

Scaling up the SmallSat production

Session 3: Scaling up the Production of Small Satellites and Attaining
Commercial Success | Space Tech Expo Europe, Bremen

November 19, 2024 | Oliver Grassmann, Executive Vice President Satellites

About Beyond Gravity



14 sites in **7** countries



1800
employees
(60% outside
of Switzerland)



Products on **1000**
payloads delivered to space



1250
successful separations



More than **40**
years of experience



38
nationalities
employed



R&D spending **10.9m**
CHF in 2023



CHF 383m
net sales in 2023
(50% generated in USA, 95%
from outside Switzerland)

**At the current pace, the space industry
doubles every 8 years**

\$1.8 trillion

Expected market size of space market by 2035

\$70 Billion

Annual industry-wide investments in 2021/2022

9% CGAR

Industry growth rate >2x global GDP growth

25,000

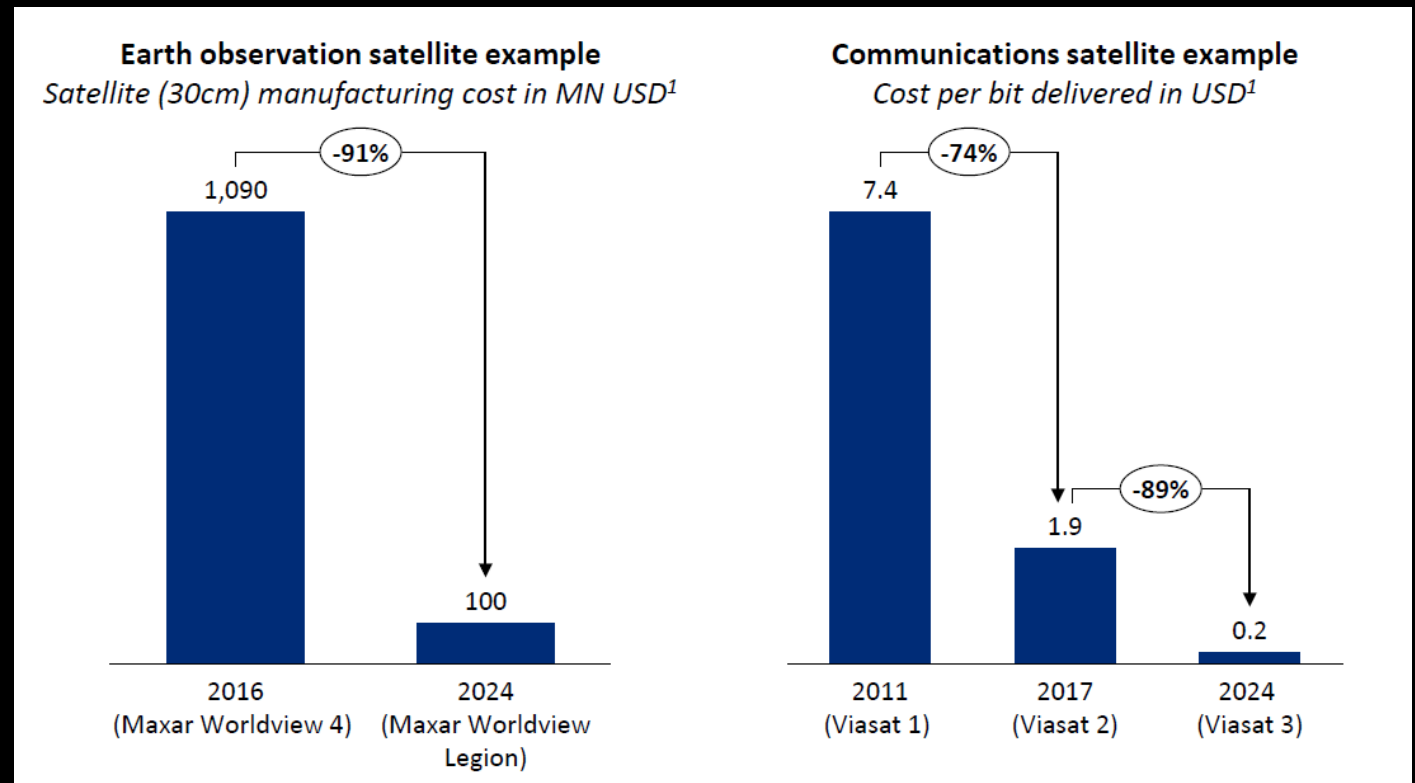
Number of satellites to be launched until 2030

Manufacturing cost drop



**Huge drops in
satellite
manufacturing
costs.**

**Industrialization
Automation
Standardization**



(illustrative)

How to succeed on this market

beyond gravity

In our areas of expertise be the leading tier-1 supplier to the space primes

1 Invest into products for the commercial market (e.g. computers, GNSS, structures, mechanisms, thermal management, satellite platform)

2 Remain strong in the institutional business (ESA, EU, NASA, JAXA)

3 Grow further in the US

4 Drive digitalization, and industrialization

5 Take controlled and smart risks

6 Build on the best experts in their field

Standardized products for the commercial market



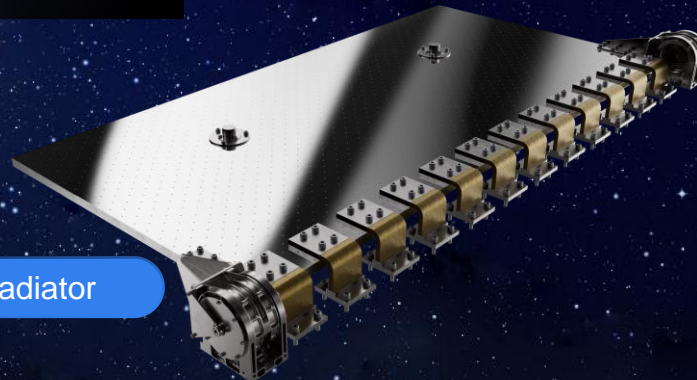
300+ units sold

Constellation On Board Computer



60+ units sold this year

Solar Array Drive Mechanisms



Deployable Radiator

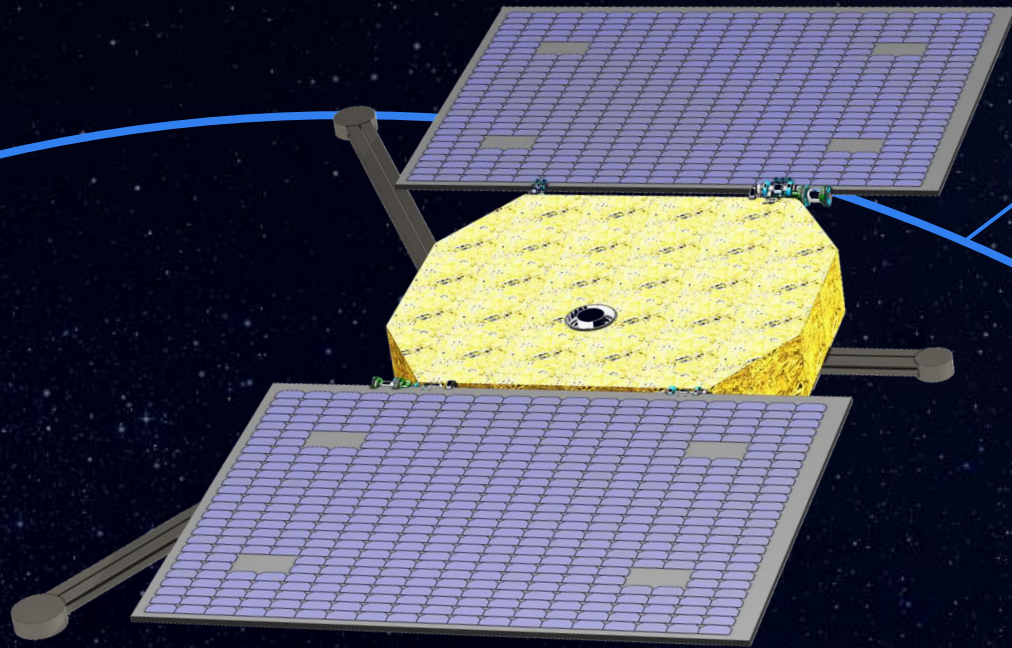


100 pieces contracted

APPMAX Steering Mechanisms

The next move

Multi-Purpose Satellite Platform



Low-cost platform for the global market

High volume production design

Standardized Payload Bay

Low drag design for LEO

No dispenser needed

150 – 250 kg mass

Up to 1 kW power

Payload Bay

Payload Bay:

- Standardized interface to platform
- Independent development of payload
- Parallel payload manufacturing, assembly, integration & testing
- Late payload mating with platform

Satellite Platform

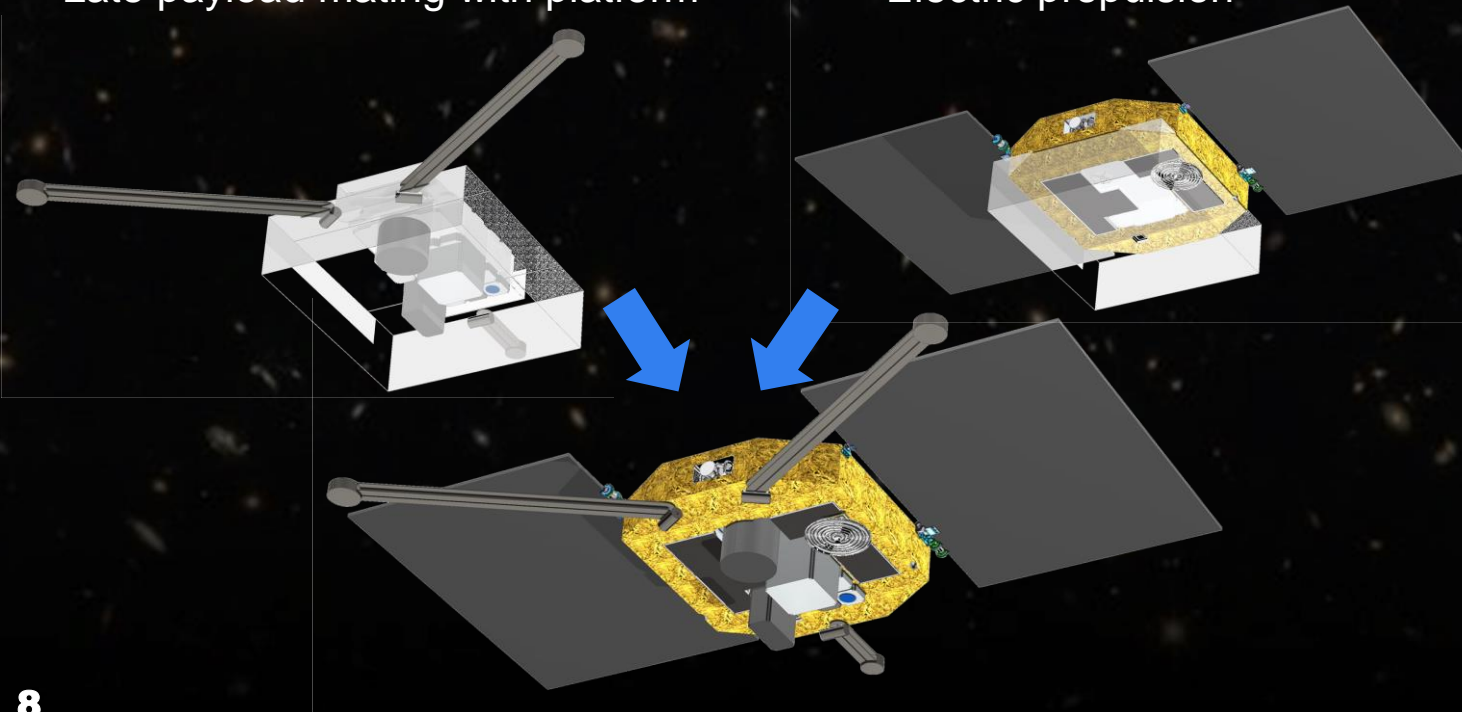
Multi-Purpose Platform:

- 7 years lifetime in Low Earth Orbit
- Low drag design
- Simple & cost-efficient design
- Design for mass production
- Electric propulsion

Launch

Launch:

- Dispenser-less & stackable launch
- Compatible with new launcher families
- Heritage launchers compatible (e.g. Falcon9 rideshare)





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Proof of Concept: MDA Space selects a standard product for their constellation