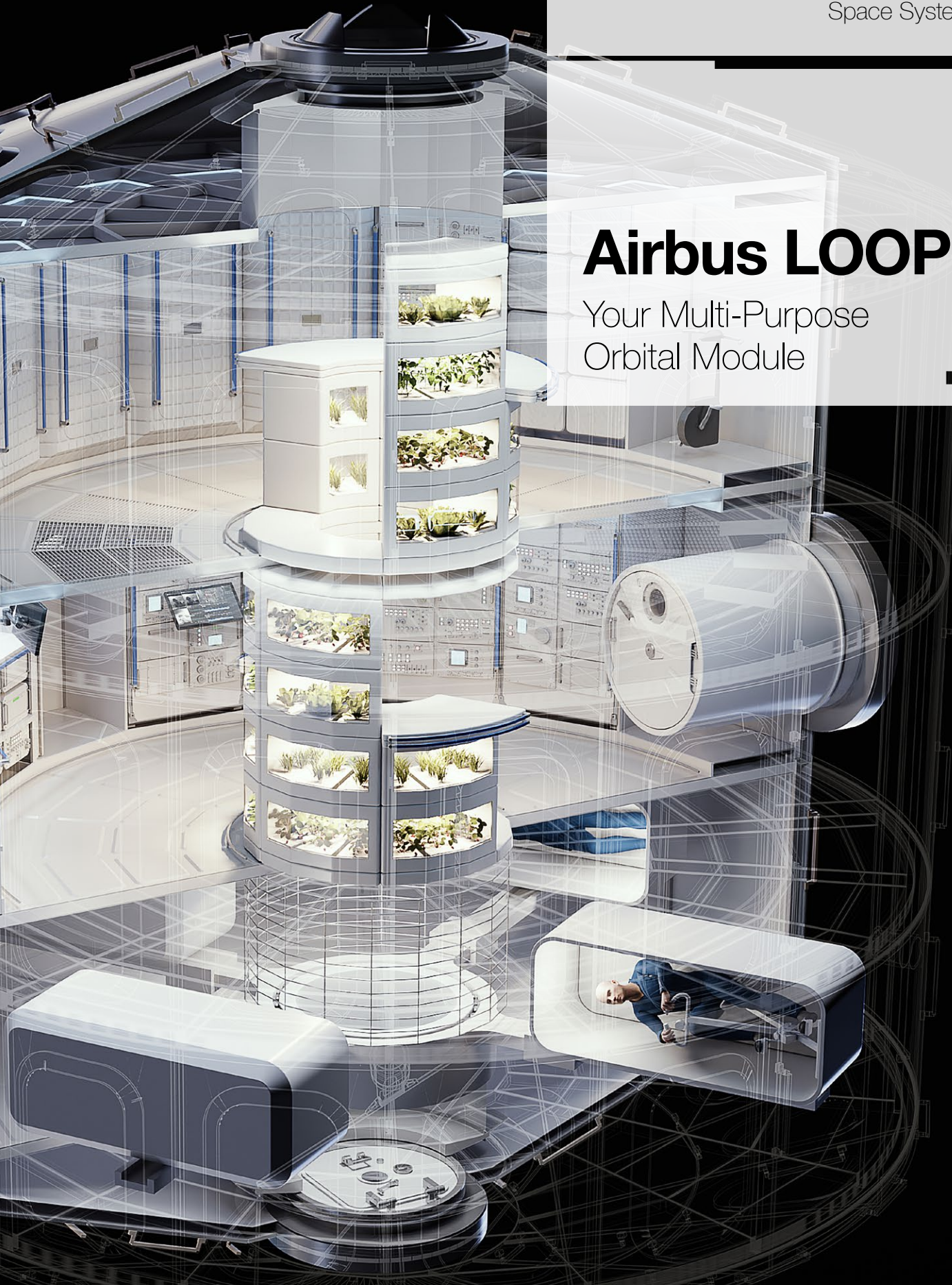


DEFENCE AND SPACE
Space Systems

Airbus LOOP

Your Multi-Purpose
Orbital Module



AIRBUS

EIGHT METERS, 26 FEET, **AMPLE SPACE IN SPACE**

The Airbus LOOP is designed to make long-term stays in Space comfortable and enjoyable for its inhabitants, while supporting efficient and sustainable operations at the same time.

A diameter of eight meters (or roughly 26 feet) and roughly the same length enable an unprecedented volume that would typically only be achieved by an inflatable structure, giving crews on board ample space.

At the same time, its rigid outer shell not only offers maximum protection against any external influences, it also supports the installation of windows, airlocks, docking ports for visiting vehicles or extensions (rigid or inflatable), and robotic interfaces.





FOUR CREW, LONG-TERM, **UNLIMITED SCIENCE**

Designed for a four-person crew, the Airbus LOOP could temporarily accommodate up to eight astronauts at a time quite comfortably. It is compatible with all of today's and tomorrow's crew and cargo vehicles.

The Airbus LOOP comprises all necessary life support systems including thermal control via body-mounted radiators, power supply as well as various communication systems. All critical systems are accessible for the crew from within the module.

ONE MODULE, THREE DECKS, ENDLESS POSSIBILITIES



HABITATION DECK

Crew quarters and exercise possibilities.



SCIENCE DECK

Airlock, payload space, glove box, rack system and shelving.



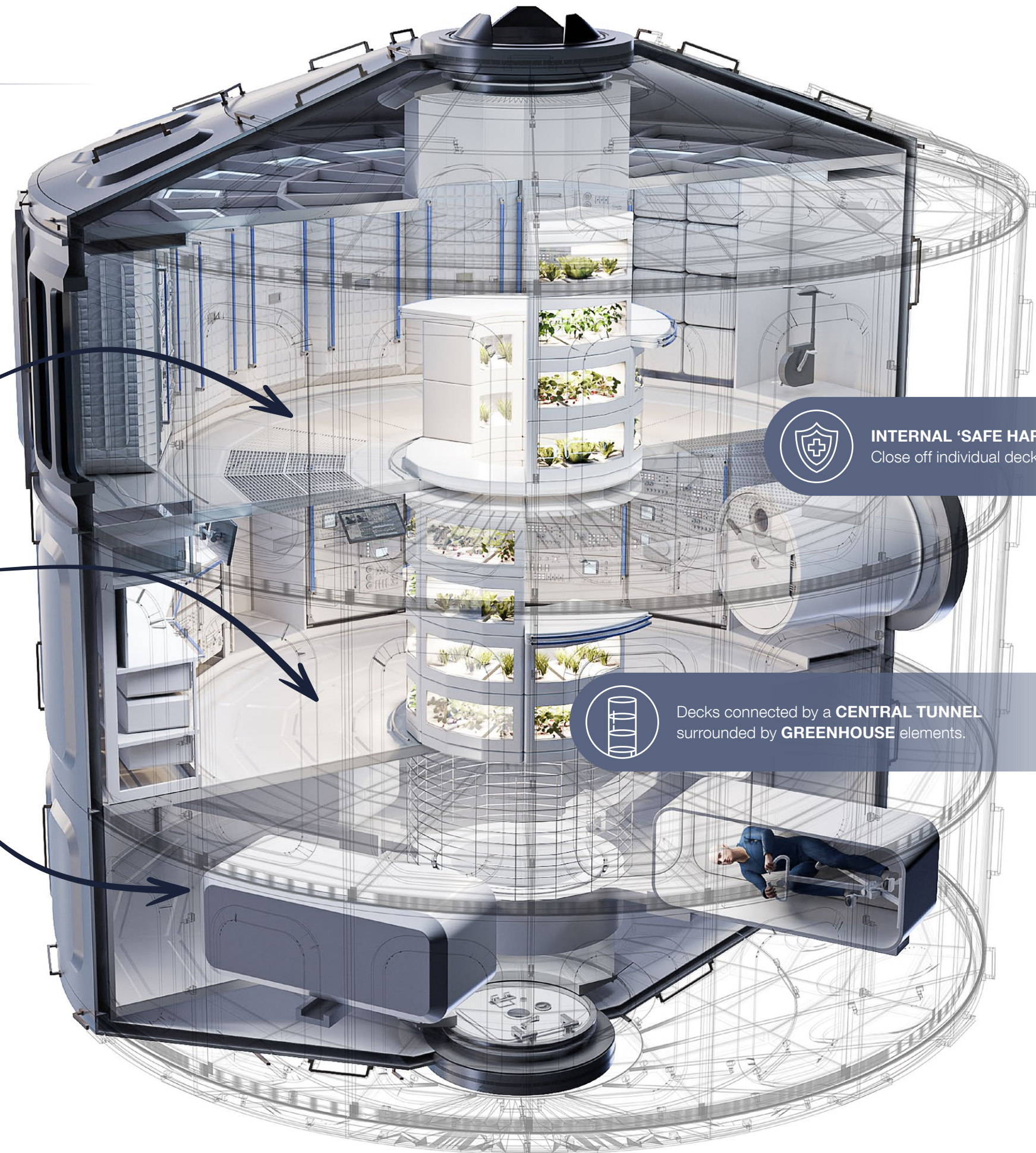
CENTRIFUGE

Creates gravity situation, reducing stress of weightlessness on body.

SELECT YOUR DECK(S), DESIGN YOUR MODULE(S)

A modular approach enables Airbus LOOP customers to adapt the deck selection to their respective mission requirements. Operators may choose to replace any or all of the three decks with individually designed options - e.g. an Entertainment Deck, an In-Orbit Factory, Medical Facilities, Luxury Accommodation, and more.

Customers may also resort to a 'dry' module or deck, i.e. a mechanical structure with no outfitting, and equip it with their own infrastructure elements.

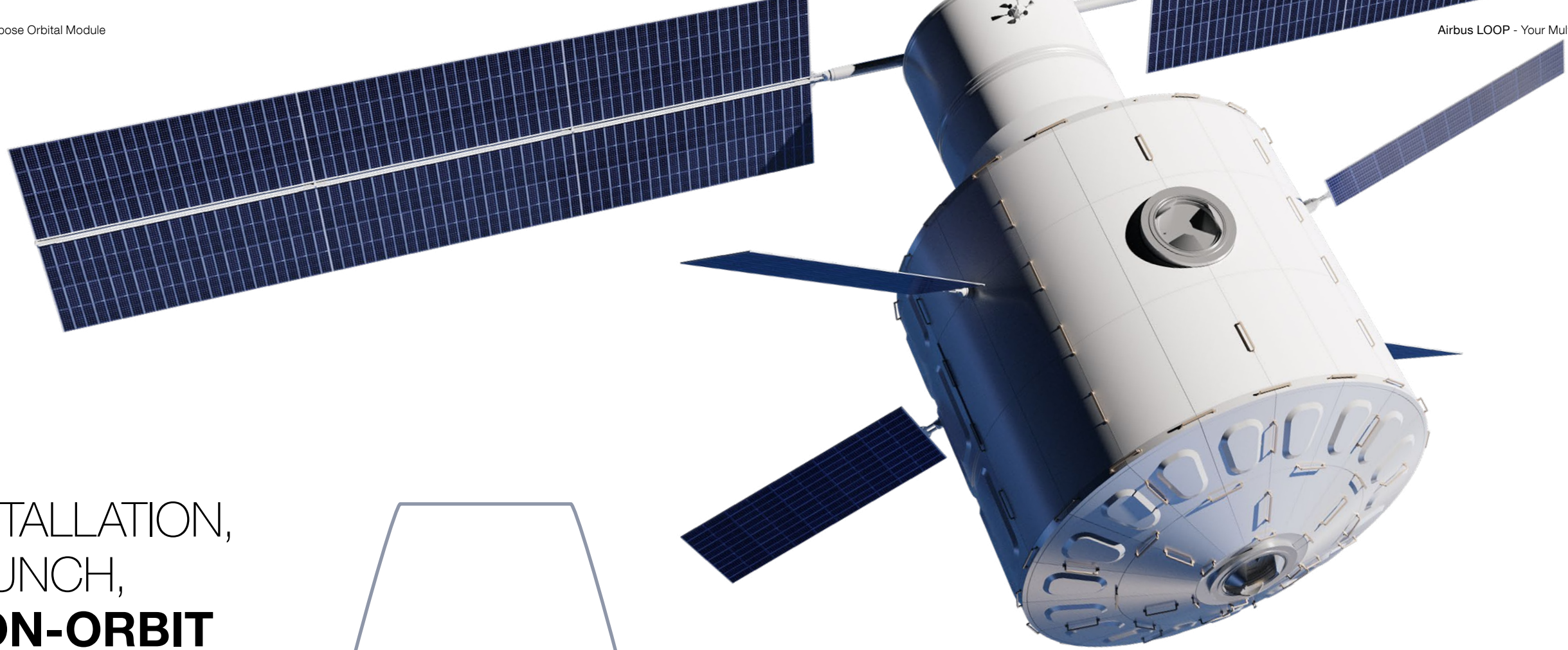


INTERNAL 'SAFE HARBOUR'

Close off individual deck for shelter.



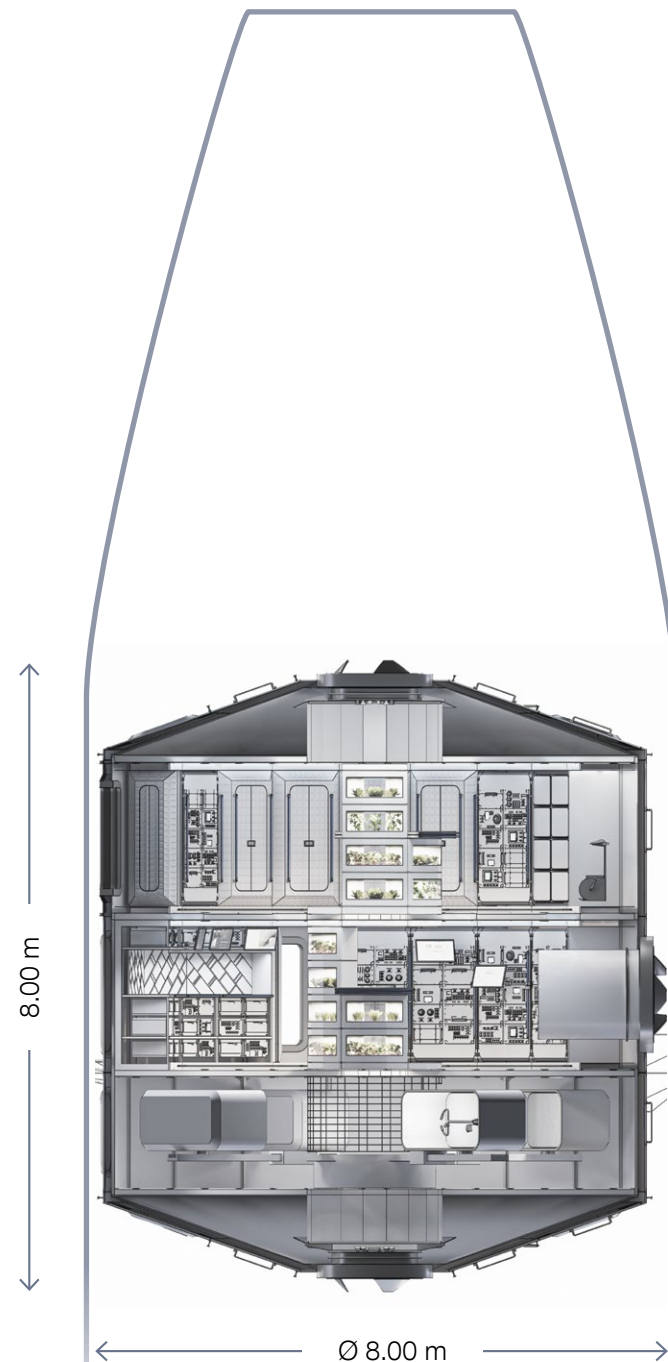
Decks connected by a **CENTRAL TUNNEL** surrounded by **GREENHOUSE** elements.



ONE INSTALLATION,
ONE LAUNCH,
**ZERO ON-ORBIT
INTEGRATION
EFFORT**

The Airbus LOOP is designed to fit with the upcoming generation of super-heavy launchers that can launch an entire module in one piece, eliminating the need for a complex and time-consuming assembly in Space.

An on-ground integration of large systems such as an entire centrifuge is feasible; solar panels and airlocks are also installed pre-launch, external payloads will be attached to the rigid shell once in orbit.



Overall diameter

Ø 8 m

Outer shell

0.2 m

Equipment (outer ring)

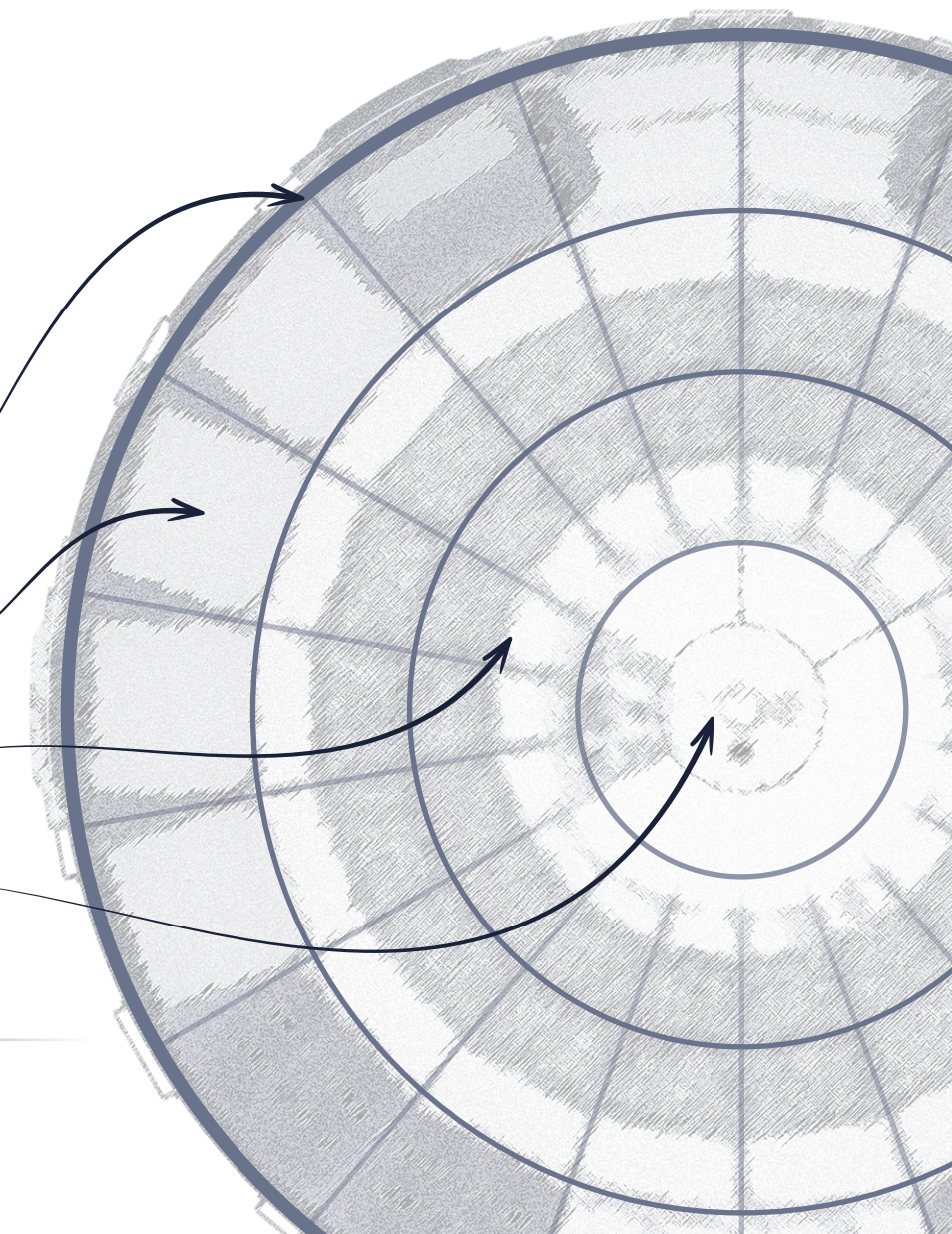
1 m

Equipment (inner ring)

1 m

Tunnel

Ø 1.8 m



YOUR MULTI-PURPOSE ORBITAL MODULE

The Airbus LOOP builds upon everything that has been learnt over the decades of Human Spaceflight and fully exploits the potential of tomorrow's technologies in order to best support humanities' future in Space: In Low-Earth or Lunar Orbit, or on long-term missions to Mars.

This novel orbital module - or any element of it - can become part of any post-ISS and other future infrastructure, be they commercial or institutional in nature.

Under the Airbus LOOP umbrella, Airbus also offers a variety of services and products that support Human Spaceflight Missions, ranging from consulting services through system integration to individual payloads and operations.

For all of this, Airbus can build on its substantial heritage from major human spaceflight programmes such as the ISS Columbus Module, the Automated Transfer Vehicle (ATV) and the Orion European Service Module (ESM).



AIRBUS

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Airbus LOOP design concept visualisation by
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Reference: TMMPO074/03/2023

More information on www.airbus.com/space

