



Inmarsat GMDSS update

GMDSS Task Force

June 2023



Viasat 

+


inmarsat

Viasat closes acquisition of Inmarsat,
new global communications
partner created.



INTRODUCING I-8

Our new eighth-generation of spacecraft

Developed by SWISSto12, one of Europe's fastest-growing aerospace providers

The three I-8 satellites will provide additional **network resilience**, securing the future of Inmarsat's global **L-band safety services**.

5 times smaller than conventional geostationary satellites (1.5 cubic metres) but with the capacity to deliver **critical safety services with certainty**.

The new satellites will provide the **extra layer of resilience** to complement the existing constellation and Inmarsat's two I-6 generation satellites (launched 2021 and 2023).

The I-8 satellites will continue to secure **Inmarsat's global safety services into the 2040s**.



SATELLITES

I-6 F1 Successfully Launched on 22 December 2021 from JAXA Tanegashima Space Centre in Japan. Targeting for services of I-6 F1 from mid-June. This is more than two months earlier than previously planned

I-6 F2 the world's most advanced commercial communications satellite launched on 17 February 2023 from Cape Canaveral



INMARSAT-6 SATELLITES

ELERA + GX IN DEPLOYMENT

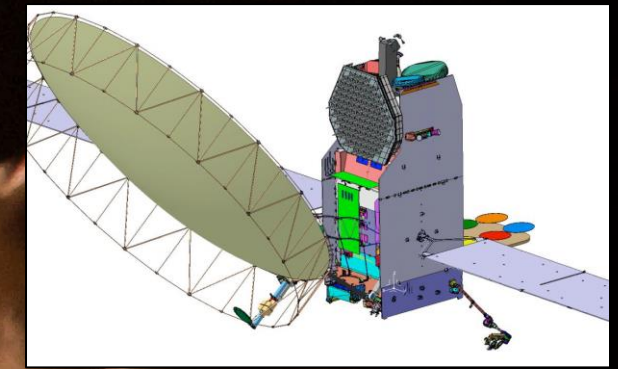
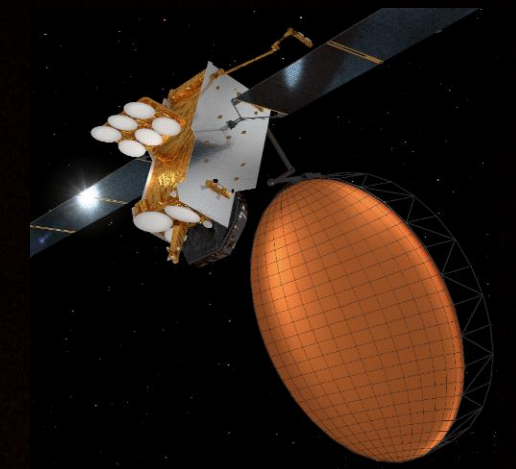
High-gain L-band Mission
continuity through 2040

COMPARED TO I-4

- 2X the L-band power
- 50% more L-band spectrum
- 4X the number of channels
- Regional GX augmentation

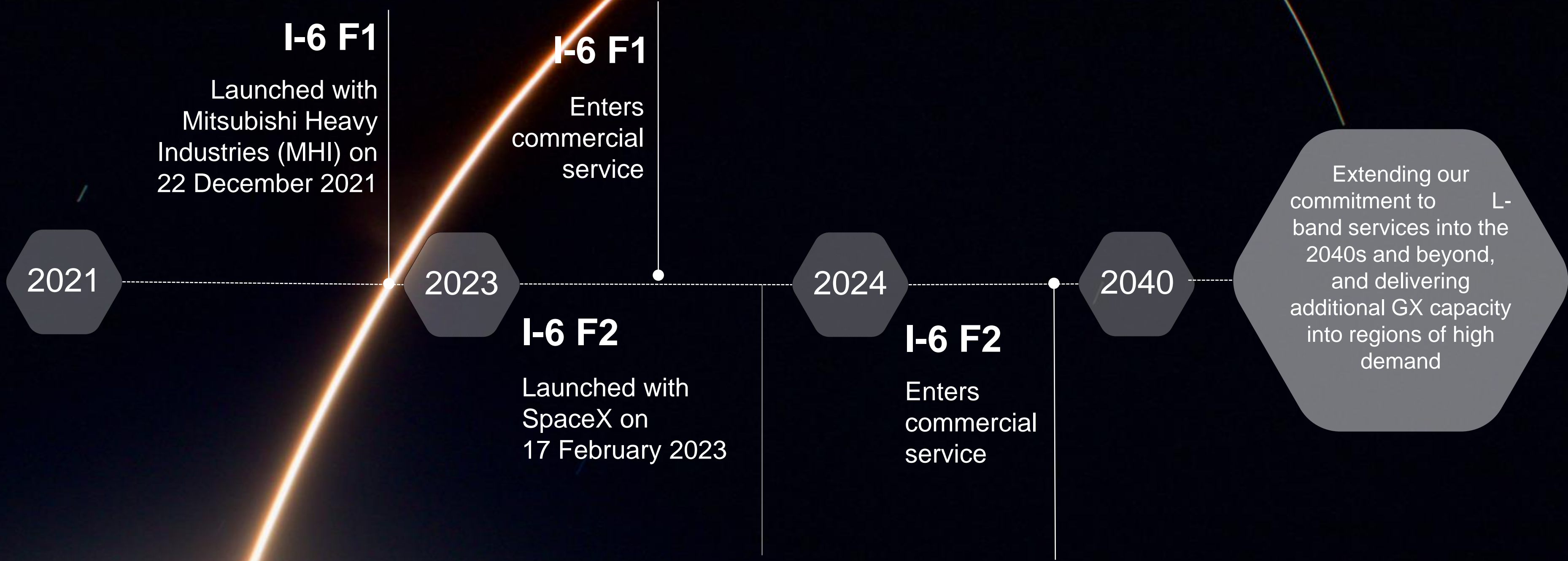
6F1: IOR-E L-band/SEAsia Ka:
Launched from Japan 21 December 2021

6F2: AOR-E L-band/NAmerica Ka:
Operational by 1Q24



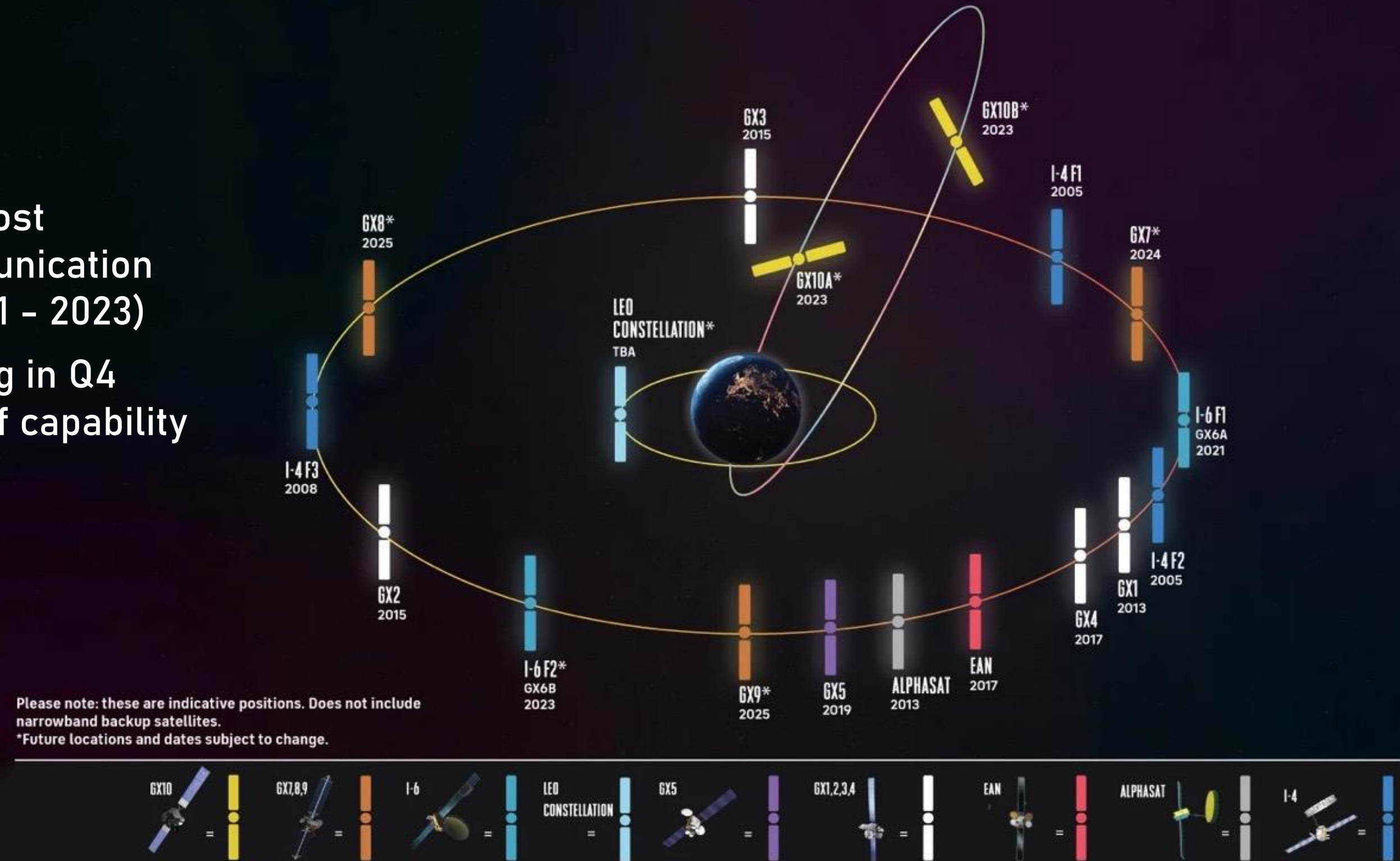
I-6 ROADMAP

The I-6s will be positioned over the Indian Ocean (F1) and Atlantic Ocean (F2) regions, delivering additional capacity and capabilities in areas of high traffic growth

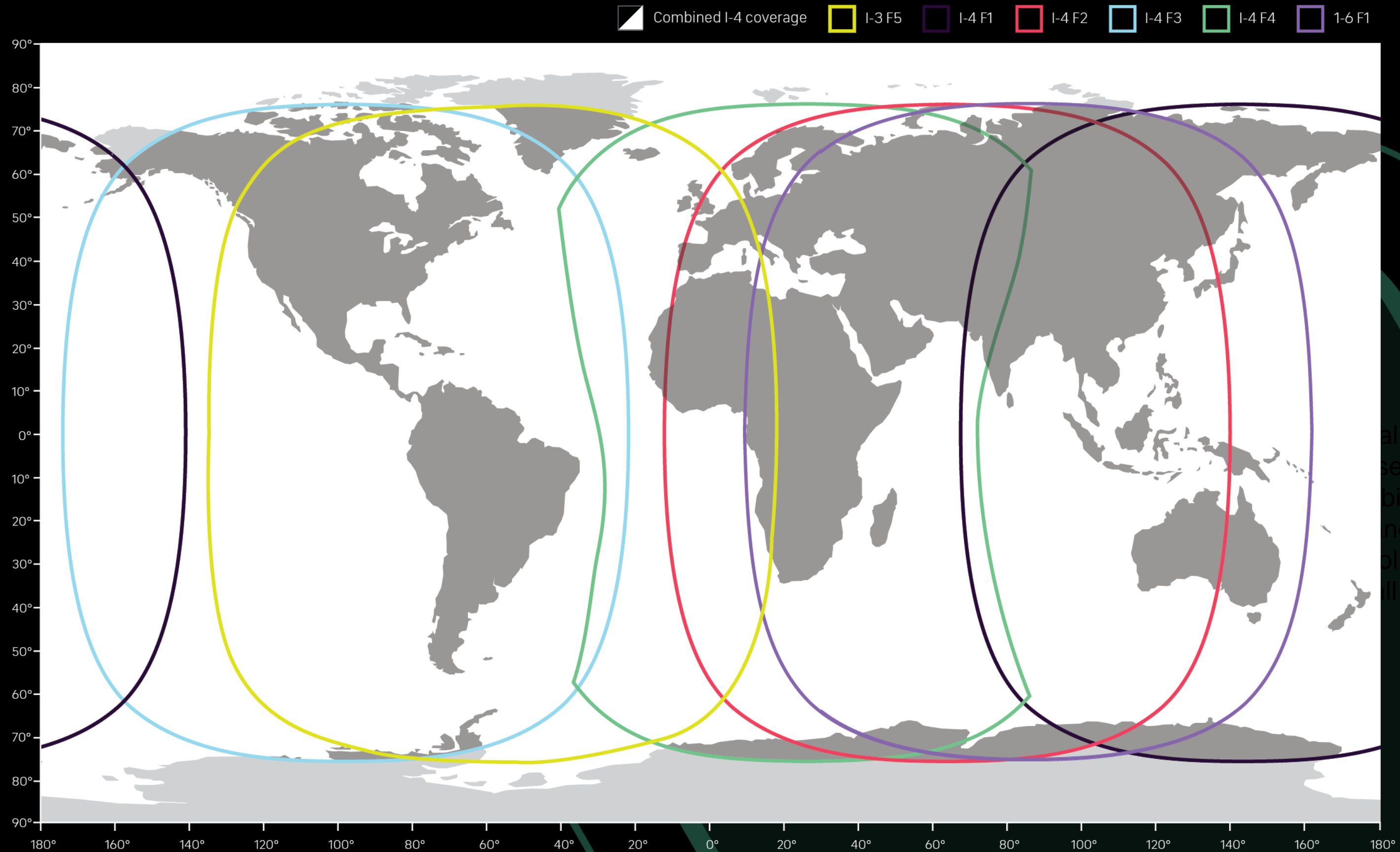


CURRENT & FUTURE

- I-6 F1 and F2 - the world's most advanced commercial communication satellites ever launched (2021 - 2023)
- GX10A and B - start launching in Q4 2023 ushering in a new era of capability and capacity



COVERAGE MAP ELERA



This map is for general information purposes only and no guarantee is given of accuracy or fitness for a particular use. Coverage is subject to change at any time.

ORCHESTRA

Inmarsat ORCHESTRA will be the first of its kind. A unique, global, multi-dimensional, dynamic mesh network that will redefine connectivity at scale with the highest capacity for mobility worldwide and at hot spots, as well as the fastest average speeds and the lowest average latency of any satellite-based network.



A UNIQUE, MULTI-DIMENSIONAL, DYNAMIC MESH NETWORK MADE UP OF:



ELERA

A critical layer of always-on connectivity with all-weather resilience.



TERRESTRIAL 5G

Ultra-high capacity at high demand hot spots - supplemented by the power of dynamic wireless mesh networking.



GLOBAL XPRESS

Reliable, high-speed, global coverage with security and full redundancy.



LEO

Small complementary constellation layering additional high capacity over further high demand areas.



Fleet Safety


inmarsat
FOR CERTAIN

FLEET SAFETY

Fleet Safety (FS SERVICE)

- Distress Alerting
- Distress Messaging
- Urgency / Safety Messaging
- Voice Distress
- Reception of MSI (all areas)
- MSI On Demand
- Distress Chat
- +40 RCC's
- Direct real time communications
- LRIT (Fleet Poll)
- SSAS
- I-4, I-6, I-8

Inmarsat C (SERVICE)

- Continues to be the backbone of the GMDSS
- 132,000 terminals in operation
- Distress Alert
- Distress / Urgency message
- Reception of MSI (all areas)
- LRIT
- SSAS
- Large investment to upgrade
- I-4, I-6, I-8


FleetBroadband (FS)

- IP Voice and Data services
- Fleet Safety services when MST installed
- Stand alone:
 - Voice Distress
 - Medical Advice
 - Medical Assistance
 - Maritime Assistance
- 505
- I-4, I-6, I-8

Fleet C

- Next Generation Safety
- Fleet Safety services when MST installed.
- Omni-directional antenna
- low profile, low power usage,
- Competitively priced, quick install/retrofit form factor
- Millions \$ investment into ground infrastructure upgrade.
- I-4, I-6, I-8

3 sec



Distress routed to closest Inmarsat associated RCC on average within 3 seconds.

>132,000

Inmarsat GMDSS terminals in operation

505

Non-GMDSS Voice Distress

2024

Next Generation Safety



Competitive analysis

GMDS functions	Fleet Safety	Inmarsat C		What makes Fleet Safety unique
Distress Alert	✓	✓		Instant Distress Alerting - the fastest method available Current and competitor systems can take up to 4 minutes to deliver a distress alert - would you want to wait that long?
Voice Distress	✓	✗		Voice Distress automatically and instantly routed to a global network of Rescue Centres
SAR Communications	✓	✓		Direct communications with Distress priority to over 60+ Inmarsat & IMO approved Rescue Centres around the world
EGC – Maritime Safety Information	✓	✓		Automatic reception of Safety Broadcasts from every global NAV/METAREA, including enhanced message filtering
Short Access Code voice	✓	✗		Medical Advice and Assistance at the touch of a button
Short Access Code Data	✓	✓		The only system that provides text based Medical Advice and Assistance with a direct link to the medical authority
Distress Chat	✓	✗	Inmarsat Only	The only system that provides real-time Distress text Chat Room with multiple IMO approved Rescue Coordination Centres (RCC), for fast Search and Rescue Coordination and reassurance that action is being taken
EGC On Demand	✓	✗	Inmarsat Only	The only system that provides a database search function of global EGC broadcasts and download of any missed safety messages
LRIT	✓	✓		Complies with Long Range Identification and Tracking IMO requirements
SSAS	✓	✓		Ship Security Alert System offers covert alerting in case of Piracy or Armed Robbery attacks
VMS	✓	✓		Vessel Monitoring System enabled for national requirements
Manual RCC selection	✓	✓		The default RCC will automatically route Distress to the closest Rescue Centre within the Inmarsat network. The manual selection allows the user to select their preferred Rescue Centre
505	✓	✗	Inmarsat Only	As well as Voice Distress, 505 is an additional non-SOLAS Safety Voice service only available through Inmarsat
RCC Vessel Tracking	✓	✗	Inmarsat Only	Authorised Rescue Authorities can automatically track the terminal in a Distress situation, for greater accuracy and assistance in a Distress or emergency.
Message deliver confirmation	✓	✗	Inmarsat Only	Provides vital notification that all messages are sent / delivered / read by the appropriate Search and Rescue Authority.



Fleet C – Next Generation Maritime Safety terminal

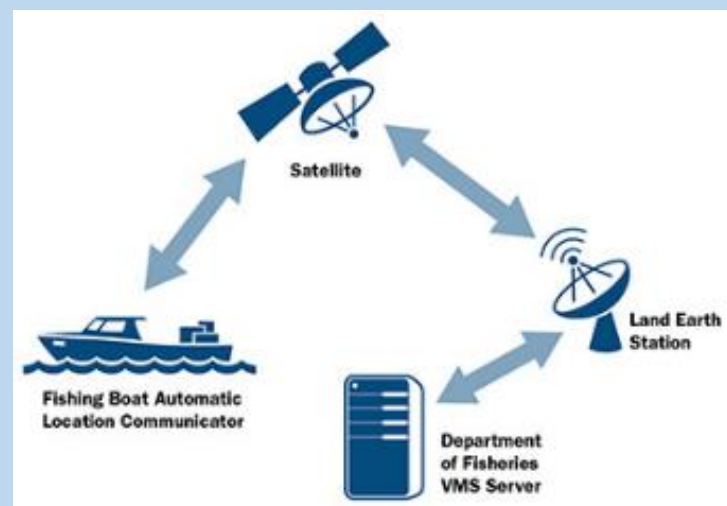


Global Maritime Distress and Safety System

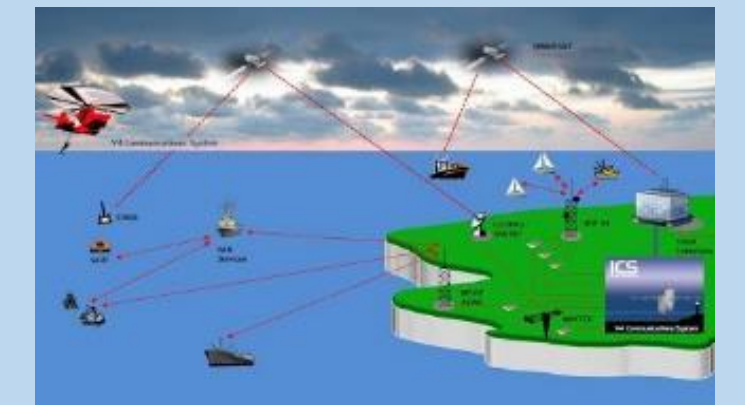
General Purpose & LRIT Antenna



Vessel Monitoring System



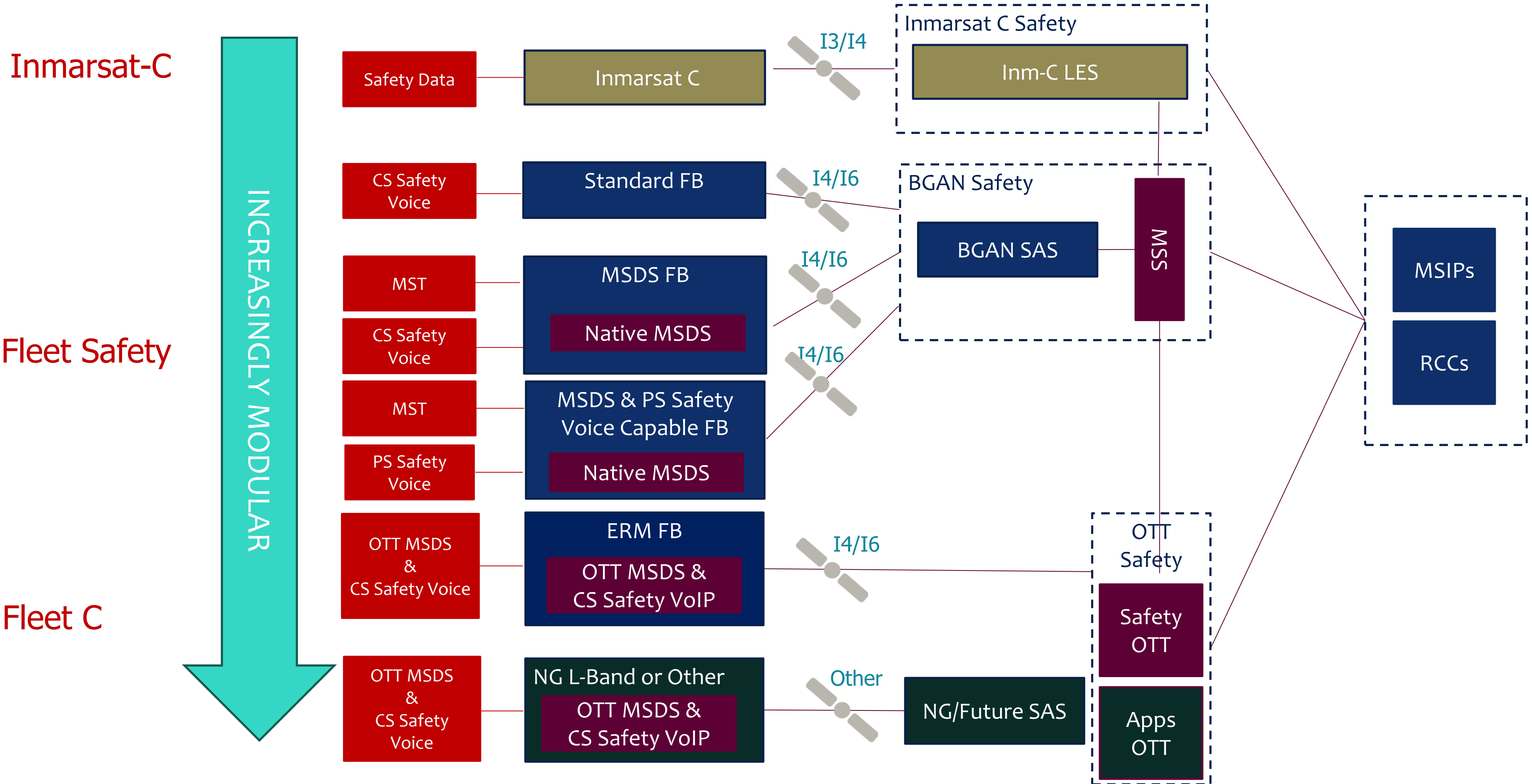
3rd party provider



Ship Security Alert System



Maritime Safety Landscape Overview

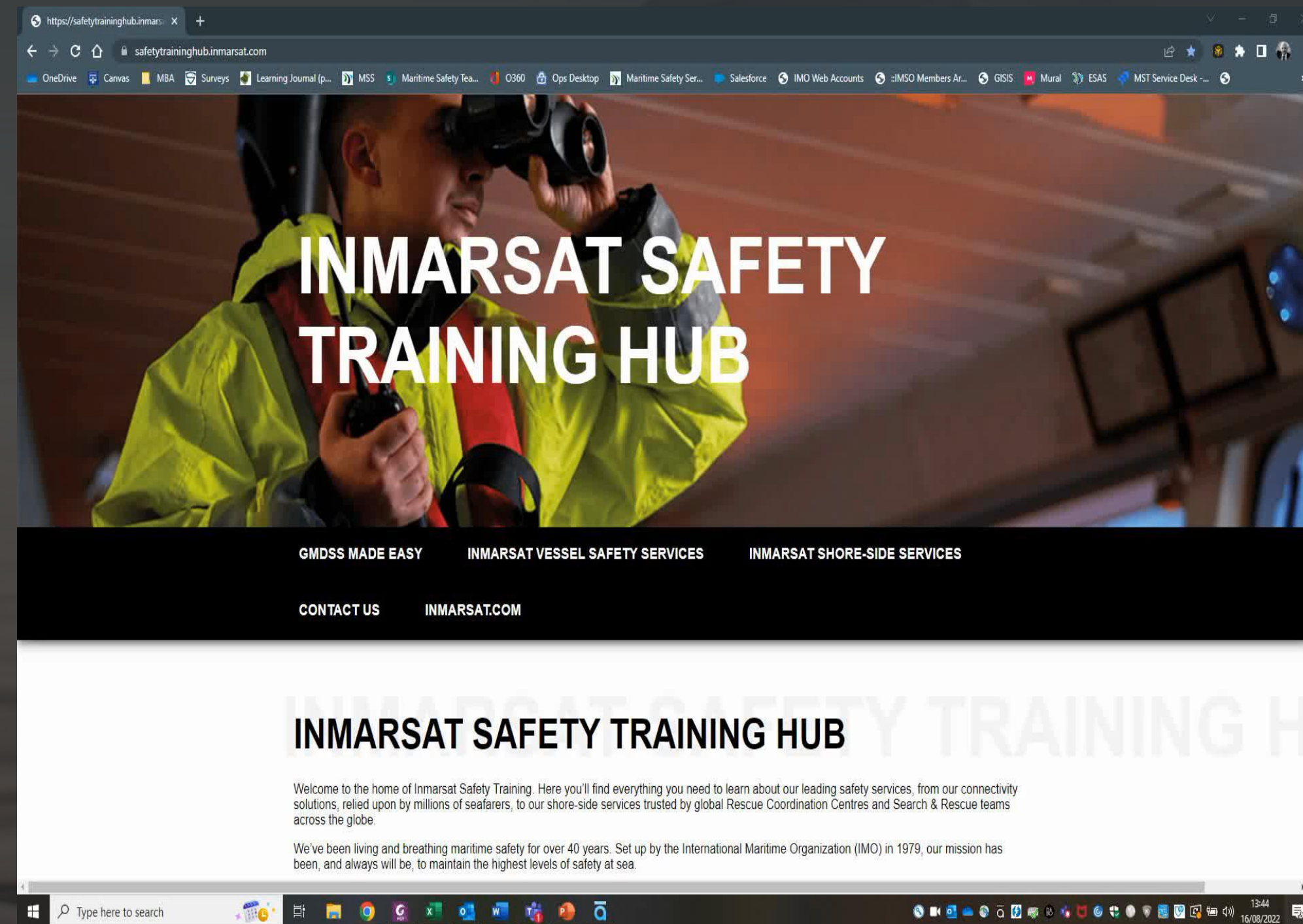



WHERE CAN I FIND OUT MORE?

Inmarsat Maritime Safety Training Hub
<https://safetytraininghub.inmarsat.com/>

- PDS
- SafetyNET
- SafetyNET II
- GMDSS overview
- Fleet Safety training
- Fleet Safety user overview
- RescueNET training
- Open access

QUESTIONS?



A person stands in the center of a vast, snow-covered mountain canyon at night. The scene is illuminated by a bright blue light, likely from a flashlight, which casts a long shadow on the snow. The canyon walls are steep and covered in snow, with some rocky outcrops visible. The sky is dark and filled with stars. The overall atmosphere is one of solitude and exploration.

GLOBAL AVAILABILITY TODAY
SUPERIOR MOBILE RELIABILITY
TRUSTED, SECURE AND RESILIENT

THANK YOU