



In a rapidly growing market, with continuous technology breakthroughs, space companies need to:

- Reduce time to market
- Improve cost efficiency
- Deliver actionable data and real value to the end user

With B2Space, all of this is possible.



## **NEAR SPACE TESTING**

## HAPS MISSIONS

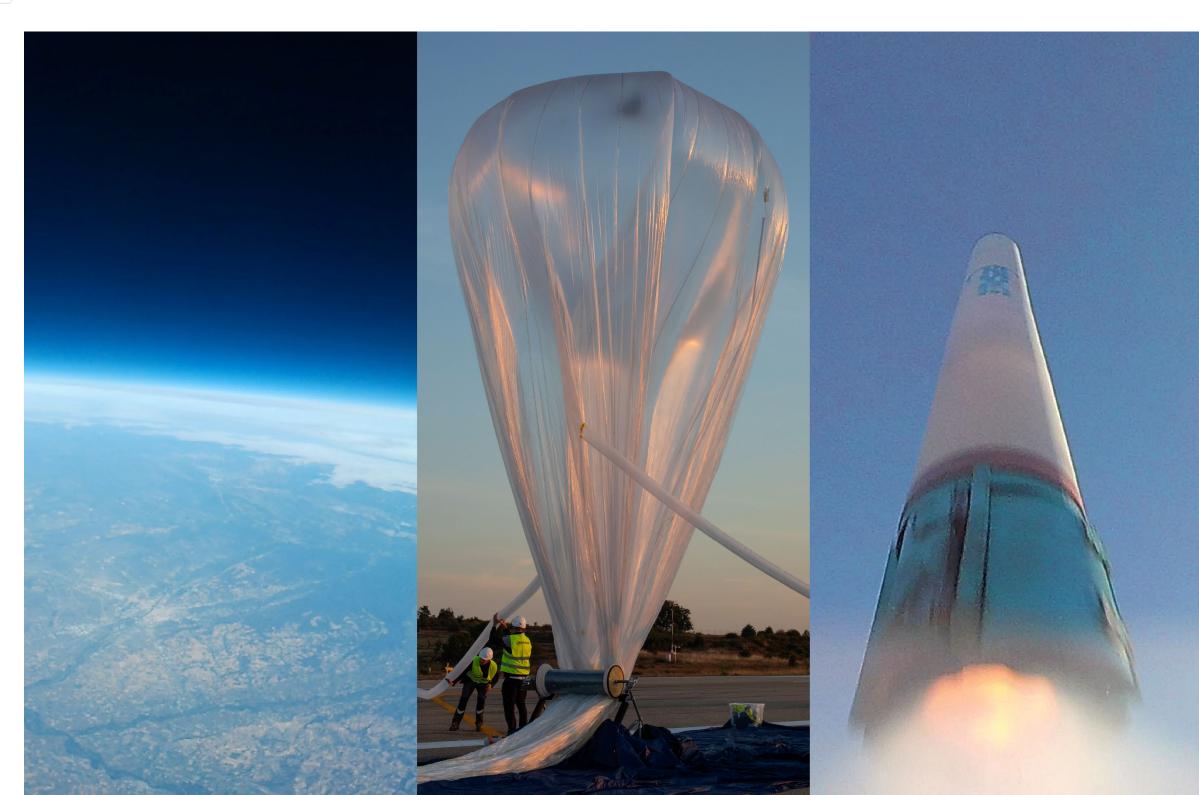
## SATELLITE LAUNCH

# HIGH ALTITUDE OPERATIONS EXPERTS

Near Space Testing
High altitude Pseudo Satellite

Missions Satellite Launch (Rockoon)

Founded in 2016 in UK and later expanded to Spain, B2Space is the European leader in High Altitude Operations, delivering a set of unique services already generating commercial revenue.





CAPABILITIES

NEAR SPACE TESTING TESTING

TESTING

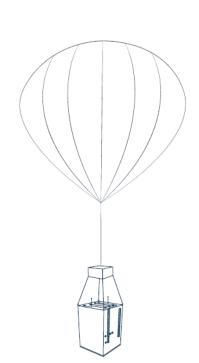
HAPS

FOR SPACE TESTING

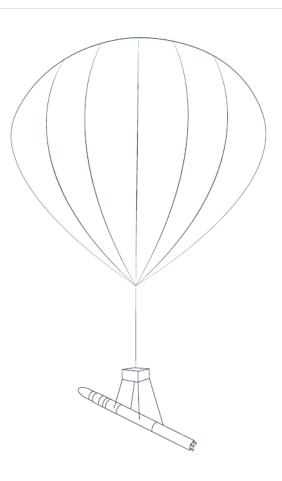
FOR SPACE TOURISM

ROCKOON









In commercialization	In commercialization	In commercialization	In Proof of concept	
2 - 6 h	Up to 48 h	6 h	4 h	
14 - 37 km	14 - 37 km	25 - 35 km	20 - 35 km	
< 50 Kg	100 - 500 Kg	3000 Kg	5500 Kg	
50 Kg	200 - 600 Kg	3500 Kg	6000 Kg	
	2 - 6 h 14 - 37 km < 50 Kg	2 - 6 h Up to 48 h 14 - 37 km 14 - 37 km < 50 Kg 100 - 500 Kg	2 - 6 h       Up to 48 h       6 h         14 - 37 km       14 - 37 km       25 - 35 km         < 50 Kg	2 - 6 h       Up to 48 h       6 h       4 h         14 - 37 km       14 - 37 km       25 - 35 km       20 - 35 km         < 50 Kg

















## **NEAR SPACE TESTING**

A "flying lab" based on stratospheric balloons to test Space technologies

The stratosphere presents extreme conditions very similar to in orbits ones:

Near vacuum conditions

Big temperature gradients

High radiations levels

Near Space Testing enables the cost-effective conduct of tests, qualification, and validation of technology, an aspect highly sought after by universities, research institutions, small satellite manufacturers, and R&D projects. Additionally, it provides equipment and expertise in the High Altitude Operations for emerging space tourism operators.

Image provided by HALO, the company to which we offer our services











#### HAPS MISSIONS

High Altitude Pseudo Satellites solutions that can be applied in multiple scenarios

HAPS is considered by ESA and industry as the 'missing link' between drones flying close to Earth's surface and satellites orbiting in space.

There are many potential applications of HAPS, mainly derived from the communications and remote sensing capabilities, among them we find:



Earth Observation

Smart Agriculture

Fire detection

Environment control



Telecommunications

Emergency communications (disasters)

Eliminate communication "dark areas" in maritime and airplanes routes

Support to smart applications



Surveilland

Border control

Illegal fishing

Oil spills













#### **ROCKOON LAUNCHER**

Reliable, flexible and low-cost access to Low Earth Orbit for small and micro satellites

#### "ROCKET + BALLOON" LAUNCH SYSTEM



A stratospheric balloon lifts a self-operative platform (to a height of up to 35km) from which the rocket launcher is deployed. A 3-stage solid propellant rocket then delivers the satellites into the required client orbits (into Low Earth Orbit - LEO).

B2Space will be capable of dedicating individual launches to small satellites or providing launch capacity for a group of nano or cube satellites, satisfying the main needs of this market focus. All of this will be achieved by making use of innovative technologies to drive further efficiency and cost reduction: generative design, additive layer manufacturing, autonomous systems, and advanced materials.

Carbon emissions and propellant consumption reduction of more than 70% compared to other launchers

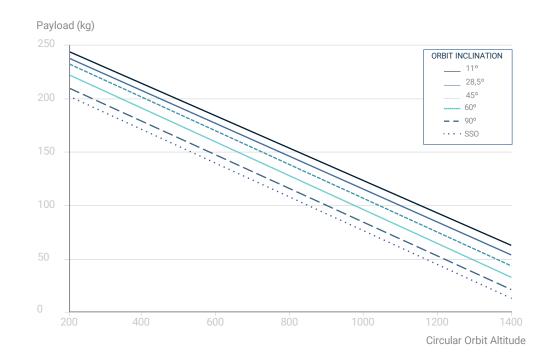
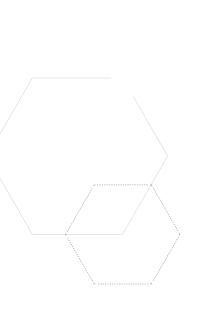


Image taken from our launches













Judith Martin









Cofounders

Co-CEO & COO

Co-CEO & CTO

Director

Co-founder



PhD

MSc

**BSc** 

Proven track record in top companies























**Avionics** 

Daniel Couso

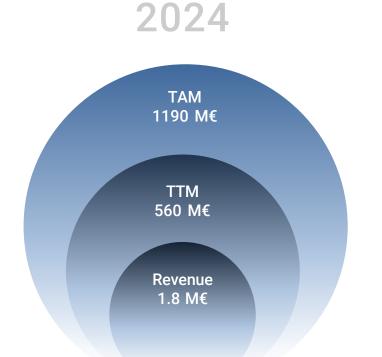
#### MARKET OVERVIEW - FOCUS ON HAPS, NEAR SPACE TOURISM AND NST

The **market for near space testing activities**, which includes flying payloads in the stratosphere for scientific experiments and testing space technologies, **is projected to grow significantly.** This growth is driven by the increasing demand for <u>cost-effective platforms for scientific</u> research, technological testing, and environmental monitoring at high altitudes, utilizing <u>high-altitude balloons (HABs)</u> and other near-space systems

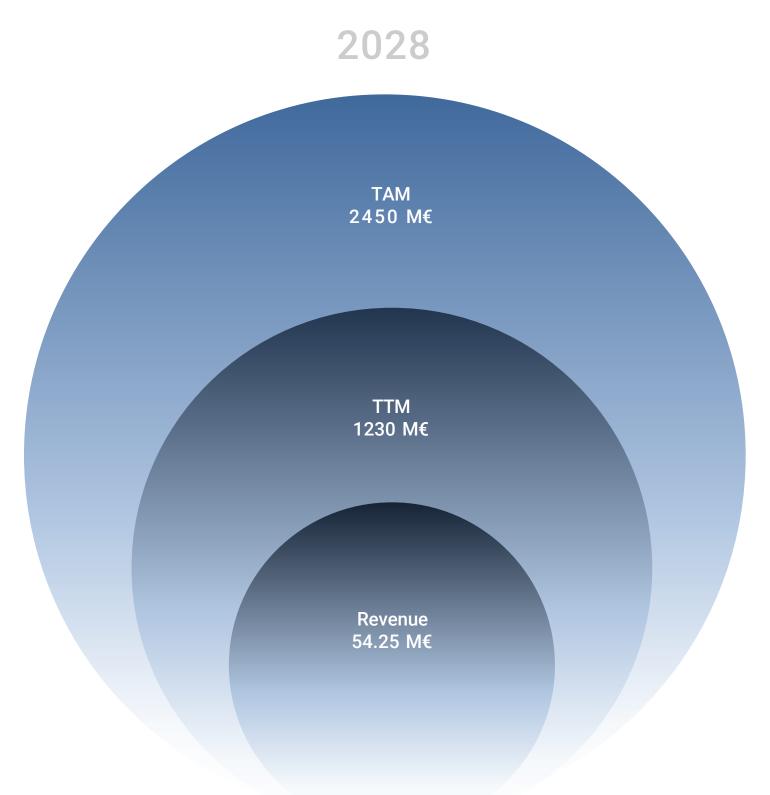
The **near-space tourism market is gaining significant momentum**, with companies like Space Perspective, World View, and HALO Space at the forefront of this emerging industry. <u>These companies offer unique experiences</u> by taking tourists to the edge of space using stratospheric balloons, providing a more accessible and cost-effective alternative to traditional space tourism ventures.

The High-Altitude Pseudo Satellite (HAPS) market is poised for significant growth over the next few years. According to multiple market reports, the HAPS sector is expected to see a robust compound annual growth rate (CAGR) ranging from approximately 9.62% to 17.2% between 2023 and 2028. This growth is driven by the increasing demand for high-capacity wireless services, advancements in photovoltaic technology, and the development of new propulsion systems, as well as the defence applications being developed.

Sources: Frontex Research Study on High Altitude Pseudo-Sat. (July 2023); Frost and Sullivan; B2Space. All values in millions of €









#### **VALUE PROPOSITION**

#### UNIQUE SELLING POINTS PROVIDING US COMPETITIVE ADVANTAGE, LEADING THE WAY IN EUROPE











Flexible Launches Cost Efficiency

Operational Excellence

Technology Capabilities

**Dual Use** 

Launches can be planned in multiple locations, environments (i.e. land, sea,...) and with quick and agile response times.

B2Space has obtained licences to fly in UK, Spain, France, USA and Saudi.

The ability to develop inhouse all critical technologies allow us to be very cost efficient compared to competitors.

Additionally, counting with 2 sites (UK and Spain) allow us to hire highly qualified engineers worldwide at a competitive cost

More than 7 years of flight experience allowing us to have robust flight operations procedures and processes, with a recognised safety methodology.

This is an entry barrier for competitors and a key advantage

B2Space has developed advanced in-house technology capabilities allowing us to design and build all HAPS critical systems:

- PCB design and build
- Embedded Software development
- Avionics test and validation
- Simulation tools
- Advance aerospace structures

B2Space technology and product have a direct application for defence and security activities, opening a huge market:

- Intelligence, Surveillance and Reconnaissance (ISR)
- Communications (defence and emergencies)



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