

A detailed illustration of a satellite in space, positioned above the Earth's horizon. The satellite has a central body with a circular antenna and two large, rectangular solar panel arrays extending outwards. The background shows the curvature of the Earth with blue oceans and white clouds, set against the blackness of space.

COMPANY PRESENTATION  
March 2019

# STRUCTURAL ENGINEERING AND DESIGN OFFICE

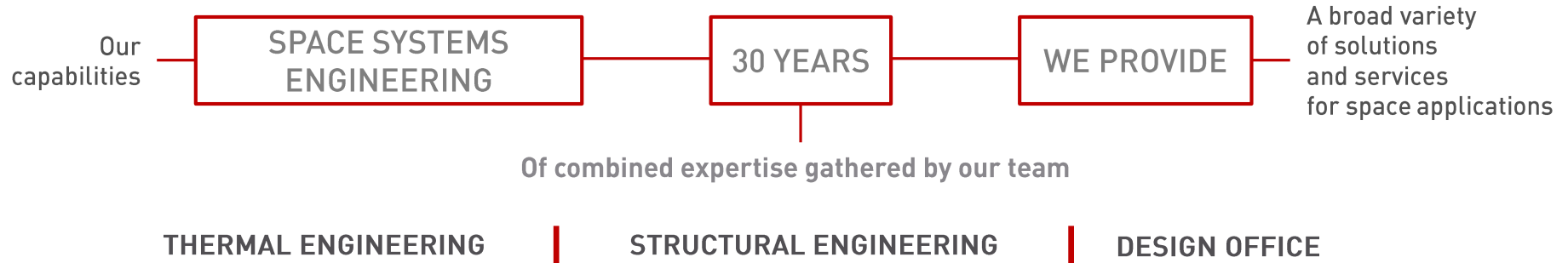
 [d.orgaz@madridspace.eu](mailto:d.orgaz@madridspace.eu)

 [www.madridspace.eu](http://www.madridspace.eu)

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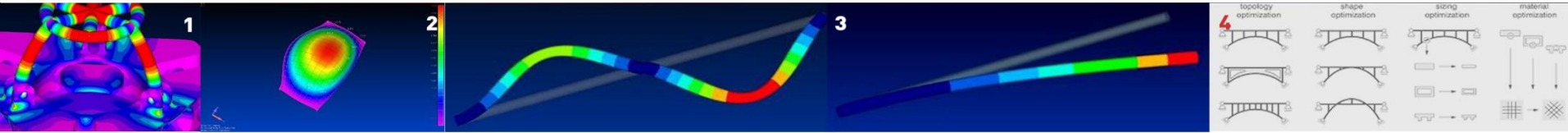
 [@Madrid\\_Space](https://twitter.com/Madrid_Space)







UC3M Scientific Park, location  
of Madrid Space's HQ

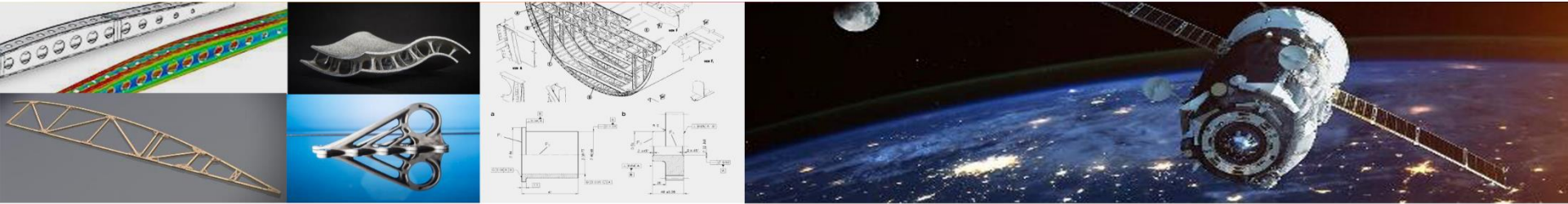


01 STATIC ANALYSIS

02 BUCKLING ANALYSIS

03 NORMAL MODES  
& FREQUENCIES ANALYSIS

04 OPTIMIZATION  
General manufacturing methods  
Specific for Additive Manufacturing  
Including functional integration and  
weight reduction



01 ADDITIVE MANUFACTURING  
DESIGNS

02 LIGHTWEIGHT PARTS

03 PRECISION AND TIGHT TOLERANCE  
PARTS

04 AEROSPACE STRUCTURAL DESIGN

## 01 THERMAL CONTROL

ESATAN-TMS™ (releases from r3 to 2018)  
Systema – Thermica™ (releases from 4.5.3a to 4.8.0)

## 02 FEM

Hypermesh™/OptiStruct™

## 03 CAD

CATIA V5™  
Solid Edge™

## 04 FATIGUE AND DT

ESACRACK™

## 05 SCIENTIFIC/ COMPUTATION LANGUAGES

Python  
Fortran  
Matlab  
VBA

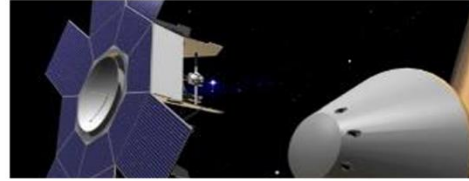


Some NASA-  
ESA-JAXA  
Projects in which  
Madrid Space has  
participated

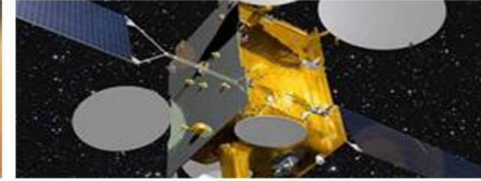
01 MPCV - Orion



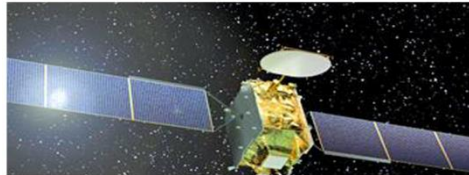
02 ExoMars 2020



03 EDRS



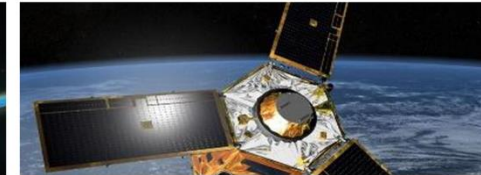
04 Eutelsat Quantum



05 BepiColombo



06 Astrobus-S



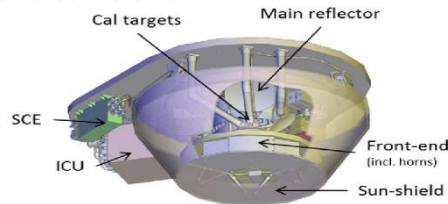
## 07

Mechanism thermal analysis and thermal design, including coatings, heaters and **MLI definition for IBDM** (International Berthing and Docking Mechanism, for the ISS)



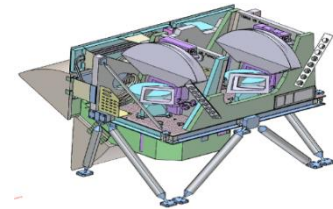
## 08

Full responsible for **MetOp 2nd generation CDPU** and **ICI-FE** (Ice Cloud Imager – Front End) thermal analysis, including thermal model reduction and correlation



## 09

Thermal analysis and design of **TSBOA-US** and **TSBOA-VN** telescopes for Sentinel 5 including **TGSE** definition





# 10

Thermal design and analysis for the complete Proba NEXT platform

# 11

Structural-Thermal Models (dummies) thermal design and analysis for Solar Orbiter

# 12

And many more for cubesats (solar panels), stratospheric probes (IR cameras), optical instruments (FLEX satellite optical bench), Sun-sensors, etc



I have asked **Madrid Space** again since I appreciated the proactive way of working and the availability to respond to customer requests with respect to progress meeting preparations, clarifications, etc – CEO of a customer company after working with us for the first time

**QinetiQ** space is happy with your work – Lead engineer of our customer, after our work on **IBDM**

After working on a thermal analysis project with **Lens R&D**, we were selected by that company to be part of its proposal for the **OneWeb** constellation

A wide banner image showing a space station in orbit over the Earth. The station has a large blue solar panel array and a complex structure. The Earth below is covered in clouds.

THANKS FOR YOUR TIME!

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