



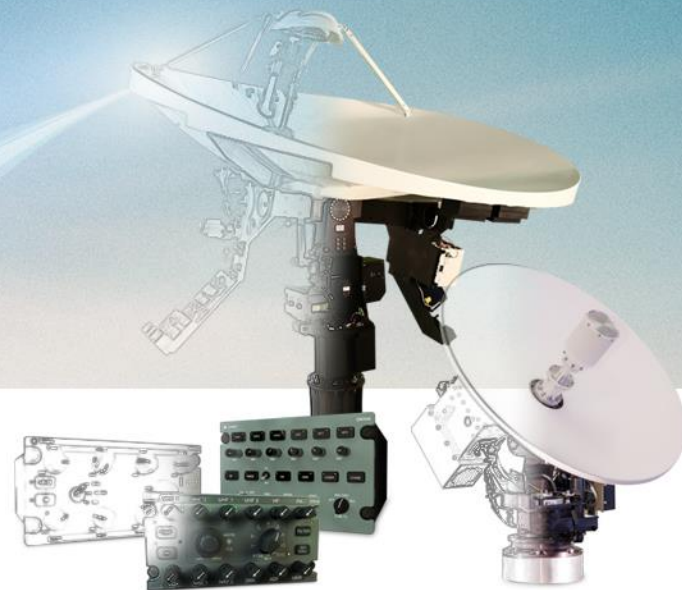
ORBIT *If you can conceive it,
we can provide it.*

Wind of Change in Ground Stations TCO

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Market Assumptions



- Parabolic full-motion NGSO ground systems here to stay
 - Remains best option for visible future
 - The move to higher frequencies: Ka-band, now, and Q/V +, in the future
- Ground systems must be adapted to support new constellation backbones
 - Hundreds to thousands of systems to be installed in the next decade
 - Need for significant cost effectiveness
- Similar trends in remote sensing ground stations
 - Smaller magnitude due to quantities, but still affected



Innovation is Crucial

Total Cost Ownership (TCO) Drivers for Ground Stations

CAPEX

- Make them very **low cost**, but good enough
- **Large quantities** derive commoditization
 - X3-5 lower cost vs. small quantities
- **Innovation** is a must!
In Composite, Mechanics, 3D and more
- Faster **legacy technology decommission**
- **Performance optimization** at Constellation-level
Performance tradeoffs:
 - Antenna
 - RF equipment
 - Satellite
 - Waveforms

OPEX

- Need for long-term **high reliability**
 - Risky with new technologies
 - Requires extensive testing
- **Low maintenance**
- Easily shipped and **simply installed**
- **Everyone** should be able to commission and fix them (BIG VSATs)
- **Power savings** is crucial
- **Global M&Cs**



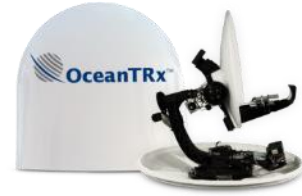
High Volumes ➡ Lower TCO & Simplicity = Innovation



Orbit at a glance

- 70 year of experience, global coverage and thousands of deployed systems
- 30 years of NGSO-oriented solutions
- Pioneering solutions via innovation
- Market leader in ground, air and maritime
- Long term relationship with Tier-1 customers
- Highly flexible, fast and cost effective
 - Technology building blocks for faster delivery
 - Scalable operations
 - High bandwidth
 - Unsurpassed reliability and field tested quality

Maritime



Aero



Ground stations



Stay tuned for new space ground solutions to be launched in 2019





Thank you

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