



The evolution of safety at sea

Safety without compromise



Safety is in our DNA

Inmarsat was set up by the International Maritime Organization (IMO) in 1979 to deliver satellite communications that seafarers could rely on when their lives depend on it.

We are proud of our safety heritage, and nearly 40 years on we continue to work tirelessly to protect people at sea. Around 1.6 million seafarers trust us to deliver a communication lifeline when they need it most. Every day, six vessels around the world send out distress alerts or calls via Inmarsat. Every month, more than 30,000 Maritime Safety Information (MSI) and Search and Rescue (SAR) messages are broadcast via Inmarsat's international SafetyNET II system, warning vessels of danger and requesting their assistance when a nearby vessel is in distress.

This all happens without fail because, ever since the introduction of the Global Maritime Distress and Safety System (GMDSS) in 1992,

Inmarsat has met and even exceeded the stringent network and service availability regulations set out by the IMO.

Today, as satellite technology becomes increasingly accessible, Inmarsat also provides safety services to vessels that do not come under the Safety of Life at Sea (SOLAS) convention. Using our reliable L-band services FleetBroadband and Fleet One, we offer smaller merchant, fishing and leisure vessels the peace of mind of a free emergency connection (505 calling) direct to a Maritime Rescue Coordination Centre (MRCC), no matter where in the world they are or how bad the weather conditions.

We continue to innovate and invest in our L-band services in the lead up to the launch of our newest satellite constellation, Inmarsat-6, expected in 2020, which will herald a new era of critical safety service provision.

Then, as now, we will be there for seafarers – without compromise:

- > Over 99.9% service availability
- > Global always-on coverage
- > Easy-to-use equipment
- > Dedicated and experienced maritime safety team
- > Fully-funded infrastructure
- > Service interoperability

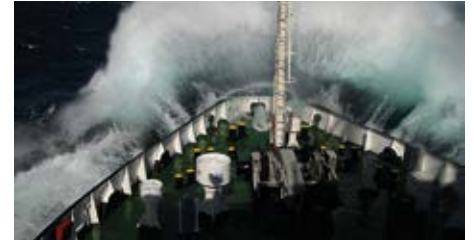
Inmarsat safety services

“I strongly believe that the new RescueNET system is a great leap forward in maritime safety and SAR. Inmarsat is blazing a path utilizing new technologies.”

Vladimirs Sadoha
RIGA MRCC



Fleet Safety – in May 2018, our next generation satellite safety service Fleet Safety, delivered over FleetBroadband and Fleet One, received formal GMDSS recognition by the IMO, marking the most significant advance in maritime safety for a generation. Fleet Safety offers a full suite of GMDSS applications such as Distress Alerting, Priority Messaging, reception of Maritime Safety Information, priority Short Access Codes such as 38-Medical Assistance. New innovative safety features are also included such as Distress Chat with MRCCs and retrieval of historic Maritime Safety Information.



Inmarsat C – the most widely used ship safety system in the world, with approximately 160,000 terminals installed on vessels operating worldwide. Launched in 1991, Inmarsat C provides two-way data and messaging communication services to and from virtually anywhere in the world.



Voice safety services on FleetBroadband and Fleet One – our free of charge safety service for non-SOLAS vessels is 505 Emergency Calling, where dialling the short code '505' in an emergency connects a vessel directly to one of three MRCCs located around the world. Vessels can also access priority Short Access Codes, a two-digit code for medical advice / assistance or maritime assistance. In addition, some manufacturers' terminals support Voice Distress – where the call has distress priority and pre-emption over any other calls on the Inmarsat satellite network.



SafetyNET II – the new generation international broadcast and automatic reception service for Maritime Safety Information (MSI) was released in November 2017. SafetyNET II allows Maritime Safety Information Providers (MSIPs) worldwide to transition to web-based messaging, delivered over multiple Inmarsat systems simultaneously, and provides the critical link to upgrading GMDSS capability.



RescueNET – an advanced MRCC service provided free of charge to MRCCs enabling swift, reliable and approved SAR communications ship-to-shore and shore-to-ship. RescueNET offers capabilities such as reception of Distress Alerts, vessel and MRCC look-up, and Distress Chat – a group messaging service to aid SAR coordination with full distress priority on our network.

Inmarsat maritime safety in action

Dedicated safety team

The Inmarsat Maritime Safety team is responsible for all our maritime safety services, new and old, as well as ensuring Inmarsat complies with IMO regulations. With decades of experience in the maritime and communications industries, the team is dedicated to developing ever more innovative tools to improve safety of lives at sea.

The team also provides satellite and safety services training to maritime universities, MRCCs and technical organisations. At the request of the International Maritime Rescue Federation (IMRF), they delivered a three-day course on GMDSS and SAR technology developments in Rabat for MRCC personnel who were then able to pass on their new knowledge to their colleagues in Morocco, Senegal and Nigeria.

Although not on the front line of search and rescue, Inmarsat regularly receives calls from desperate families of non-SOLAS vessel sailors feared missing, and security organisations involved in anti-piracy, requesting assistance. To the safety team, it is irrelevant if a seafarer in distress is the captain of a supertanker or the owner of a leisure yacht, they will do everything in their power to help get in touch or support rescue efforts.

Always being prepared

As part of Inmarsat's Public Service Agreement (PSA) with the International Maritime Satellite Organization (IMSO), we carry out four contingency exercises every year to ensure we are prepared for the unlikely event of one of the satellites transmitting distress alerts and MSI losing service.

Involving our Network Operations Centre and Land Earth Stations worldwide, the 50-step protocol requires our engineers to move all traffic from the inconsistent satellite to one of our Inmarsat-4 fleet and restore service within one hour. We have never failed the task, and the average time for service restoration is 16 minutes.

“The new SafetyNET II system is simpler to use, easier to understand and operate. Certain added features make it less prone to expensive errors such as the inadvertent transmission of bandwidth-intensive images. It works well for the IMB PRC’s applications.”

Noel Choong

International Maritime Bureau Piracy Reporting Centre



Volvo Ocean Race – made possible by Inmarsat

As official Satellite Communications Partner to the Volvo Ocean Race for the fifth consecutive edition, Inmarsat is responsible for keeping the seven competing crews safe and connected on their 45,000 nautical mile circumnavigation.

Each Volvo 65 race boat has Inmarsat C on board for 24/7 tracking and GMDSS-approved safety, and the crews also have FleetBroadband 500 and 250 terminals for voice and data communications, which includes 505 Emergency Calling, Voice Distress and Urgency Priority.

In addition, the crew carry an IsatPhone 2 handheld satellite phone in their liferaft pack.



Combating the threat of piracy

For vessels plying some of the world's busiest shipping routes, the risk of pirate attack can be the biggest threat to their safety.

The International Maritime Bureau's Piracy Reporting Centre enables shipmasters to report attacks or suspicious activity 24 hours a day. All information received is immediately relayed to the local law enforcement agencies requesting assistance, and incident details are also immediately broadcast via SafetyNET II to vessels in the region, to warn others of the danger.

In 2016, 191 incidents were reported to the PRC, with warnings given to vessels in South East Asia and the Indian sub-continent; Africa and the Red Sea; and South and Central America.

Supporting maritime organisations

Inmarsat is proud to support charities and organisations dedicated to the safety and welfare of seafarers:

- **International Maritime Rescue Federation** – The IMRF launched its H.E.R.O. Awards in 2016 to recognise the extraordinary work done in SAR operations around the world. We sponsor the Vladimir Maksimov Lifetime Achievement Award in commemoration of our late colleague who made an exceptional contribution to safety of life at sea in a 25-year career at Inmarsat.
- **Sailors' Society** – Inmarsat sponsors the charity's annual Wellness at Sea conference, which considers the physical, emotional, intellectual and social impacts on crew morale.
- **International Seafarers' Welfare and Assistance Network** – Inmarsat is gold sponsor of the 2018 International Seafarers' Welfare Awards, in which seafarers spotlight the companies and organisations who have offered them high quality welfare services and facilities.

We also work with leading institutions including the World Maritime University in Malmo, Sweden to help inspire future generations of seafarers.

“Inmarsat's continued support and involvement with the university has provided a significant contribution to WMU's mission of maritime capacity building.”

Professor Daniel Moon
World Maritime University



The future of maritime safety

The role connectivity will play in every aspect of our future lives cannot be over-estimated. Inmarsat is leading the way in enabling the maritime industry to ride the wave of digitalisation – from transforming operational efficiency to tackling cyber security and, critically, evolving safety services to aid mariners and search and rescue authorities.

Through continuing investment in innovative systems like SafetyNET II and RescueNET we are supporting ever-more accessible safety services at sea. We are developing a new Maritime Safety Terminal (MST) to enable the simple dissemination of information-rich safety data, including distress alerts and MSI.

Our commitment to our L-band network is evidenced by plans for our sixth-generation satellites. The Inmarsat-6 fleet will be the first to feature dual-payload satellites; each supporting L-band and Ka-band (Global Xpress) services.

The I-6 satellites represent a step change in the capacity of Inmarsat's L-band services and will support a new generation of capabilities, including advanced global safety services. The new constellation will ensure reliable global coverage until at least 2035, marking more than half a century of Inmarsat safety services.

At the heart of all we do is a simple pledge – to deliver safety at sea, without compromise.

<https://www.inmarsat.com/service/maritime-safety/>



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