

# Additive and Hybrid Approaches for Space



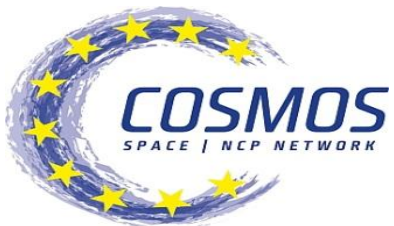
# ONE3D



Additive and Hybrid Approaches for Space  
Bogdan Kaczmarek – Commercial Proxy Holder & Key Account Manager  
One3D Sp. z o.o. and ONE3D s.r.o.

# About ONE3D

- **CEE region leader** in additive and hybrid technologies and post-processing of plastic and metal parts
- **1.000 customers** in EU/non EU countries
- **Production plant:** >2 000 m<sup>2</sup>
- **Employees:** >50
- **In May 2024**, the establishment of a **Polish entity and office**, ONE3D Sp. z o.o.
- **We Are Becoming A Development Partner In The F-35 Programme**
- **December 2024**, purchase of the **largest** metal printing machine from **Nikon SLM**
- Our solution has been accepted for incubation at **European Space Agency Business Incubator (ESA BIC)**.



**ONE3D**

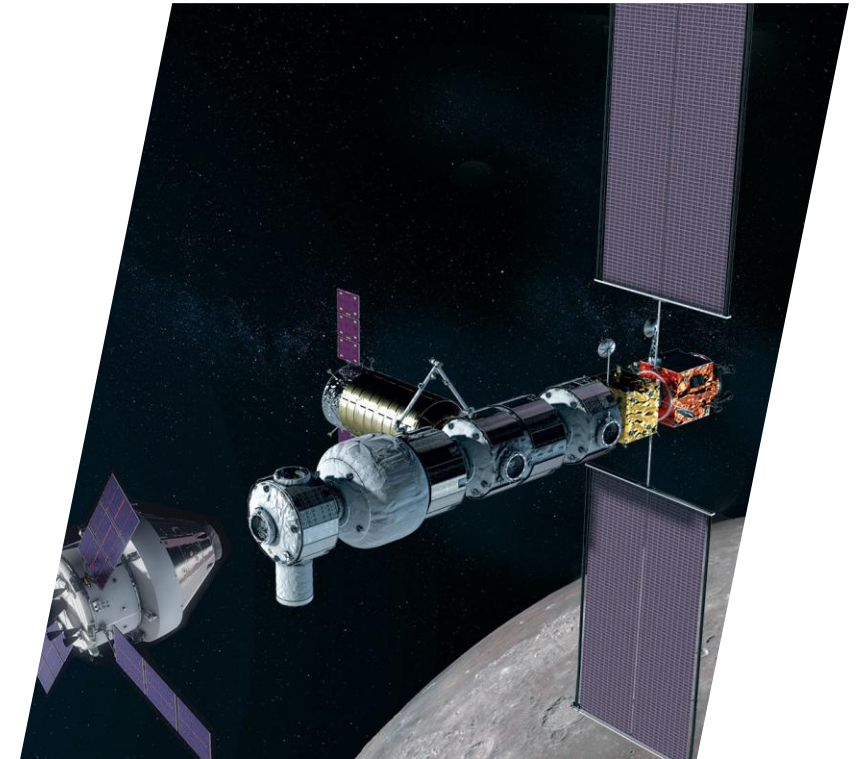
# Our Vision and Goals in Space Industry

## Now

- ESA BIC Czech Republic
- Focus on CubeSat buses 3U-12U
- Comply with ECSS

## Visions

- AM Products for Space Industry
- Customizable CubeSat Structure
- ESA Projects: LEO/Moon
- Leading AM Company in EU





# Our projects

## CubeSat Frame

- Customised frame of CubeSat
- Adapted design to mission requirements
- Lower weight – up to 30 % (146 g)
- Shorter lead time
- Comparable product price with conventional production
- Our solution has been accepted for incubation at **European Space Agency Business Incubator (ESA BIC).**

[https://www.one3d.cz/en/cubesats-small-satellites-with-huge-possibilities/?\\_gl=1\\*1aokc7\\*\\_up\\*MQ..&gclid=EAlaIQobChMI4Z6encG0hQMVepCDBx1r3QcGEAAAYASAAEgLbefD\\_BwE](https://www.one3d.cz/en/cubesats-small-satellites-with-huge-possibilities/?_gl=1*1aokc7*_up*MQ..&gclid=EAlaIQobChMI4Z6encG0hQMVepCDBx1r3QcGEAAAYASAAEgLbefD_BwE)



**ONE3D**

# Our projects

## O.W.L. (Orbital Whereabout Locator)

**Challenge:** Orbital Whereabout Locator (OWL) to instantly locate spacecraft, their trajectory and current status.

**Sollution:** Topologically optimised, lightweight frame fully exploiting the material properties

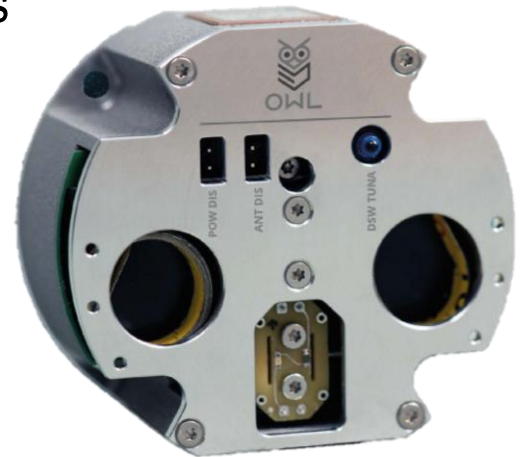
**Material:** AlSi10Mg

**Technology:** Direct Metal Laser Sintering (**DMLS**)

**Post-processing:** Abrasive blasting, Heat treatment,  
Surface treatments: SurTec, Elox

**ONE3D** acquired **Flight Heritage**.

The device was developed within the **ESA ARTES** programme.



[https://www.one3d.cz/en/aquiring-flight-heritage/?\\_gl=1\\*1aokc7\\*\\_up\\*MQ..&gclid=EAlaIQobChMI4Z6encG0hQMVepCDBx1r3QcGEAAAYASAAEgLbefD\\_BwE](https://www.one3d.cz/en/aquiring-flight-heritage/?_gl=1*1aokc7*_up*MQ..&gclid=EAlaIQobChMI4Z6encG0hQMVepCDBx1r3QcGEAAAYASAAEgLbefD_BwE)



# Our projects

## DUMMY MASS

**Challenge:** Precise weight and defined centre of gravity and fast lead time.

**Sollution:** Topologically optimised, lightweight frame fully exploiting the material properties

**Material:** AlSi10Mg

**Technology:** Direct Metal Laser Sintering (DMLS)

**Post-processing:** Abrasive blasting, Heat treatment





# Contact us

## Contact us

- Bogdan Kaczmarek
- One3D s.r.o. and One3D Sp. z o.o.
- Private owned company related to modern manufacturing
- Czech Republic & Poland

