

Intellectual Property @Thales Alenia Space Italia S.p.A.


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JOINT VENTURE

ThalesAlenia
a Thales / Leonardo company **Space**

THALES (67%)
LEONARDO (33%)



An infographic illustrating satellite orbits from Earth to deep space. The Earth is shown on the right, with a satellite in low Earth orbit. Five concentric arcs represent different orbital altitudes, with various satellite types shown at each level. The background transitions from a blue Earth to a purple and blue nebula. The text 'FROM EARTH TO DEEP SPACE...' is centered in white. Two vertical white lines with dots at the ends are positioned on the left and right sides of the diagram.

FROM EARTH TO DEEP SPACE...

36000 KM

8000 KM

800 KM

700 KM

400 KM

A JOINT VENTURE BETWEEN TWO LEADERS

A WORLD PLAYER IN EACH OF THE SPACE MARKETS



TELECOMMUNICATIONS

FIXED / MOBILE
BROADBAND
DUAL / MILITARY
SECURED



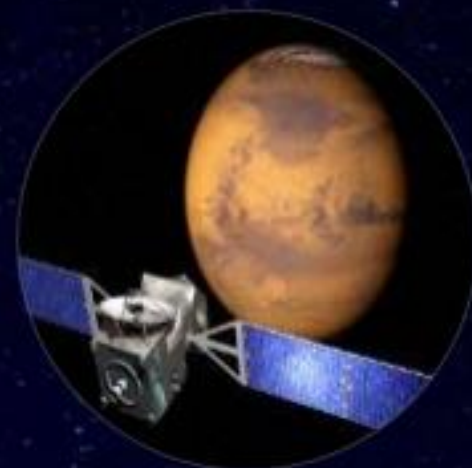
OBSERVATION

CLIMATE CHANGE
METEOROLOGY
OCEANOGRAPHY
INTELLIGENCE
SURVEILLANCE



NAVIGATION

LOCALIZATION
AERONAUTICAL
COMMUNICATIONS
DATA COLLECT



EXPLORATION
/ SCIENCE

PLANETOLOGY
FUNDAMENTAL PHYSICS
ASTRONOMY
HUMAN SPACEFLIGHTS
SPACE TRANSPORTATION
SYSTEMS

TORINO

Human Space Exploration Scenario



Hours



Days

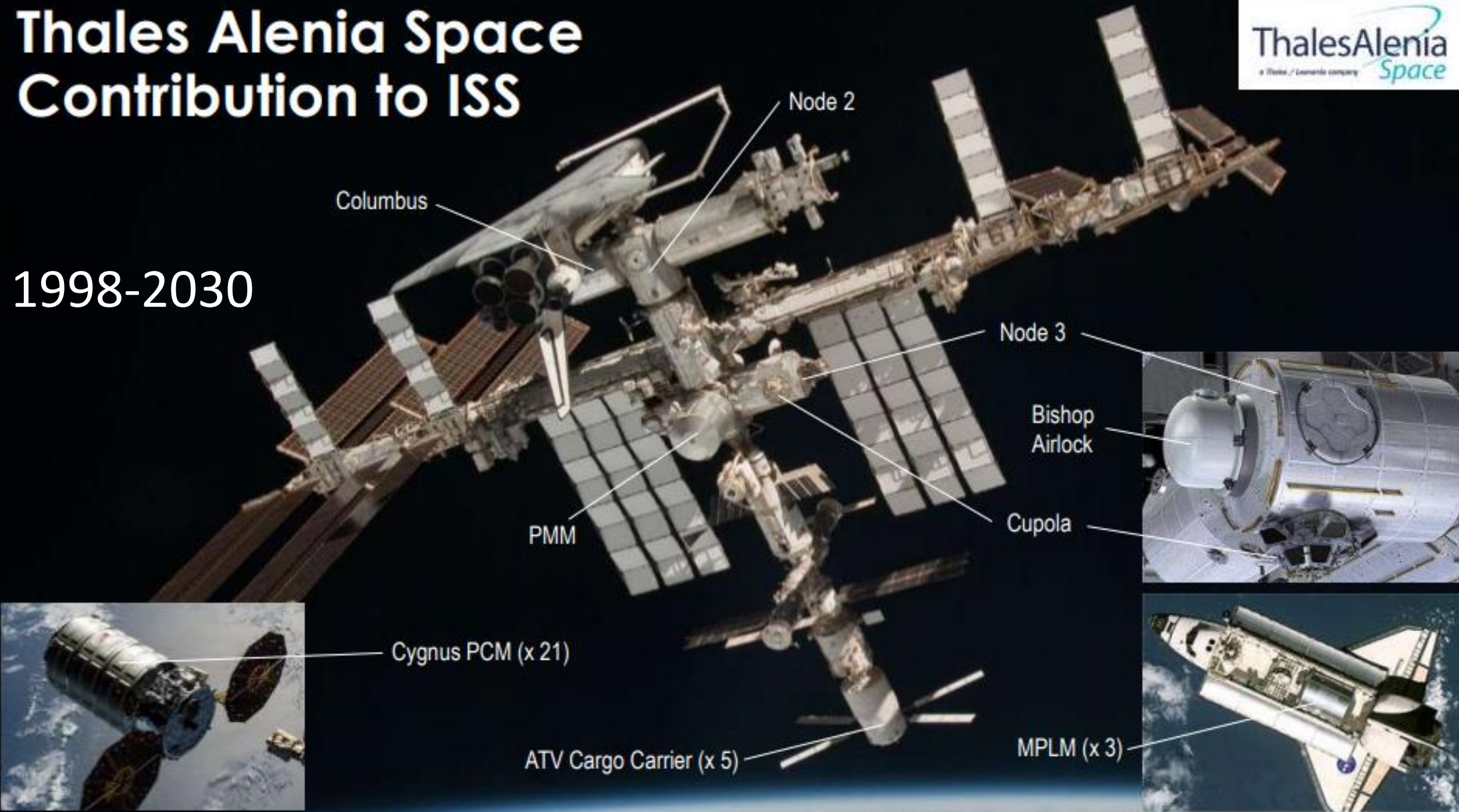


Months

Thales Alenia Space Contribution to ISS



1998-2030



Columbus

Node 2

Node 3

PMM

Bishop Airlock

Cupola

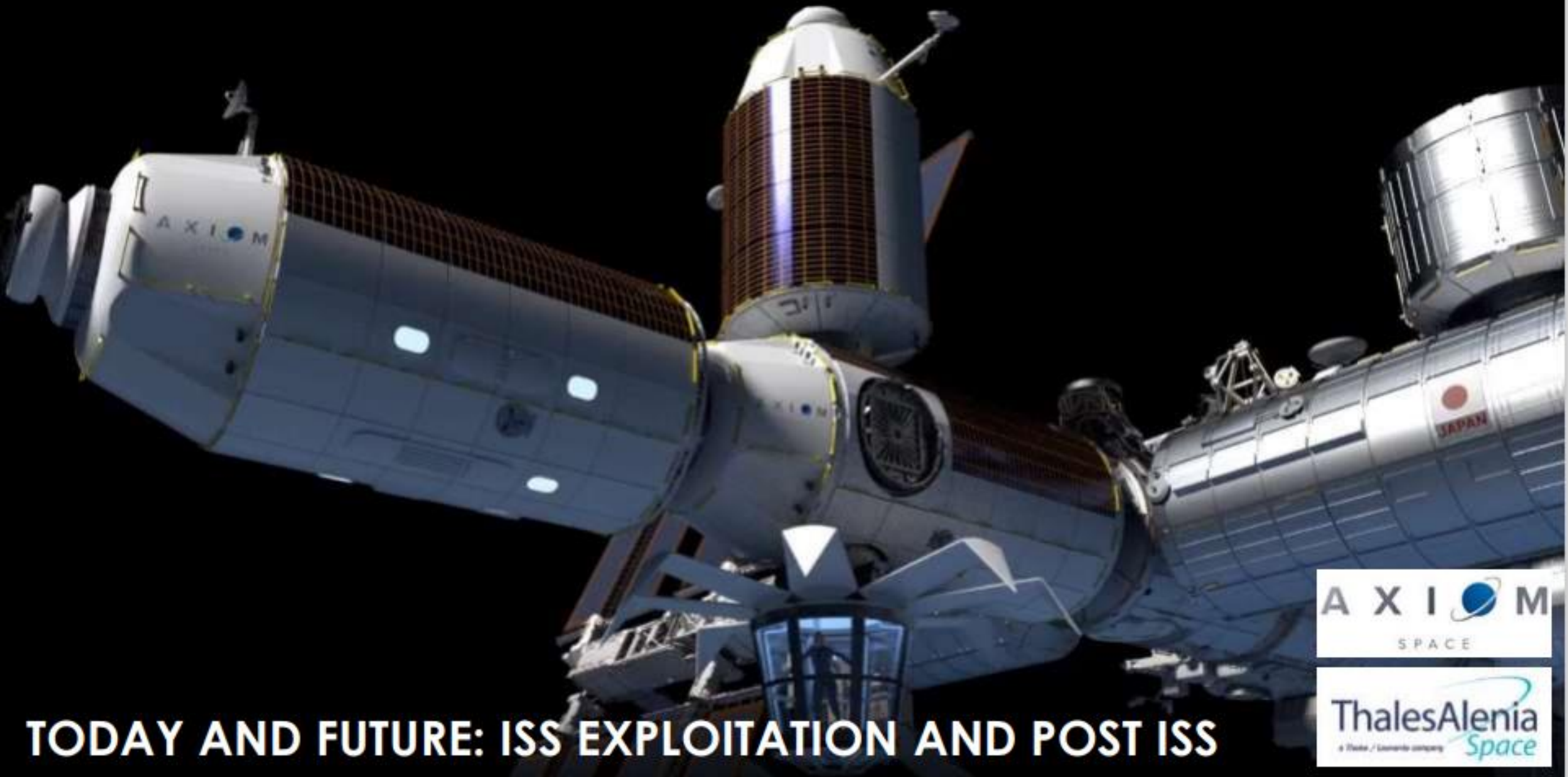
Cygnus PCM (x 21)

ATV Cargo Carrier (x 5)

MPLM (x 3)



AXIOM - Commercial LEO Station



AXIOM
SPACE

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Space
a Thales / Leonardo company

TODAY AND FUTURE: ISS EXPLOITATION AND POST ISS

Orbital Reef
Blue Origin and Sierra Space



Free Flyer
Northrop Grumman



Starlab
Nanoracks and Lockheed Martin



TODAY AND FUTURE: COMMERCIAL LEO DESTINATION

ON ORBIT SERVICING



ThalesAlenia
Space

ON ORBIT RECYCLING



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Space

ON ORBIT MANUFACTURING



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Space

ATMOSPHERIC RE-ENTRY VEHICLES



IXV – INTERMEDIATE EXPERIMENTAL VEHICLE

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EXPERT



SPACE RIDER



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REV1 – SPACE CARGO UNLIMITED



COMMERCIAL ON-ORBIT SCIENCE

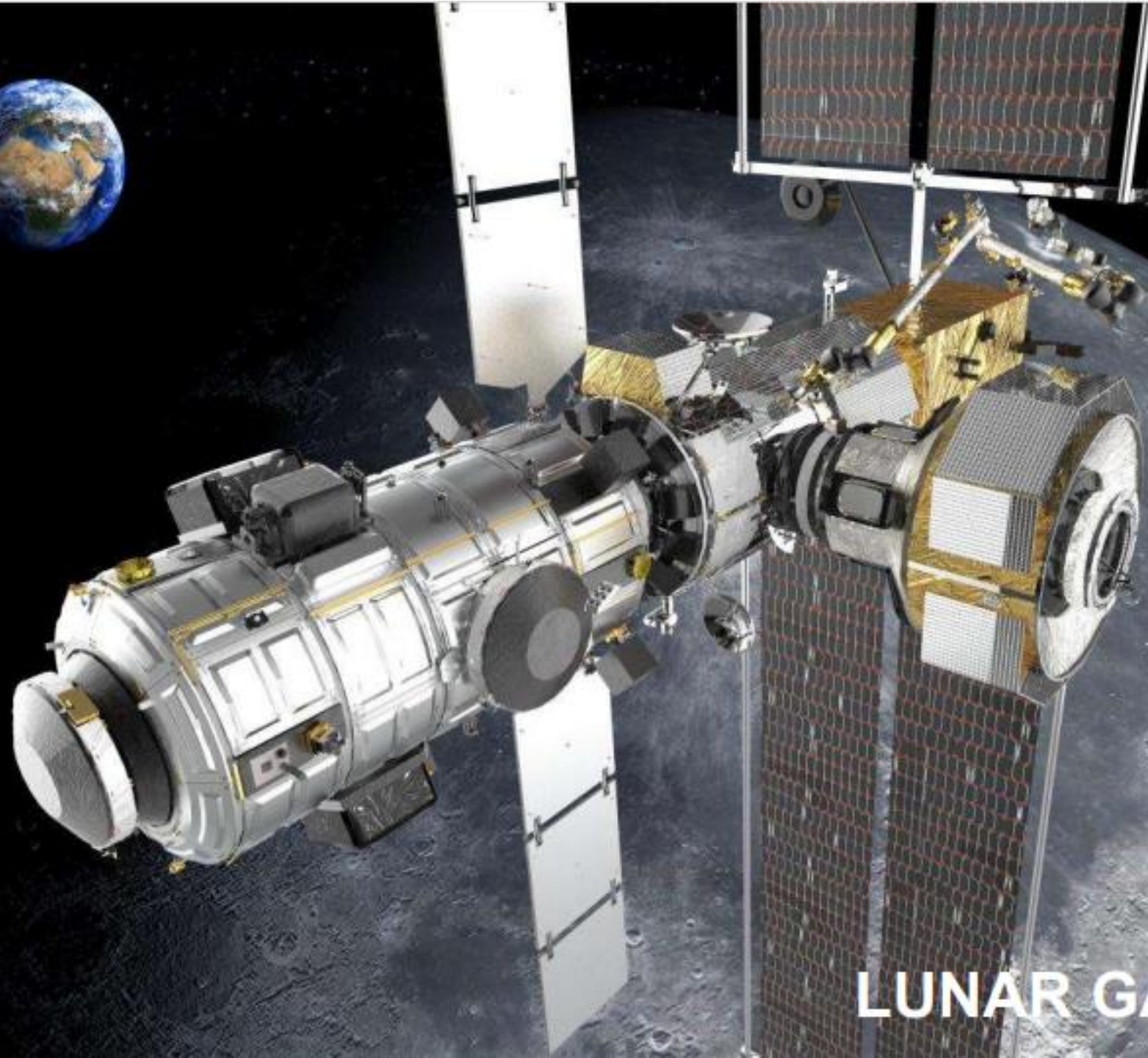
RADIAN



Daily Flights To and From
Low Earth Orbit

RADIAN

HALO
i-HAB
ESPRIT



LUNAR GATEWAY

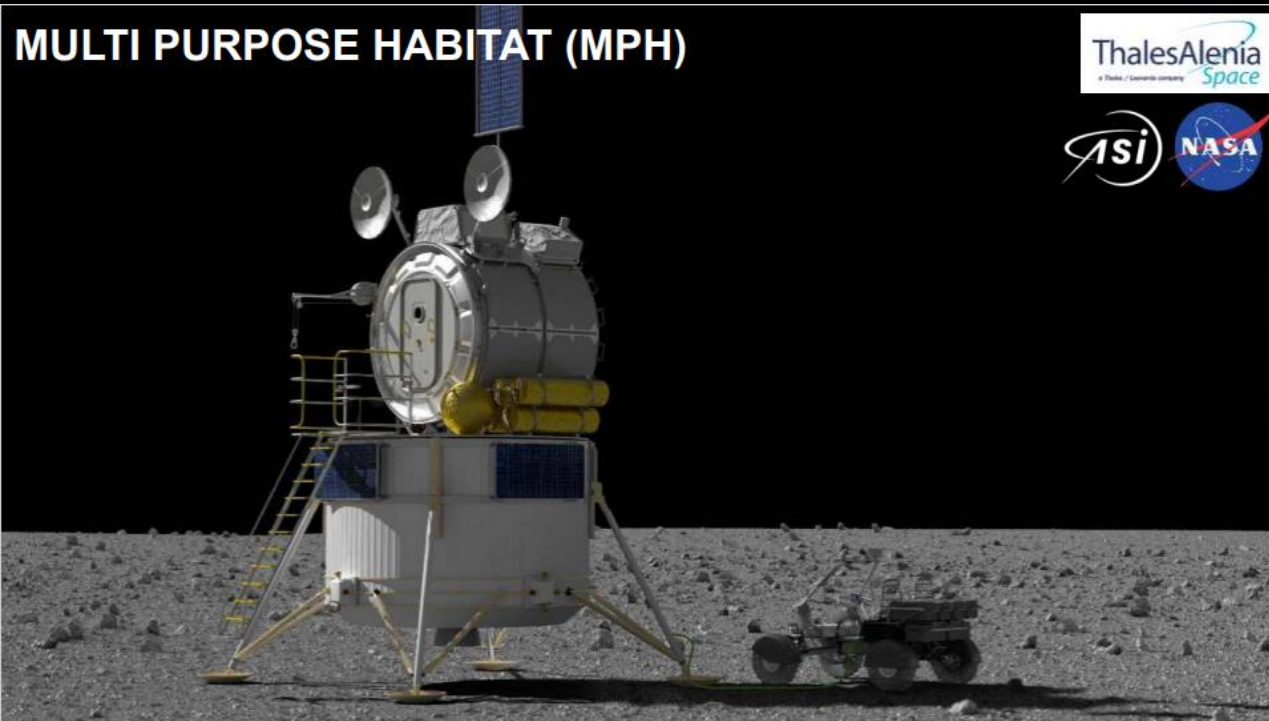


NORTHROP
GRUMMAN

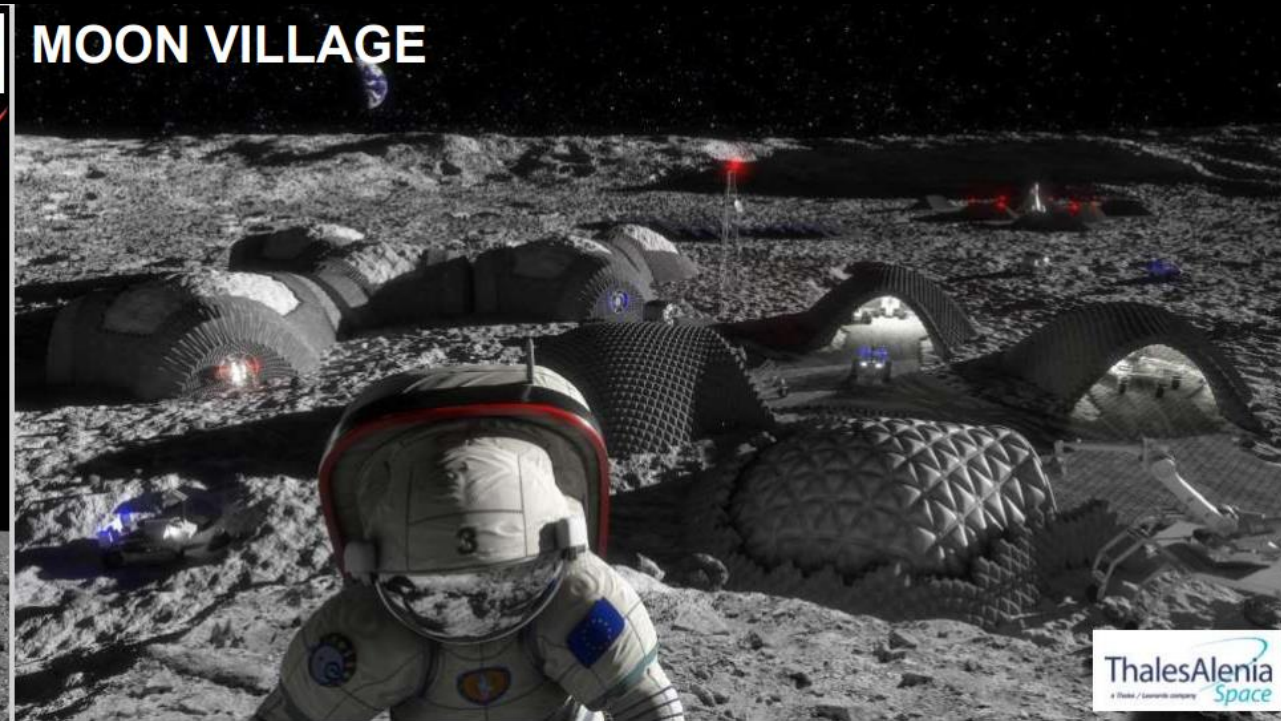
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MOON

MULTI PURPOSE HABITAT (MPH)



MOON VILLAGE



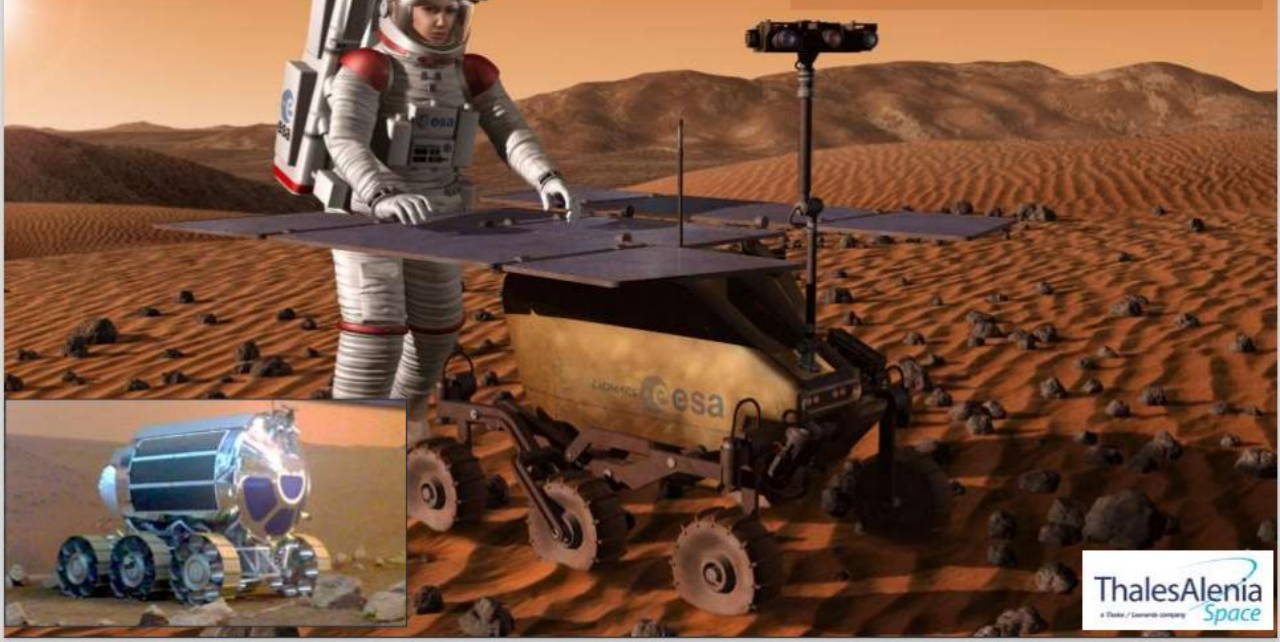
MARS



MARS SAMPLE RETURN



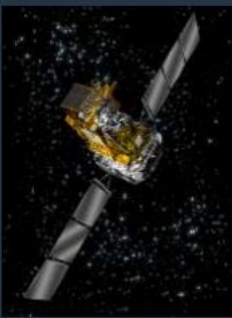
MARS HUMAN EXPLORATION



SPACECRAFT FOR SCIENCE: OUR HISTORY



X-ray astrophysics
(**BeppoSAX**, ASI)



γ-ray astrophysics
(**INTEGRAL**, ESA)



IR astrophysics
(**Herschel** SVM, ESA)



CMB mapping
(**Planck** SVM, ESA)



Earth gravity field mapping
(**GOCE**, ESA)



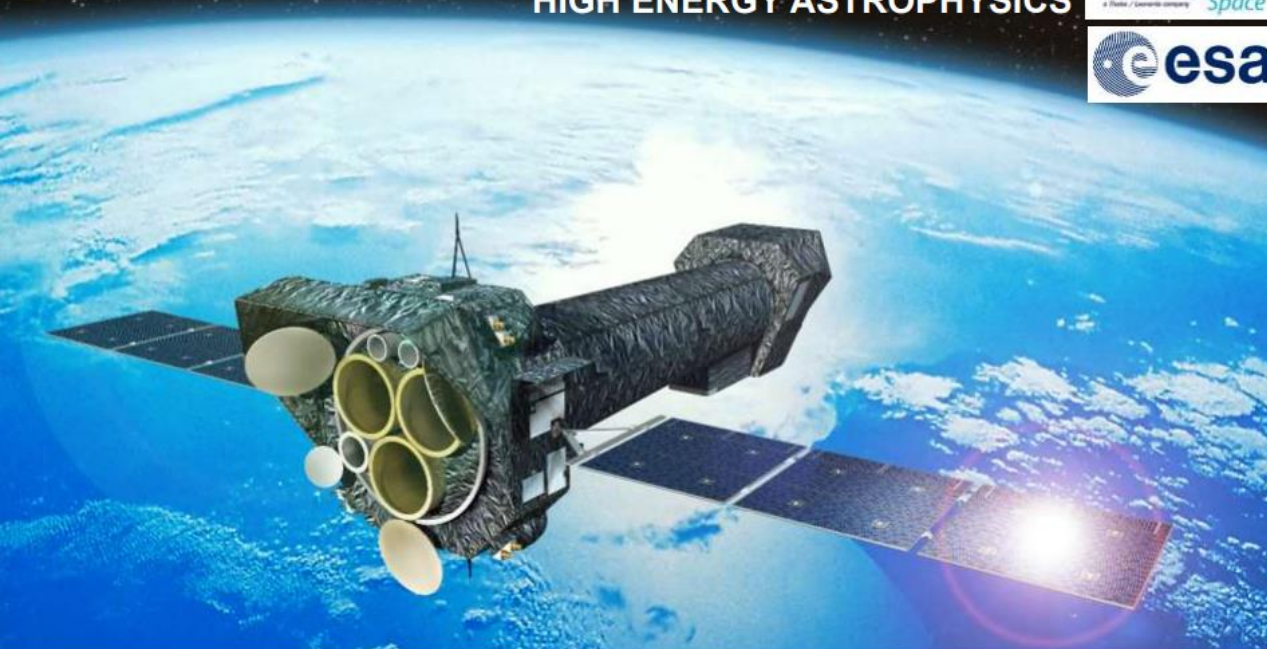
Mission to Mercury
(**BepiColombo**, ESA)



48 15.05.23 Ce document ne peut être reproduit, modifié, adapté, publié, traduit d'une quelconque façon en tout ou partie, ni divulgué si ce n'est dans l'accord préalable et écrit de Thales Alenia Space. Ref. : 0005-000074647 Ref. Modèle : 2016 Thales Alenia Space **THALES ALENIA SPACE CONFIDENTIAL** ThalesAlenia Space

ATHENA – L2

ADVANCED TELESCOPE FOR HIGH ENERGY ASTROPHYSICS



EUCLID – M2

Mapping the dark Universe geometry



Credits: ESA



LISA – L3

MASTERING GRAVITATIONAL WAVES



SPACE FOR LIFE

WE BELIEVE IN SPACE AS HUMANKIND'S
NEW HORIZON TO BUILD A BETTER,
SUSTAINABLE LIFE ON EARTH.



#spaceforlife

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a Thales / Leonardo company *Space*

THALES ALENIA SPACE ITALIA S.P.A. CON SOCIO UNICO

Patent Portfolio @ End 2022

Active Patent families: 47 of those:

///Around 50% DESI; 40 % DONI; 10% DTI

///41 have at least one Grant,

///6 are still pending,

///1 Key Digital Technologies (i.e. AI) families present (deposited end of 2019)

///Trademarks: 2 registered

3 New Patents in the activation path

1 Patent transferred to GST (GranSasso Tech) Foundation

14/07/2022 - Won 2021 Best patent @ LEONARDO Awards.

TRANSITION FROM INSTITUTIONAL TO COMMERCIAL MARKET

IP Strategy:

/// Most of the Knowledge is Industrial Secret of Multidisciplinary nature

/// Disclosures process through

- Patent Committee (on call)
- Publication Committee (Monthly)
- NDA with Partners, Frame Agreements with Academia

PATENTS:

/// FTO or Anteriority Analysis made in house



/// Support for Patents management  STUDIO TORTA

/// Patent deposits countries: IT, UK, DE, FR, NL, US, JP – RU, CN

In case of Partnership also in other countries.

/// OPT-OUT all the portfolio.

THANKS FOR YOUR ATTENTION

