

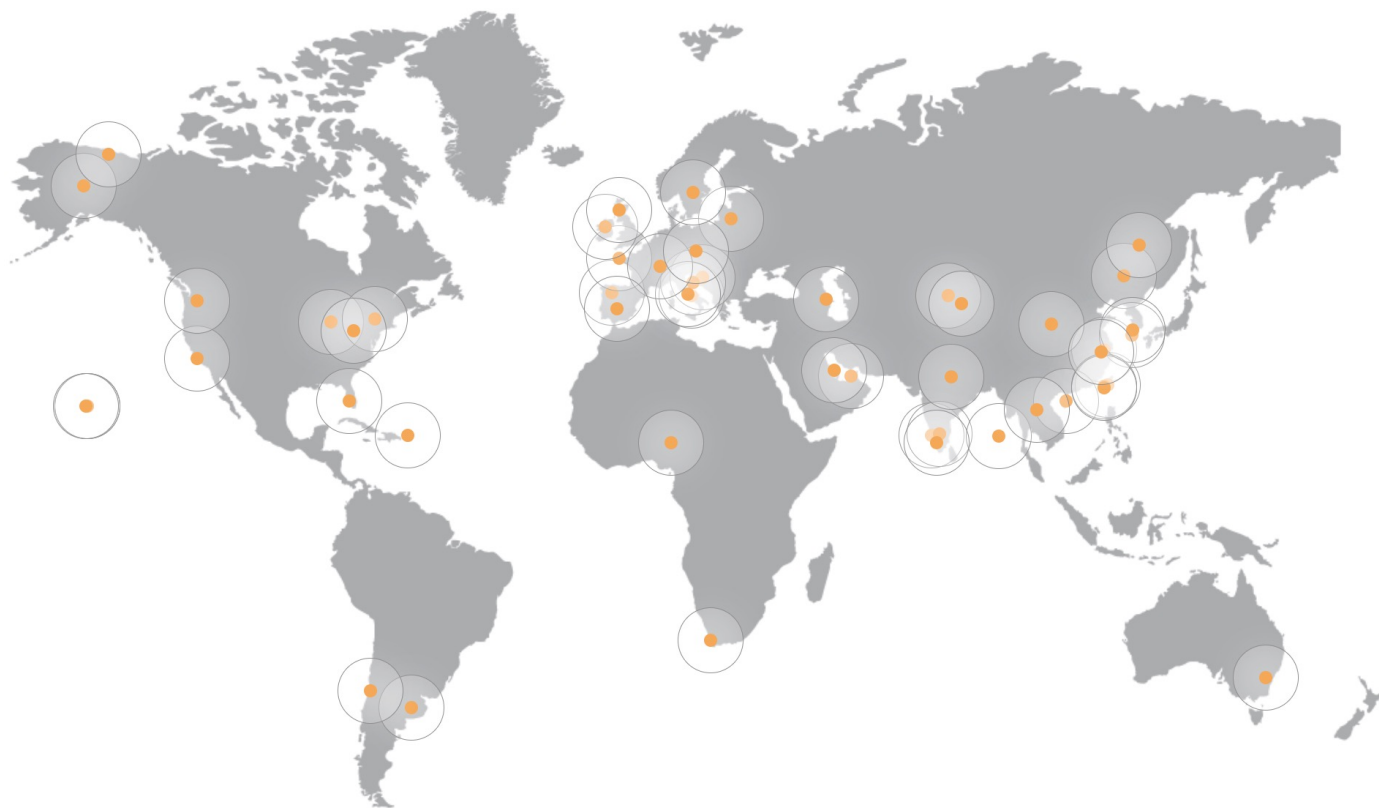


The Evolving Multi-network, Terrestrial Edge Ground Station

Ron Faith
President and COO
RBC Signals

March 2022

RBC Signals Global Ground Station Network



Flexible

solutions in V/UHF, L, S, C, X, Ku, Ka and optical bands

Asset-light

mix of RBC-owned and Partner-owned Ground Stations

Easy

API-based scheduling

Global

coverage >80 antennas in over 60 locations

Efficient

shared infrastructure model

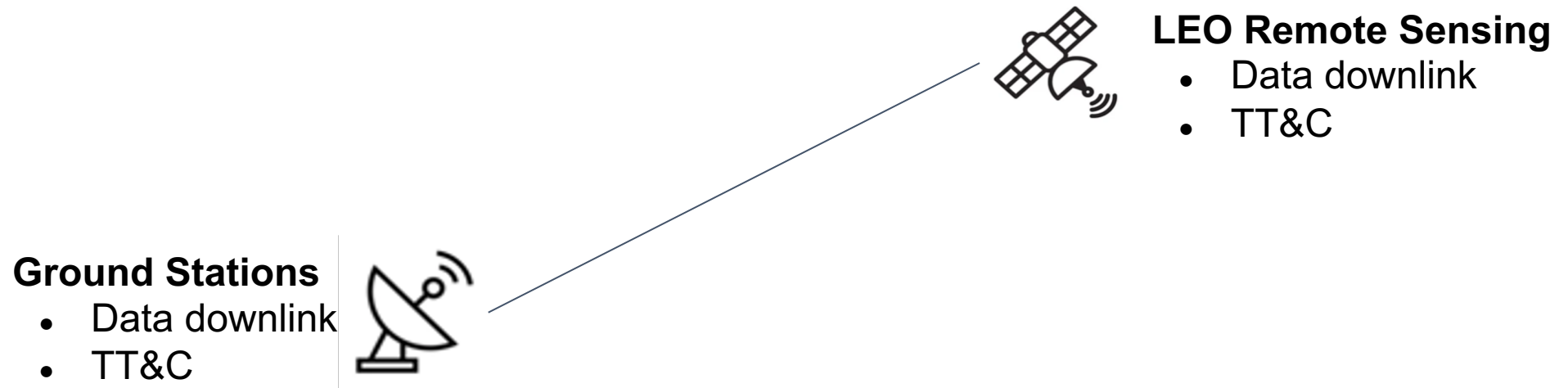
Simple

subscription pricing

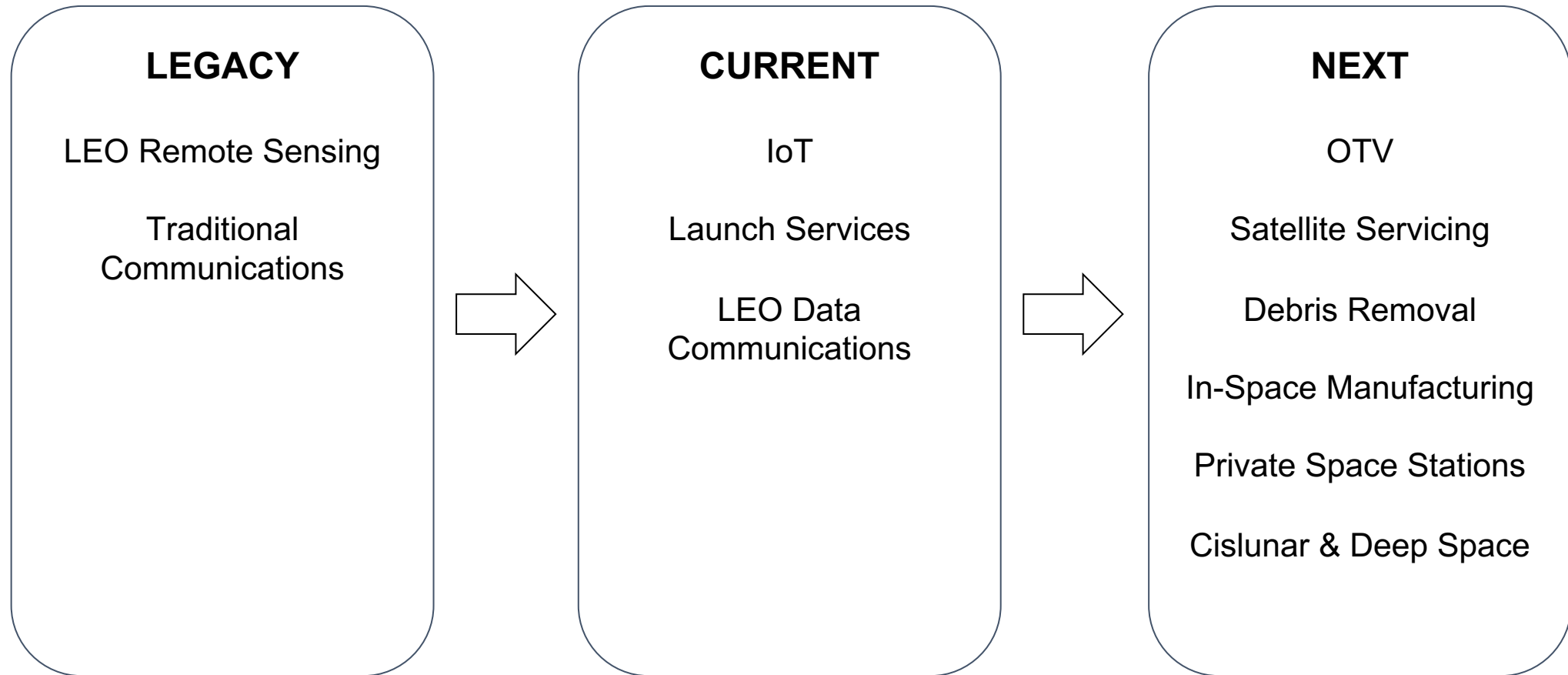
Partners



Our point of departure



Evolving small satellite missions



New reality drives more data & complexity



Space Networks

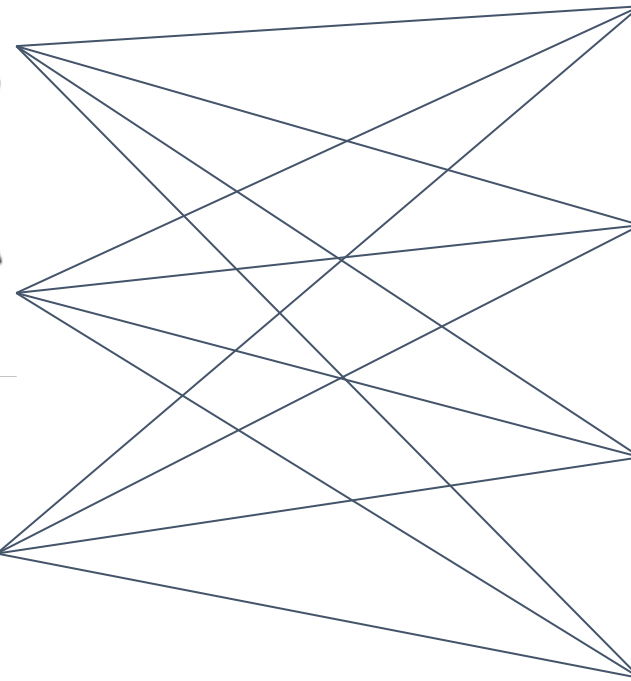
- RF / Optical
- Intersatellite links
- Multiple orbits

Ground Networks

- Data / TT&C
- Data Centers
- Cybersecurity

Terrestrial Networks

- Cellular
- Fiber
- WiFi



LEO Remote Sensing

- Data / TT&C
- High bandwidth
- Low latency

Space / Terrestrial IoT

- Device connectivity
- Lower bandwidth
- Latency tolerant

Earth Orbit Economy

- Variable orbits
- High bandwidth
- Low latency (always on)

Cislunar / Deep Space

- Data / TT&C
- Extreme distances

Space Networking as a Service (SNaaS)



Space Networks

- RF / Optical
- Intersatellite links
- Multiple orbits



Ground Networks

- Data / TT&C
- Data Centers
- Cybersecurity



Terrestrial Networks

- Cellular
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Space Networking as a Service



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Earth Orbit Economy

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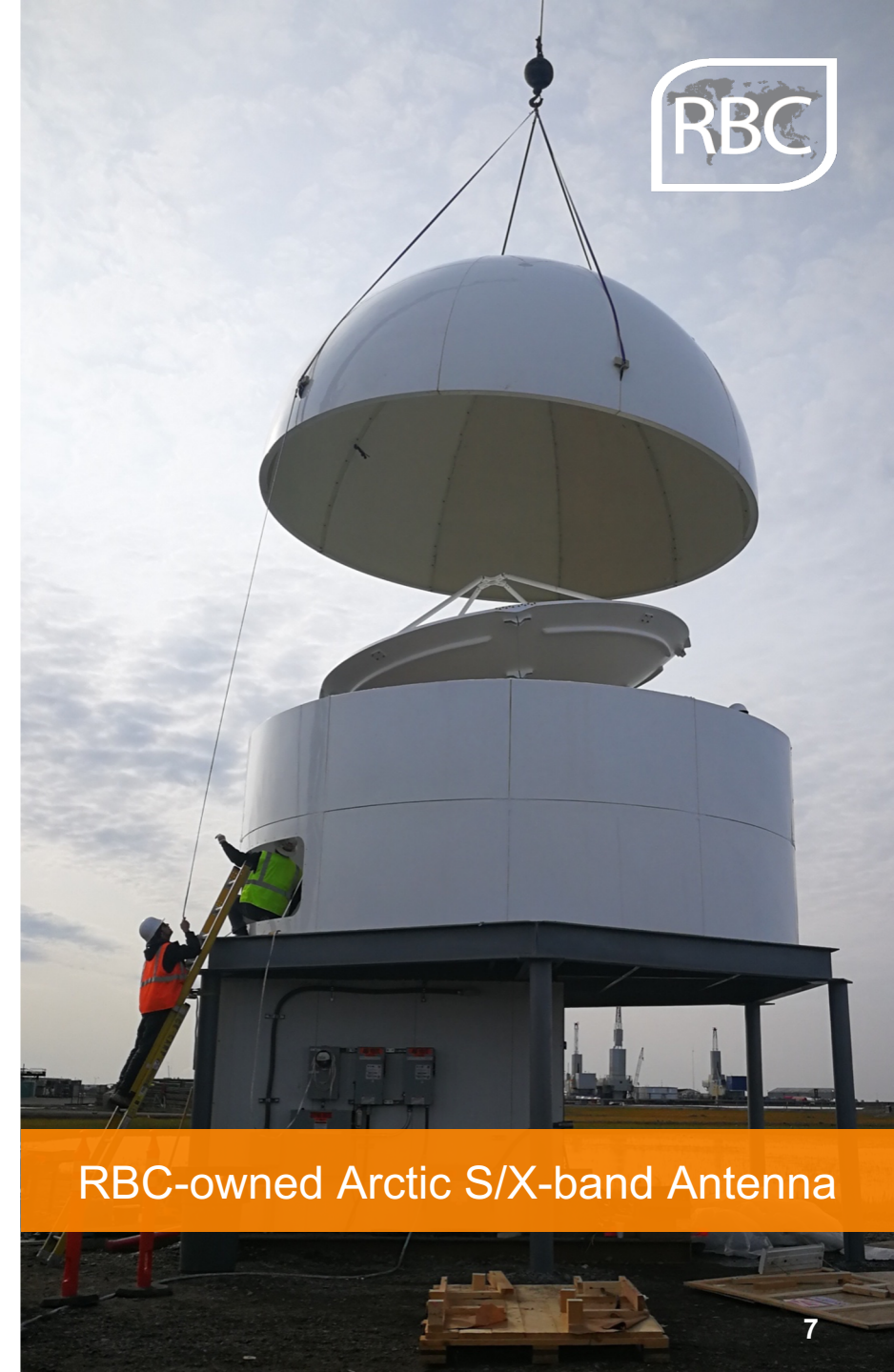
The Evolving Ground Station

Distributed Compute Architecture

Multi-tenant / Multi-mission

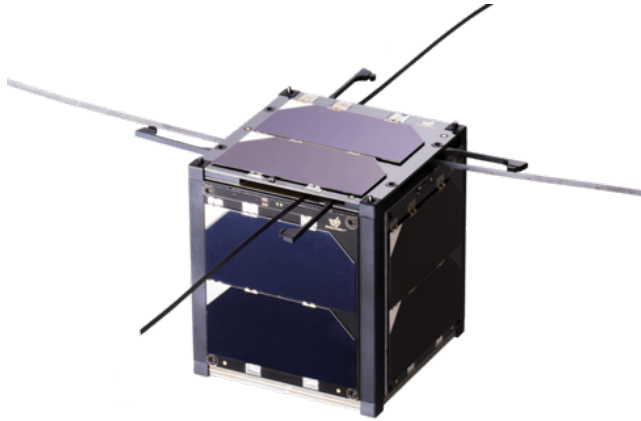
Cloud-connected

Multi-network Nexus



RBC-owned Arctic S/X-band Antenna

Distributed Compute Architecture



Onboard Processing



Ground Station Processing
(Terrestrial Edge)



Cloud/Data Center
Processing

Software-defined Ground

Software-defined Radio's (SDRs)

Secure networking

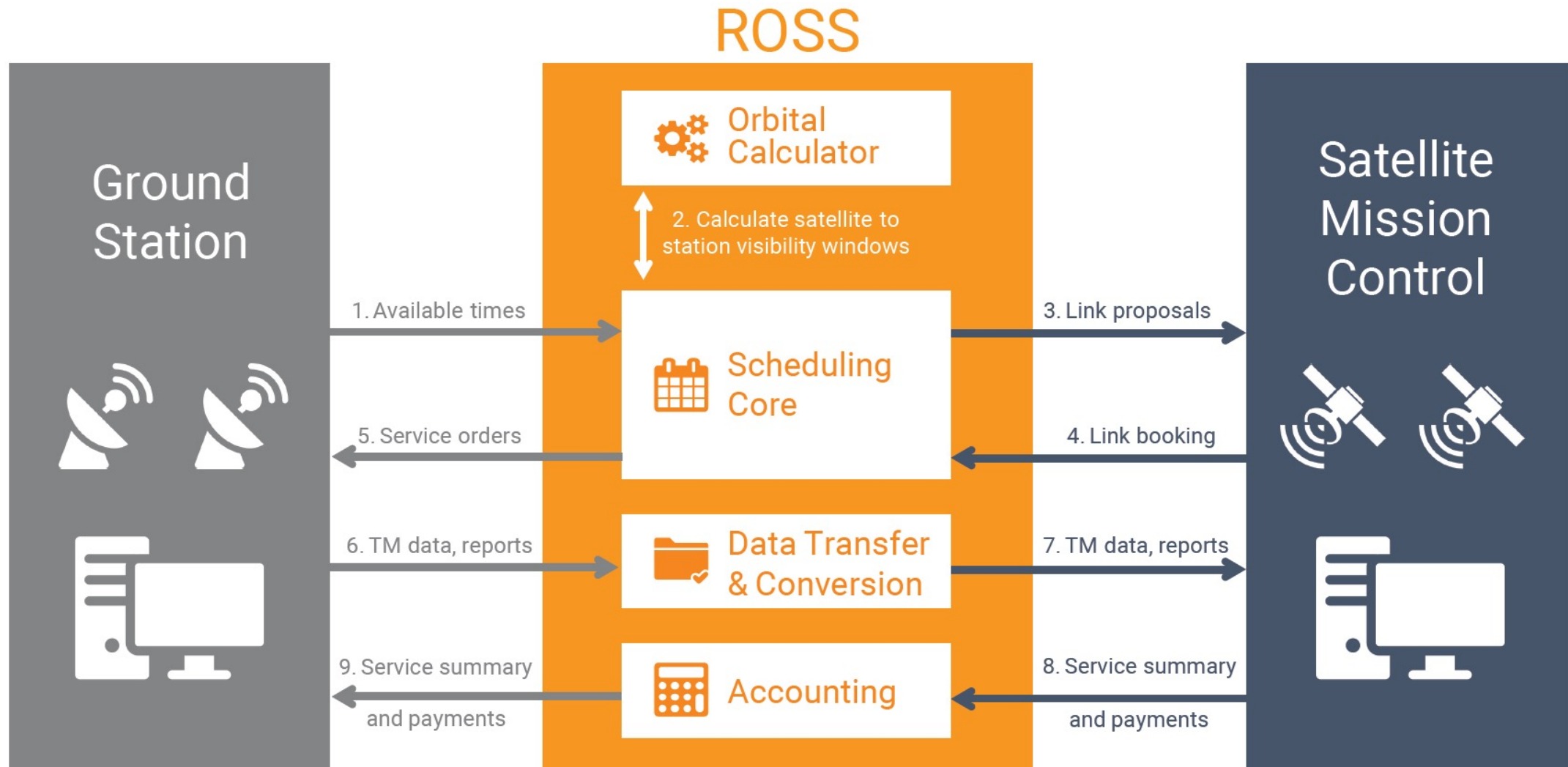
Containerized applications

RF over IP

API-based scheduling and configuration



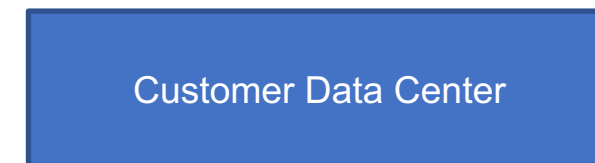
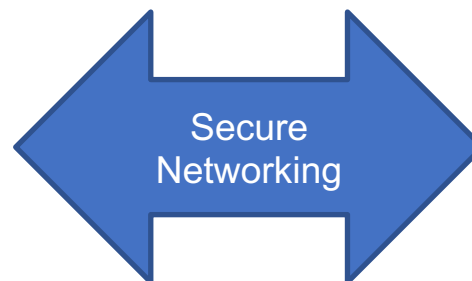
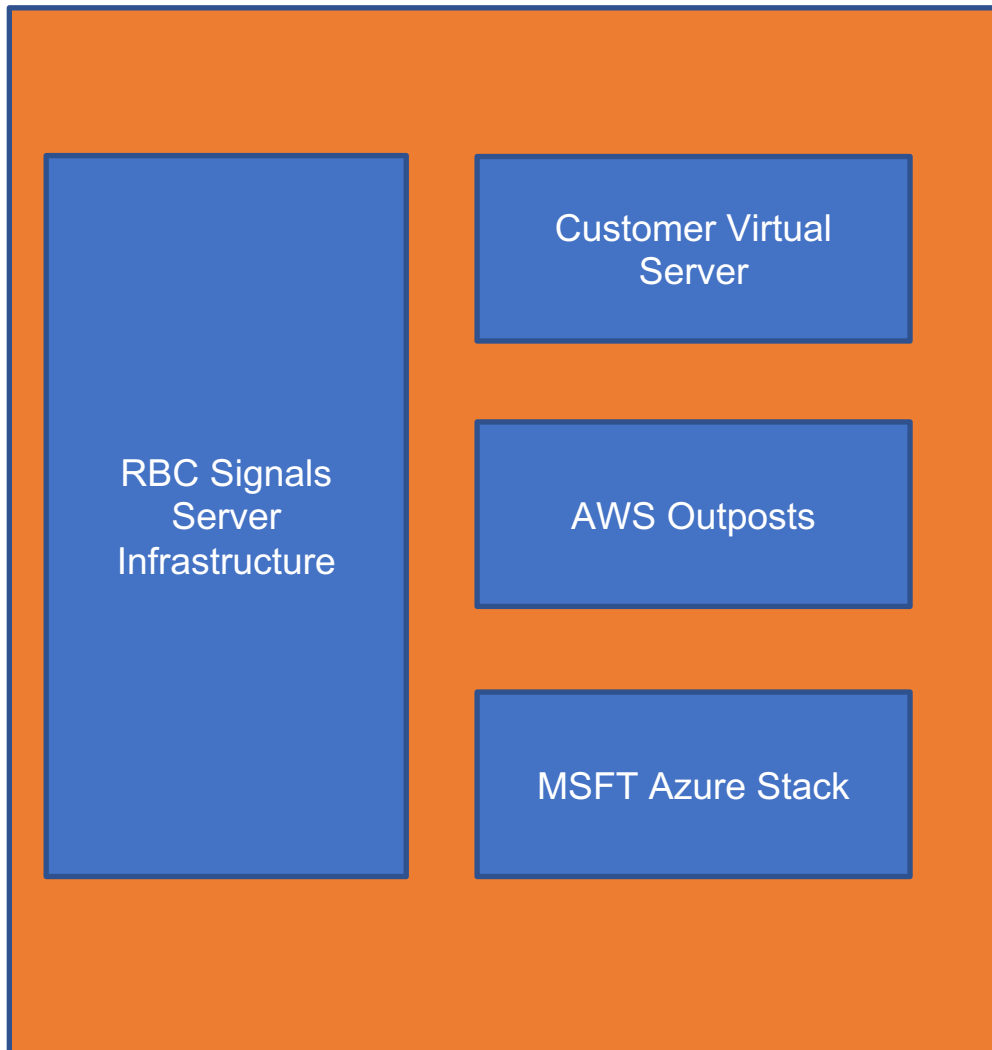
API-based Scheduling & Configuration System



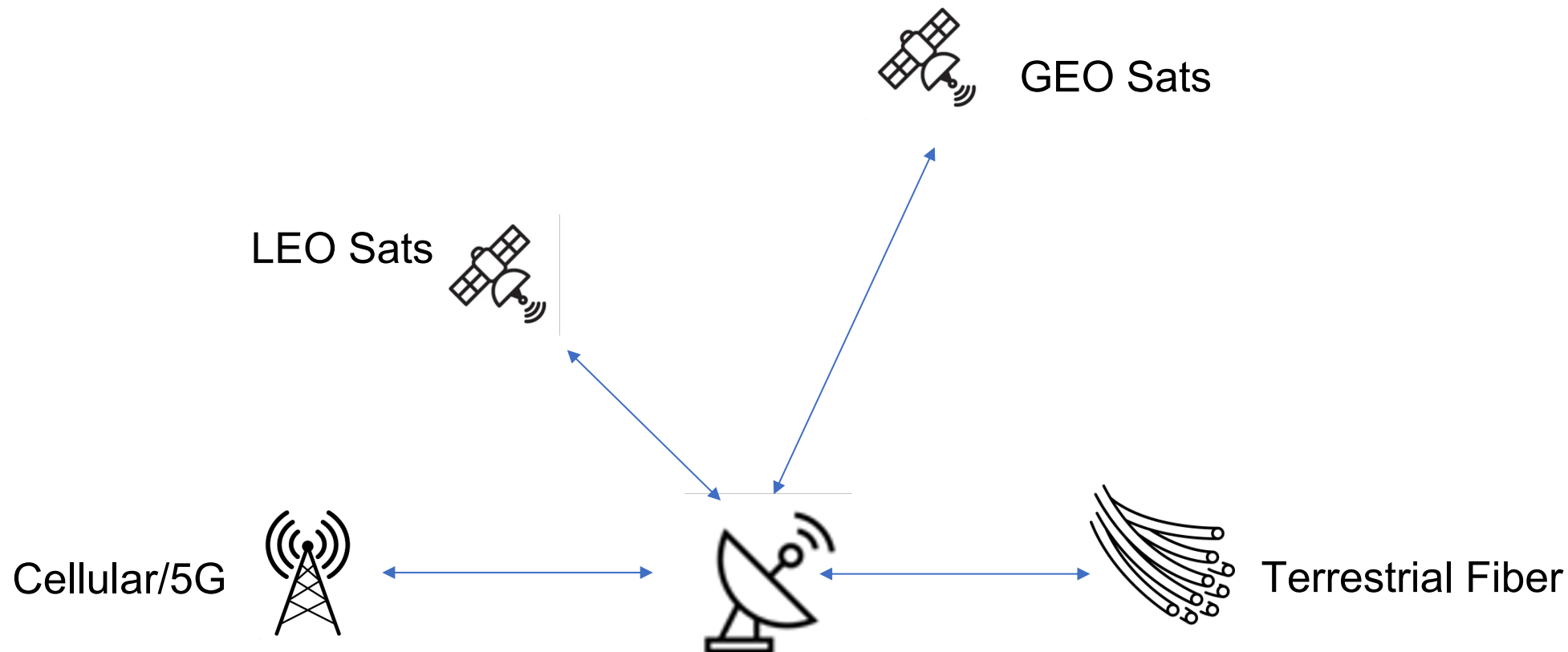
Cloud Connected Ground Stations



Secure Ground Station Infrastructure



Ground Station as Multi-network Nexus




Multi-network enables higher resiliency and multi-path networking security



Ron Faith, President & COO

 rfaith@rbcsignals.com

 (206) 234-5630

 2205 152nd Ave NE
Redmond, WA 98052