

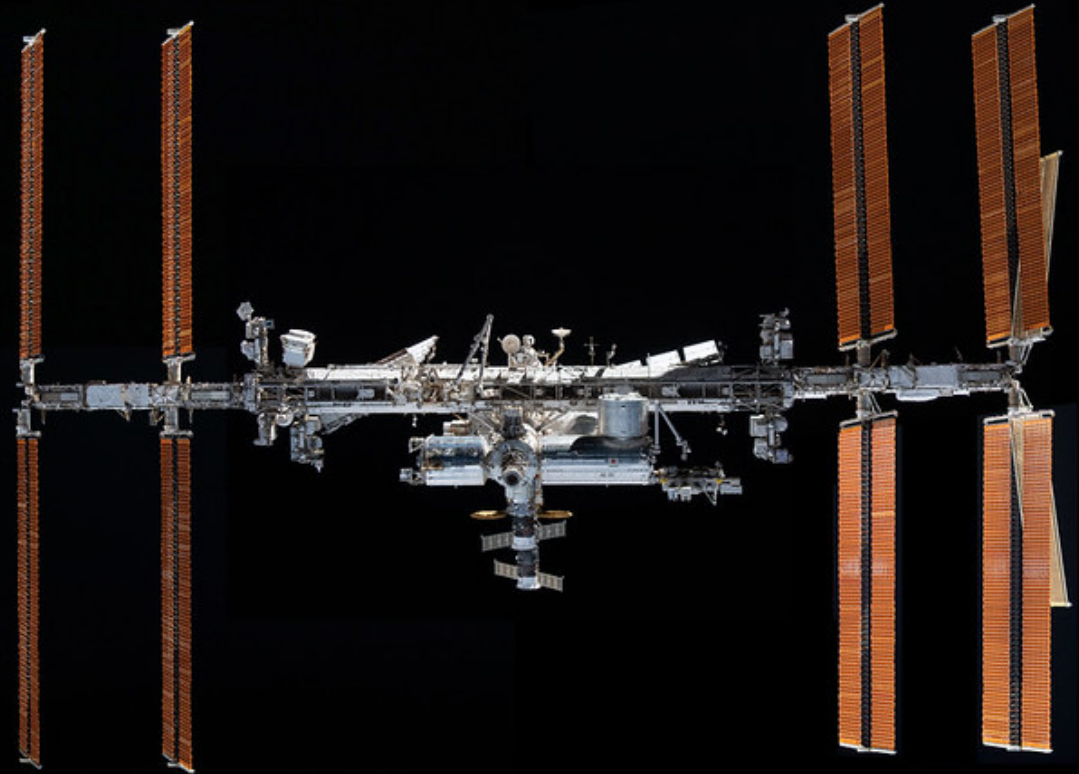
STAYING IN LOW EARTH ORBIT

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CORE OBJECTIVES IN LOW EARTH ORBIT



- Preserve a continuous presence to conduct groundbreaking research and technology development
- Expand commercial access, stimulate commercial demand, and foster economic growth
- Responsibly end ISS operations and transition to commercial space stations



Building a replacement for ISS is a **national imperative** to maintain an orbital laboratory and proving ground in Low Earth Orbit

ISS DEVELOPMENT AND CAPABILITIES



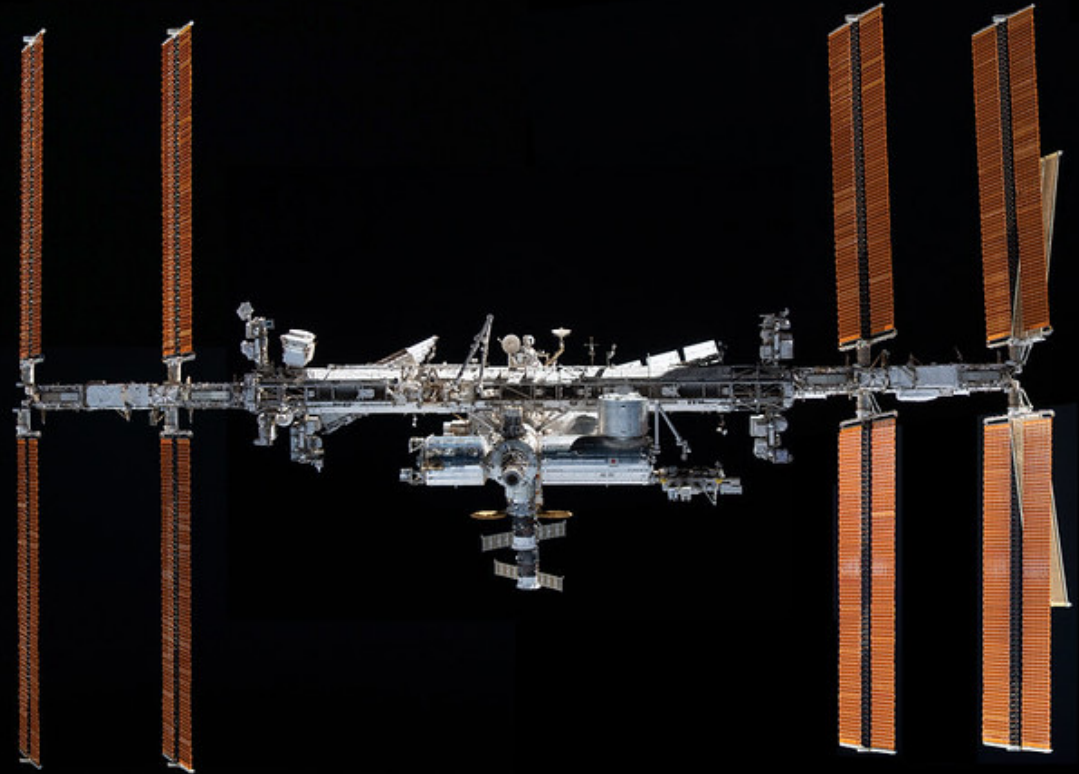
Worldwide and industry commitment:

- 37 Shuttle flights
- 160 spacewalks
- \$50B+ to develop/assemble;
- ~\$100B to date

World-class orbiting laboratory:

- 4,000+ research investigations
- 5,000+ researchers
- 110+ countries

- 290+ visitors from 26 countries



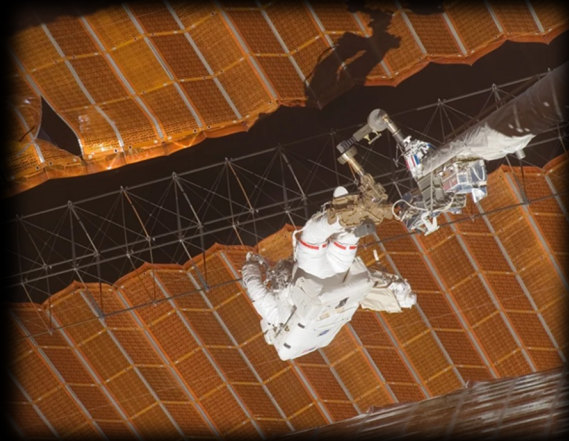
25+ YEARS OF OVERCOMING THE IMPOSSIBLE



A quarter-century of success was forged through significant failures and anomalies. The ISS remains state-of-the-art only through relentless, high-stakes human intervention.



Columbia, SpaceX CRS-7, and Orbital CRS-3 failures highlighted need for redundancy and resiliency



Since assembly, conducted 110+ spacewalks to address equipment failures or upgrades



Overcame numerous vehicle and suit anomalies and medical events



30 years and significant investment to get the ISS state-of-the-art life support systems to current performance

Any future station will encounter similar failures and challenges. Overcoming them will require expertise, robust capabilities, and strategic planning.



CURRENT COMMERCIAL MARKETS



Commercial use of ISS

- Four commercial Private Astronaut Missions
- Use of ISS ports & facilities; commercial R&D

After 25+ years, no breakthroughs products or capabilities that generate demand

- NASA continues to offset infrastructure costs
- No evidence of scaled product manufacturing on Earth or in space

Tourism has not materialized as a market

- Sovereign entities have funded short duration missions but not long duration



There is no independently-verifiable market research indicating economic viability of a commercial station partially funded by NASA.

Having independent data is paramount. ISS will end, and the replacement path must be economically viable and technically feasible, or America would give up its presence in LEO.



CHALLENGES

Presence in LEO is a national imperative

ISS life is limited, and we cannot get replacement approach wrong

Complex development and high risk

Replacement Station development will require robust, reliable systems and partnerships

No self-sustaining market

No data suggests nations, companies, or individuals beyond NASA will create sufficient demand

Budgets are inadequate

Unable to fund the original path of two stations. Challenge to afford one: multi-billion shortfall

Stage is set for single “winner take all” with an uncertain outcome.



PATH FORWARD

Doing nothing is not an option

NASA will attempt to stimulate commercial demand and increase commercial access to ISS

Increase PAMs, sale of commander seat, potential joint crew missions and prioritize high potential commercial research

We welcome industry ideas to address the challenges and risks

We are open to continue with original commercial plan or to pivot to a new preferred option

ORIGINAL PATH



NASA's Original Goal for LEO

NASA anticipates tourism and other markets drive significant demand

Larger customer base allows bulk commercial transportation buys creating discounts for all

NASA invests significantly less for development and services (50% or less)

NASA is one of many customers across multiple commercial destinations

Market is self-sustaining

Market/Budget Reality

Limited market growth and very limited recurring demand

Transportation costs are increasing, not decreasing

NASA positioned to be primary/majority customer; insufficient budget for 2 destinations

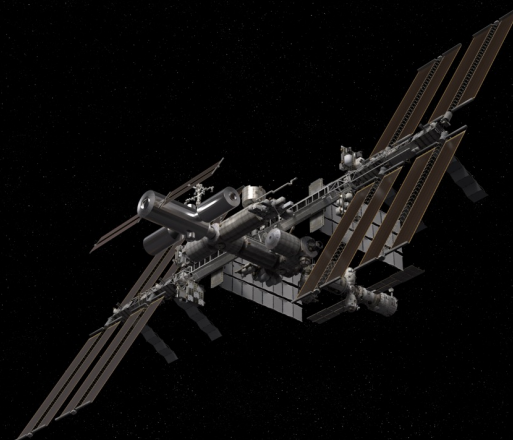
NASA procures from a single provider with high execution risk in an uncertain market



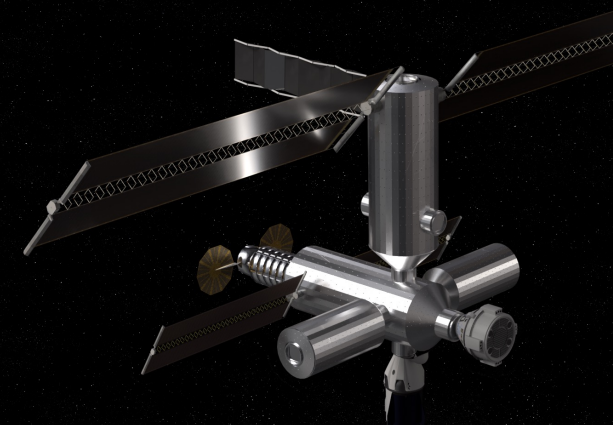
ALTERNATE APPROACH FOR COMMERCIAL DESTINATIONS



ISS TODAY



ADDED CORE



DETATCH

Leverage ISS

- Stable platform in LEO
- Stimulate market: more private astronaut missions and additional commercial opportunities

Add core + commercial modules

- Foundation for future separation
- Mature industry capabilities
- Grow demand

Transition to Commercial

- Industry achieves operational readiness
- Multiple stations can detach
- NASA becomes one of many customers buying services



BENEFITS OF ISS BEFORE DETACHING



Fully Operational to Support Continued Commercial Development



Operational Flexibility for Outfitting & Anomaly Response



Shared Habitability and Crew & Cargo Capability



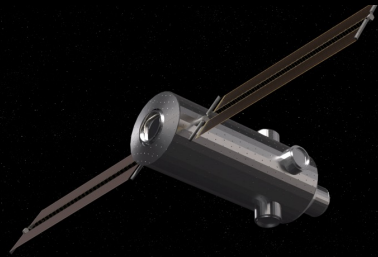
ISS Robotics and EVA



Transfer of ISS Assets



EVOLUTIONARY ASSEMBLY

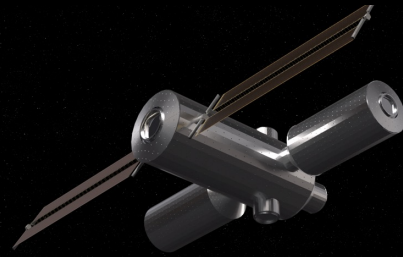


Starting Point

Core Module

Delivered and assembled to the ISS

Additional PAM missions enabled by additional docking port

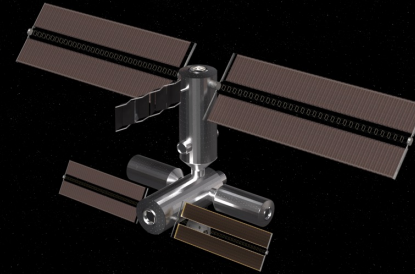


Commercial Expansion

Commercial Modules

Two commercial modules arrive and are assembled to the core

ISS assets are transferred and installed to complete outfitting



Separation and Growth

New Station

Power and cooling expanded to foster full utilization and continuous crew presence

Seamless transition from ISS to new station



Commercial Market Achieved

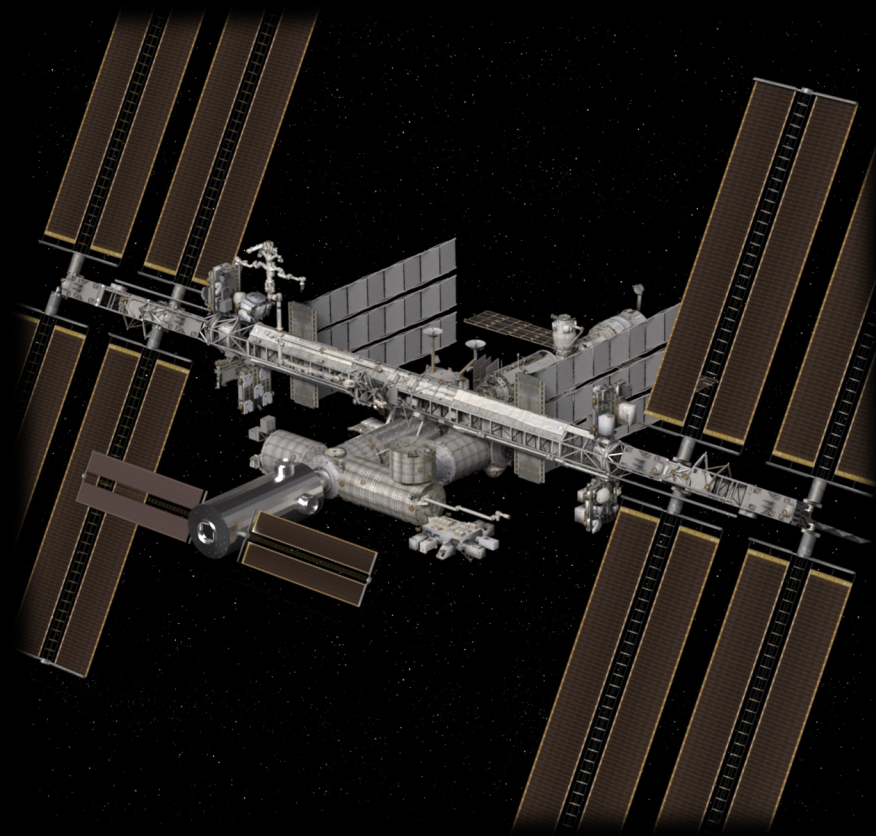
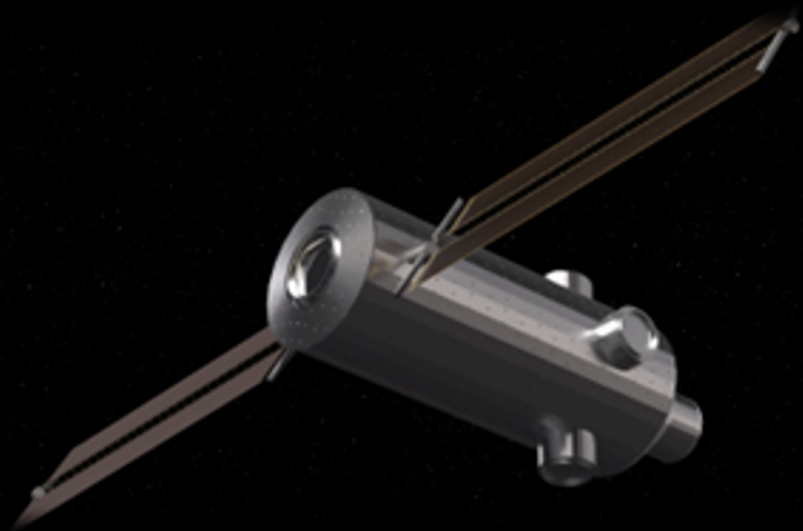
Multiple Destinations

Commercial expansion leading to multiple free flying destinations

Market grows: NASA becomes one of many customers in a new LEO economy

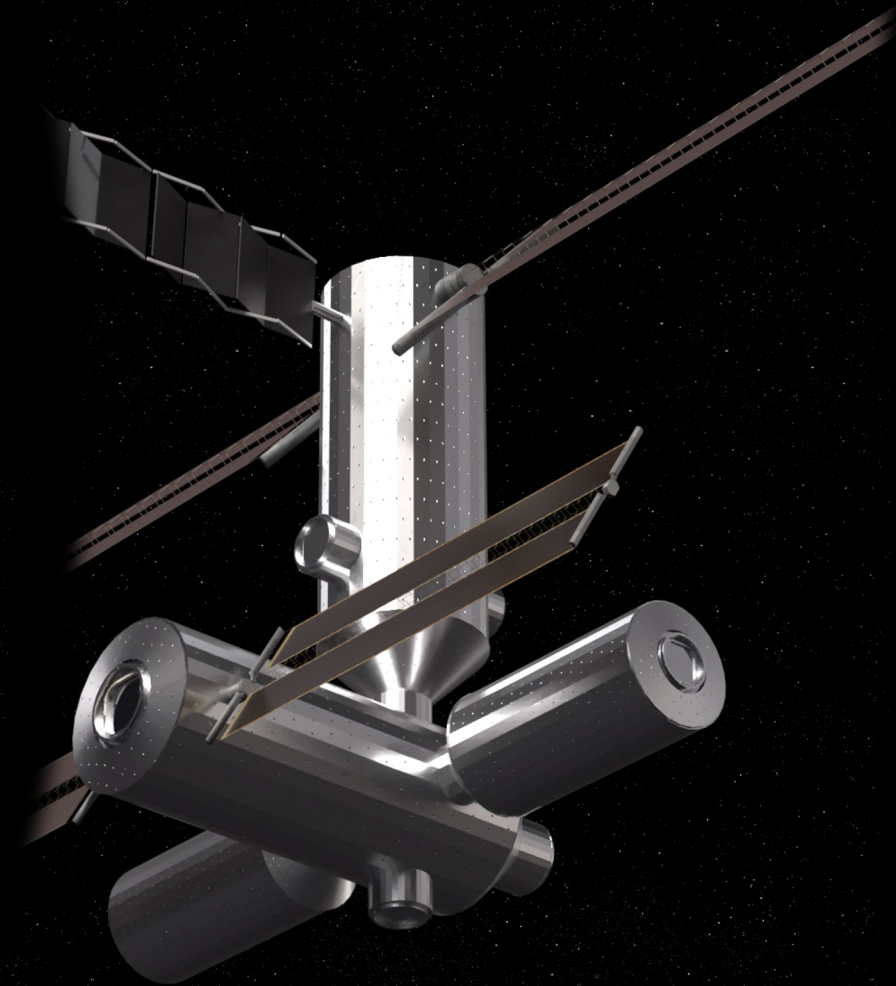
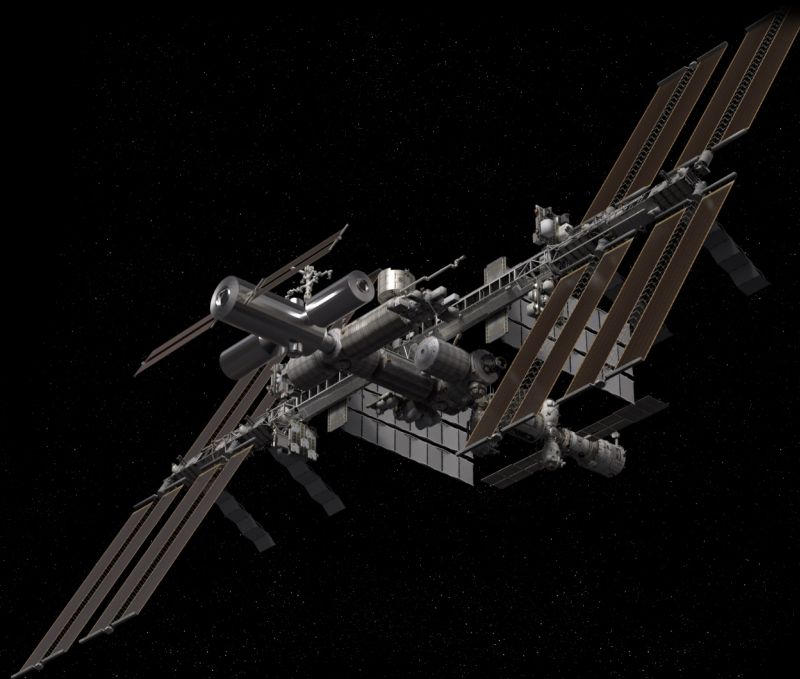
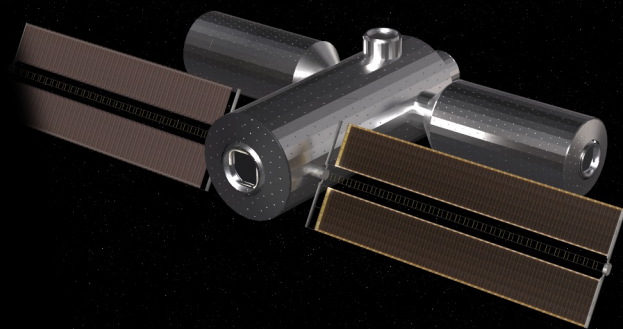
CORE MODULE

- NASA-procured core module enables multiple commercial module providers
- Includes propulsion, power/cooling, basic life support, and is compatible with existing transportation
- Attaches to ISS forward port



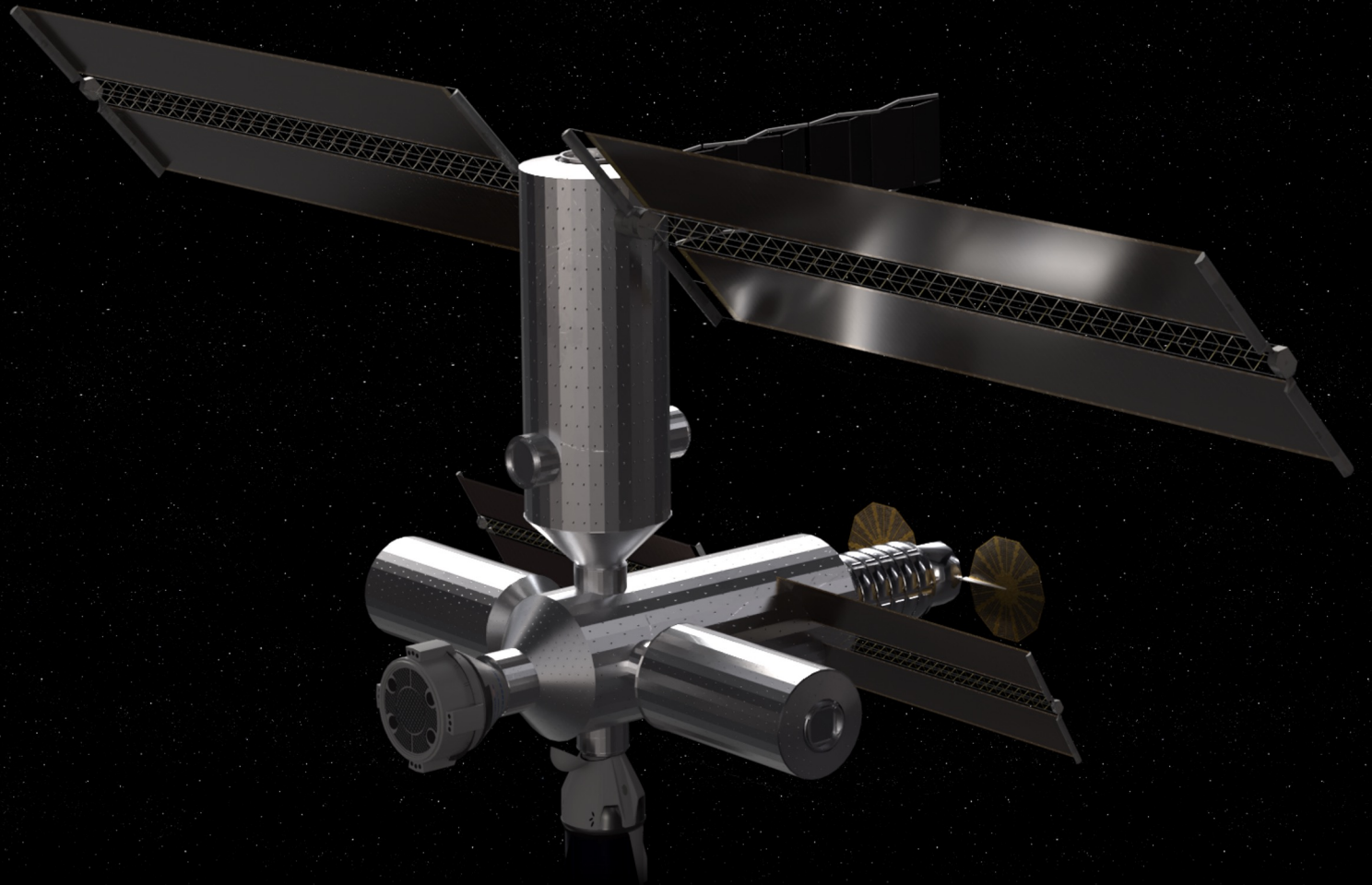
COMMERCIAL MODULES

- Commercial modules provide research and habitation capabilities to meet NASA research and industry commercial needs
- Modules attached to Core at ISS
- Partnership arrangement for development and operations with transition to a commercial service upon market maturation



FUTURE EXPANSION

- Market-driven flexible and scalable architecture
- Additional commercial modules can be added
- Transition to free-flying commercial platforms at market demand pace



MULTIPLE OPPORTUNITIES FOR INDUSTRY



Expansion of opportunities on ISS:

- Two PAM missions per year
- PAM commander seat sale
- Expanded ISS commercial use
- Potential commercial/NASA joint crew missions

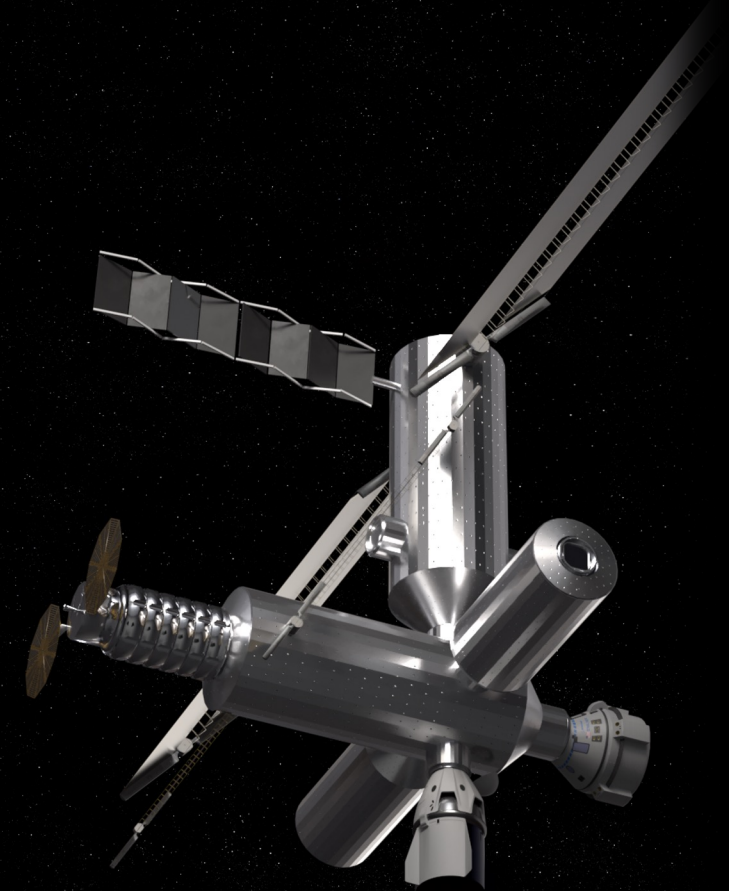
Module development:

- Core module development
- Commercial modules by two providers in initial phase

Future commercial acquisitions:

- Market-driven power and cooling module
- Additional commercial modules and capabilities
- Market-driven transition to free flying commercial destinations

Continued crew and cargo transport demand past ISS





ALTERNATE OPTION: PHASED PROCUREMENT

2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035

Phase 1: Core Module

Core Initial Design (Provider 1)

Core Initial Design (Provider 2)

Core Module Downselect

Phase 1: Commercial Module (Provider 3)

Phase 1: Commercial Module (Provider 4)

ISS Commercial Use Calls

Call 1

Call 2

Call 3

Call 4

Phase 2: Power and Cooling Module (Market Driven)

Power and Cooling Design (Provider 1)

Power and Cooling Design (Provider 2)

Power and Cooling Module Downselect

Phase 3: Commercial Module Expansion or Services (Market Driven)

Phase 1 RFI Timeline

Concept RFI	3/25/26
Final RFI	4/24/26
Draft RFP	6/1/26

Available budget is \$250 million per year through end of ISS



WRAP-UP

It is a national imperative to maintain U.S. leadership in low Earth orbit.

Regardless of the path we choose, we have a real budget shortfall.

Look for RFI on SAM.gov on March 25th and give us feedback for both options:

- Ideas for implementing the new approach including partnership arrangements
- Hard financial commitments to ensure stability through manufacturing and launch
- Long-term economic viability beyond NASA as a customer
- Major technical hurdles and approach to managing them

NASA commits to a rapid turnaround of industry inputs to proceed toward procurements.