



IRIDIUM CERTUSSM MARITIME

PARTNER / DEALER PRESENTATION

IRIDIUM IN A SNAPSHOT

100% Global coverage

connects people and IOT in remote & compromised locations



High reliability

and service availability complements terrestrial & cellular

Single global network, single device and SIM, helps **simplify installation and maintenance**



66 x Satellites
Fully Meshed
Low Earth Orbit
Real Time

Flexible services

help meet unique user requirements across different vertical markets

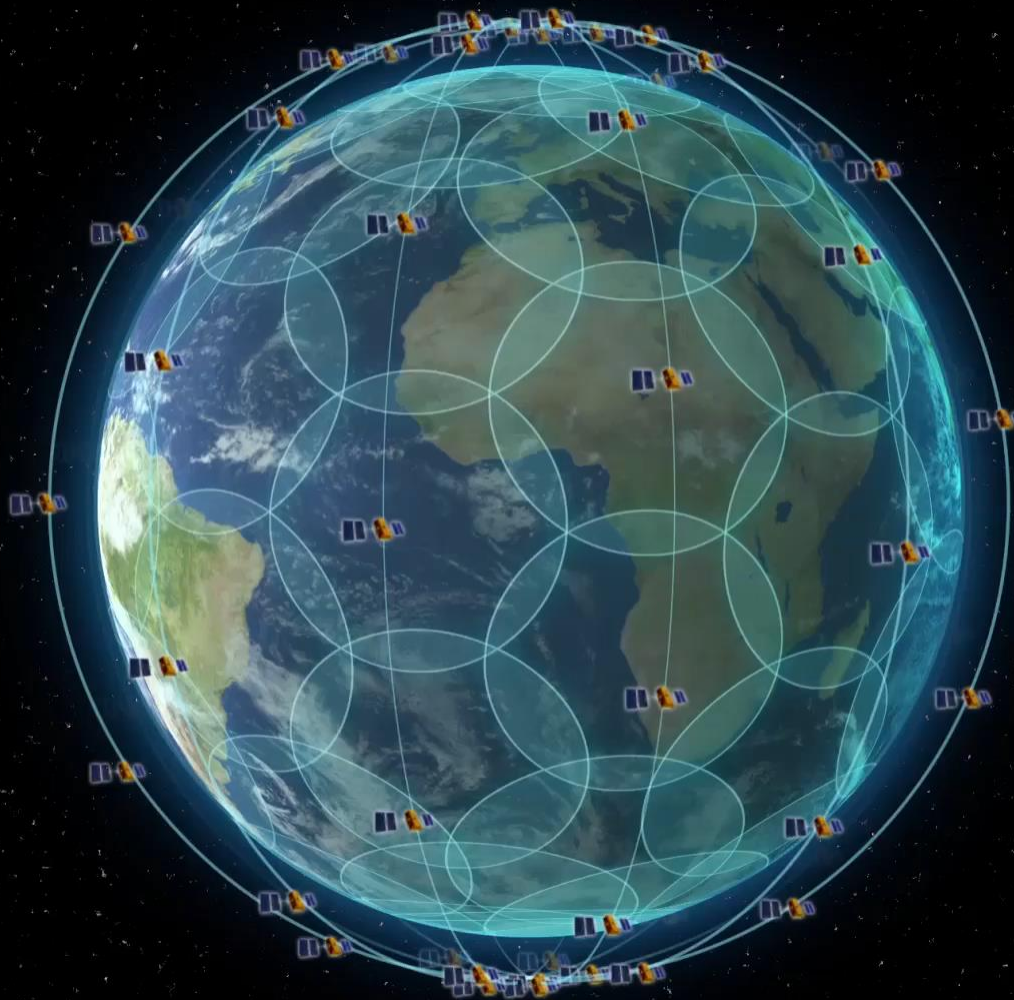


1,000,000 subscribers

~\$433M
LTM Revenue

Full Year
OEBITDA
~ \$254M

THE IRIDIUM® CONSTELLATION



GLOBAL SMART-GRID FOR THE CONNECTED SHIP

Iridium NEXT network architecture
Low-Earth-Orbit L-band



Highly reliable and pervasive network coverage:

- **Interconnected** mesh architecture, routing through outer space without reliance on local infrastructure
- **Global coverage**, Pole-to-Pole
- **Multiple satellites** overhead handling communication traffic simultaneously
- **Uniform low latency** signaling and transmission
- **High Performance**, fastest L-band speeds
- **Weather resistant** connectivity
- **Small form factor** devices, low power
- **Highly secure and redundant**
- **Optimized** for high volumes of simultaneous IOT data sessions
- **Single price** around the world, no roaming
- **Network Longevity** beyond 2030

LAUNCH UPDATE

The Iridium NEXT Constellation

- SpaceX successfully completed 5 launches for Iridium
- As of May 1, **44 Iridium NEXT SVs** are in commercial service
- 6th launch scheduled for May 19th at Vandenberg Air Force Base (VAFB)
- All Iridium NEXT satellites have exceeded our operational KPI's
- On target for full constellation deployment in 2018
- Expected Commercial Service Introduction (CSI) of Iridium Certus Services and Products by summer 2018





Iridium NEXT

**Achieving a
successful update
to our network**

Iridium Certus

**Expanding our
capabilities and
competitiveness**

IRIDIUM CERTUS

Real Choice is on the Horizon

- Breaking the status quo in L-band
- A superior alternative to other L-Band services
- The right choice for smart ship business critical, IoT, crew welfare and safety services applications

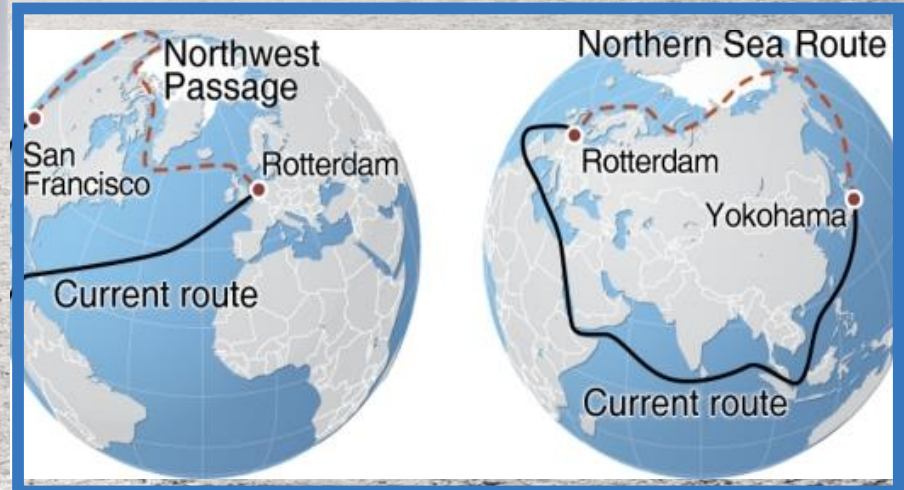
GROWTH THROUGH INNOVATION

- Successful Partner ecosystem
- “Value-adding” Partners



ENTRY BROADBAND MARKET LEADERSHIP WITH IRIDIUM OPENPORT®

- Iridium Pilot®'s proven performance, reliability, features and value are a solid foundation for expanding the market with Iridium Certus
- Leading Market position for 'stand-alone' and 'VSAT companion' use



COMMITTED TO SAFETY & SECURITY AT SEA

Regulatory compliance

SSAS – Ship Security Alert System

LRIT – Long Range Identification Tracking

SAR – Search & Rescue

Anti-Piracy & Citadel solutions

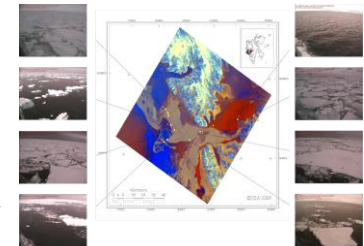
Ice Navigation

MSI Maritime Safety Information

Fisheries VMS & Catch reporting

MRV – EU emissions monitoring

E-Navigation



Proven track record in safety services – foundation for GMDSS

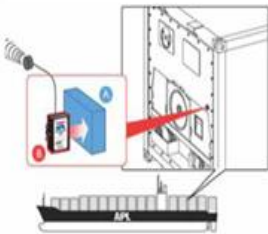
DRIVING THE DIGITAL TRANSFORMATION

- Different Industries, Same Drivers, Same Network
- “Iridium Inside” Strategy
- Global Smart-Grid for IOT Applications



“Optimizing supply chain logistics”
“True end-to-end visibility across water and land”

Reefer monitoring



Condition based monitoring



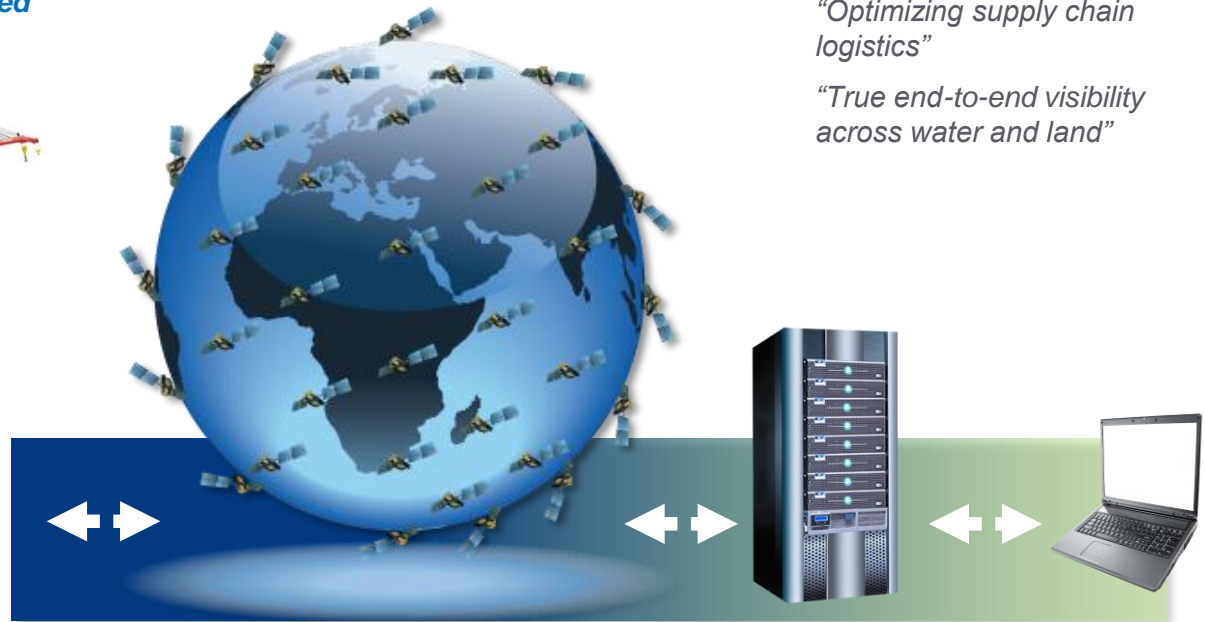
Route optimization



Emission & Fuel monitoring



Predictive maintenance



Making Your Business
Smarter, Safer, Greener, More profitable



IRIDIUM® MARITIME IOT FOCUS

**Environmental Legislation
Monitoring**

Remote Sensing

**Vessel Safety and
Security**

Voyage Planning

Intelligent Traffic Management

Performance Optimization

Energy Management

Condition Based Monitoring

THE CONNECTED SMART SHIP



Delivering answers in real-time

Powerful combination of satellite L-band & AIS



BIG DATA, WHAT ABOUT THE CONNECTION?

- Is L-band still relevant?
- Myriad of connectivity options: 4G / L / Ku / Ka / ...
- Confusing Market place, lack of standardization
- Many Maritime markets, not a one-size-fits-all

Considerations

Coverage

Reliability

Latency

form-factor

Availability

TCO

Inter-operability

Redundancy

Iridium Certus introduces standardized high-quality reliable connectivity

IRIDIUM NEXT ADVANTAGE



Coverage	✓ 100% global
Reliability	✓ Robust weather-resistance
Mobility	✓ Seamless access on-the-move
Simultaneous service use	✓ All services
L-Band IP data speeds	✓ Up to 1.4 Mbps
High Definition voice lines	✓ Integrated
Tracking/monitoring capability	✓ Integrated
Push-to-Talk	✓ Integrated
GMDSS*	✓ Integrated
Data Streaming	✓ Integrated
Latency/jitter	✓ Low
Acquisition time	✓ Fast

*IMO Approval Expected in 2018

Iridium CertusSM



1408 kbps Iridium Certus 1400

1408 kbps

- High Definition Video
- Video Conferencing
- Multi-User Internet/ VPN
- Telemedicine

704 kbps Iridium Certus 700

704 kbps

- Standard Definition Video
- Video Conferencing
- Multi-User Internet / VPN
- Telemedicine

352 kbps Iridium Certus 350

352 kbps

- Flight Data Recorder Streaming
- VSAT Redundancy
- Low Resolution Video

176 kbps Iridium Certus 200

176 kbps

- ECDIS Updates
- Aeronautical Charts
- Streaming Audio

22 kbps Iridium Certus 20

22 kbps

- Global Maritime Distress and Safety System (GMDSS)*
- ACARS
- Asset Tracking
- eLog Book
- Telemetry
- Remote Monitoring

88 kbps Iridium Certus 100

88 kbps

- Internet/VPN
- Email
- Graphical Weather (WX)
- Photo Transfer
- Credit Card Validation

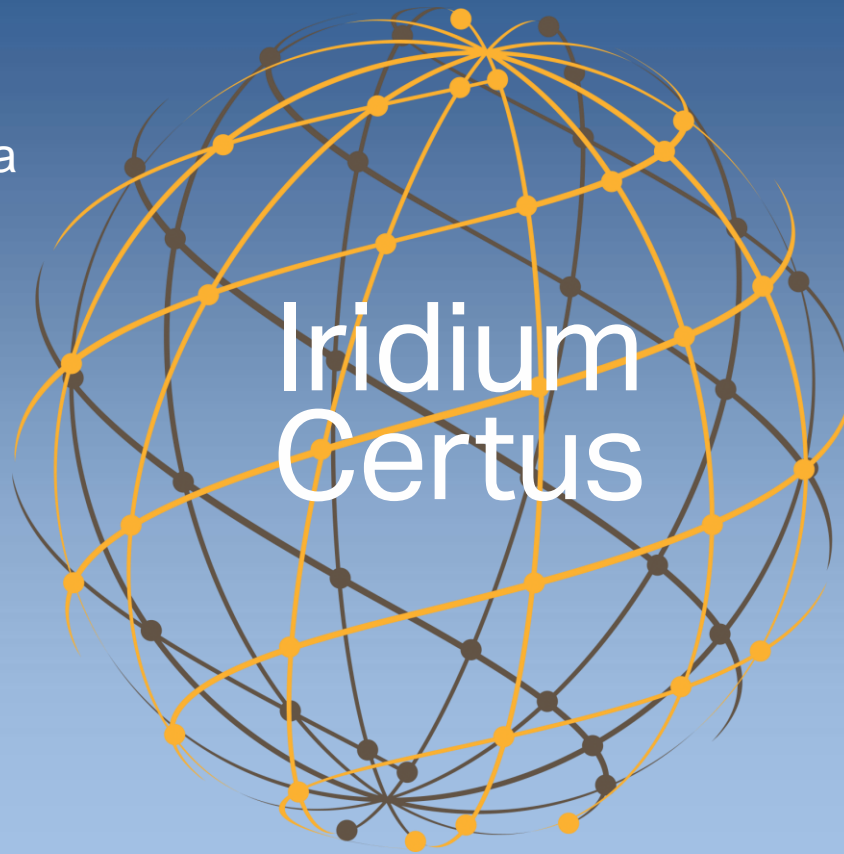
*IMO Approval Expected in 2018

IRIDIUM CERTUS MULTI-SERVICE PLATFORM

Streaming IP Data

IP Data

Short Burst Data



High Definition Voice

Safety Services
GMDSS*

Prepaid services

*IMO Approval Expected in 2018

HIGH DEFINITION VOICE

Voice

New and improved voice codec for delivering superior voice quality

- Double bandwidth allocated to HD calls
- Near toll-quality (3.5 MOS)
- Low latency for real-time connection
- Minimized distortions

Provides cellular phone-type voice quality in mobile satellite network

“It sounded just like a call from a mobile phone....”

“That has to be the best satellite voice quality and latency I have ever heard....”

- IP data
 - 352Kbps initially, 704Kbps (after firmware upgrade)
- Streaming IP data
 - 4.8kbps, 9.6kbps, and 14.4kbps rates will be available at service launch
 - 56kbps, 128kbps, and 256kbps rates after full launch of Iridium NEXT constellation
 - Supports VoIP, encrypted voice for security, and video broadcast

SHORT BURST DATA® (SBD®)

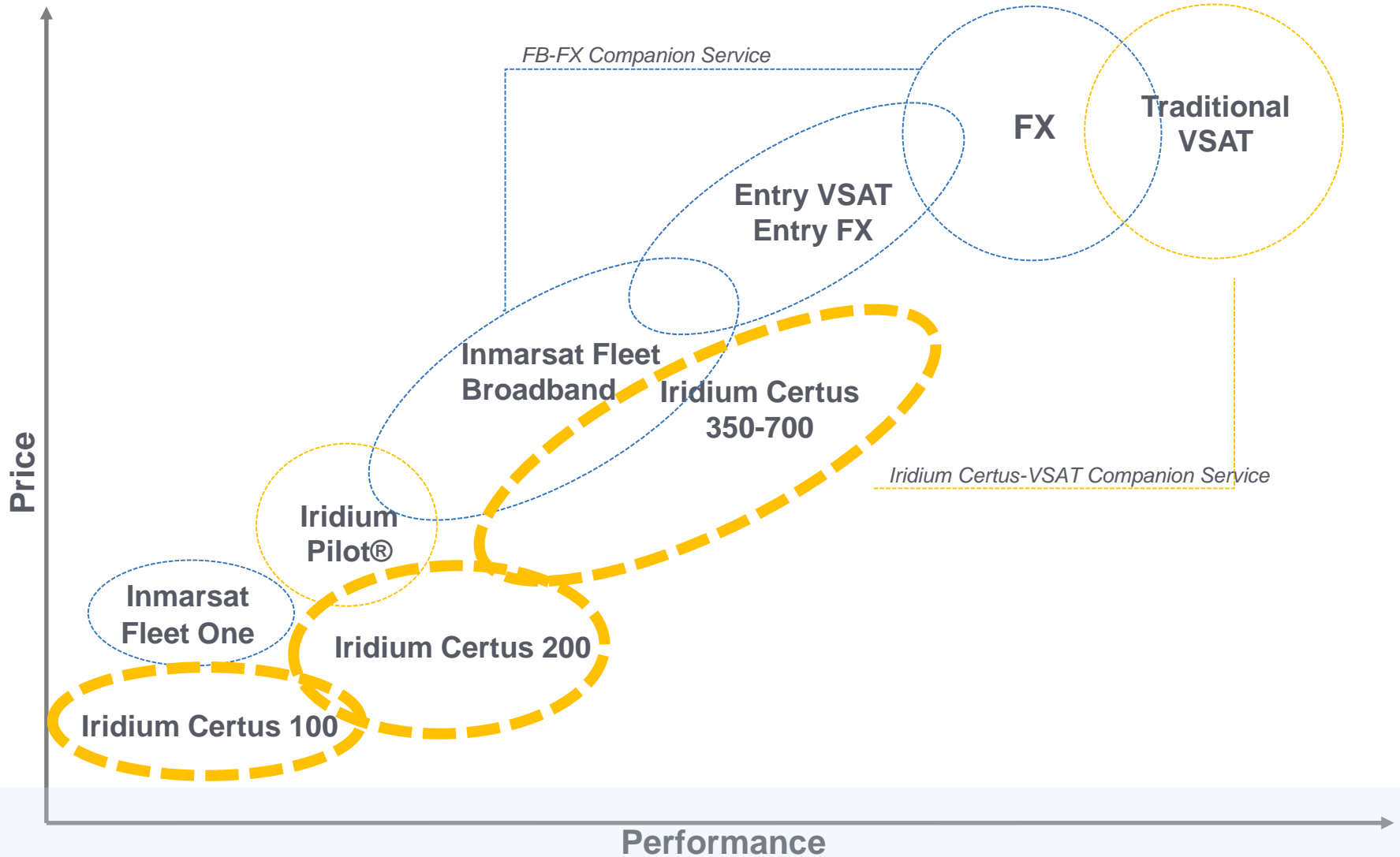
Data

Simple and efficient network transport capability

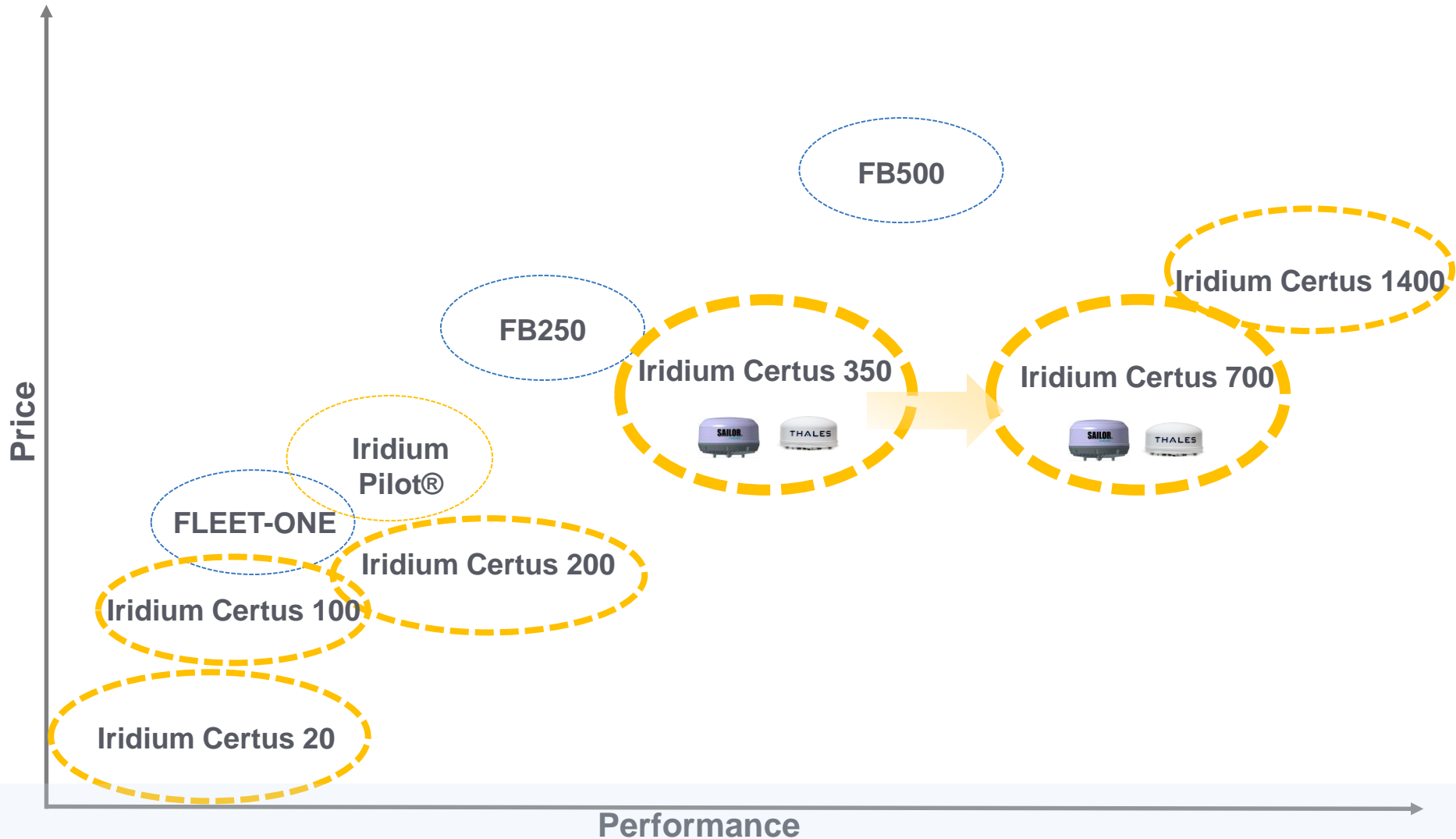
- Transmitting short data messages between equipment and hosted applications
- Works exactly like the Iridium 9602 and Iridium 9603

Simplifies integration with existing SBD® solutions

MARITIME SERVICE POSITIONING



MARITIME TERMINAL POSITIONING



MARITIME TERMINAL COMPARISON



Terminal	Sailor 4300	VesseLink	FB250	FB500
Max Download	704k	704k	284k	432k
Antenna Weight	7kg	3kg	5kg	20kg
Antenna Diameter	38cm	35cm	35cm	63cm
Antenna Height	23cm	27cm	35cm	68cm
Phone Lines	3	3	1	1
Price	\$\$	\$\$	\$\$\$	\$\$\$\$

THE IRIDIUM CERTUS ADVANTAGE - TERMINALS

Delivering fastest L-band at the best value to any point on the globe:

Easy install

Compact light-weight antenna
Dual mounting options for BDU

Easy upgrade

Compatible with existing mounting
Ability to re-use existing cabling

Robust

Virtually maintenance free
Solid-state antenna
No moving parts

Supported

Global support networks
for after-sales and installation
Best-in-class warranty

INSTALLATION ADVANTAGE



MARKET OPPORTUNITIES FOR IRIDIUM CERTUS



Merchant Shipping: Cargo ships, tankers, bulk carriers, Ro-Ro



Research Vessels: Scientific, Polar, Fisheries, Seismic



Commercial Fishing: Catch processors, seiners, trawlers, trap setters

Workboats: Tugs, Offshore Supply, AHTS, dredgers, barges, inland vessels



Recreational: Yachts, sailboats, private/polar cruise, kayak, fishing



Fixed: Jack up rigs, platforms, buoys, submersibles, floats, gliders, offshore construction



IRIDIUM CERTUS PRIMARY

Iridium Certus is ideal for high speed communications requirements on a wide variety of vessels.

Iridium Certus delivers

- Optimal benefits of L-Band and Low Earth Orbit in a high speed solution.
- Standardized packaging and speeds.
- No asterisks, caveats and small print

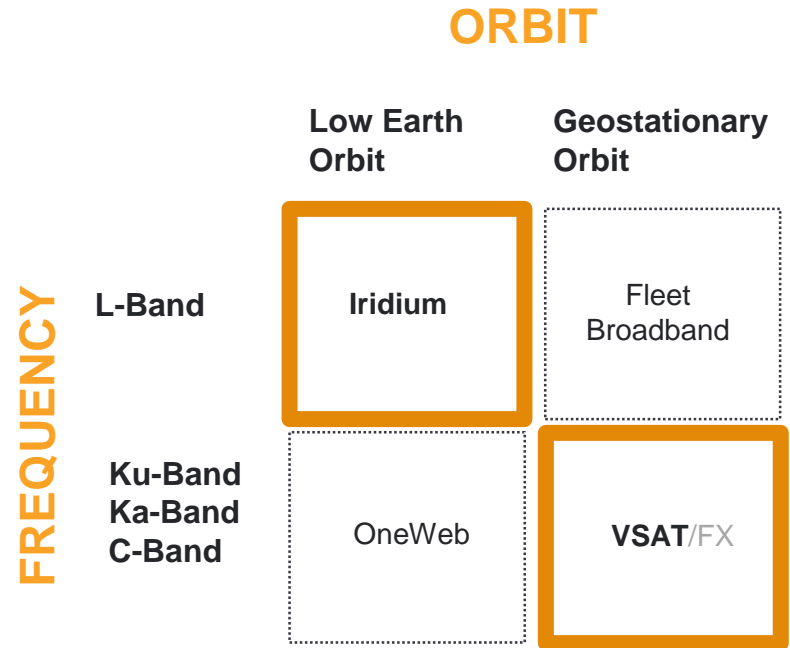
Iridium Certus is easy to position as a turn key standard solution to a market increasingly confused by non-standard metered VSAT and heavily-caveated budget plans



IRIDIUM CERTUS COMPANION TO TRADITIONAL VSAT

Iridium Certus is also an excellent traditional VSAT companion system.

When paired with traditional VSAT, Iridium Certus delivers an ideal hybrid solution combining the benefits of low earth orbit with the benefits of L-band with Ku-band with C-band.



IRIDIUM GMDSS*

- Will cover the entire globe
- Tri-service terminals
 - Simpler process
 - Clear Information
 - Less risk of False SAR
- Lower Cost Solution for GMDSS Voice, Messaging and MSI
- A better system for those who need it the most (non-SOLAS)
- Wide variety of complementary services
- Looking at new innovation

Choice is on the Horizon

*IMO Approval Expected in 2018



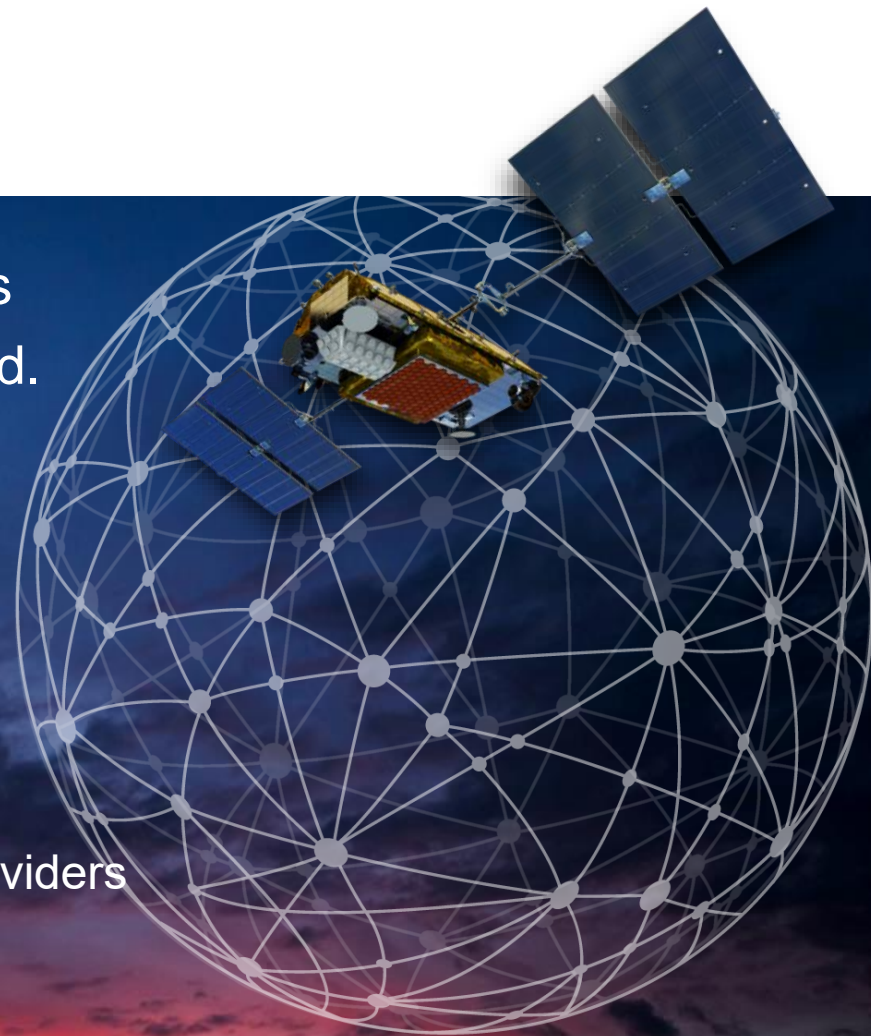
READY TO MAKE GMDSS TRULY GLOBAL



SUMMARY - IRIDIUM CERTUS

Delivering the satellite communications the maritime market has always wanted.

- New Satellites
- New Technology
- New Ground Infrastructure
- LEO Constellation
- World-class Manufacturers
- Experienced “Value Adding” Service Providers
- Real Choice





iridium[®]
Everywhere

