



MOBILITY REIMAGINED



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## UAM/AAM Ecosystem

## Key Challenges and Opportunities



**EMBRAER**

## First Spin-off from Embraer-X

eVTOL and UATM projects incubated for four years within Embraer-X

## Strategic Support from Embraer

Leveraging 50+ years of aviation experience and 30+ models certified

## Addressing a Massive Global TAM

\$760B Urban Air Mobility market up to 2040 - 100k eVTOLs - 4B passengers

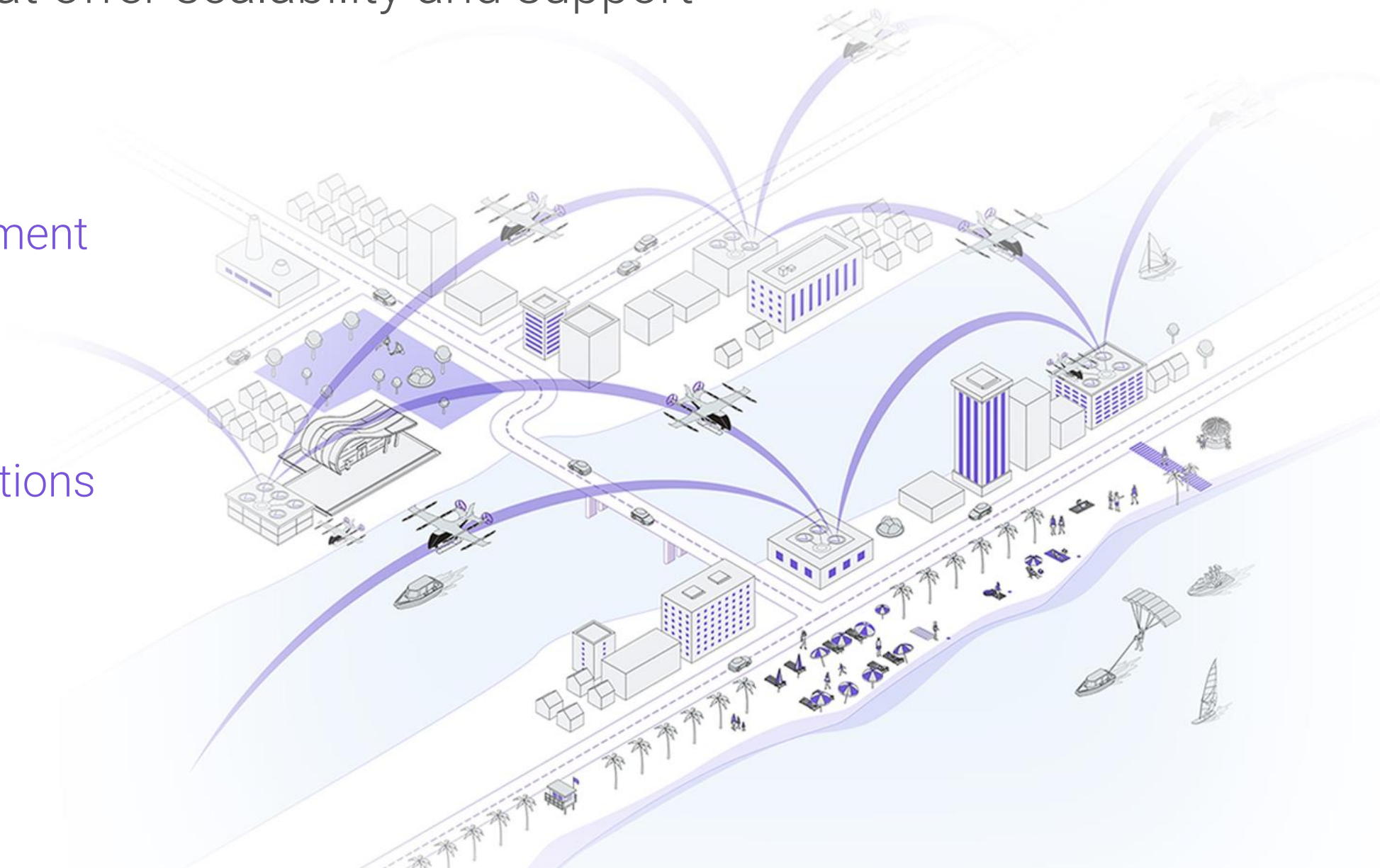
# Enabling AAM ecosystem by developing product and solutions that offer scalability and support

eVTOL Development

UAM Services

Operations Solutions

UATM





# VEHICLE DESIGN OPTIMIZED FOR URBAN MOBILITY

- Lift + Cruise design
- Tailored for urban mobility
- High utilization rate
- Unmatched cost efficiency
- Community-friendly



The Largest and Most Diversified Backlog in the Industry

Letters of Intent for up to

**2,770**  
eVTOL AIRCRAFT

Strong partnership network

AIRCRAFT OPERATOR & RIDESHARING PLATFORM

INFRASTRUCTURE

TECHNOLOGY

# Building Blocks for Enhanced Maturity

Strategic tools at Eve to enhance technology maturity

## Software & flight controls



**Flight Simulator**



Electric Demonstrator



User engagement



Mockups



Computer Simulations

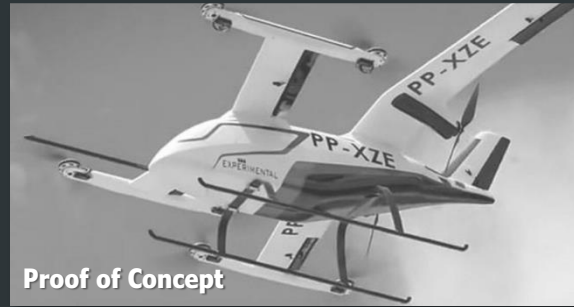


Battery Tests

## Vehicle concept



**Wind Tunnel**



Proof of Concept



RIG Thermal Management System



Wind Tunnel Tests



TU Delft Simulator



**Proof of Concept (POC)**

## Parts & components



**Rigs**



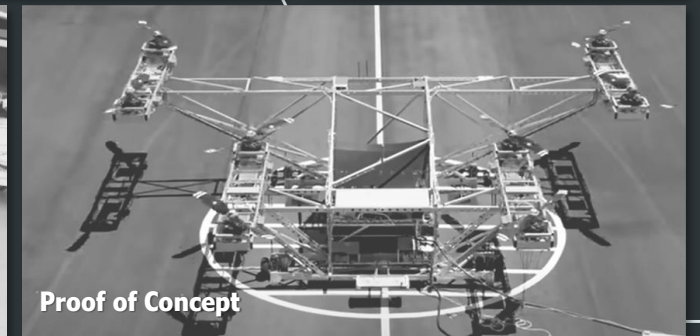
Flight Simulator



Autonomous Flight Concept



**LABs**



Proof of Concept

# Eve's Global UAM Ecosystem Initiatives

for agnostic, integrated and equitable UAM ecosystem



## Australia UATM CONOPs

Developed and tested UATM CONOPs for airspace integration with Australia's ANSP



## Japan CONOPs

Understanding ground infrastructure and traffic management systems



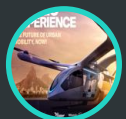
## Miami UAM CONOPs

Understanding Passenger Experiences and eVTOL User Journeys to prepare for UAM implementation



## UK CAA Regulatory Sandbox

Co-created solutions with to address regulatory barriers to airspace integration



## Rio CONOPs & Simulation

Simulating passenger services and operational ecosystem in airport shuttle



## Chicago CONOPs & Simulation

Simulating passenger services and operational ecosystem in commuting





CONCEPT OF OPERATIONS & SIMULATION RIO DE JANEIRO



Stakeholders: 14 institutions

Team: +50 attendees

Journeys Scope: Passenger, Vehicle, Operations & Support

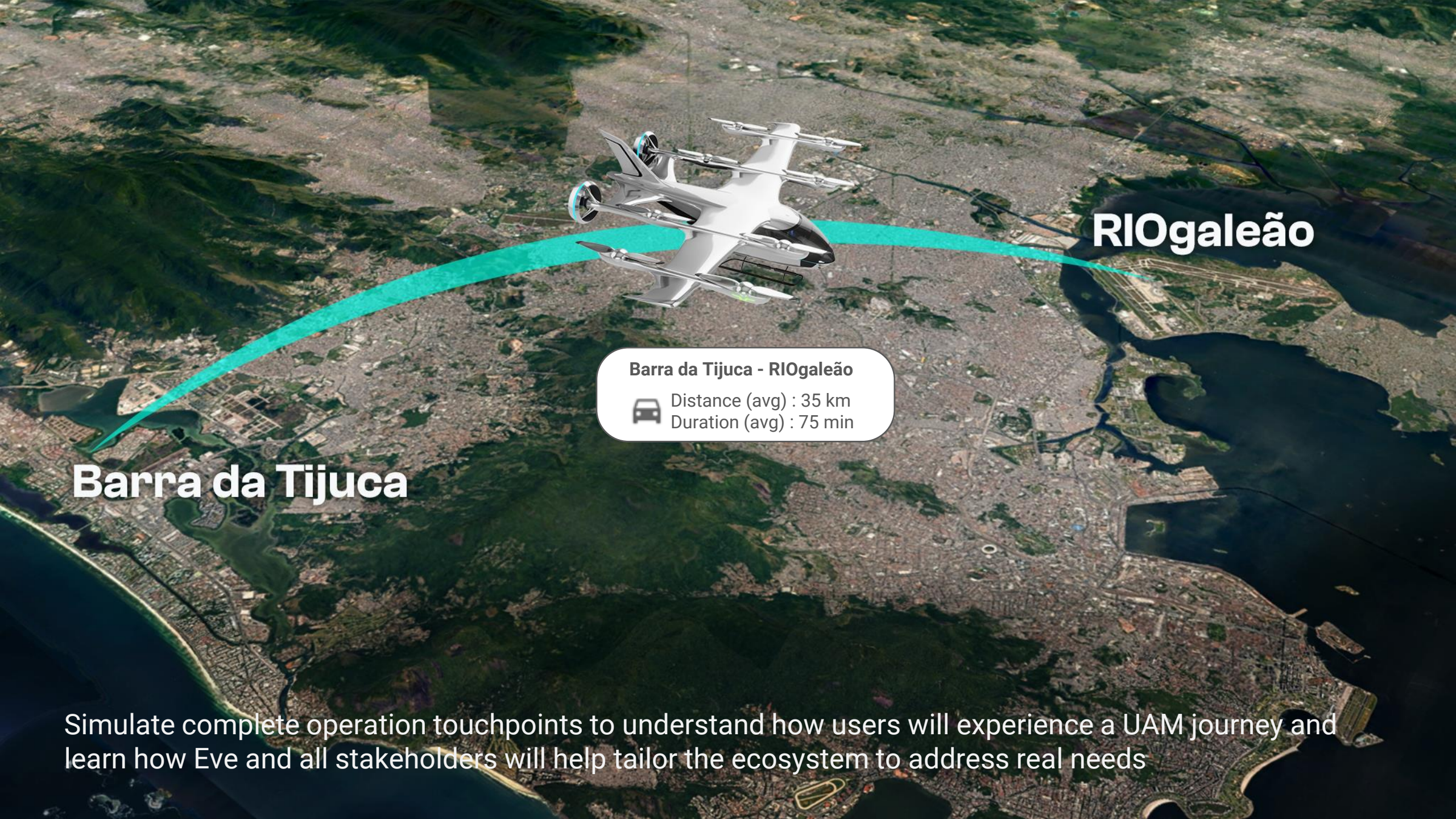
Develop a  
Preliminary  
ConOps for a  
UAM Ecosystem

Engage  
Community about  
UAM

Collect and  
structure data and  
refine ConOps for  
UAM Ecosystem

Real case results  
and feedback





**Barra da Tijuca**

**RIOgaleão**

**Barra da Tijuca - RIOgaleão**



Distance (avg) : 35 km

Duration (avg) : 75 min

Simulate complete operation touchpoints to understand how users will experience a UAM journey and learn how Eve and all stakeholders will help tailor the ecosystem to address real needs





Concept of Operations for  
SUSTAINABLE URBAN AIR MOBILITY IN  
**RIO DE JANEIRO**

APRIL 2022







 245 eVTOLs

 100+ Routes

 37 Vertiports

 4.5M Annual Passengers

 \$220M Annual Revenue

 \$23B Total Revenue (2026-2035)  
for Rio de Janeiro



#### NEW JOB OPPORTUNITIES

As UAM surges forward, the industry will create over 6000 blue- and white-collar jobs and unlock training opportunities in a green industry.



#### GREEN INVESTMENT

Electric UAM growth will also attract investment in green infrastructure. Between 2020-40, \$318 B will be spent in infrastructure investments globally.



#### NEW & DIVERSIFIED REVENUE STREAM

Taxes and fees from UAM operations could generate a new and diversified revenue stream for RIO DE JANEIRO. This will reduce city's reliance on tourism as a source of revenue.



#### ZERO-EMISSION TRANSPORT

Electric UAM flights have the potential to slow the growth of traffic congestion, complement transit systems and accelerate the decarbonization of RIO DE JANEIRO.



Figure 17 shows the proposed profile for a "lift+cruise" type eVTOL, considering relevant speed transitions and related flight phases.

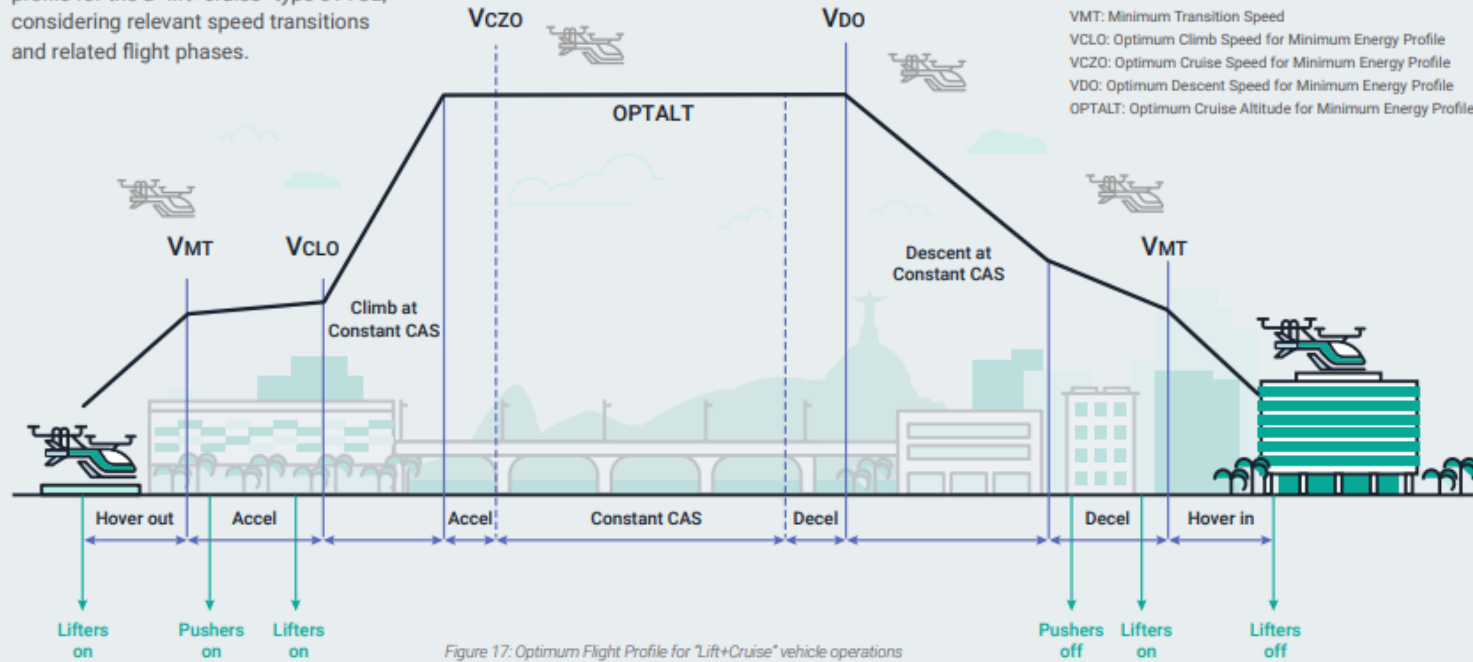
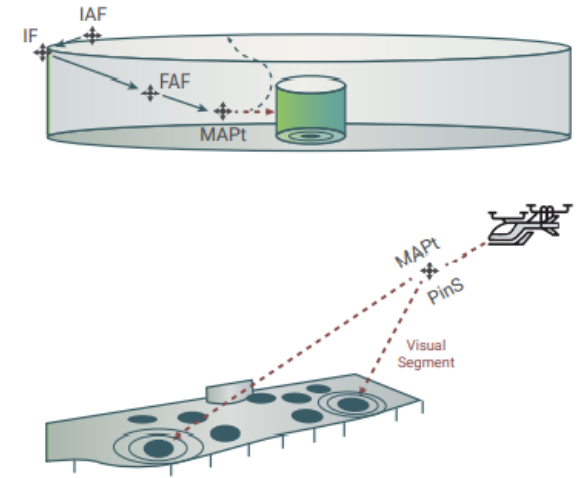


Figure 17: Optimum Flight Profile for "Lift+Cruise" vehicle operations



CURRENT RESERVE POLICY	PROPOSED RESERVE POLICY
No diversion vertiport defined in case of emergency or abnormal situation en route	Pre-defined diversion vertiport in case of emergency or abnormal situation en route
Suitable alternate is selected in flight for unplanned scenario at destination or en-route	Suitable alternate pre-defined during dispatch phase. Vertiport spot availability and meteorological conditions are considered.
Reserve time of 20 minutes	Reserve time sufficient to reach the selected suitable alternate from a certain point defined in the route (equal or less than 20 minutes)

Table 2: Comparison between current and new operational reserve policies

Note: z time will be discussed with certification authorities.

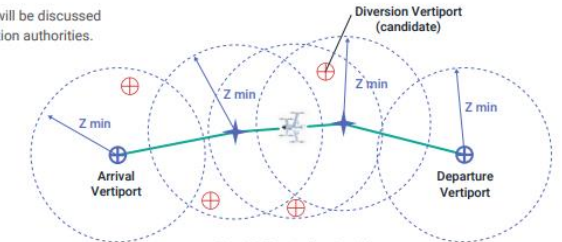


Figure 18: En route diversion circles

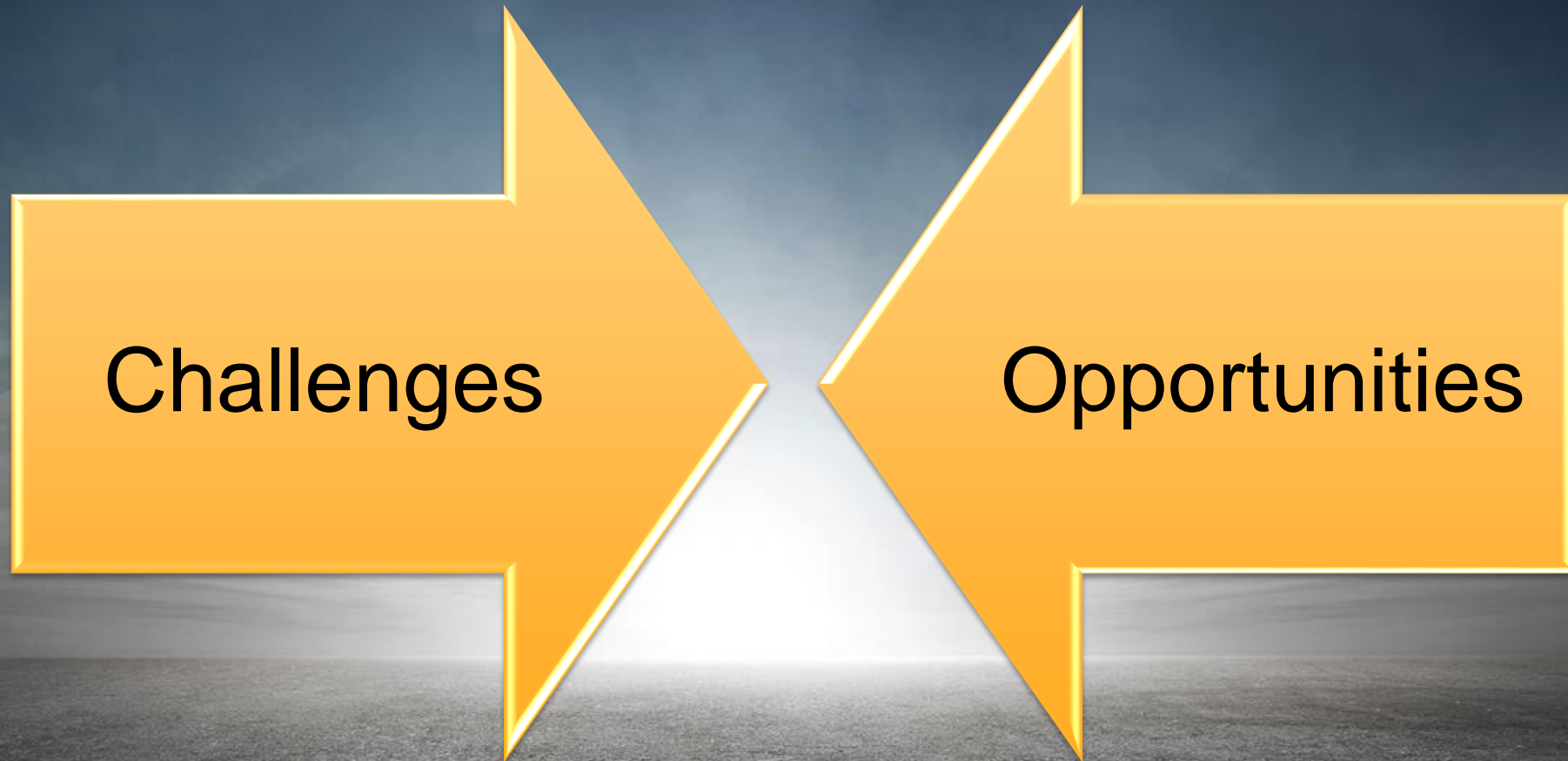




decision to construct an additional deck level upon which the vertiport would be placed. Furthermore, there are concerns of vibrations that are disruptive to CEMHS customers coming from the roof during aircraft operation; this may also drive toward a solution of adding



# Conclusion





Thank you

