EVOLUTION IN L-BAND CONNECTIVITY
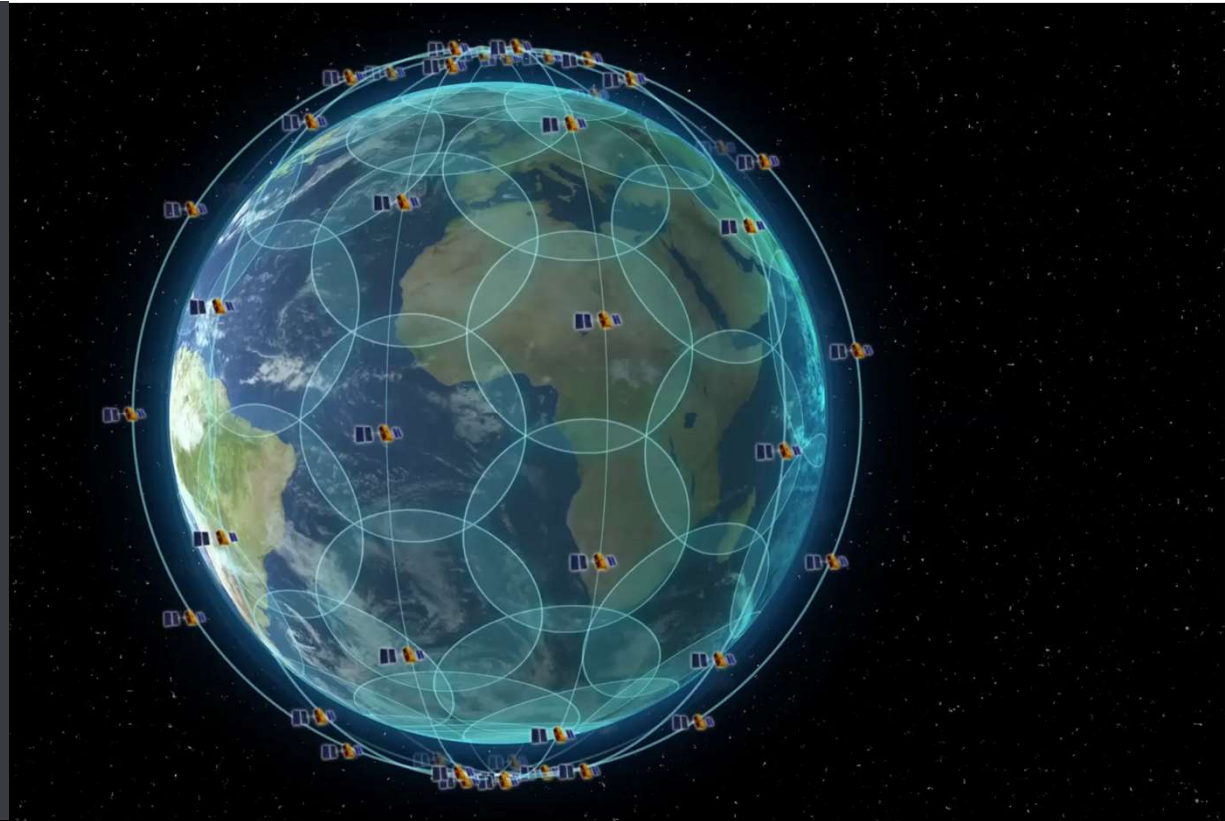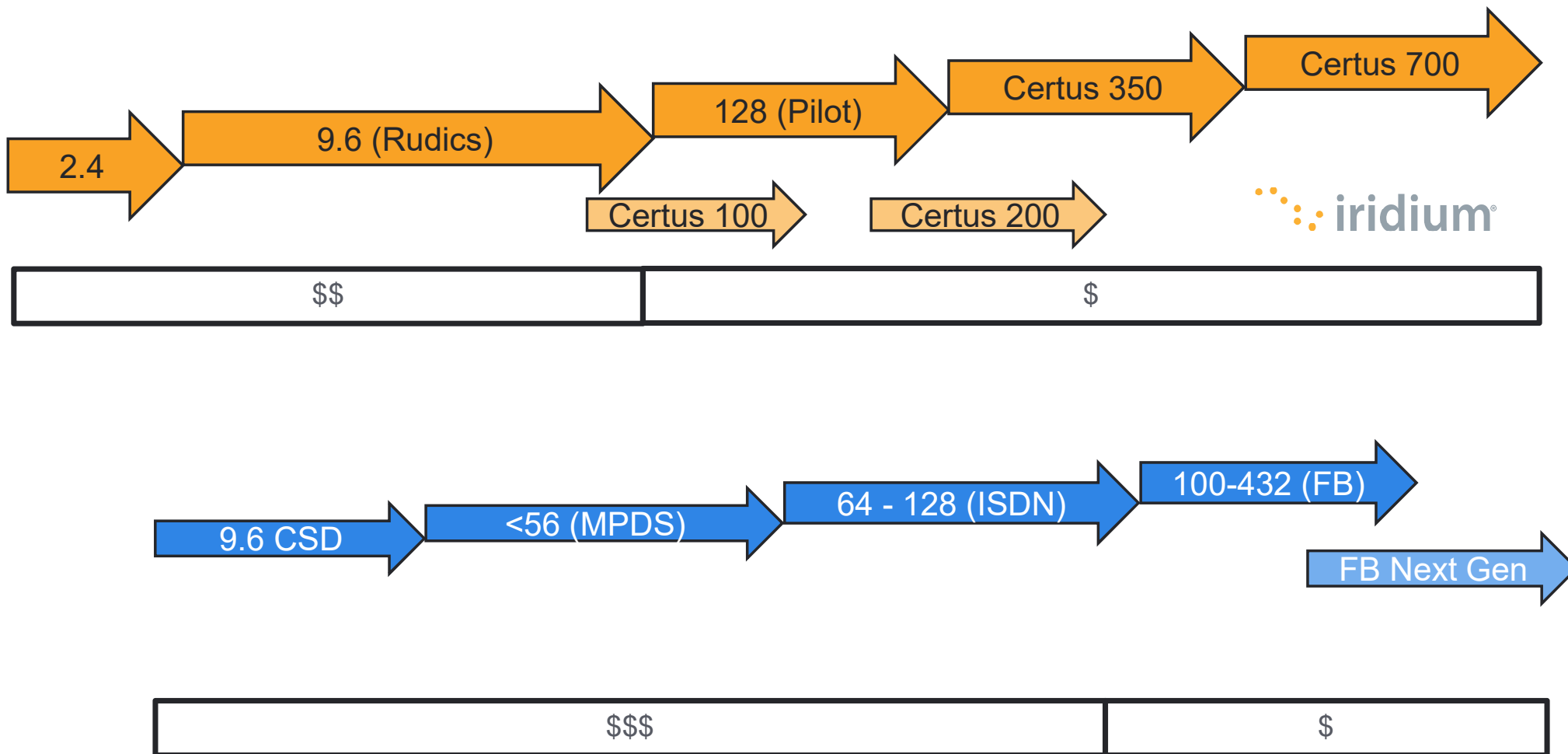
DAN ROONEY, DIRECTOR MARITIME (EMEAR)

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WHY IS L-BAND STILL RELEVANT?

- L-Band remains the primary satcomms for many vessels

- VSAT needs a dependable global backup

- Choose the fastest L-Band* connection for ultimate flexibility
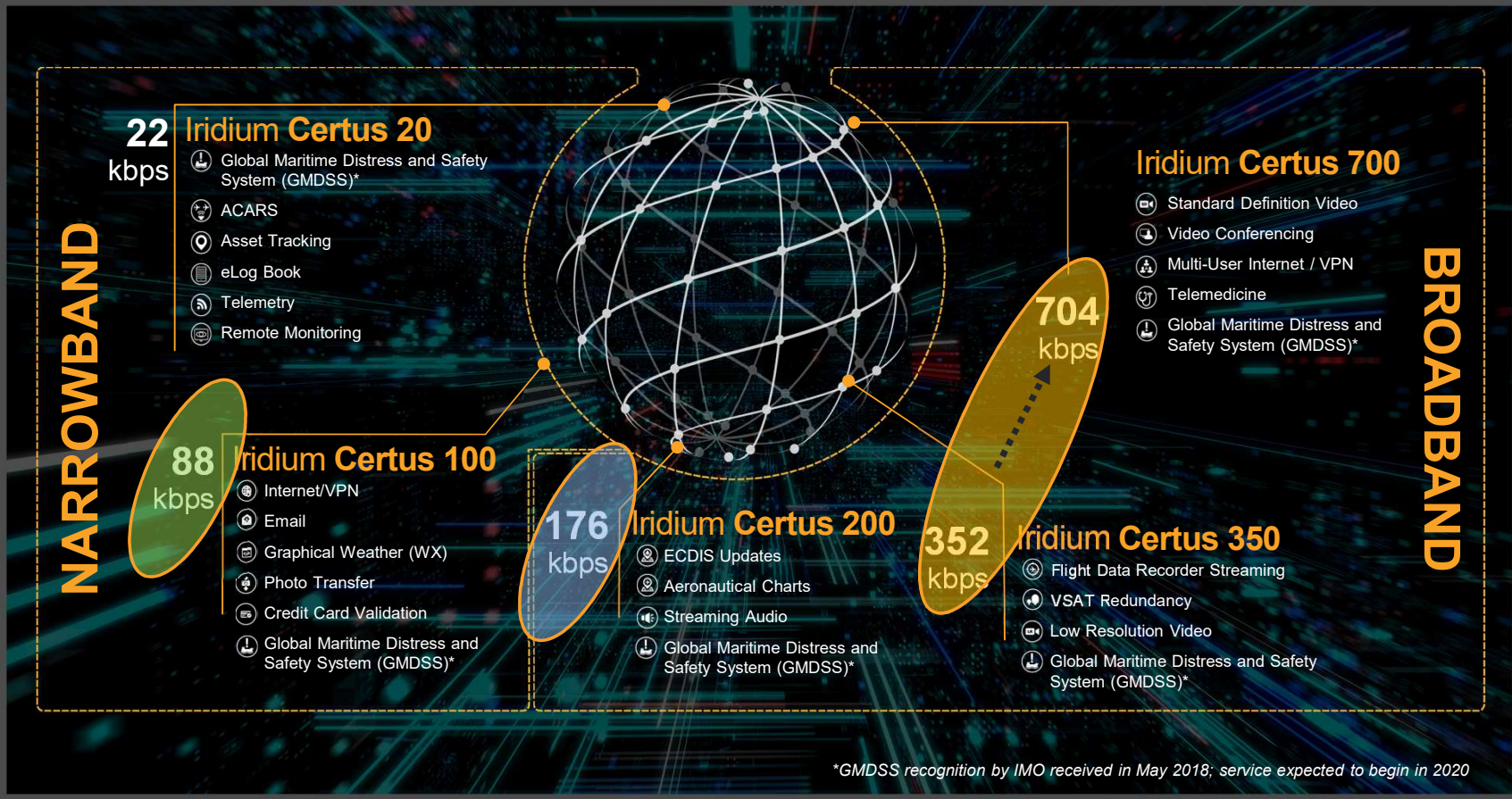
- Ultimate reliability & ultimate insurance

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THE EVOLUTION OF DATA CONNECTIVITY VIA L-BAND

IRIDIUM CERTUS^{SM} SERVICE CLASSES

NARROWBAND

22 kbps Iridium **Certus 20**
- Global Maritime Distress and Safety System (GMDSS)*
- ACARS
- Asset Tracking
- eLog Book
- Telemetry
- Remote Monitoring

88 kbps Iridium **Certus 100**
- Internet/VPN
- Email
- Graphical Weather (WX)
- Photo Transfer
- Credit Card Validation
- Global Maritime Distress and Safety System (GMDSS)*

176 kbps Iridium **Certus 200**
- ECDIS Updates
- Aeronautical Charts
- Streaming Audio
- Global Maritime Distress and Safety System (GMDSS)*

352 kbps Iridium **Certus 350**
- Flight Data Recorder Streaming
- VSAT Redundancy
- Low Resolution Video
- Global Maritime Distress and Safety System (GMDSS)*

704 kbps Iridium **Certus 700**
- Standard Definition Video
- Video Conferencing
- Multi-User Internet / VPN
- Telemedicine
- Global Maritime Distress and Safety System (GMDSS)*

BROADBAND

*GMDSS recognition by IMO received in May 2018; service expected to begin in 2020

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NEW CERTUS CLASSES = NEW POSSIBILITIES

Introducing new Iridium Certus service classes for maritime:

88 kbps

Iridium Certus™ 100

IoT – connected ship

Email - Messaging

Regulatory compliance: SSAS, LRIT, Citadel, Fisheries VMS, e-Log,…

Global Maritime Distress & Safety System (GMDSS)

…

176 kbps

Iridium Certus™ 200

Email – Messaging - Internet

ECDIS Updates

IoT – connected ship

Regulatory compliance: SSAS, LRIT, Citadel, Fisheries VMS, e-Log,…

Global Maritime Distress & Safety System (GMDSS)

Introducing new Certus terminals for Maritime:

Iridium Certus™ 350 - 700

Intellian

C700

Iridium Certus™ 200

LARS Thrane communication systems

THALES

Iridium Certus™ 100

COBHAM

LARS Thrane communication systems

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AST — Enabling Global Connectivity

Iridium Certus® Polar Case Study
Oceanwide Expeditions
In partnership with Alphatron Marine

IRIDIUM CERTUS 350-700 CAPABILITIES

VOICE	DATA	TERMINALS
HQ Calling	Up to 352Kbps	
3 x HQ Lines	704Kbps	
Post & Prepaid	Primary Use	
	VSAT Companion	

Thales VesseLINK
D/U 704*Kbps 352Kbps

Cobham Sailor 4300
D/U 704*Kbps 176Kbps

Intellian C700
D/U 704Kbps / 352Kbps
Available Q2 2020

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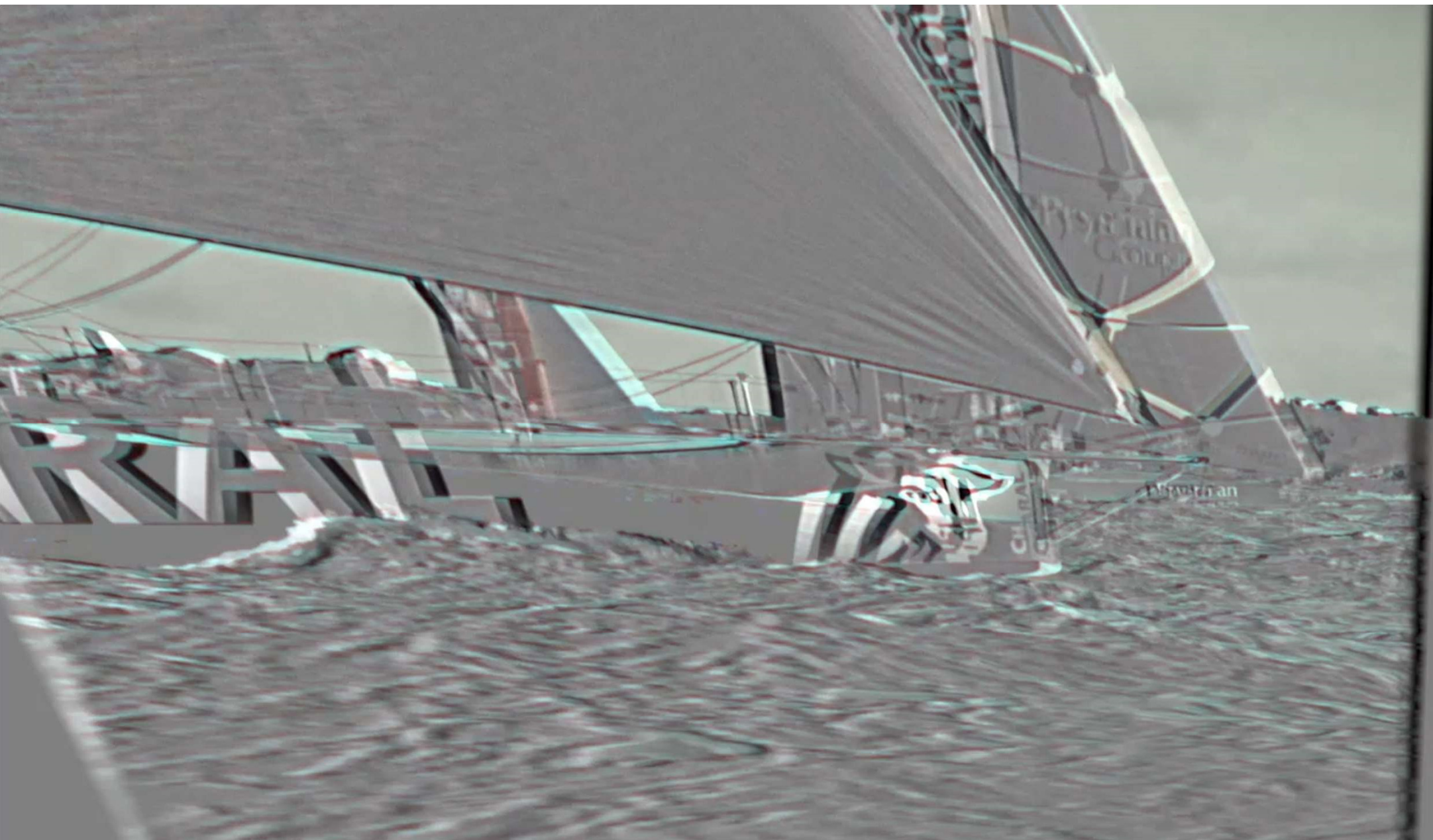
IRIDIUM & THALES – OFFICIAL COMMS PARTNER FOR IMOCA RACES

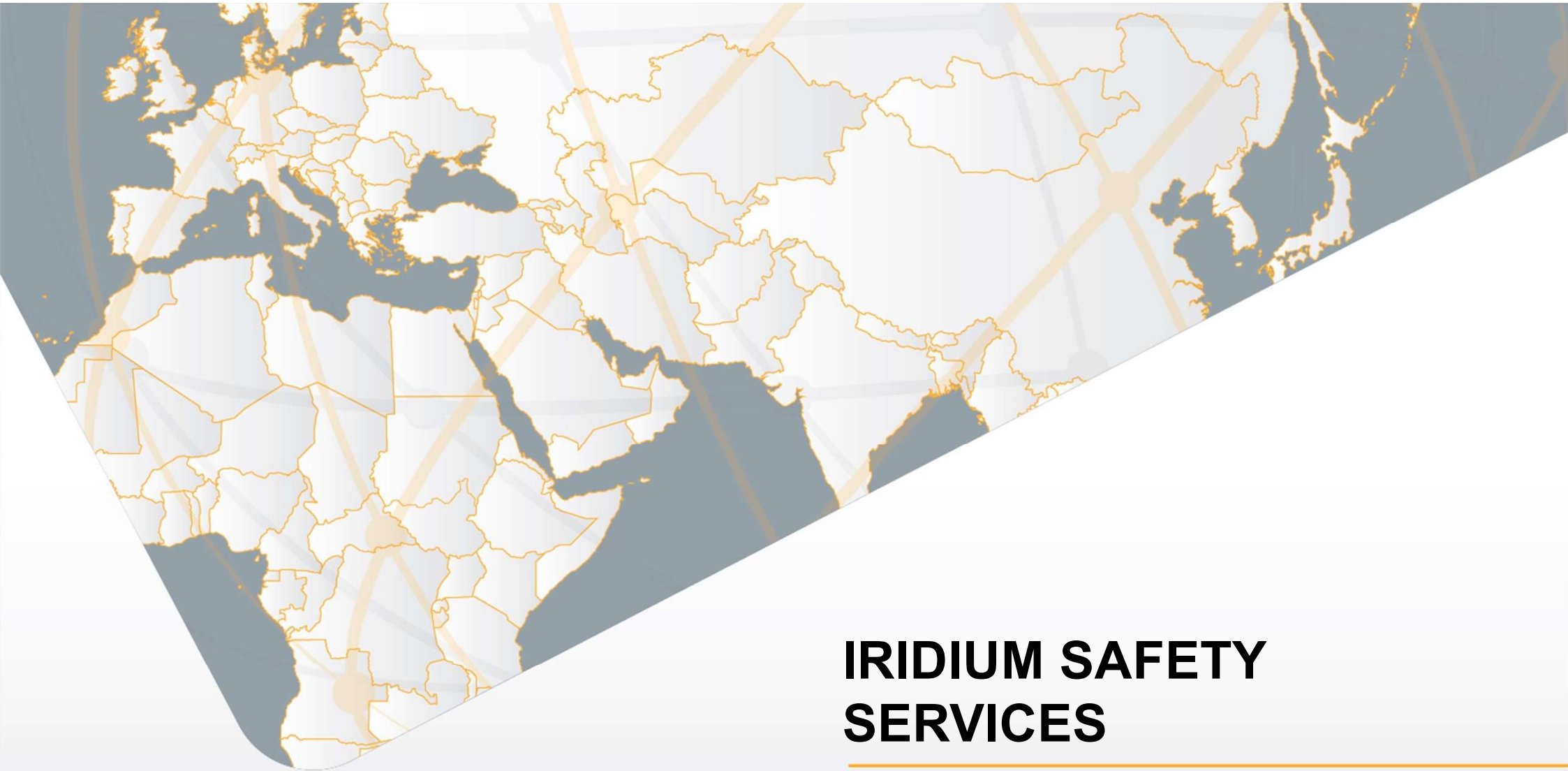# VOICE CALLING?

- Voice calling is efficient

- Voice calling is emotional

- Voice calling works when apps don't

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IRIDIUM SAFETY SERVICES

IRIDIUM GMDSS STRATEGY: THE THREE Cs

Coverage

First and only truly global system – coverage over Polar areas (Sea Area A4) not served today

Capability

All functions are available in a single terminal;
- Distress Alerting
- Safety Voice
- MSI
- Standard Voice & Data

Cost

~25% of the cost of current equipment

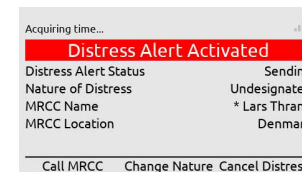**Iridium provides GMDSS Service Provider Diversity and Enhances Safety at Sea**

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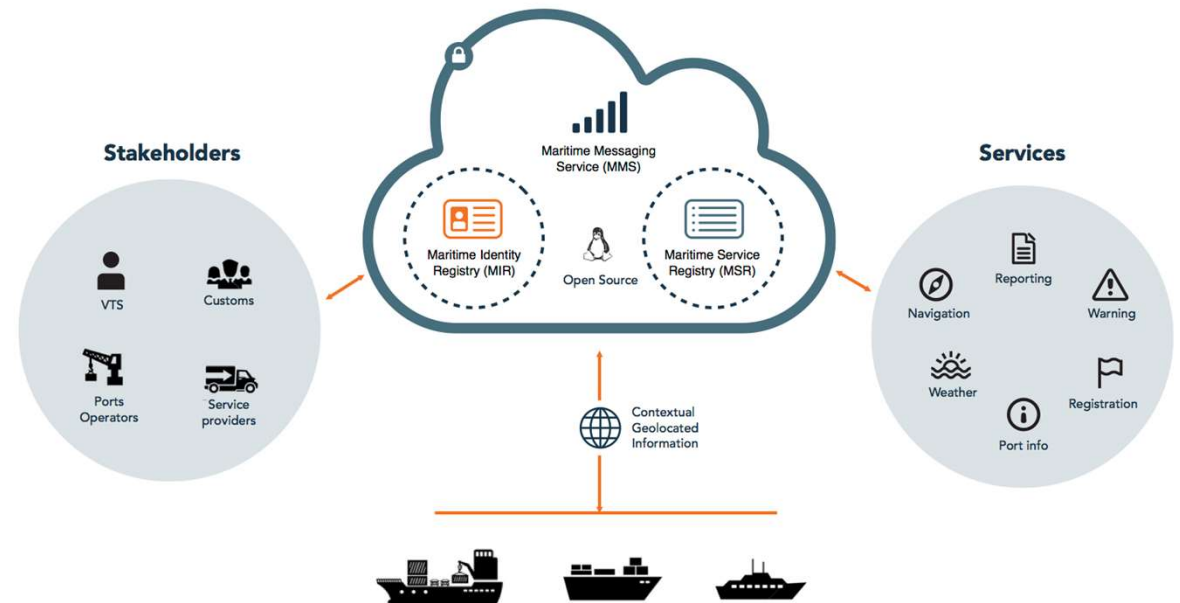# INTRODUCING THE FIRST IRIDIUM GMDSS – LT3100S

- All GMDSS services in a single form factor terminal:
  - Distress Alert
  - Safety Voice
  - Maritime Safety Information (MSI)
- Multi-service capability: can also be used for
  - SSAS
  - LRIT
- 100% global coverage, inc sea area A4
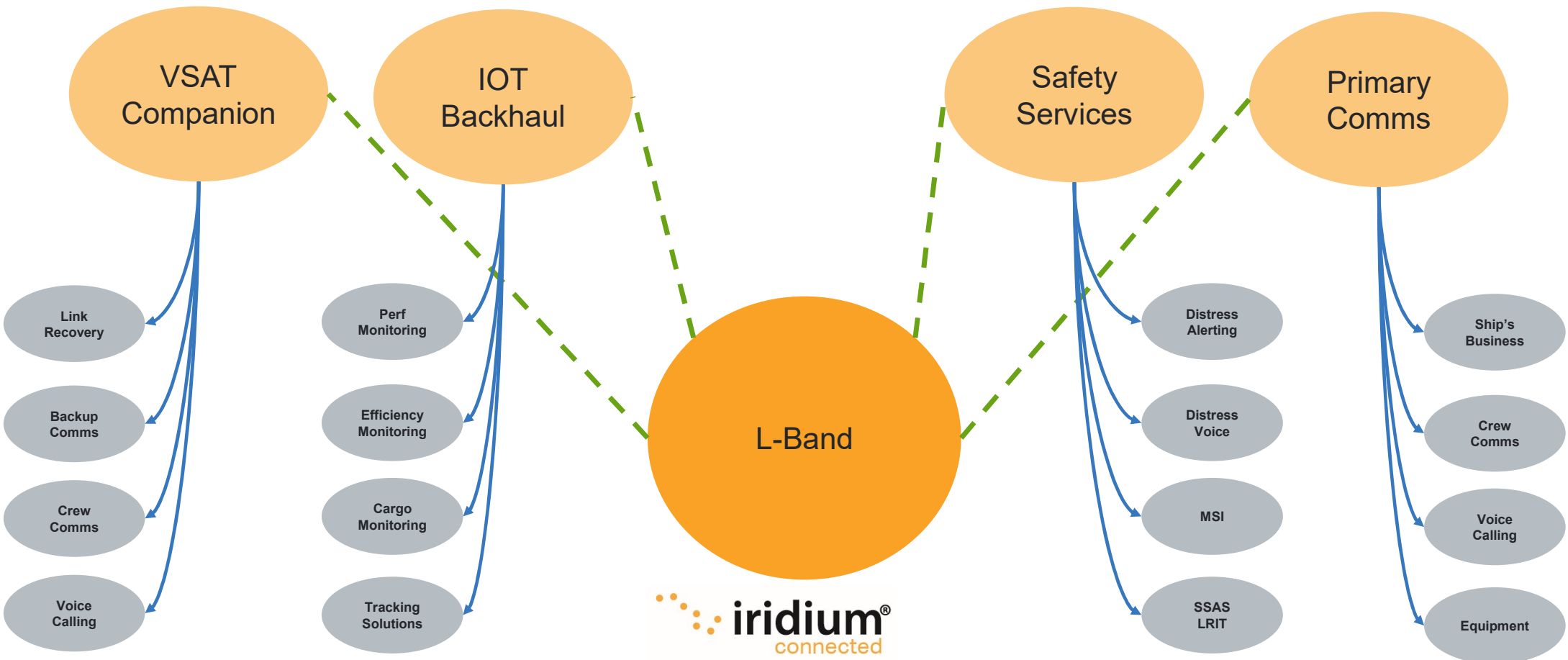
MARITIME CONNECTIVITY PARTNERSHIP

- Iridium has joined the Maritime Connectivity Platform

- MCP is a communications framework enabling secure and efficient EDI between all authorized stakeholders

- Open Source Architecture

- Together we can shape the future of EDI over satellite communications

THE MARITIME CONNECTIVITY PLATFORM

Stakeholders
- VTS
- Customs
- Ports Operators
- Service providers

Maritime Messaging Service (MMS)

Maritime Identity Registry (MIR)

Open Source

Maritime Service Registry (MSR)

Contextual Geolocated Information

Services
- Navigation
- Reporting
- Warning
- Weather
- Registration
- Port info

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L-BAND IS AT THE CORE OF MARITIME CONNECTIVITY

VSAT Companion
- Link Recovery
- Backup Comms
- Crew Comms
- Voice Calling

IOT Backhaul
- Perf Monitoring
- Efficiency Monitoring
- Cargo Monitoring
- Tracking Solutions

L-Band

iridium® connected

Safety Services
- Distress Alerting
- Distress Voice
- MSI
- SSAS LRIT

Primary Comms
- Ship's Business
- Crew Comms
- Voice Calling
- Equipment

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THE EVOLUTION OF CORE MARITIME CONNECTIVITY IS IRIDIUM