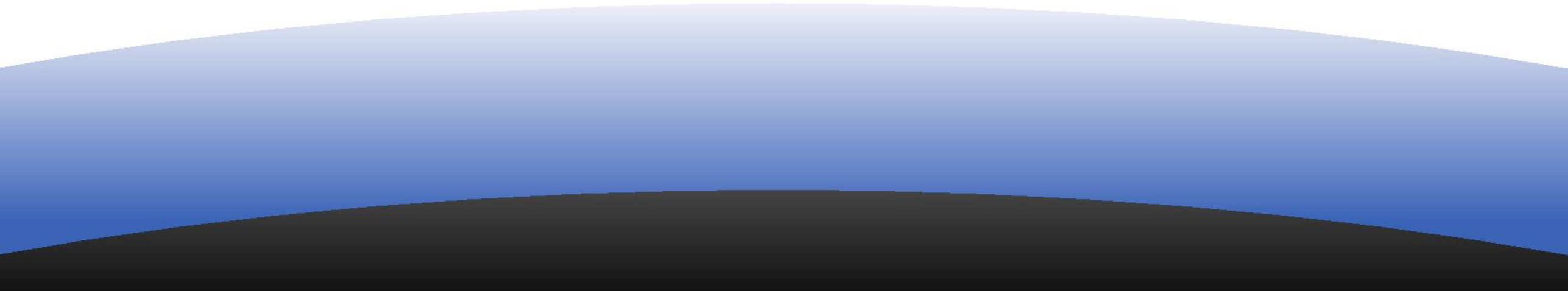
# STRATOSYST

HAPS SERVICES FROM STRATOSPHERE



# Problem

Today‘s technologies utilized for telco, Earth observation or navigation (i.e. satellite and ground infrastructure) have certain limits.

1

**Satellites**

high latency, limited data capacity, Space debris, high CAPEX

2

**On-Ground Infrastructure**

limited reach, high CAPEX, damage-prone

3

**Drones**

highly limited reach, operation constraints

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These limits prevent current technologies to extend their services on a real global scale and at the highest possible quality at the same time.

# Solution

HAPS - High Altitude Pseudo Satellites

## Fixed wing

Heavier than Air

- High manoeuvrability
- Wider operational envelope
- Endurance, with flight duration months at a time
- Greater flexibility in operation - enabling persistent coverage or readily re-tasked

## Balloon

Lighter than Air

- Long duration – capabilities to stay afloat for months
- Rapid deployment
- Wide area coverage
- Large payload capacity
- Low-cost stratospheric access


## Airship

Lighter than air

- High manoeuvrability
- Large payload capacity
- Station keeping abilities
- Rely on buoyancy (Helium, Hydrogen) and not on lift by cruising
- Large solar cell surface area

## Market Overview

The global HAPS market presents a EUR 3.5bn (USD 3.8bn) opportunity in total revenues for the period, 2019-2029. Commercial interest in providing internet connectivity in remote and rural regions and military interest for Intelligence, surveillance and reconnaissance (ISR), remote sensing applications and communication are key factors driving demand for various kinds of HAPS platforms.


**HAPS operate in stratosphere (around 20 km above surface) and carry satellite payload for telco, EO, navigation etc.**

# Why we have the best technology

## HAPS = High-Altitude Pseudo-satellite

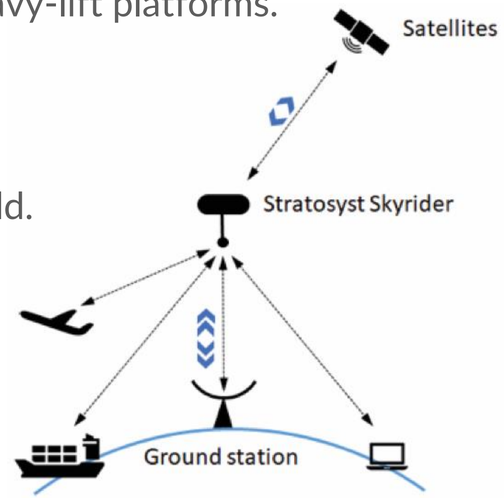
Stratosyst provides satellite-like services from the stratosphere.

**The main competitive advantages:**

- light and compact design for small payloads up to 30 kg.
- This payload can offer images with resolution of 7 cm or 5G data connection.

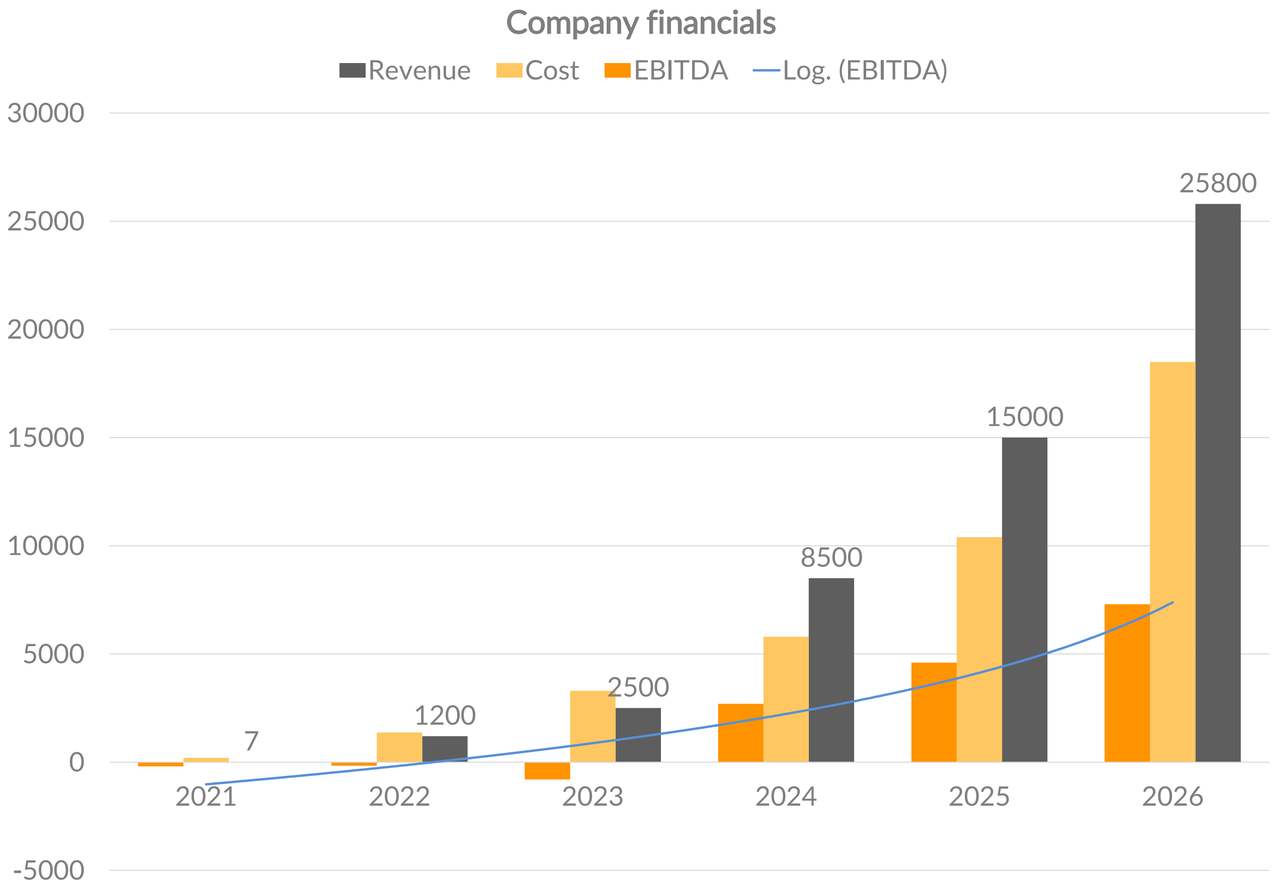
Small payloads reduce size of the platform, price for the development and simplify operation compared to heavy-lift platforms.

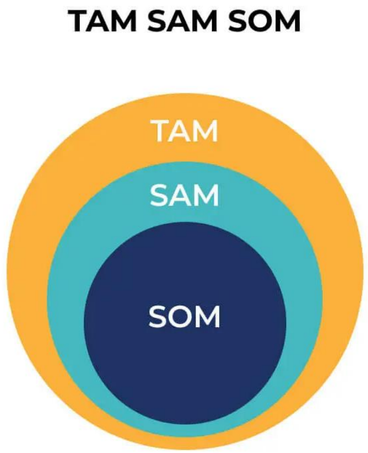
Our container solution enables quick and simple launch anywhere in the world.



# Market share

The HAPS market is gaining traction thanks to new technologies, but many vehicles are still in the experimental stage; by 2029, HAPS market could generate USD 3.8 B in value as stated in NSR report 2020.




**We focus to obtain 5%** of the forecasted market in 2029, mostly in EO. **This represents €190M of cumulative revenue by 2029.**

Long-term goal is to acquire 15% of the market which represents revenues in hundreds of Millions USD per year.

# Founders

The positive think drive us to success

**Jiří Pavlík**

CEO & Founder

Visionary, telecommunication and power system engineer with many years of in-field experience. Responsible for technical development and system integration of the HAPS platform.

**Martin Farkač**

COO & Founder

Manager with experience from public and private companies, with focus on procurement and legal affairs; active member of JARUS and HAPS Alliance preparing legislative framework for stratosphere.

**Jan Snížek**

CINO & Founder

Aerospace engineer experienced in aircraft maintenance and operation. System and mechanical engineer of scientific instruments for European Space Agency and New Space companies.

Team has 10 employees and several engineering and business contractors.
We collaborate with partners and regulators across the globe.

# The Company

Not really a garage company

Project started in 2017

Company established in 2019

HAPS Alliance members

## Contracts

Czech MoD contract – HAPS prototype for ISR

European Defense Fund – propulsion system

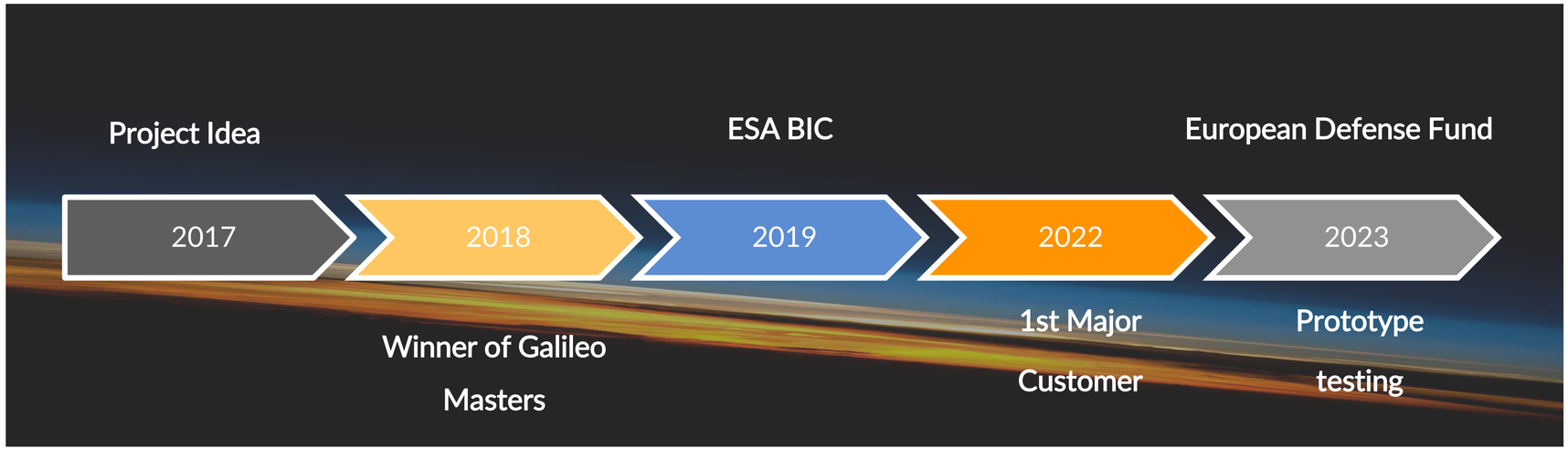
National Competence Centre – Optical Payload

**Projects**

**Deloitte study -** HAPS for FRONTEX

**JARUS** – Certification for HAPS

HAPS Alliance



# Products

From Testing to payload


## Skyrider

**Civil HAPS platform**

designed for EO, telecommunication and navigation for payloads up to 20 kg and missions up to 6 months.

TRL 7 in 2025

## Stratom

**Development project for Czech MoD**

HAPS prototype designed for military & security applications (ISTAR). Intended for use by Czech army and NATO allies.

TRL 9 in 2024


## Optical payload

**Development of multi-purpose optical payload**

with interchangeable lenses for resolution up to 7 cm. Designed for stratospheric environment, usable for space & ground applications as well.

TRL 7 in 2024

# Go to Market 2024

Almost there

We work on several projects with strategic customers.