

Starlink

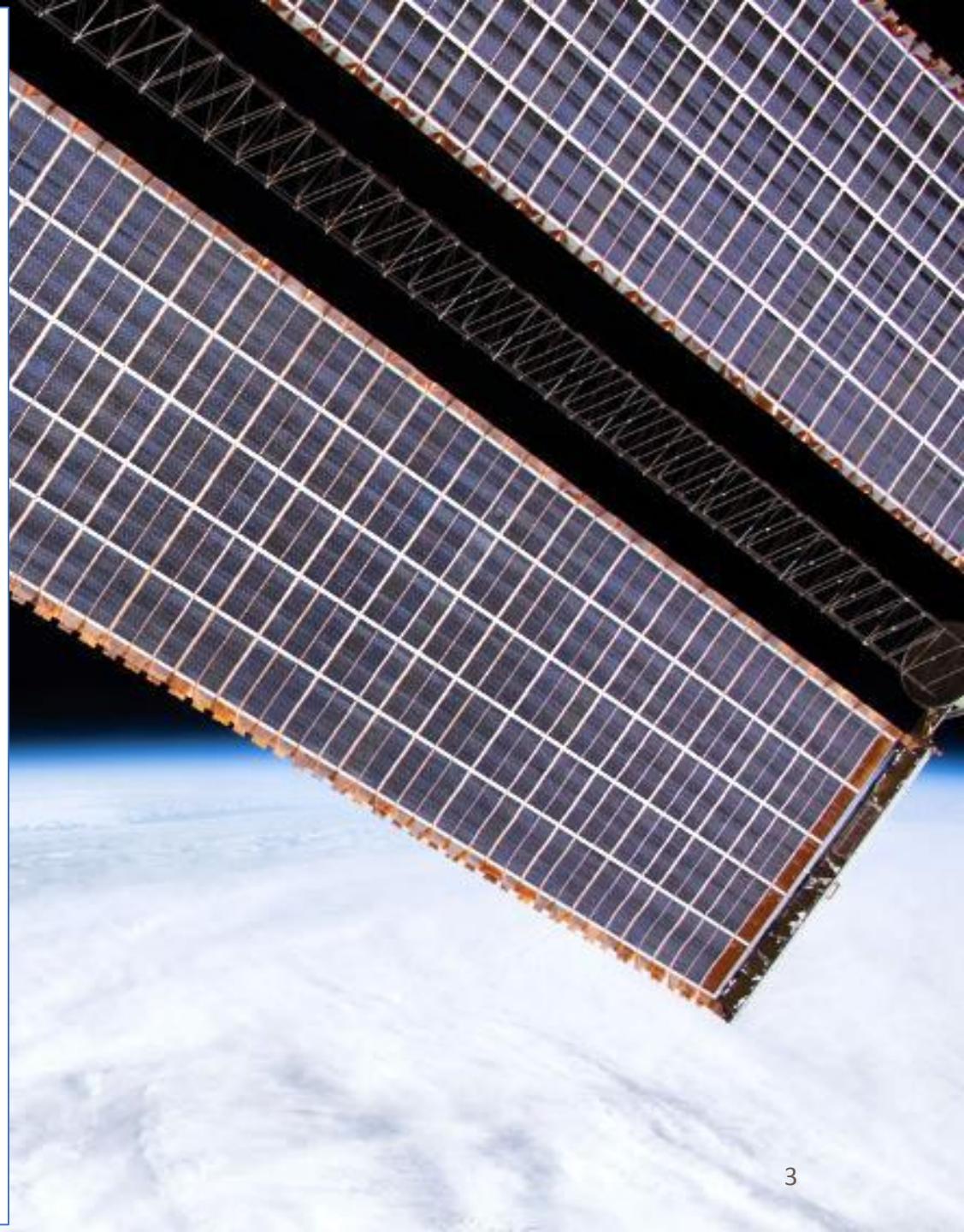
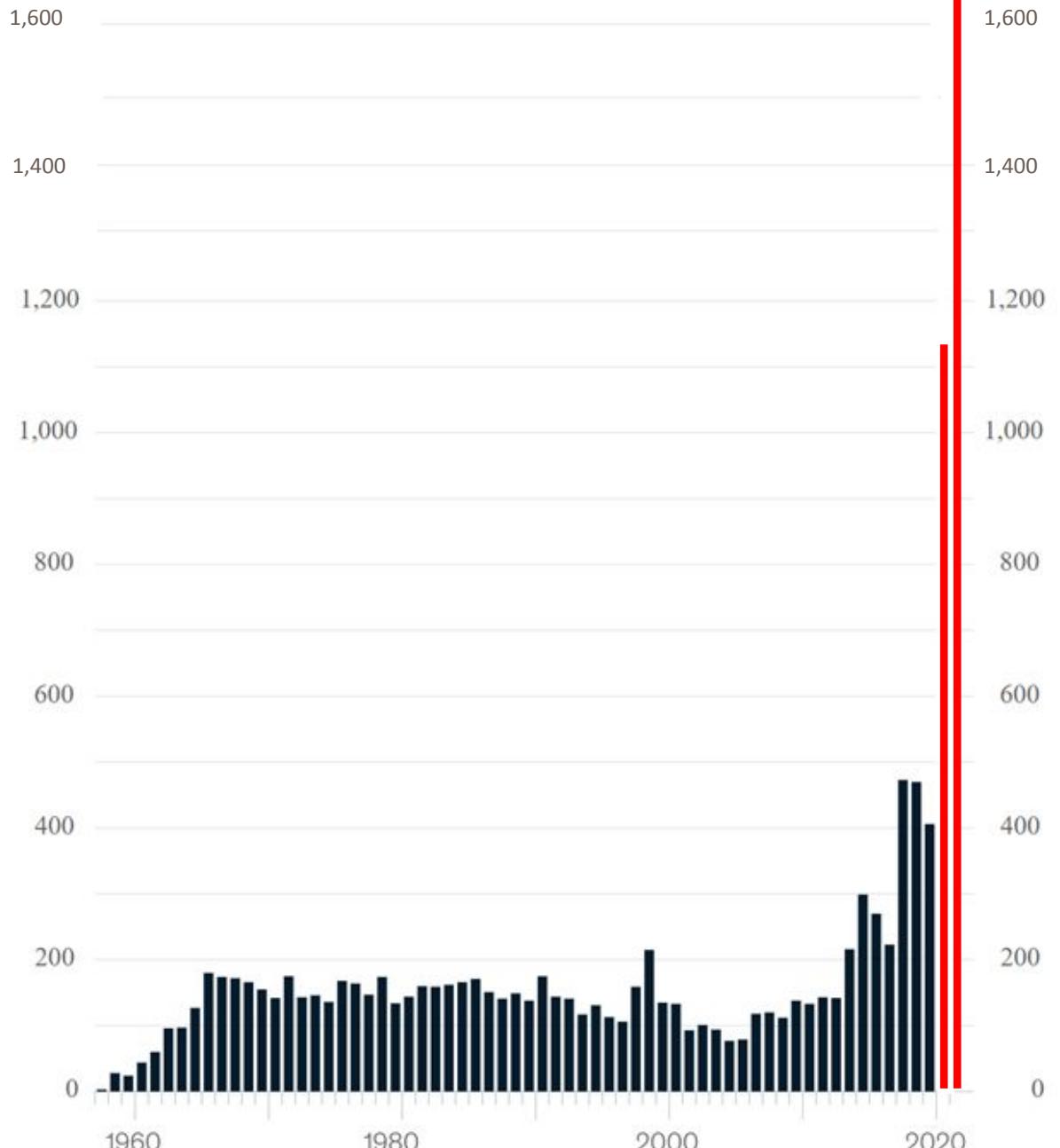
The sky is not the limit



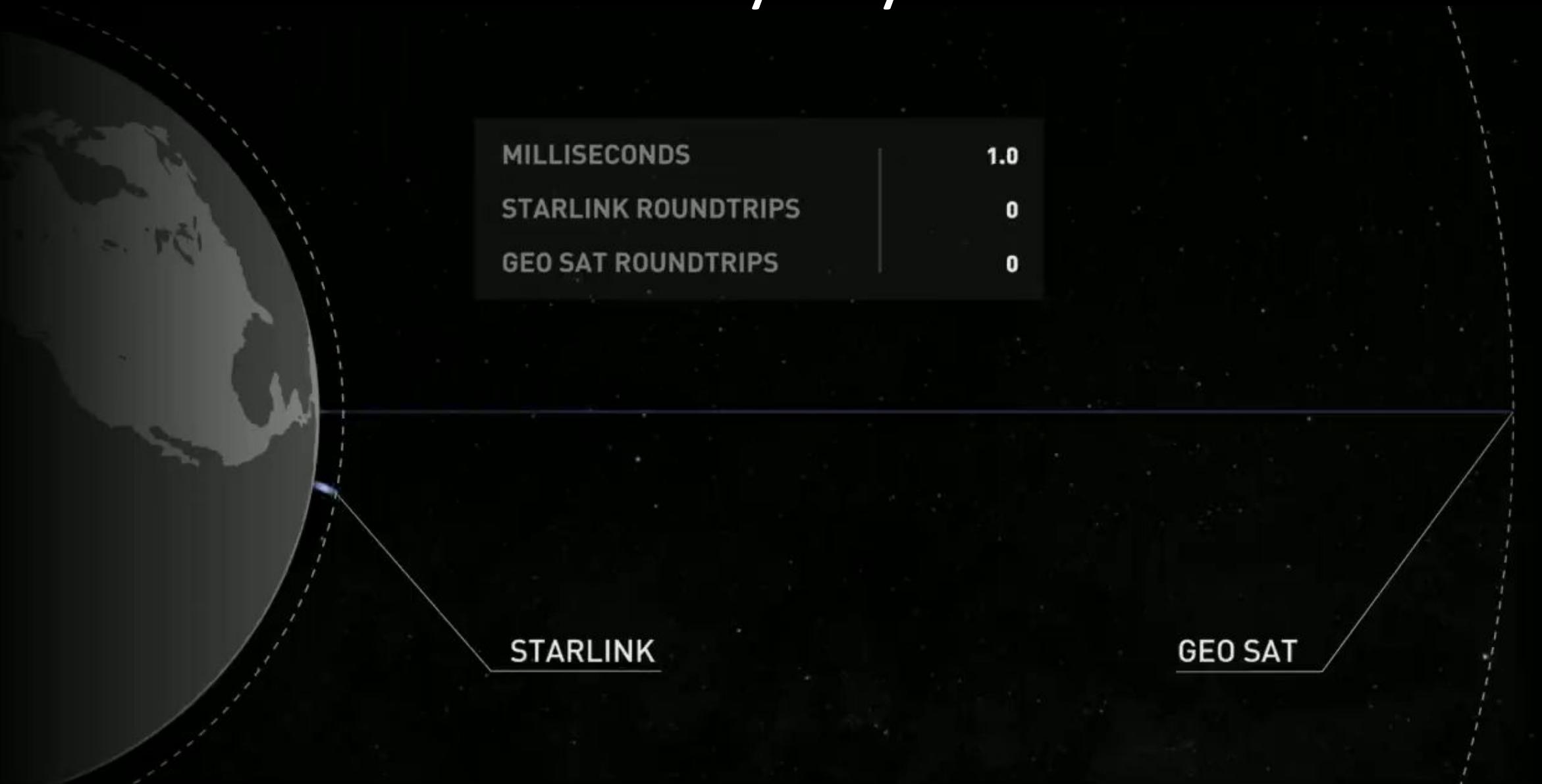
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- Why now?
- How are these any different?
- Commercial Applications
- Limitations
- Costs
- The future

Satellites launched 1957–2020,¹ number per annum



How are they any different?



How are they any different?

		Space			Terrestrial	
		LEO*	GEO	Fiber	5G	3G
Speed		Yellow	Red	Green	Green	Yellow
Latency		Green	Red	Green	Green	Green
Coverage		Green	Green	Red	Yellow	Yellow

* small satellites



Satellite Constellations



How are they any different?

Higher

- Observation frequency
- Scale fragmented systems
- Redundancy

Lesser

- Launch costs
- Response times

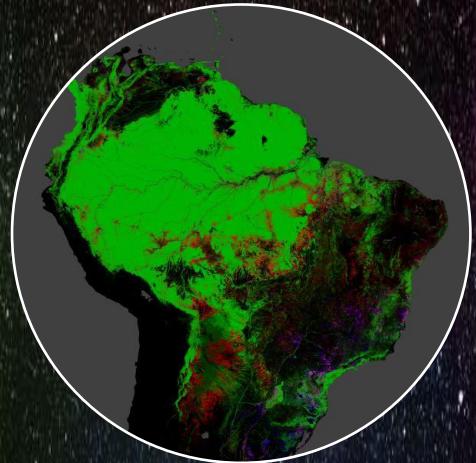
Applications of small satellites



Earth and
Science
Observation



IoT and
Communication



Science and
Environment

Applications of small satellites



Security, Defence and
National Space
Programmes

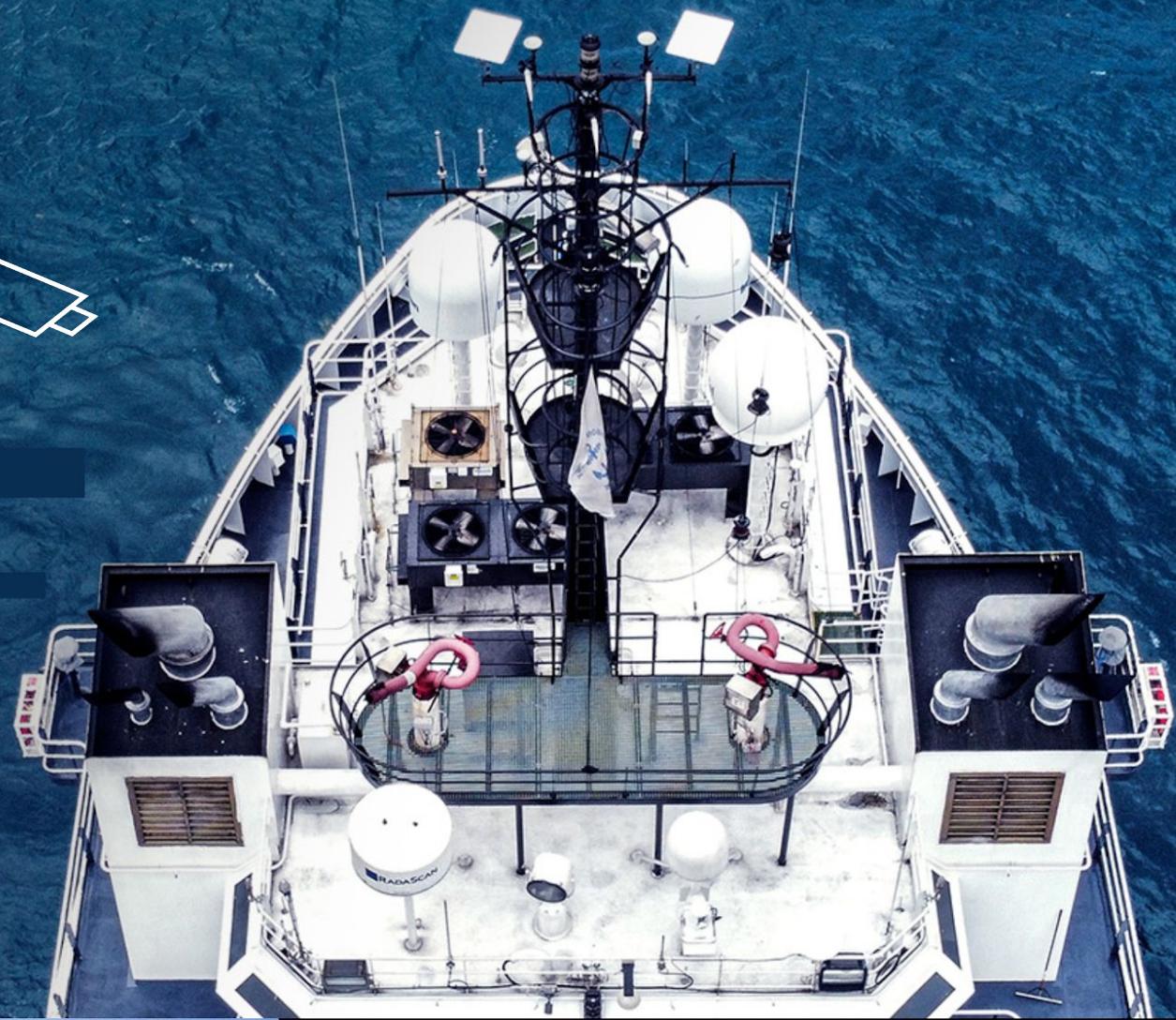
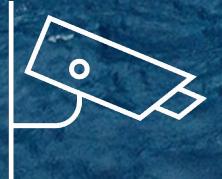


Asset Tracking



Others

1. SECURE FLEET MANAGEMENT, REMOTE MONITORING



A dark-colored van is parked on a low-lying, scrubby coastal landscape. The van has a roof rack and a small ladder. In the foreground, a white laptop sits on a small tripod stand. The background features a calm ocean and a sky transitioning from blue to warm orange and yellow hues of a setting sun.

Work from
“Home”



An aerial photograph showing a large area of white, textured snow and ice. In the center, there is a large, irregularly shaped white patch, likely a glacier or a large iceberg. The surrounding area is dark blue, representing water. There are several smaller, rounded white shapes scattered throughout the scene, which could be smaller icebergs or snow-covered land. The overall image has a grainy, high-contrast appearance.

3. Earth Observation



4. Security and Defense

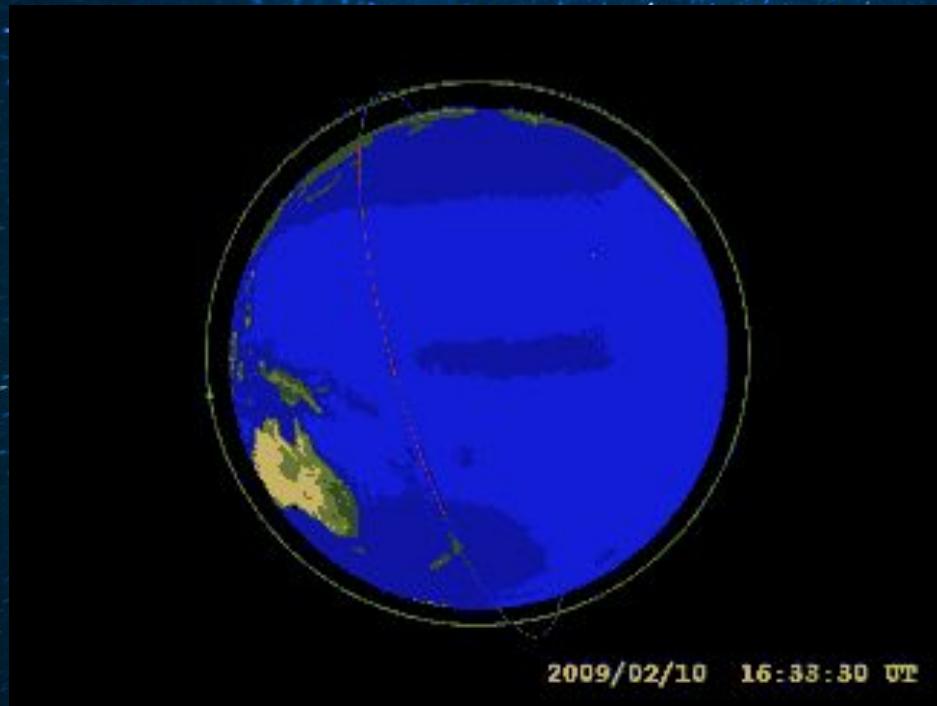


Coca-Cola

5. Other applications

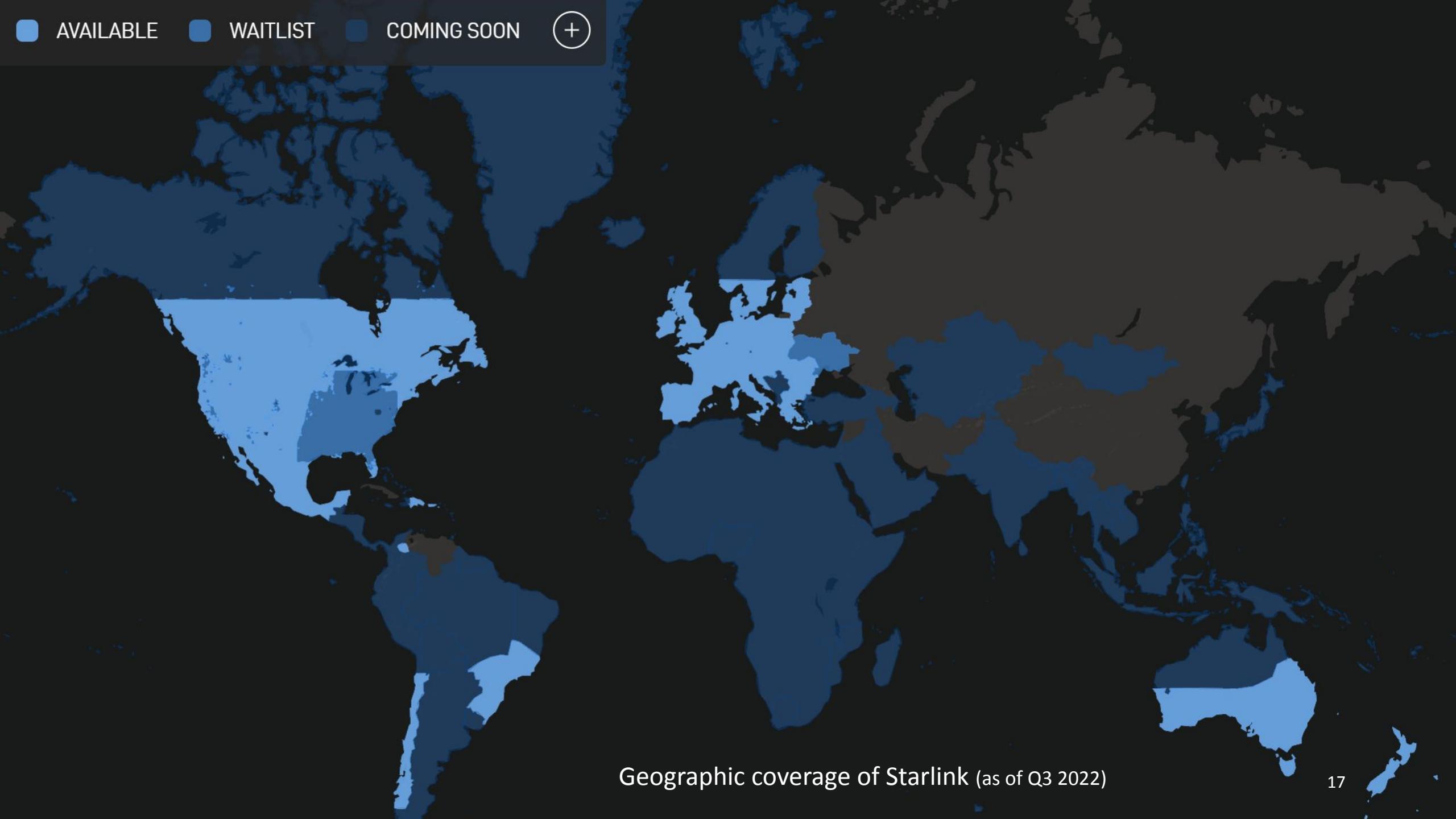
Concerns being addressed

Space debris



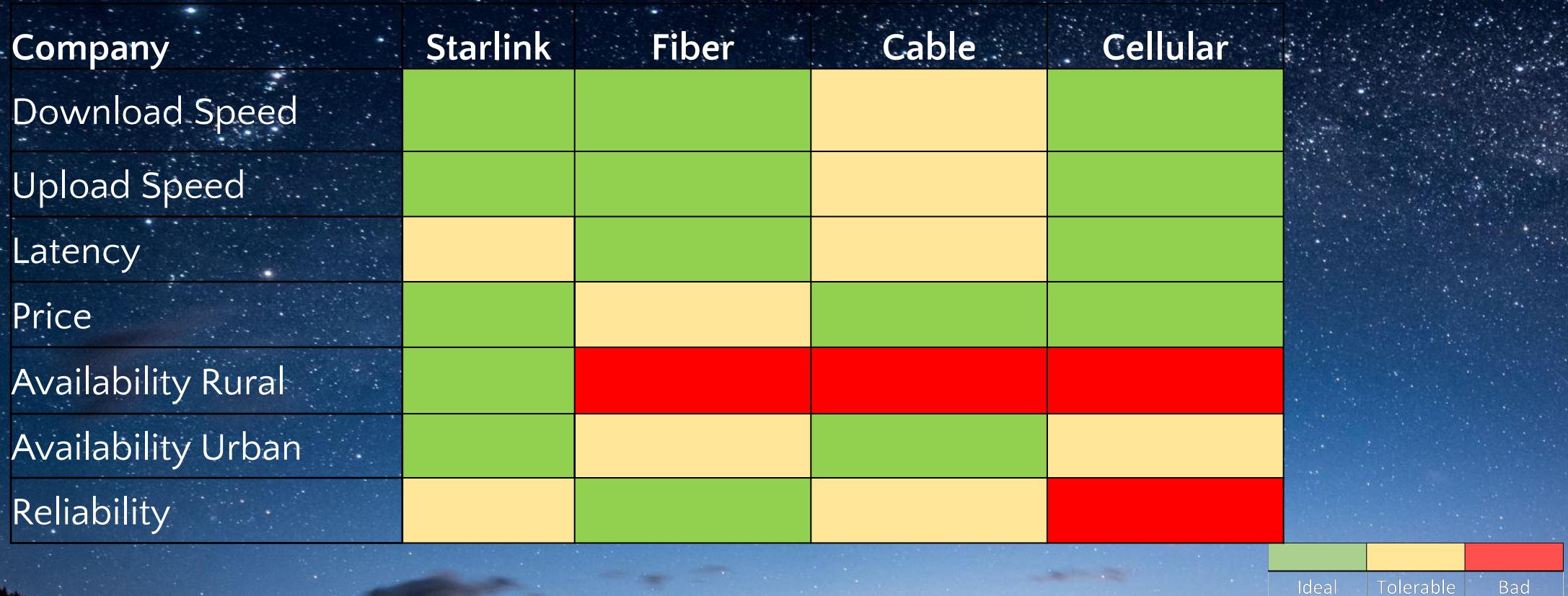
Space research obstructions

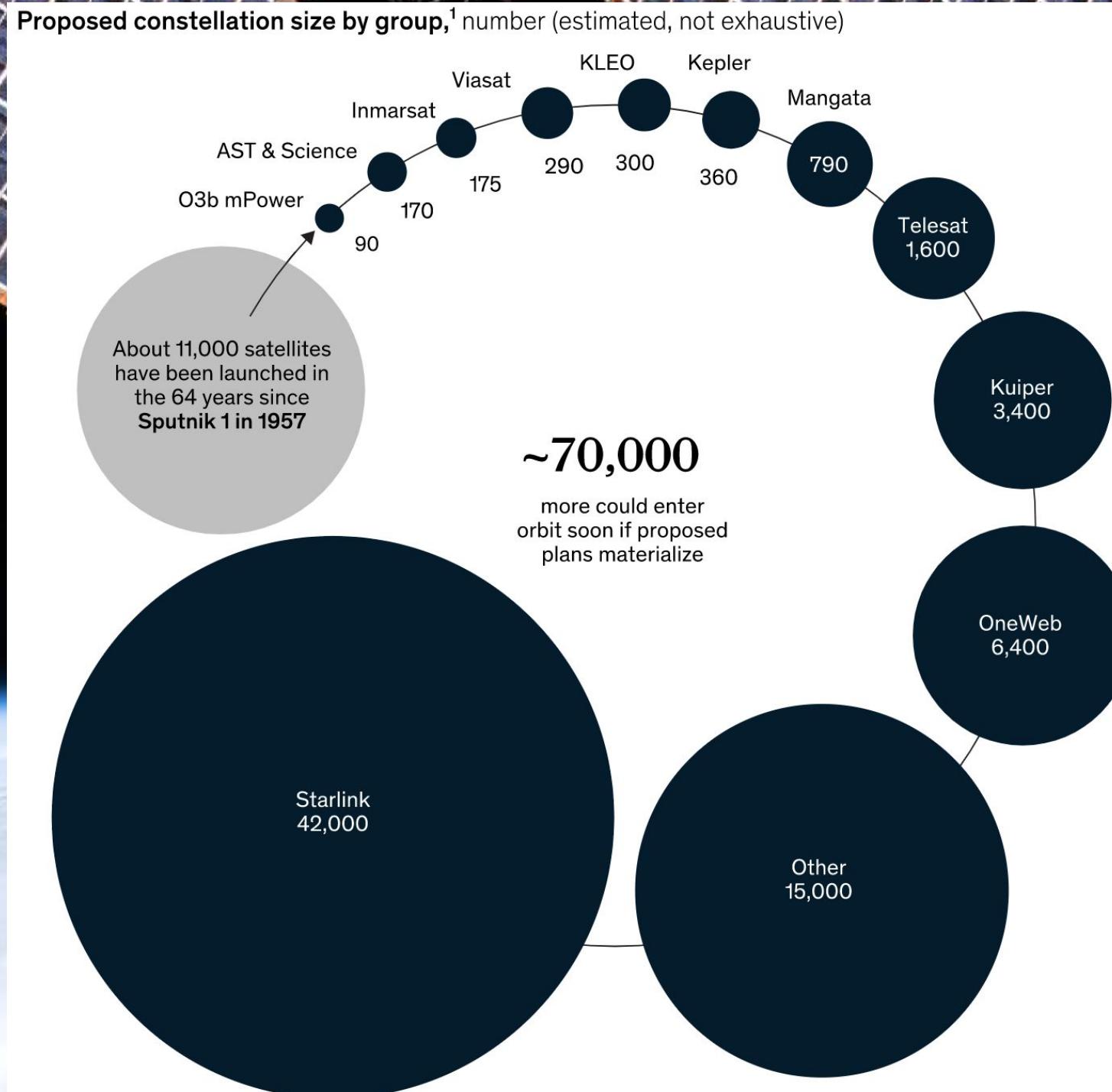
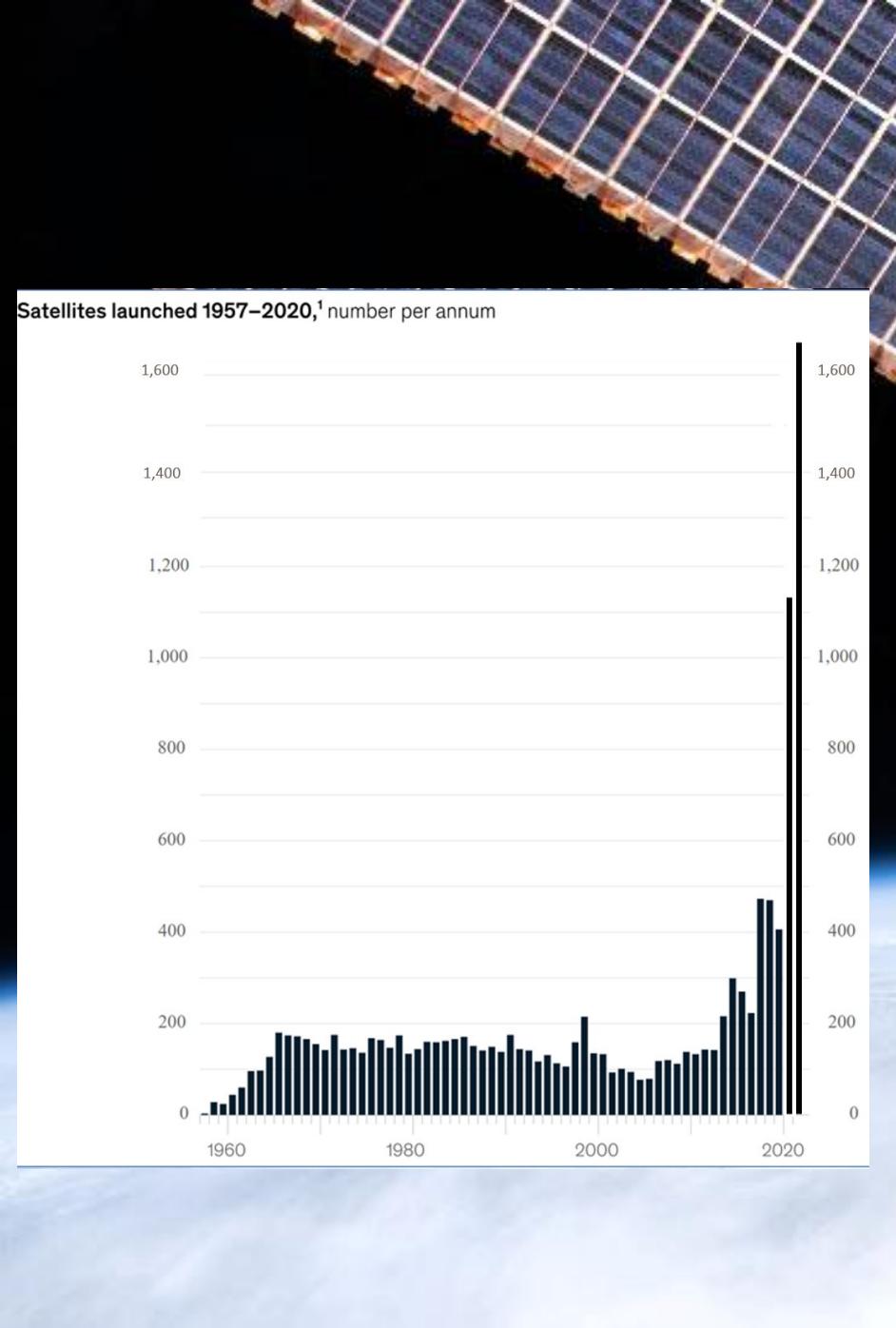




Geographic coverage of Starlink (as of Q3 2022)

What am I missing out on?





The sky is not the limit

