Proposal for Civil-Led International Security in the Indo-Pacific Region

WARPSPACE

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Shared National Security Issues and Threats

Mutual Threats in the Indo-Pacific Region

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Non-Traditional National Security

Traditional National Security

1 Disaster Management

- Flood
- Earthquake
- Landslide
- Forest Fire

2 Planetary Health

- Climate Change
- Bio-Diversity
- Public Health
- Water Scarcity

3 Supply Chain

- Extreme Weather
- Material Scarcity
- Port Congestion

4 Cyber Security

- Criminal Groups
- Nation States
- Terrorist Groups

5 Surveillance

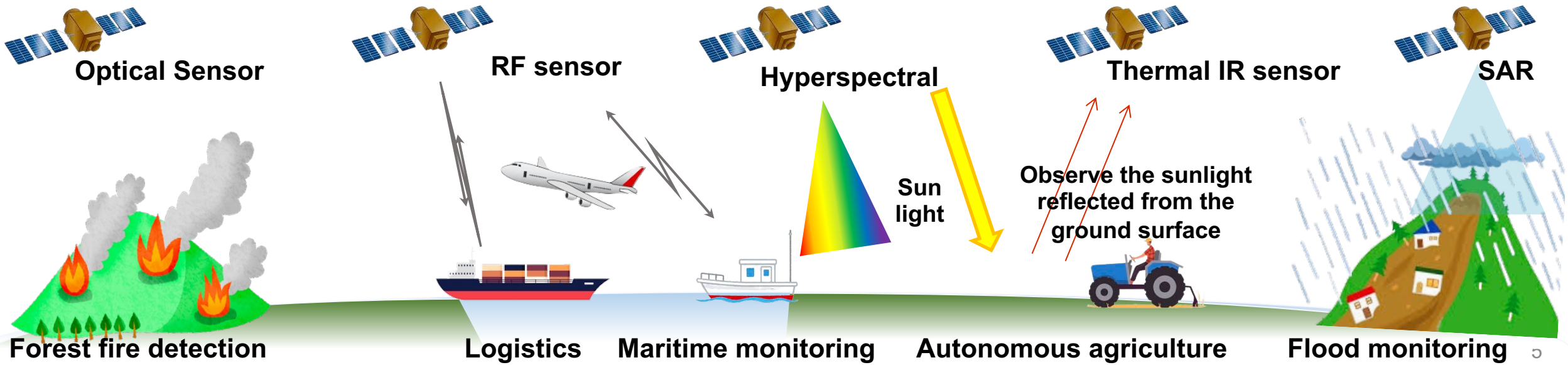
- Maritime Domain Awareness
- Border Security

6 Airborne Defense

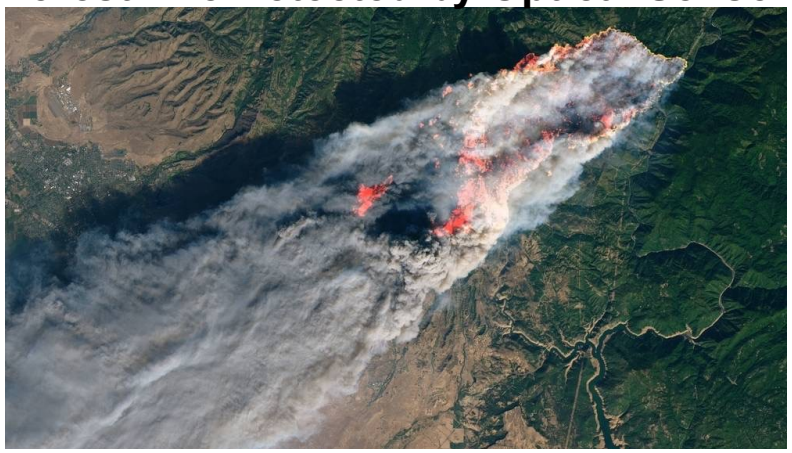
- Hypersonic Missile
- Unmanned Aerial Vehicle Attack

Contents

Applications of Earth Observation Satellites

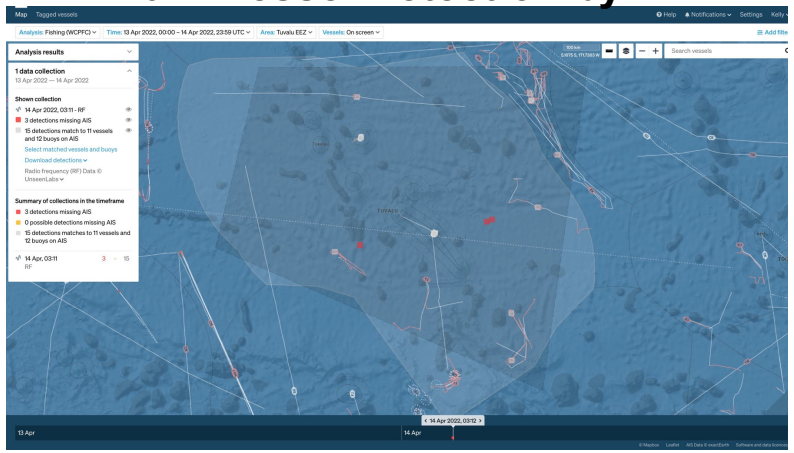


Forest Fire Detected by Optical Sensor



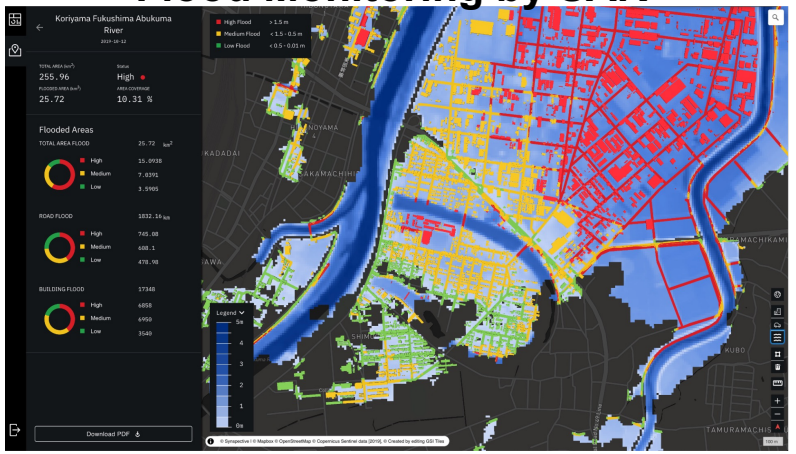
Credit: NASA

Dark Vessel Detection by RF



Credit: Starboard Maritime Intelligence

Flood Monitoring by SAR

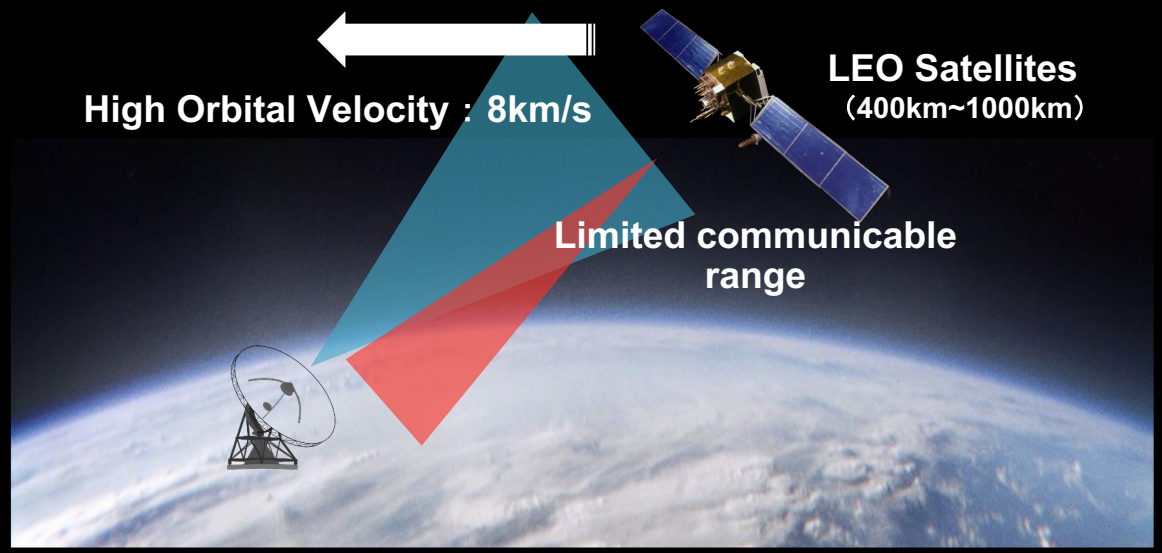


Credit: Synspective

Lack of Comm-Infra Holds Back the Growth

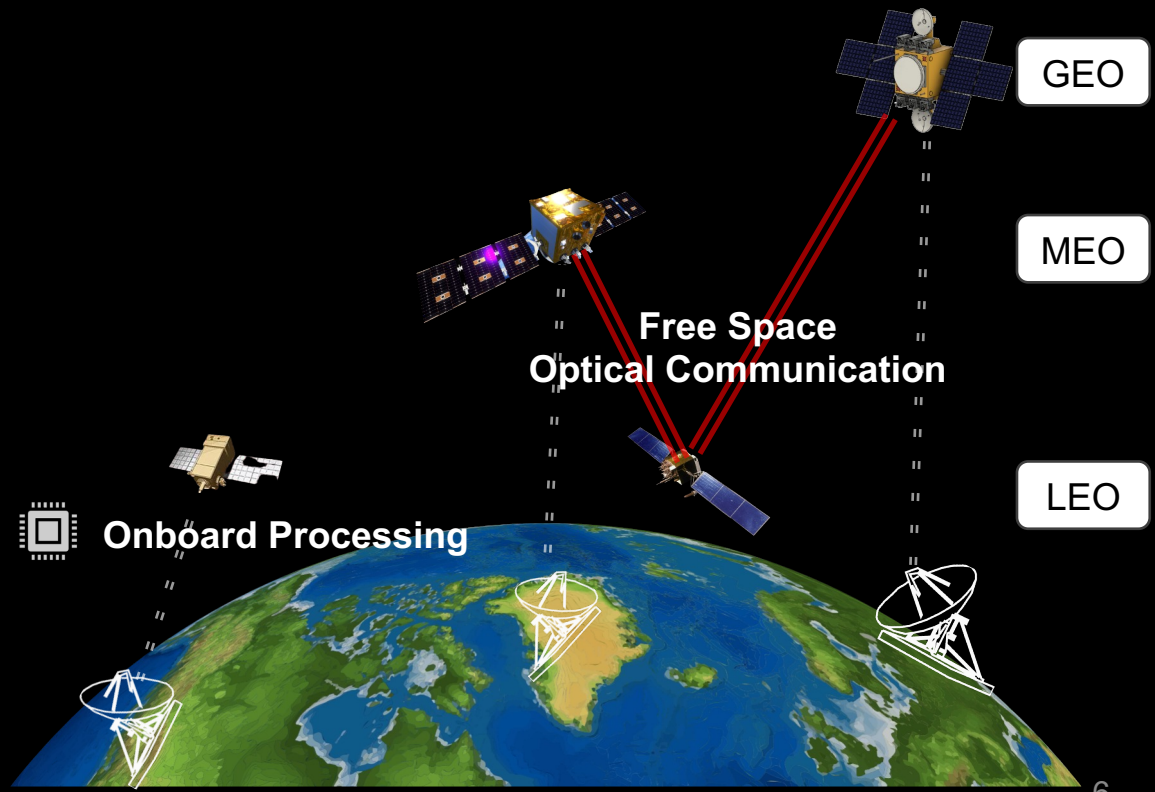
Major Comm-Issues in the EO Industry

Coverage	**90%** of Low Earth Orbit is out of Communication.
Latency	**A Few Hours** Required to Get Satellite Data
Capacity	**RF Link** isn't Capable of Downlinking a Large Data



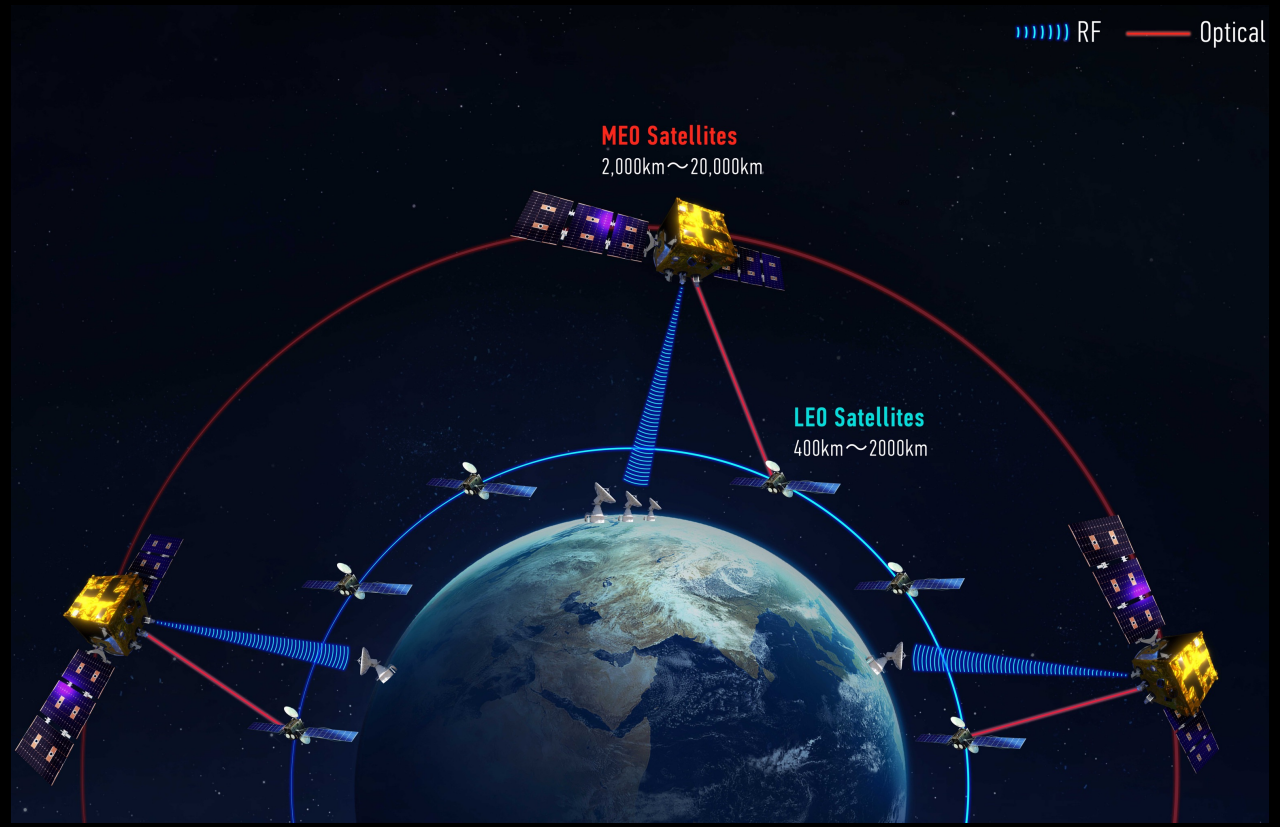
Expected Solutions

1. Free Space Optical Communication
2. Onboard Process with Edge Computer



Optical Inter-sat Link will Realize Real-Time

Image of the Architecture with Optical + RF Link



Overview of the 1st Gen of Constellation

	1st Sat	2nd/3rd Sat
Launch Plan	Q3~Q4 2025	2026
Expected Coverage	~30%	**70~90%**
Latency	~1h	**15-20 mins**
Data Rate	1Gbps~	
Security	Highly **Secured** Link	

Optical Has Four Major Advantages

	RF	Optical
Data Rate	~1Gbps	**1Gbps ~ 100Gbps**
SWaP (Size, Weight, and Power)	-	**50% less Mass, 25% less Power** (Compared to the RF)
License/ Coordination	✓ (It takes approx. 2 years)	**Not Necessary** (as of Today)
Cyberattack Risk	Relatively High	**Low**
Atmospheric Disturbance	Small	**Big**

Major Advantages of Opt-Com are;

High-Data Throughput, Communicable Distance, High-Security, & Smaller SWaP

All the Nodes will be Optically Interconnected

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2025~

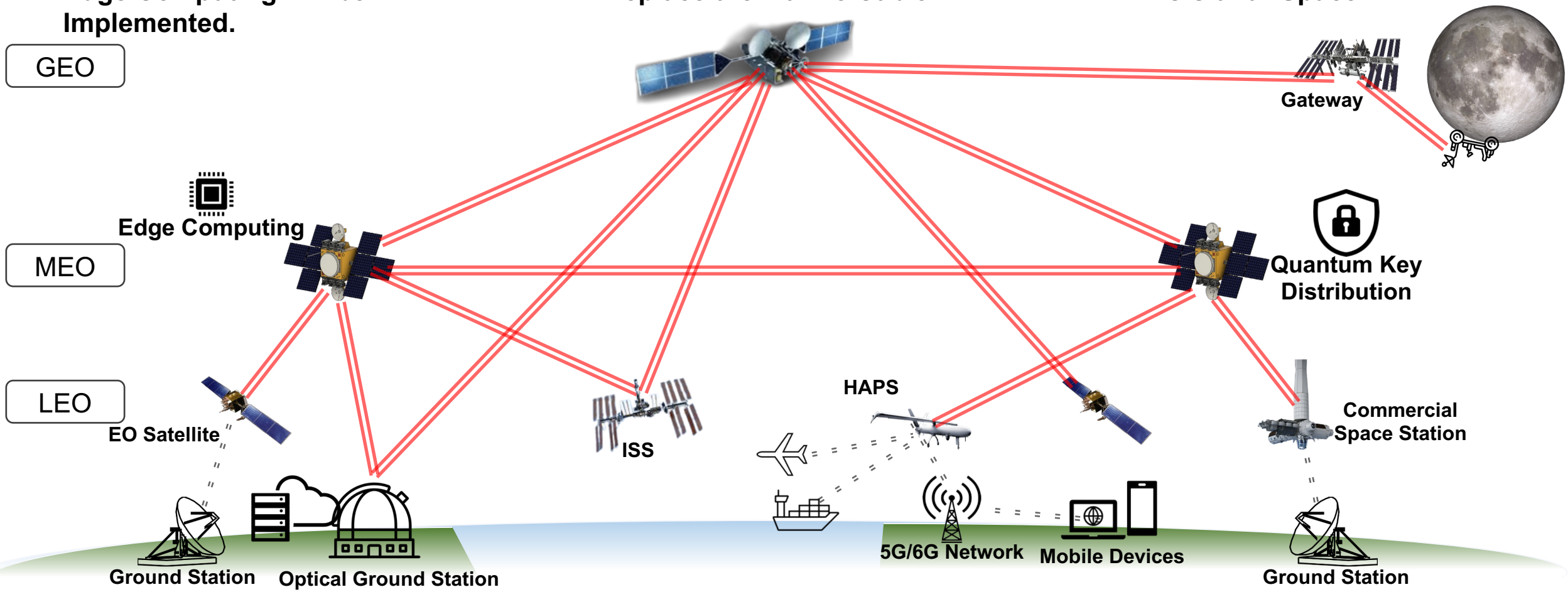
- Optical Inter-Satellite Link/Ground stations, and Edge Computing will be Implemented.

2030~

- HAPS will be Operational to Connect Space with Ground
- Replace the Marine Cable

2035~

- QKD will be Implemented
- Opt-Comm will be Utilized in Cislunar Space



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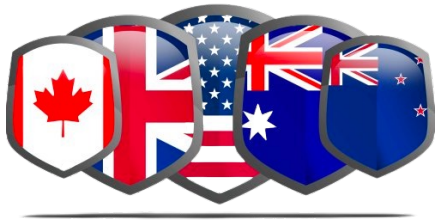
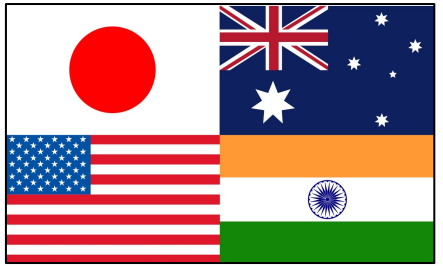
Indo-Pacific will be Reinforced by Intl. PPP

Public



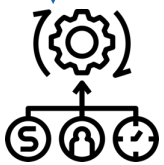
5 Eyes Alliance



QUAD

Domestic

Anchor Tenancy



Technology Transfer

Multinational PPP Between Indo-Pacific Nations will Enhance the Regional Capability

International

Joint Ventures /Partnership

International VC Investment

Global Space Industry Value-Chain

Private

Confidential

Proposal for Possible Future Alliance

Collab on EO will be Accelerated by Private

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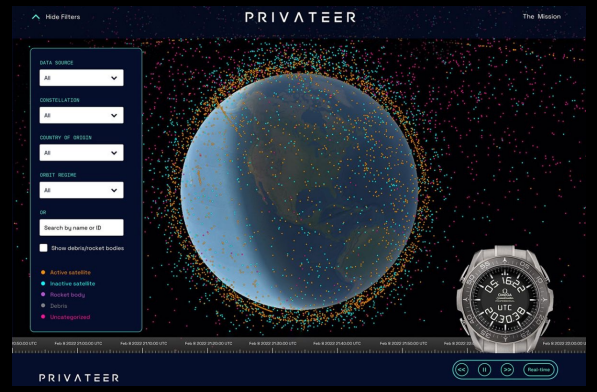
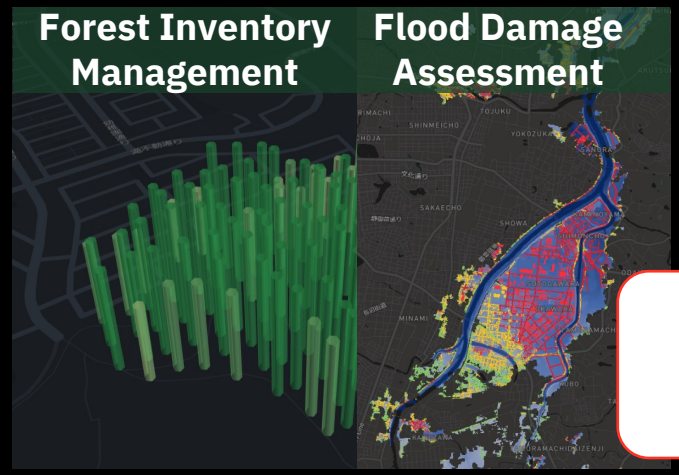
Space Situational Awareness Platform



Space-Based Carbon Emissions Monitoring

Lat 60 Connect

Synspective



pixxel

Krishna River Delta
India

Granny Smith Gold Mine
Laverton, Australia

SAR Sat Operator/ Solution Provider

Hyperspectral Satellite Operator

Confidential


WARPSPACE
Unlock the Power of Satellite Data by Utilizing the Optical Network
Thank you for Listening!