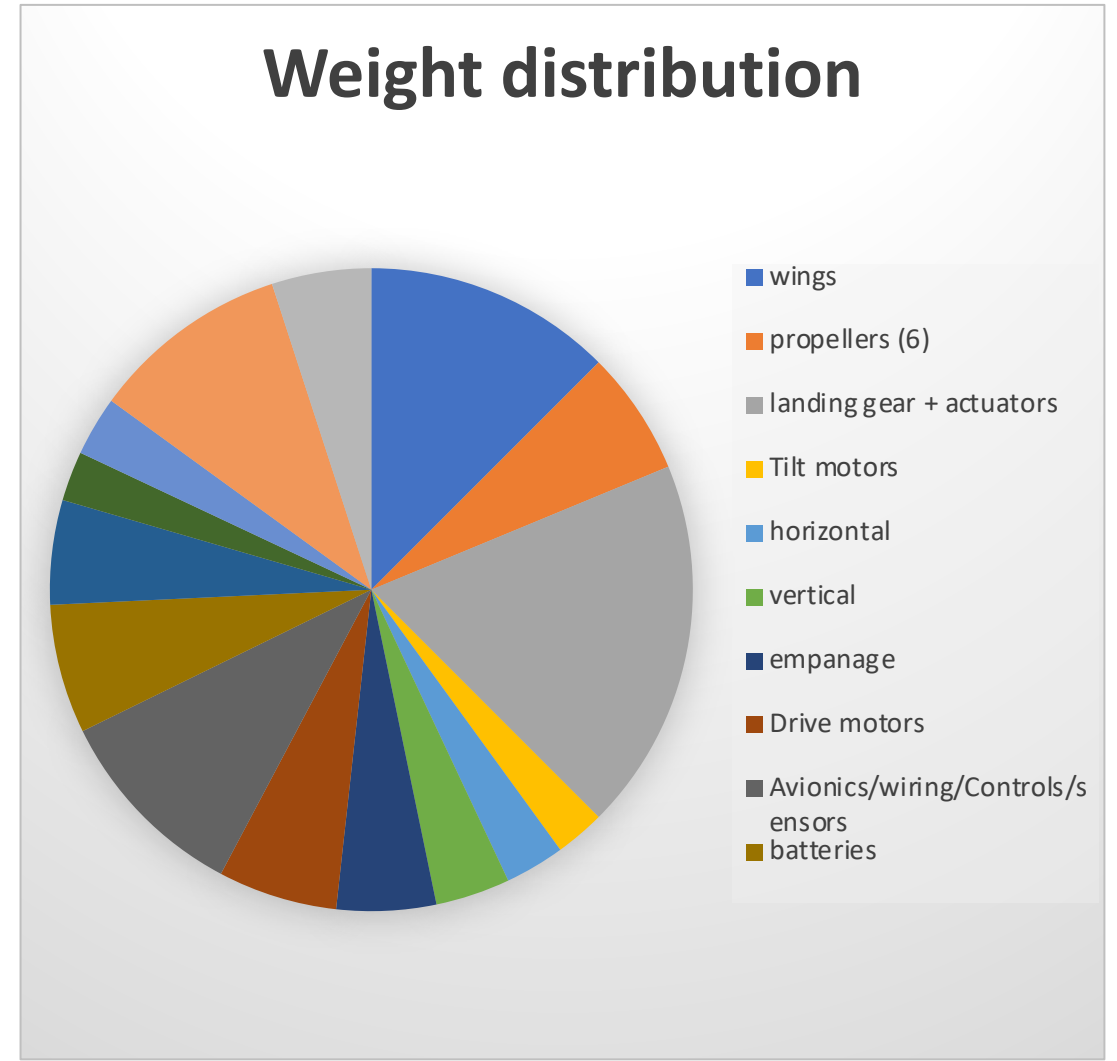


Technology challenge

Weight balance

Power balance

Light weight
materials



Technical Challenges



NVH

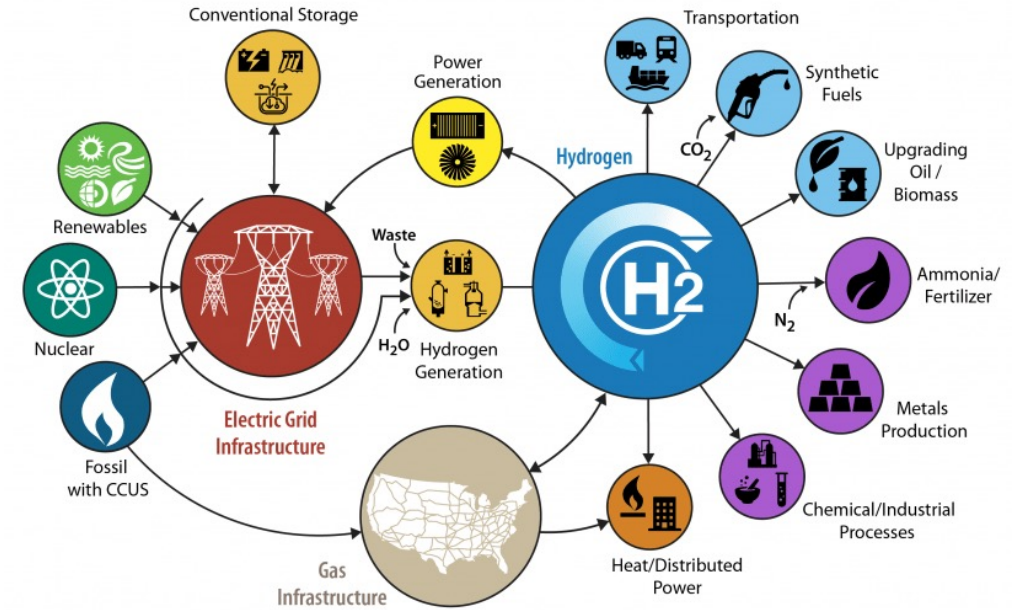
Air
Worthiness

Road
Worthiness

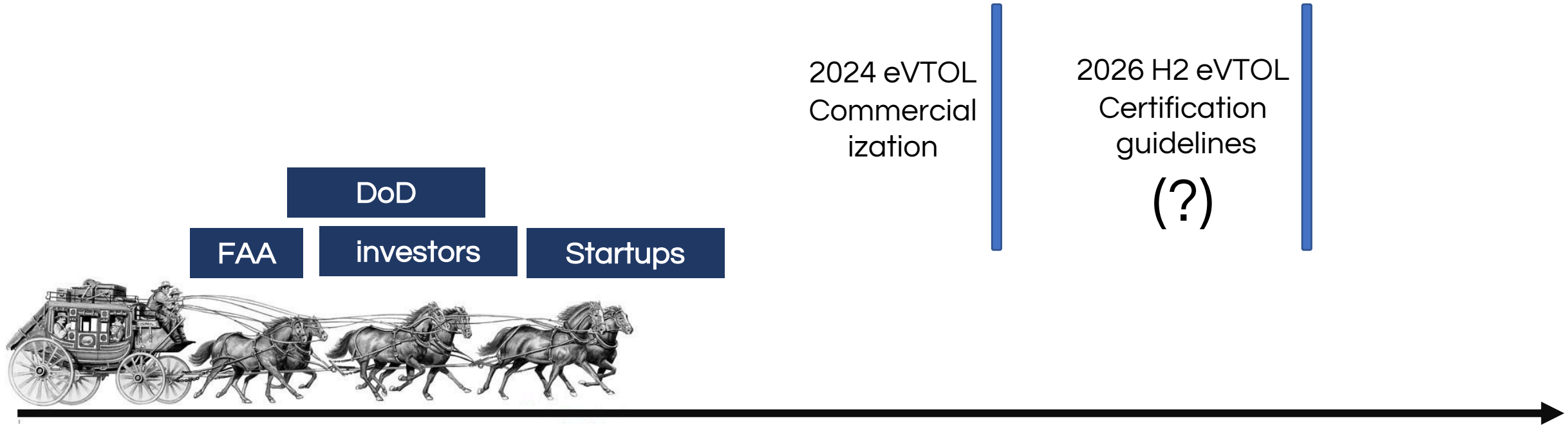
Safety Challenges

Hindenberg
happened a 100
years ago

Refer to DOE studies on H₂ safety
and collaborate



Regulatory challenge



Investors point to regulatory risks.
FAA guideline on certification requirements for H2 eVTOLs will help startups

LuftCar – for all people



\$ 0.5 per car seat mile



\$ 0.5 per 100 lb. per mile



Zero emissions



40% reinvestment in disadvantaged communities



2000 skilled jobs



3000 semiskilled jobs



Will use existing infrastructure



Will follow existing airways



LUFTCAR TRACTION

MOUs:

- ✓ NYSERDA for DOE Hydrogen Hub
- ✓ National Renewables Lab [NREL] partnership on H2 Technologies
- ✓ Dusseldorf Airport, Germany
- ✓ Munchengladbach Airport, Germany
- ✓ Springfield Beckley Airport near Dayton OH

Sales traction and fundraising:

- ✓ Letter of support from Kenworth – leading truck company
- ✓ NDA with Toyota
- ✓ Interest in follow on funding from New World Angels, FL

Other critical MOUs:

- ✓ Technology partnership with Bosch Aviation
- ✓ GenH2 – for low cost H2 manufacturing
- ✓ FEV – Go to Market

US DOD

SR Singh, Rajneesh K CIV USARMY DEVCOM ARL (USA) <rajneesh.k.singh.civ@army.mil> today at 12:10 AM
To: santh.sathya@luftcar.com

Hi Sathya,

It was great chatting with you today.

I do believe that H2-based propulsion is a disruptive technology to significantly increase the range/endurance for Army's aviation applications

My group's focus is on developing analysis capabilities for VTOL vehicle platform design and control. I look forward to continued interactions with you and explore opportunities for collaborations to accelerate the technology maturation.

Regards,

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Dr. Rajneesh Singh
Lead - Integrated Analysis (FCDD-RLW-WF)
DEVCOM - Army Research Laboratory
Aberdeen Proving Ground, MD-21005
Cell: 301-938-5402
Email: rajneesh.k.singh.civ@army.mil



Above is US Army support letter for the LuftCar's H2 concept, with potential CRADA or contract opportunity.

LOI from Advent Health in purchasing LuftCar air ambulances
Purchase order for 15 vehicles

COMPETITIVE LANDSCAPE

eVTOL	FLAG	ROAD AND AIR	RANGE	H ₂	PAYLOAD	AUTONOMY
LuftCar		+++	+++	+++	++	++
Joby		-	+	++	-	+
Lilium		-	+	+	+	-
Archer		-	+	+	+	-
Beta Tech		-	++	+	+	-
Pipistrel		-	++	-	+	++
Wisk		-	-	+	-	++

Best in class range and
payload
300 – 500 miles, 1500 lb.

3X market size due to H2
fuel cell electric propulsion

2X market size due to air
and road vehicles 'docking
mechanism'

MARKET OPPORTUNITY FOR ADVANCED AIR MOBILITY (AAM)

> \$1 Trillion by 2035 for just Advanced Air Mobility
> \$500+ billion by 2032

Sources: Morgan Stanley, Roland Berger, FEV

<https://www.transtats.bts.gov/freight.asp>

\$80 B per year in US alone

\$160 B per year globally

<https://www.rolandberger.com/en/Insights/Publications/Regional-Air-Mobility-How-to-unlock-a-new-era-of-aviation.html>



REGIONAL TRANSPORT



DEFENSE



CARGO



1ST MARKET

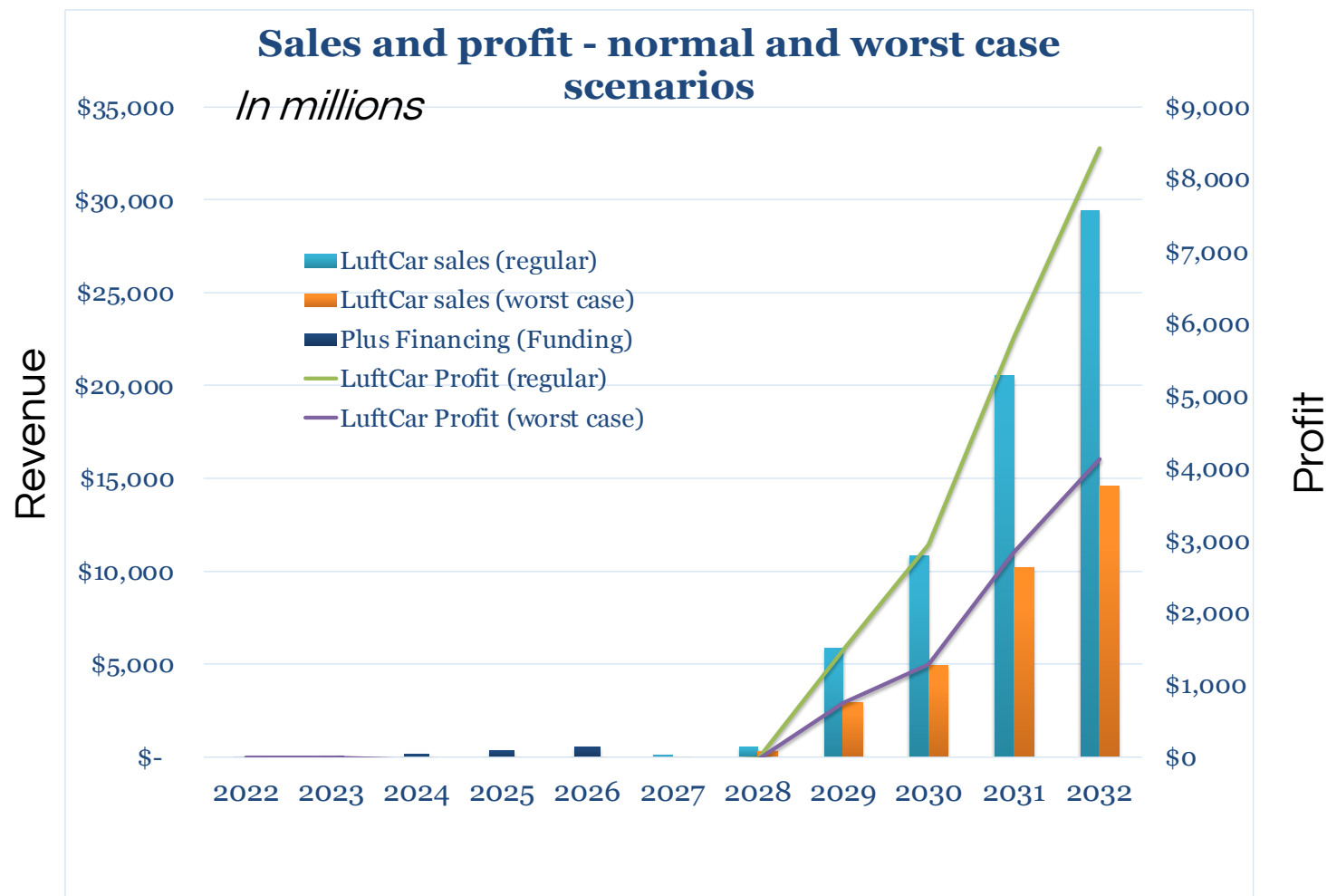
TAM	CMP
Ten-year total available market	Ten-year Revenue potential

Financial Forecast

(LuftCar + HYDROB)



LuftCar



\$17 B **2028**
Revenue by 2032 *Breakeven*

20 X
ROI by 2030

92% **2x**
CAGR *More TAM than*
By 2030 **AAM**

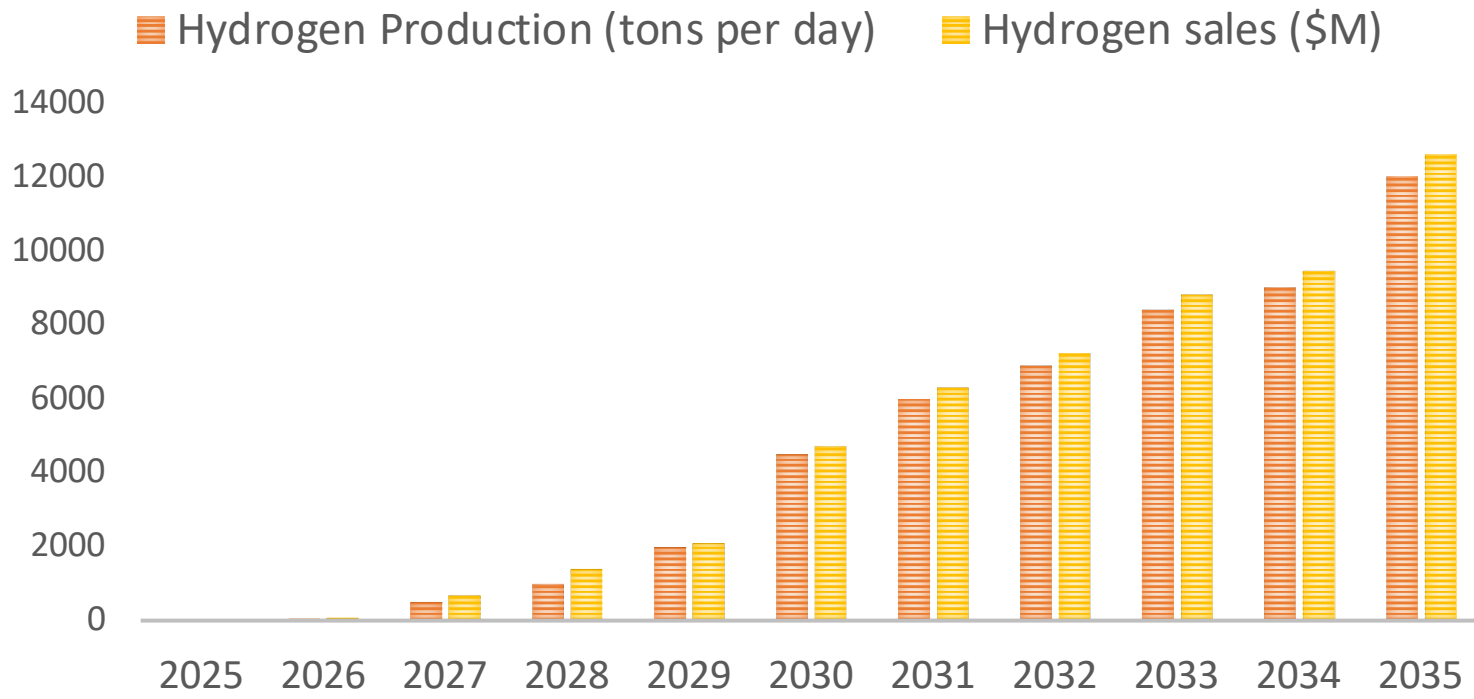
HYDROB revenue will be 10% of the total revenue
[Click here for financial forecast analysis.](#)

Financial Forecast (US market only)

(LuftPad – Hydrogen Infrastructure)



HYDROGEN REVENUE FORECAST FOR LUFTPADS (H2 INFRASTRUCTURE)



\$30 B
global
annual
revenue
by 2035

2028
Breakeven

30% IRA
Tax
refunds

*20 X ROI in 8
years*

LuftCar’s credible partnerships across in US and internationally to set up infrastructures in ‘ONE YEAR PER PROJECT’ duration
Profit: \$2.5B by 2035 in USA; \$6 B globally

CONNECTICUT H2 Corridors proposed by LuftCar, showing LuftPad locations

will be expanded to NJ, MA and NY

Partnership opportunities for H2 suppliers



LuftCar Corp
www.luftcar.com

Santh Sathya
CEO

1001 N Orange Ave, Orlando FL 32801

Ph: 408 905 0036

Santh.Sathya@luftcar.com

STRICTLY CONFIDENTIAL

Proposed H2 corridors in the US for LuftPads





LuftCar will serve as:

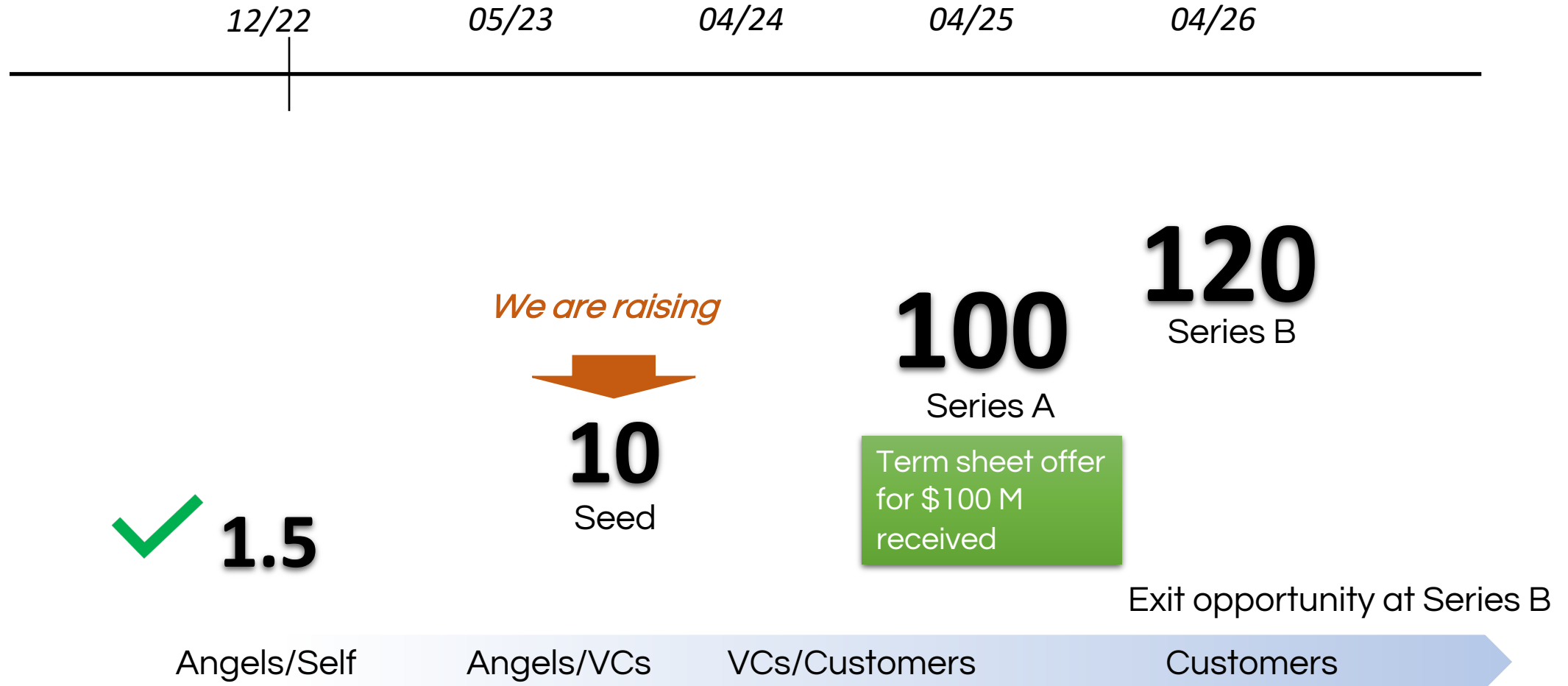
Regional transport connecting cities

Industrial logistics connector

Defense mission vehicle

Green H2 infrastructure builder

Fundraising Strategy



Seed raise is to fund vehicle prototype build only

NEOM – proposed H2 Corridors

