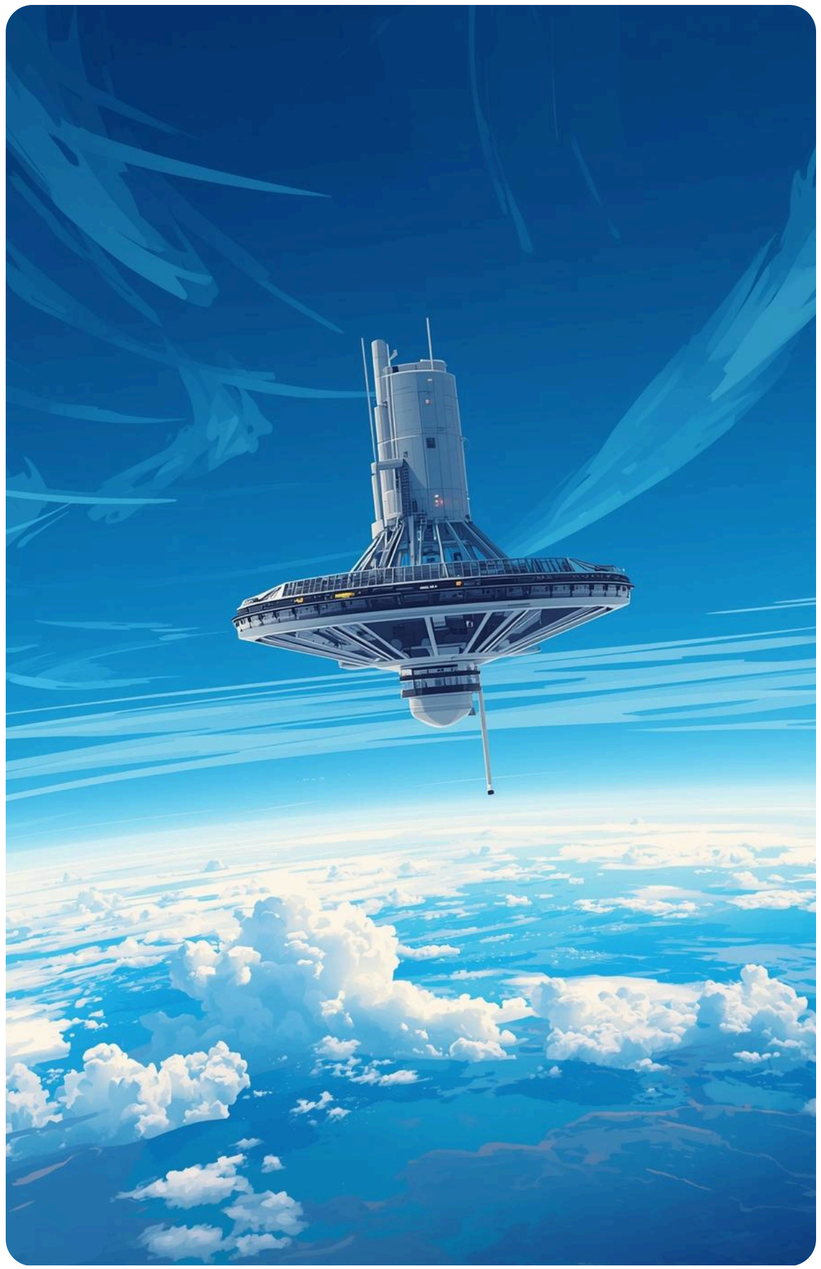
Alternatives to Satellites

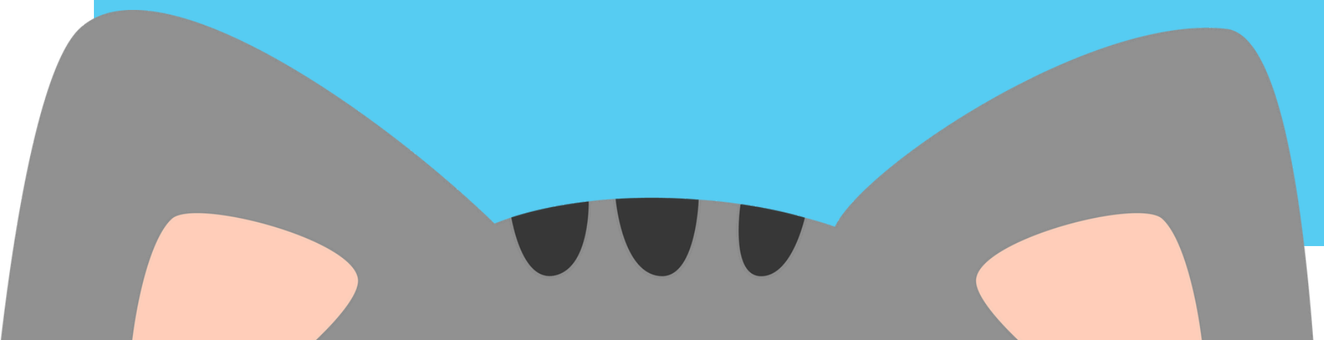
High-Altitude Platform Systems



HAPS Definition

Understanding **High-Altitude Platform Systems**

HAPS are **aircraft operating at stratospheric altitudes** (~20 km) that provide essential communication and observation capabilities, offering lower latency and cost-effective solutions compared to traditional satellites.



Popular applications of HAPS

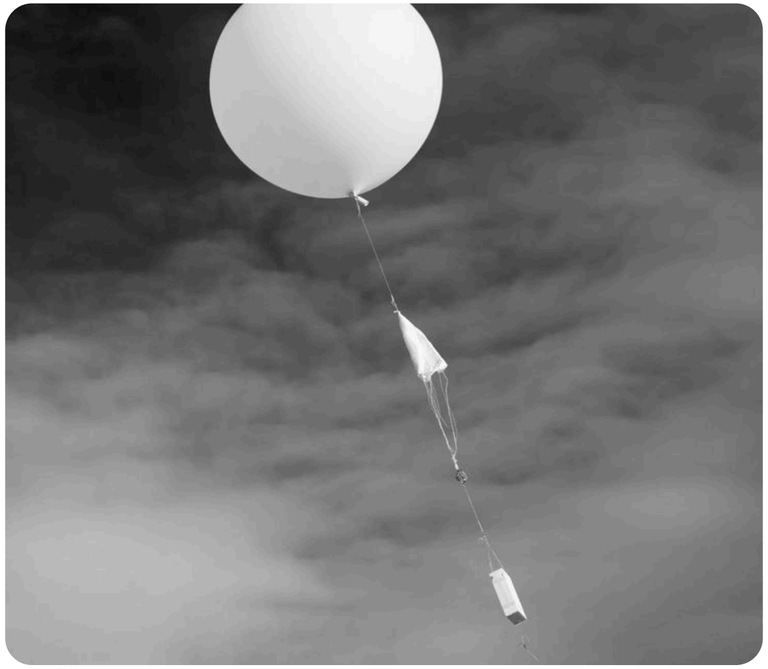
High-Altitude Platform Systems

Communication

Enhanced coverage in remote areas

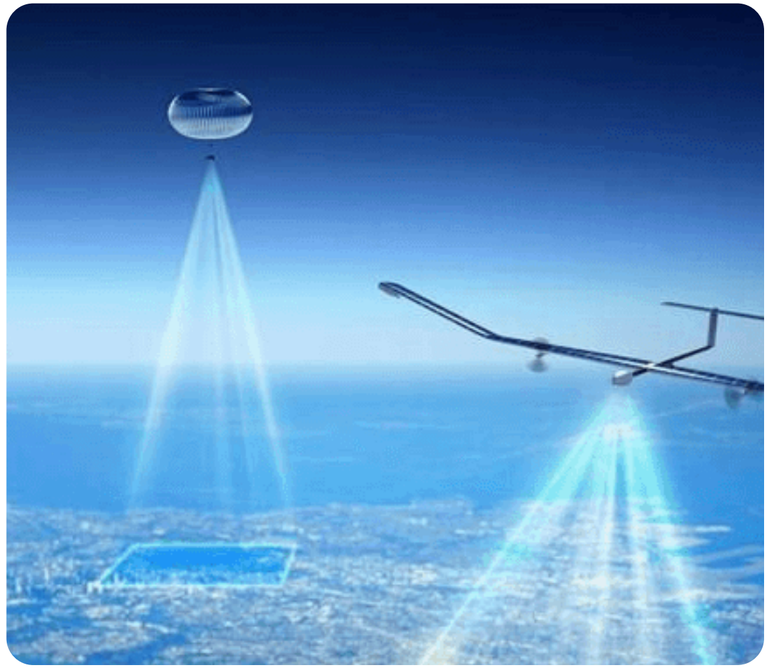
Weather Monitoring

Innovative data collection from atmosphere



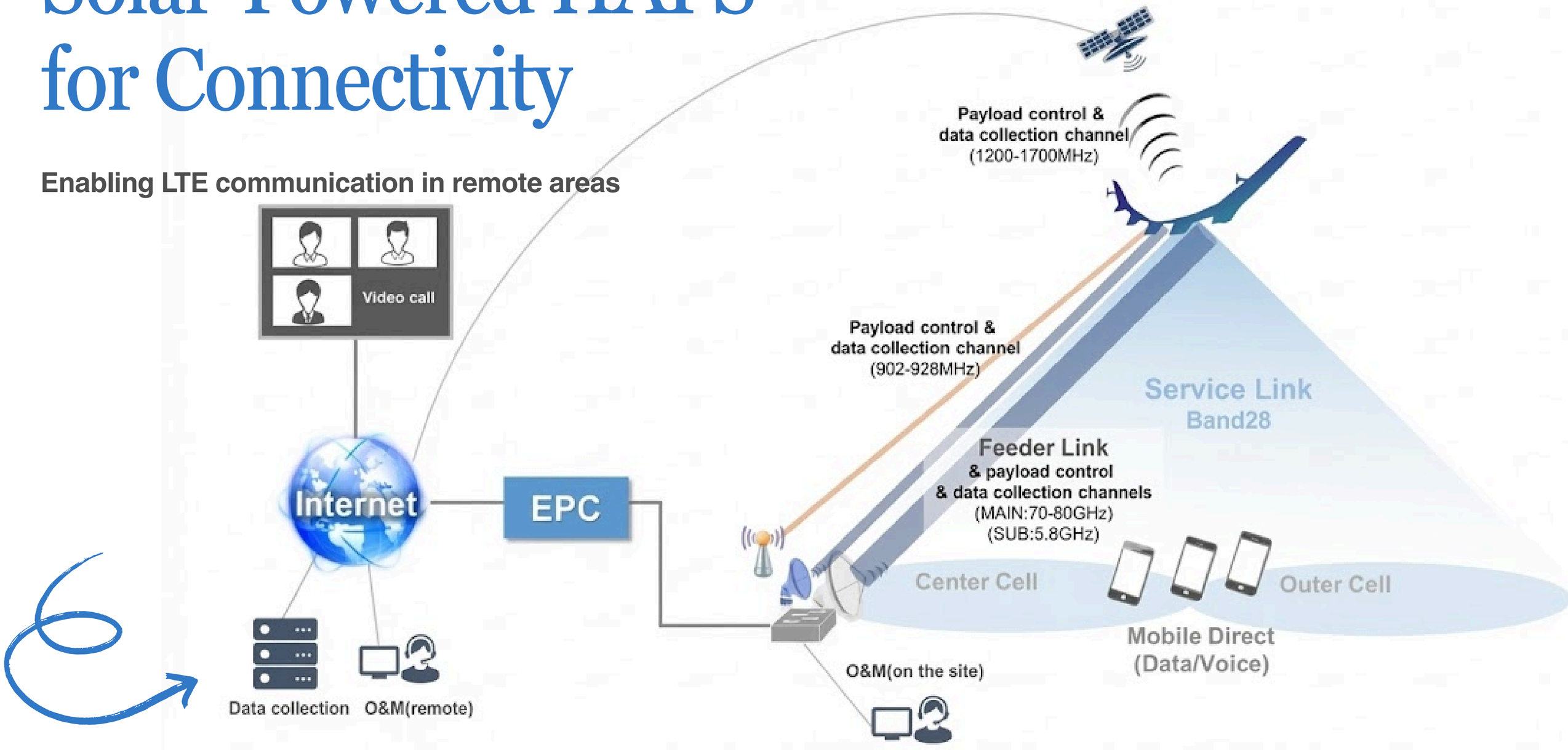
Observation

Continuous, high-altitude monitoring



Solar-Powered HAPS for Connectivity

Enabling LTE communication in remote areas



Most popular HAPS: Balloons for Weather Measurement

Cost-effective

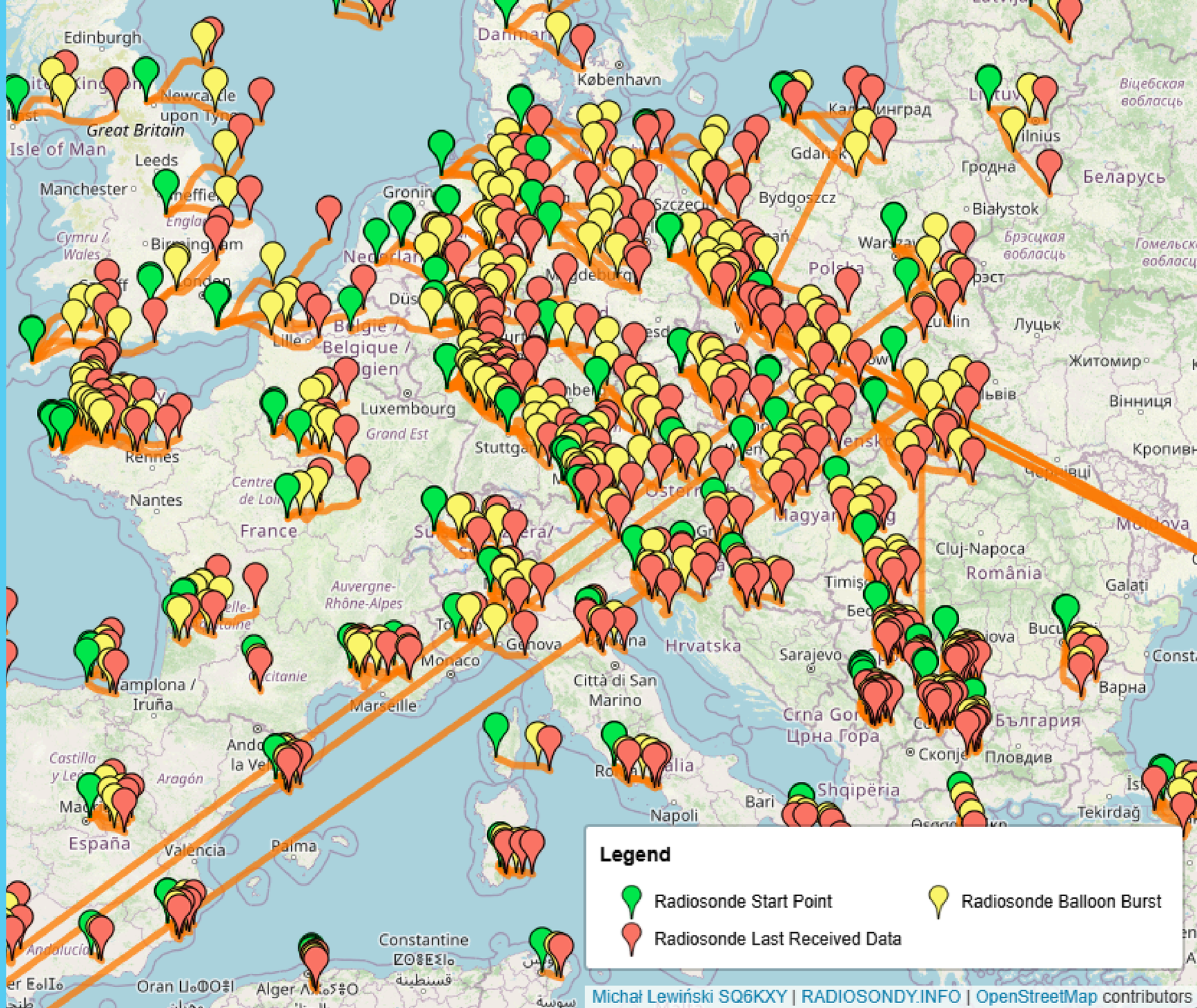
Balloons are inexpensive to deploy and operate.

Most accurate

Weather balloons can provide very accurate data about wind conditions.

Balloons for Weather Measurement

612 used in just 48 hours!



Future HAPS: Airships

High-Altitude Platform Systems

Still tested

First commercial tests are planned for 2026 in Japan, for telecommunications.

Development Limits

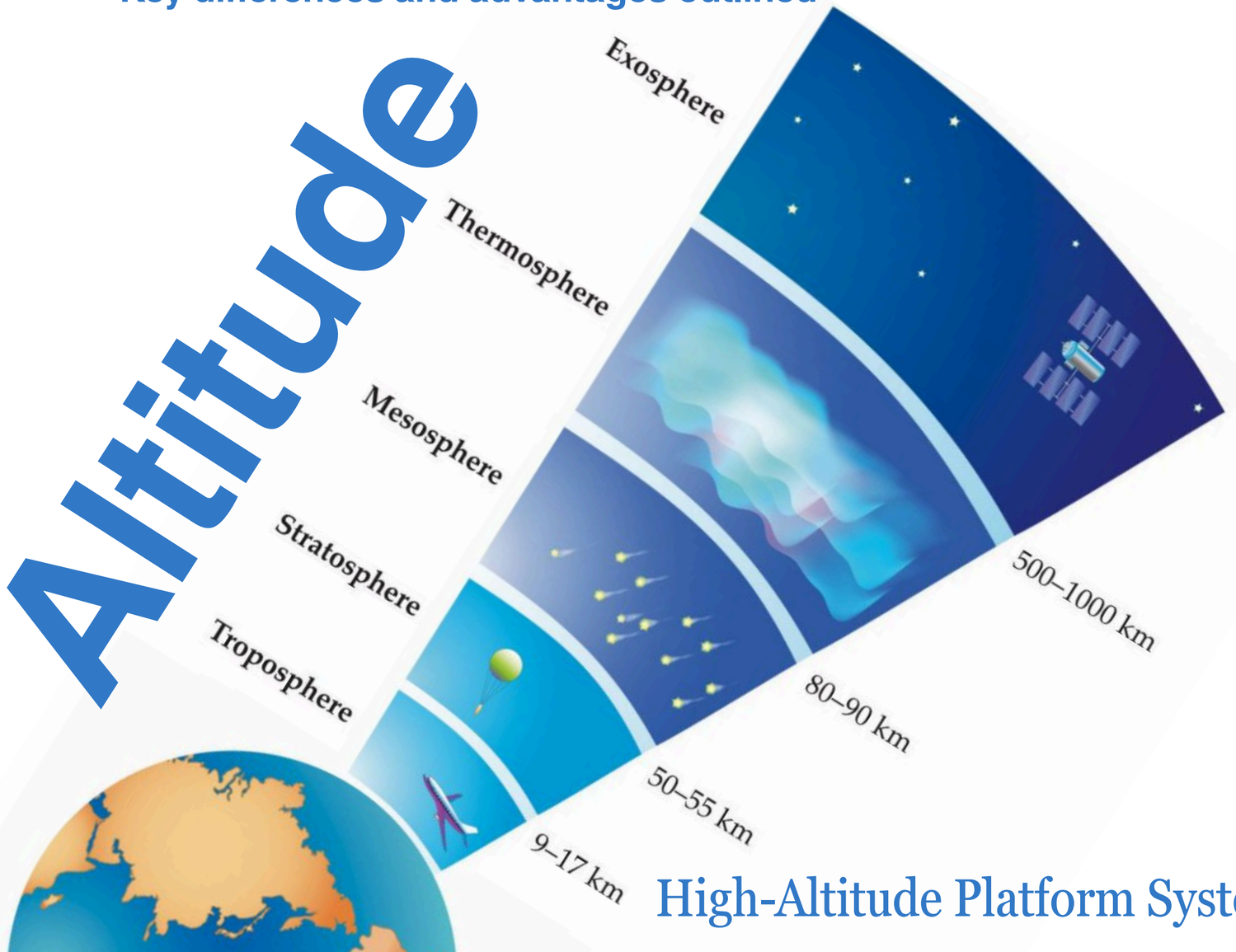
They are still difficult to build and less mature than solar aircraft.

Huge payload

Stratospheric airships can carry the most payload.

HAPS vs Satellites

Key differences and advantages outlined



Low latency

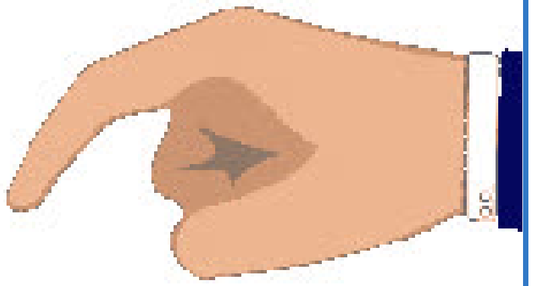
High-Altitude Platform Systems

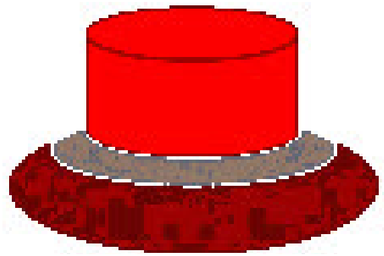
HAPS vs Satellites

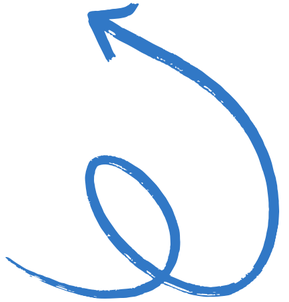
Key differences and advantages outlined

Cheeper

Deployment Speed







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