

YOUR FUTURE IN SPACE

Gennaro Russo

Campania Aerospace District

THE PAST IS OUR HERITAGE

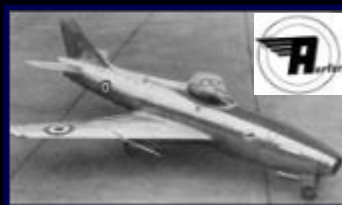
Aeronautics & Space in Campania: a long history.....



**ROMEO
Ro.1**



ITALIA



**Supersonic fighter
SAGITTARIO**



**SPACELAB and
Microgravity**



ATR-42/72



TECNAM - PVOLT

1900



N. Romeo



U. Nobile



A. Crocco



L. G. Napolitano



R. Monti



L. Pascale

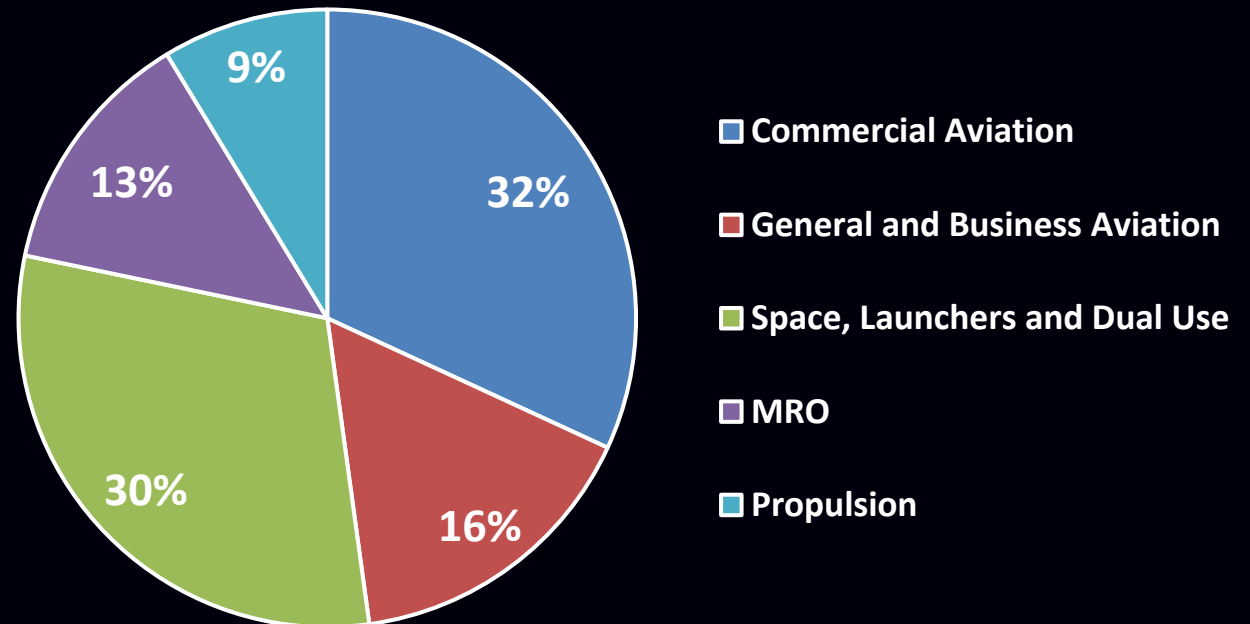
2021

DAC ENTERPRISES – AN OVERVIEW

5 different Sectors are identified in the Aerospace Campania District:

- ❖ Commercial Aviation
- ❖ General and Business Aviation
- ❖ Space and Launchers
- ❖ Maintenance, Repair and Overhaul (MRO)
- ❖ Propulsion

DAC companies by sector



STRATEGIC AND INDUSTRIAL VISION

“industry and market oriented”

REGIONAL AIRCRAFT	BUSINESS & GENERAL AVIATION AIRCRAFT (INCL. RPAS)	MICRO & NANOSATELLITES AND HIGH SPEED SYSTEMS	MAINTENANCE, REPAIR AND OVERHAUL
REGIONAL AIRCRAFTS 19 TO 100 PAX	B&GA AIRCRAFTS 4 TO 19 PAX, INCL. SUPER/HYPERSONIC BUSINESS JET	SYSTEMS & COMPONENTS FOR MINI/MICRO/NANOSATELLITES AND SUBORBITAL SYSTEMS (LAUNCHERS, SPACEPLANES)	MAINTENANCE FOR TRADITIONAL AND FUTURE GENERATION SYSTEMS (i.e. SPACEPLANES)
AERONAUTICAL ENGINE SUBSYSTEMS FOR LARGE PASSENGER AIRCRAFT	AUTONOMOUS FLIGHT SYSTEMS AND REMOTELY PILOTED VEHICLES	SPACE APPLICATIONS	
	INNOVATIVE ENGINES (INCL. HYBRID AND ELECTRIC ENGINES) FOR ULTRALIGHT, B&GA, RPAS	SYSTEMS AND COMPONENTS FOR SPACE PROPULSION	
	SYSTEMS AND COMPONENTS FOR HIGHER EFFICIENCY AERONAUTIC PROPULSION	SYSTEMS FOR SPACE EXPLORATION	









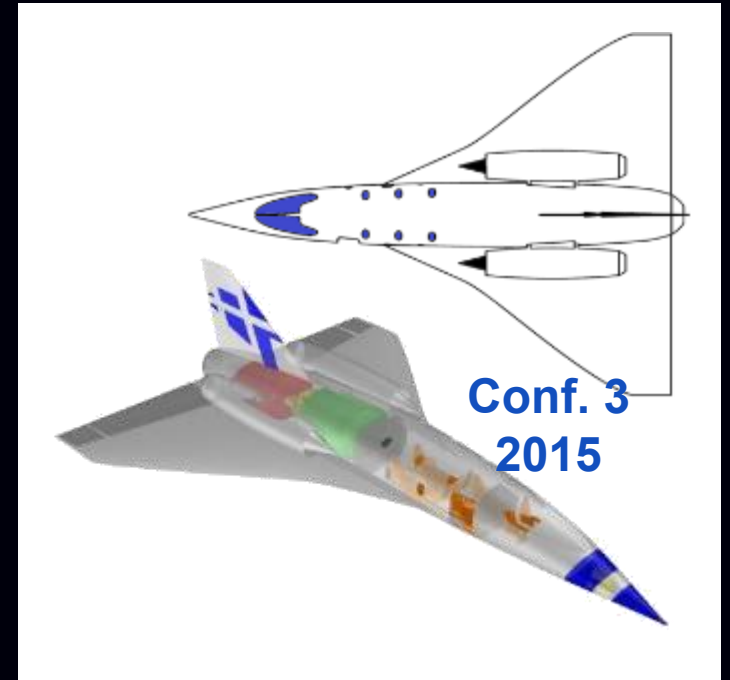


... THE BEAUTY OF TOMORROW

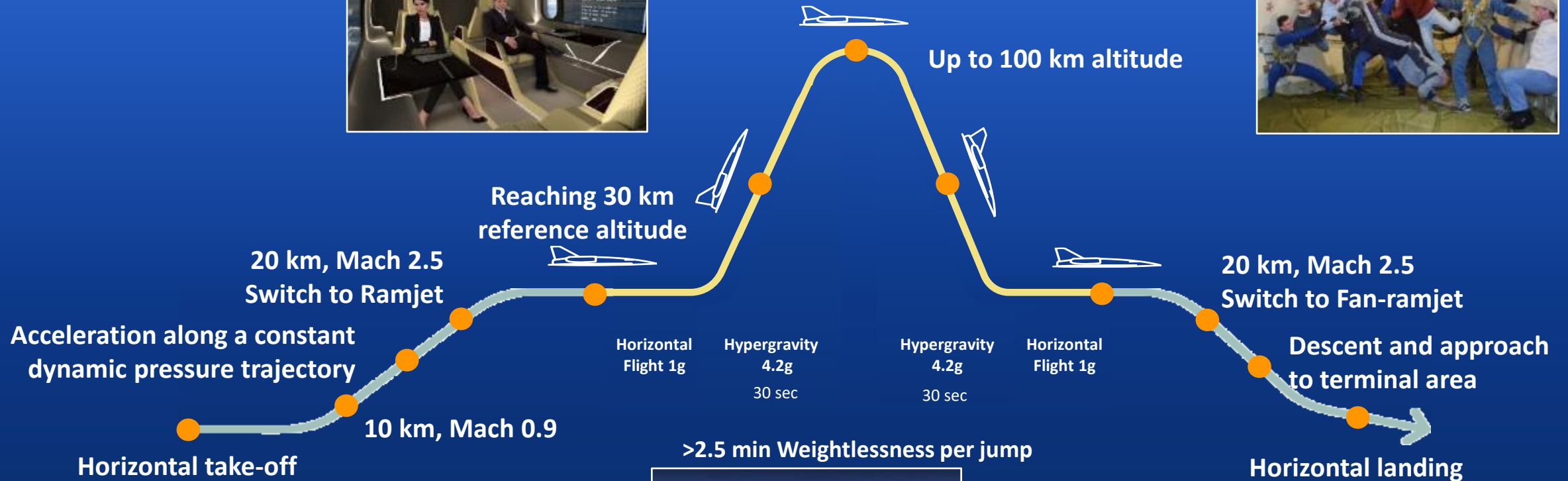
HYPERSONIC & SUBORBITAL FLIGHT

Development and introduction into operational scenarios of a 6-seats, short take-off and landing, Mach 4.5 business jet class spaceplane for:

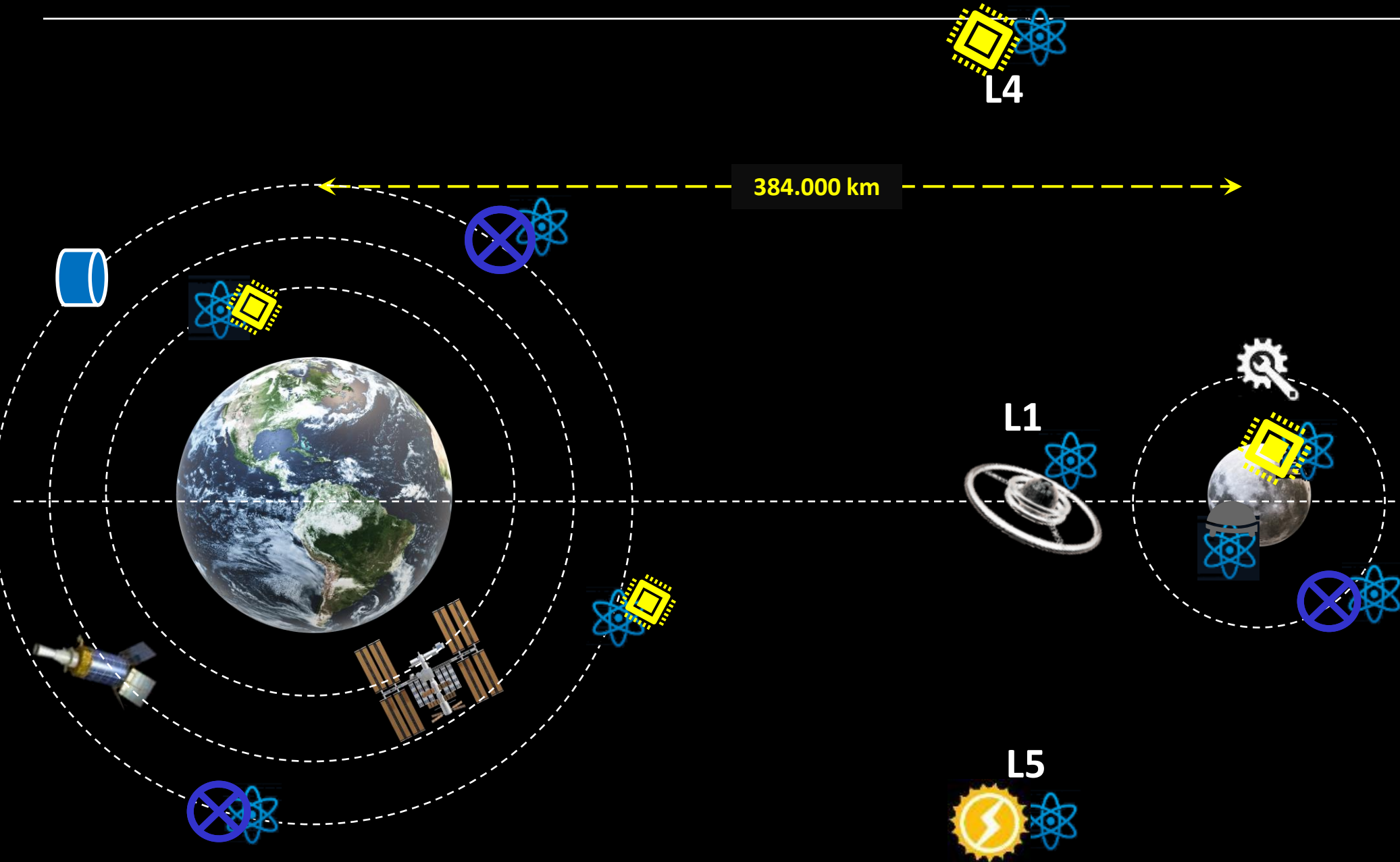
- Fast 7000 km distance intercontinental cruise at 30 km altitude
- 100 km apogee suborbital point-to-point flight



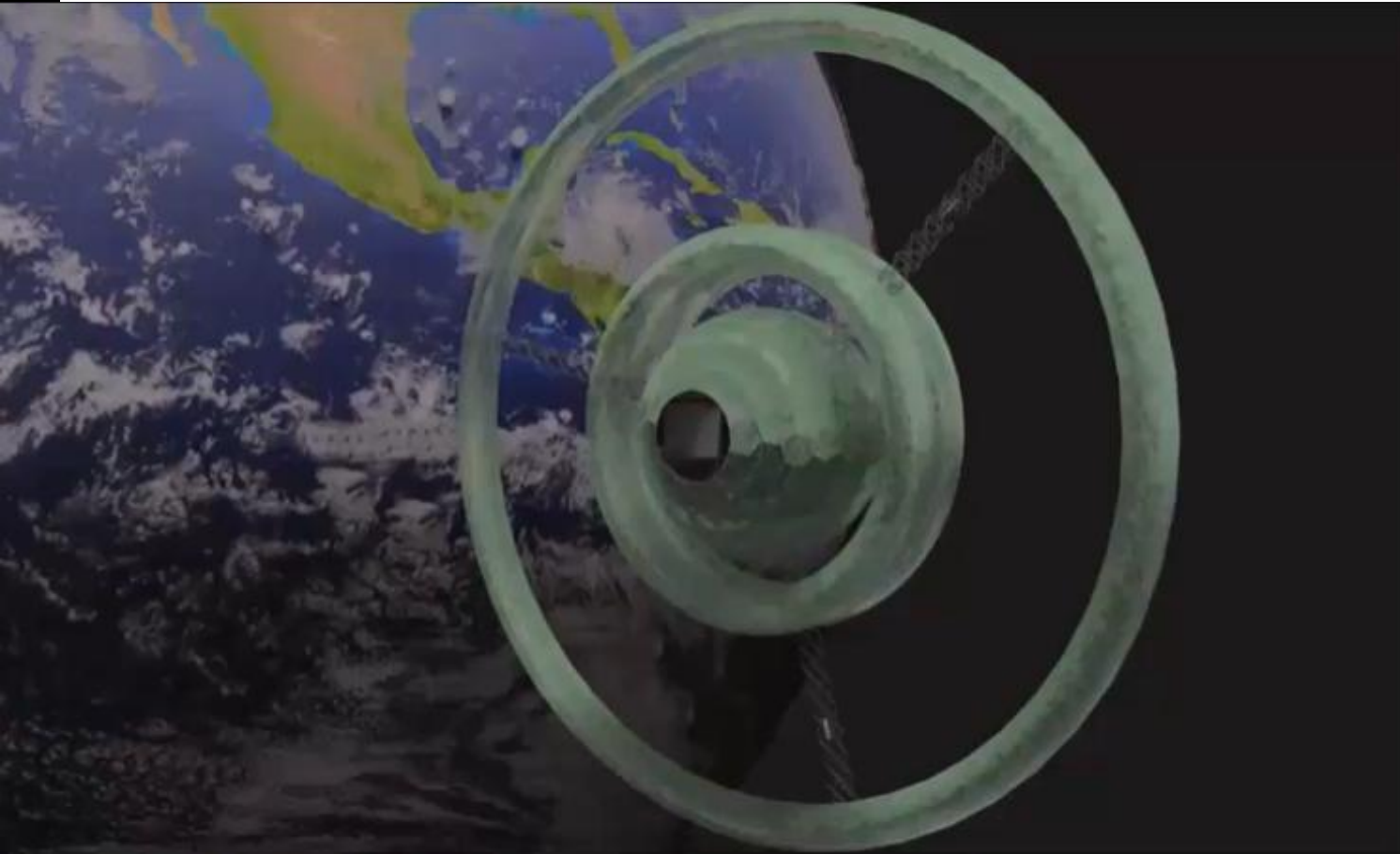
Suborbital Trajectory



2069: THE CISLUNAR CITY archipelago



-  Industrial processing
-  Hotel
-  Refueling and maintenance station
-  Solar Power Station
-  SpaceHub
-  Assembly & Storage
-  LunaFab
-  Scientific Lab



Targets

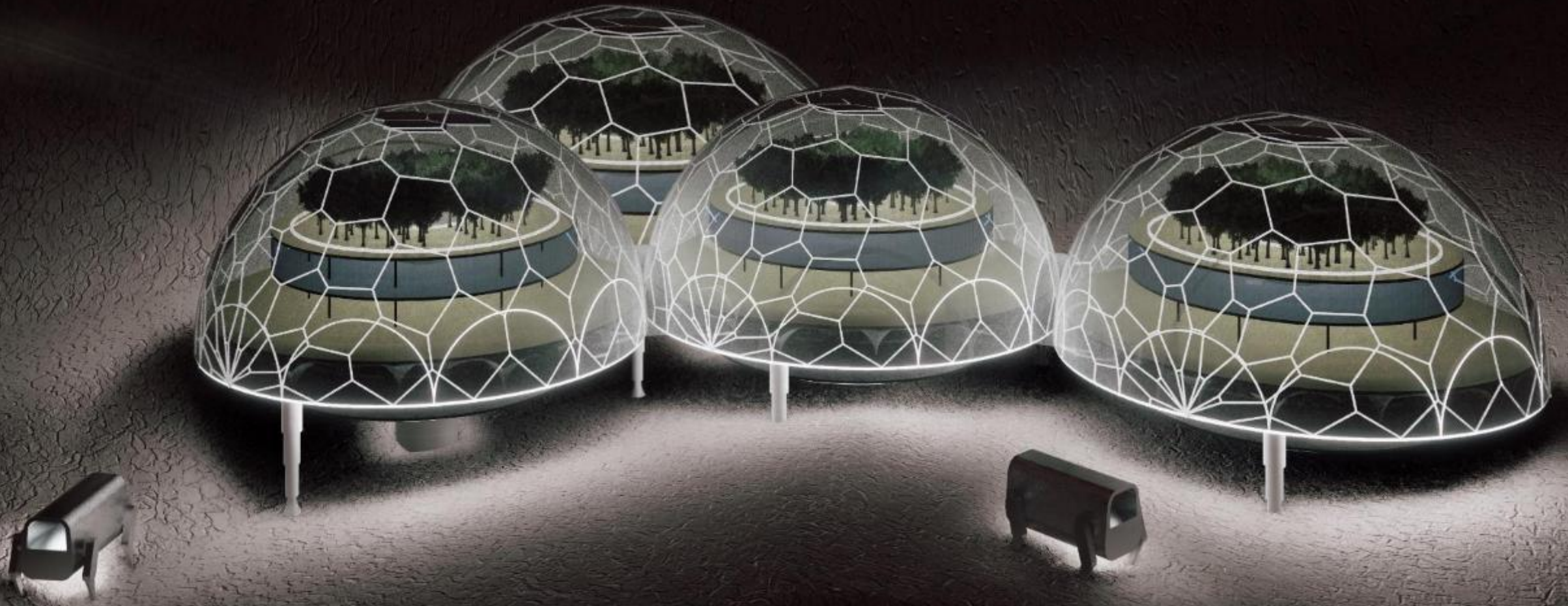
- Pressurized volume per capita 4.5 times higher than ISS
- Structural density 15% of that of ISS
- Maximized closed-loop ECLSS, including 6000 m² for crops

Design

- Concept & Phase 0 design
- Pre-feasibility based on technology forecast/foresight

Technologies

- Autonomous swarms of robotic systems
- inflatable structures to be stiffened with particular gases inside and with solar radiation
- In-space 60-head 3D printing systems (TCM, Toroid Construction Machine)
- SpiderFab for secondary structures



LunaFab is a 120-people district.
Minimization of interaction with the Moon Surface
brought us to an **archaeological** approach

THANK YOU, and

..... waiting for many of you on board!

