Issue No: 10 | JUNE 2026

DenizGündem

Denizcilik Dünyası Haber Merkezi

INTERNATIONAL

Special Issue:
MARITIME COMMUNICATIONS

İsmail KÜPÇÜ, General Manager of ALM Marine:

"Today, power at sea is defined by the speed of the data you can access."

Pharus Tech

General Manager Mehmet DOĞAN says:
"There is no second chance when it comes to life-saving technologies."

Deckhouse Communications

According to Director Yiğit KALYON:
"Artificial intelligence, autonomy, and digitalization... Behind them all lies a single invisible force: communications."

GRL Marine Electronics

In the words of General Manager A. Baki UĞURLU:
"In the middle of the sea, the entire story can sometimes depend on a single working frequency."

www.denizgundem.com

GREAT TEAMS ARE BUILT WITH SUPERIOR PARTS!

ADVANCE EUROPE
auto MASKIN
BSKY BWTS
CSSC MARINE BATTERY
DEALFENG
HUAYI MARINE SEPERATOR
basideWT
SIBO GROUP
ZICHAI ENGINE MAKER
RIKEN PISTON RING
S & T YUKANG
TIANJIN PUMPS & MACHINERY CO.,LTD
FREE FALL RESCUE BOATS
JRCS JAPAN
HEARTMAN
KSV
LUMINULTRA microbial monitoring
KEXUN

As YAF GROUP, we wish our National Football Team the best of luck at FIFA 2026.

The Way Forward Is Harmony

YAF GROUP

Evliya Çelebi Mah. Rauf Orbay Cad. No: 39-2 YAF GROUP İş Merkezi Tuzla | ISTANBUL / TURKIYE

P: +90 216 494 49 02 - M: +90 533 151 60 27 info@yafgroup.com.tr - www.yafgroup.com.tr

NORDEN
SHIPDESIGNHOUSE

Cami Mah. Arıkan Çıkmazı Sk. No:12
Tuzla, İstanbul | TURKIYE
+(90) 216 999 90 95
info@nordenshipdesign.com
www.nordenshipdesign.com

WHERE INNOVATION MEETS THE OCEAN.

We combine advanced engineering, smart technology, and deep maritime expertise to deliver future-ready solutions for the global shipbuilding industry.

From Our Editor

The Power of Connection at Sea: The Strategic Importance of Maritime Communication

Haydar ÖZDEN

The maritime industry is often discussed in terms of engine power, port investments, or trade volume. Yet the true strength of a vessel on the open sea is often hidden in the connections it maintains. Communication at sea is not merely about transmitting messages; it is about preserving safety, coordination, and operational continuity.

For a vessel sailing miles away from land, communication can mean taking precautions against severe weather conditions, receiving urgent medical assistance, or ensuring that critical operational decisions are made on time. The loss of communication at sea, on the other hand, can lead not only to operational disruptions but also to serious risks that may directly affect human life.

Today, the maritime industry is becoming faster, more digital, and increasingly connected. The uninterrupted communication established between shipowners, captains, technical teams, and operation centers forms the invisible backbone of ship management. Especially on busy trade routes, under harsh weather conditions, and during long voyages, reliable communication systems are no longer a preference but a fundamental necessity.

Communication at sea also plays a critical role not only in safety, but also in efficiency, crisis management, and the sustainability of international operations. Access to the right information at the right time often provides the greatest advantage at sea.

In this issue, Deniz Gündem focuses on the strategic importance of maritime communication within the industry, the evolving needs of the sector, and the companies developing solutions in this field. We believe that every connection established on the open sea is, in fact, an invisible yet indispensable part of global maritime trade.

During the preparation of this special feature, the support of **Mr. İsmail Küpçü**, owner of Alamatra Marine Electronics, who contributed with his valuable knowledge and experience, was truly meaningful to us. We extend our sincere thanks to him for his valuable contributions to this work through his experience and industry perspective in the field of maritime communication.

Haydar Özden

Pharus Tech

GUIDING SAFETY
SAVING LIVES

The **PHARUS EPIRB** is a float-free emergency beacon designed for sea vessels, delivering reliability, durability, and performance when it matters most.

406 MHz SATELLITE TECHNOLOGY
Fast and reliable distress alert anywhere in the world.

WORLD'S FIRST EPIRB WITHOUT HRU!
Thanks to its patented design, no HRU is required for automatic release in water.

NFC CONNECTIVITY
Easiful device programming and protected battery replacement.

10-YEAR BATTERY LIFE
Long-life lithium battery for extended protection.

RUGGED & WATERPROOF
Designed to withstand the harshest marine environments.

COMPACT RELIABLE READY FOR ANY MISSION

Trusted by professionals.
Built for real conditions.

COMPACT & LIGHTWEIGHT
Easy to install and deploy

AUTOMATIC ACTIVATION
Self-activating in water

EASY MAINTENANCE
Simple testing & inspection

GLOBAL COVERAGE
Works with COSPAS-SARSAT system

LET'S CONNECT
for more information

+90-850-308-2021
info@pharus-tech.com
www.pharus-tech.com

Pharus Tech

CONTENTS

Type of Publication

Digital Monthly

The Concessionaire

Gülşen ÖZDEN

Editor-In-Chief

Haydar ÖZDEN

European Representative

Özgür ÖZMEN

Editor

Nesibe BAT

Journalist

Erensoy ARICAN

Design and Construction

Yunus Emre TORUN
Reindeer Medya

Editorial Board

Av. Bekiralp Akdemir
Dr. Kürşat Bal
Kapt. Yusuf Özcan Demir
Şahan Demircan
Yusuf Kanıcı
Kapt. Taylan Kızıltaş
Prof. Dr. Adnan Parlak
Seyfullah Sarı
Gökçe Şengezer
Canatay Yılmaz

Contact Information

info@denizgundem.com
reklam@denizgundem.com
+90 (530) 306 49 46
www.denizgundem.com
Adres: Yavuzsultan Selim Mah. Osmangazi Cad. 2. Etap Kent Konut A8C Daire: 26 Körfezkent Körfez/KOCAELİ

Cover Art: Digital / AI-Generated

Alesta

HİZMETLERİMİZ
OUR SERVICES

- **Sualtı Survey Hizmetleri**
  Underwater Survey Services
- **Kilistin Temizliği ve Pervane parlatma**
  Sea Chest Cleaning and Propeller Polishing
- **Gemi Dolum Boşaltım sistemleri**
  Ship Loading and Unloading Systems
- **Petrol Boru hatlarının bakım onarım hizmetleri**
  With Oil Pipeline Maintenance – Repair Services
- **Çapa çıkarma**
  Anchor Extraction Process
- **Fiber optik Kablo döşeme**
  Fiber Optic Cable Installation

- **Hasarlı gemi Kaynak kesimi bakım onarım hizmetleri**
  Damaged Ship Supply , Repair and Maintenance Services Sector
- **Gemi kurtarma ve batık çıkarma**
  Ship Salvage and Wreck Removal
- **Şamandıra alt yapı bakım onarım hizmetleri**
  Infrastructure Maintenance and Renewal of Buoy System Services
- **Boru hattı döşeme**
  Pipeline Laying

DNV·GL RINA GROUP ClassNK ISQ Lloyd's Register TÜRK LOYDU SQS KR KOREAN REGISTER DBS

www.alestadalgiclik.com

Kocaeli's Share of Türkiye's Exports Climbs to 17.8%

Regional port operations, maritime safety and foreign trade performance were among the key topics discussed at the May assembly meeting of the Kocaeli Branch of the Chamber of Shipping (İMEAK DTO). Speaking at the meeting, Fatih Yalçınkaya, Regional Director of Customs and Foreign Trade for Eastern Marmara, announced that Kocaeli's share of Türkiye's total exports had reached 17.8% despite ongoing uncertainties in global trade. He added that the momentum recorded in April accounted for nearly 6% of Türkiye's overall export growth. Opening the meeting, Vedat Doğusel, Chairman of the Board of the İMEAK DTO Kocaeli Branch, described Kocaeli as one of the key drivers of the Turkish economy thanks to its ports, shipyards and logistics infrastructure. He noted that cybersecurity has become just as important as navigational safety amid growing vessel traffic and warned that tensions in the Middle East are increasing freight and insurance costs, placing additional pressure on global supply chains.

According to figures shared by Doğusel, the region recorded exports worth USD 13.308 billion and imports totaling USD 27.202 billion during the first four months of 2026. In April, Derince led the region's exports with USD 1.673 billion, followed by İzmit with USD 1.110 billion. On the import side, Derince recorded USD 3.249 billion, while Dilovası handled imports worth USD 2.377 billion. Kocaeli's ports received a total of 2,737 vessel calls during the first four months of the year, including 844 Turkish-flagged and 1,893 foreign-flagged vessels. Accounting for 15.85% of Türkiye's total vessel traffic, the province handled 27.312 million tonnes of cargo, representing nearly 15% of the country's overall cargo throughput. Kocaeli also maintained its position as Türkiye's second-busiest container hub, handling 825,615 TEUs over the same period.

Dr. Ahmet Mert, who assumed office as Regional Port Director of Kocaeli on April 17, stated that Kocaeli remains the region with the highest vessel traffic and foreign trade volume in Türkiye. He said his goal is to build a safer and more coordinated port system without slowing down operations. The meeting concluded with assembly members sharing their views and recommendations on developments in the maritime sector.

Electro Cirkel Opens Singapore Hub to Strengthen Asian Presence

Dutch maritime electrical equipment supplier Electro Cirkel has announced the opening of a new office and warehouse facility in Singapore as part of its strategy to expand its global operations network. With its new Singapore facility, the company aims to provide faster and more reliable deliveries to shipowners, operators and maritime service providers across the region.

With around 140,000 vessel calls annually, Singapore is one of the world's leading maritime hubs and a strategic center for international shipping, bunkering and marine services. Founded in Rotterdam in 1970, Electro Cirkel specializes in the supply of electrical components, cables, lighting products and technical equipment. The new facility is expected to strengthen the company's presence in the Asian market and enhance its regional service capabilities.

The Singapore operation is being led by Emil Skavlem, who recently relocated to Asia to establish and oversee the company's regional organization. Skavlem said the newly established local warehouse and logistics infrastructure would enable Electro Cirkel to respond more quickly to customers' day-to-day operational needs. He added that the company has built a strong service network tailored to the fast-paced and highly dynamic maritime market in Singapore.

Rudolf van Soelen, owner of Electro Cirkel, emphasized that rapid response and reliability are critical factors in the maritime industry. He said the company's goal is not rapid market dominance, but rather to support customers' operations and build long-term partnerships. Van Soelen added that the Singapore investment brings Electro Cirkel closer to the Asian market and strengthens its ability to serve customers throughout the region.

With operations in Rotterdam, Houston, Deqing and now Singapore, Electro Cirkel has expanded its network across four continents while continuing to develop its Calex Marine lighting solutions for the global maritime industry.

MARIDEC MARINE

WORLDWIDE SPARE PARTS SUPPLIER

- SEPARATOR SPARES
- AIR COMPRESSOR SPARES
- REFRIGERATOR COMPRESSOR SPARES
- PUMP SPARES
- SEWAGE VACUUM SYSTEM SPARES
- FWG & HEAT EXCHANGER SPARES
- ALL MARINE FILTERS
- MOATTI & BOLL&KIRCH SPARES
- BWTS SPARES
- BOILER SPARES
- COOLER SPARES

SEPARATION & FILTRATION EXPERT

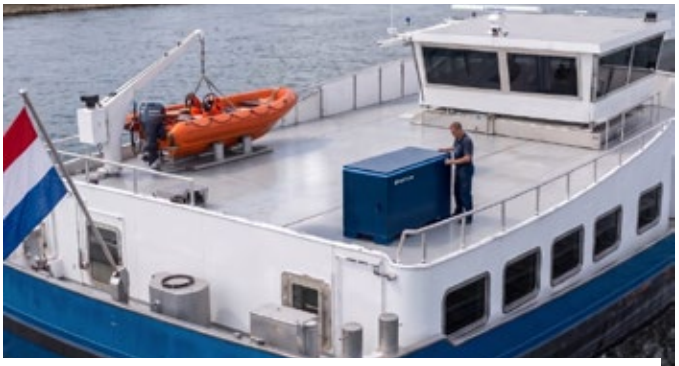
micfil INTERNATIONAL
QUALITY PRODUCTS MADE IN GERMANY
it's time to go green

MICFIL 0,5µ
DIESEL & OIL ULTRAFINE FILTER

IOW Group

IOW 1µ OIL CLEANING
CLEARIFIER SEPARATOR

+90 (216) 423 06 06
sales@maridec.com
www.maridec.com
Evliya Çelebi Mh. Rauf Orbay Cd. Nazan Sk. No:2 Lagoon Plaza K:2 D:3 34944 Tuzla/istanbul/TURKIYE



Wattlab Launches One-Day Battery Installation Solution for Inland Waterway Vessels

Dutch maritime technology company Wattlab has introduced WEstack, a new battery system designed for inland waterway shipping.

By reducing installation times from several weeks to just one working day, the company aims to accelerate the sector's transition toward electrification. Fully assembled and tested before delivery, the system can be brought online simply by connecting it once it arrives on board.

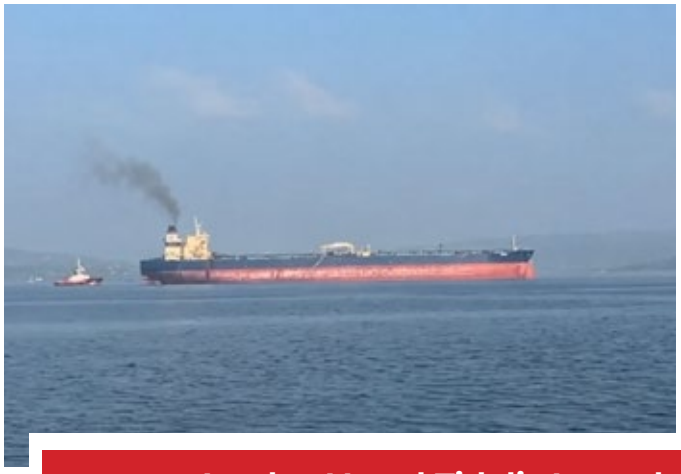
WEstack was developed to address the inefficiencies associated with diesel generators operating at low loads, a common issue in inland shipping. According to Wattlab, the system can reduce generator operating hours by 80% to 90%, significantly lowering fuel consumption, maintenance costs and carbon emissions.

It also helps reduce onboard noise, vibration and exhaust emissions, helping operators improve both environmental performance and onboard comfort.

Available in four capacity options—100, 200, 300 and 400 kWh—WEstack can be installed on both newly built vessels and retrofit projects within existing fleets.

The system has been designed for a broad range of vessel types, including dry cargo vessels, tankers and small coastal vessels.

Founded in Rotterdam in 2017, Wattlab first gained recognition through its solar energy solutions for the maritime industry. With the launch of WEstack, the company is promoting energy efficiency as one of the fastest and most cost-effective routes to emissions reduction at a time when alternative fuels remain expensive and are not yet widely available across the maritime industry.



Awake.AI and Tidalis Launch Partnership to Automate Maritime Emissions Reporting

Finnish maritime technology company Awake.AI and Dutch port and vessel traffic management specialist Tidalis have entered into a strategic partnership aimed at digitizing emissions monitoring and reporting across the maritime industry. Under the agreement, the two companies will develop automated emissions reporting solutions for ports and maritime operators.

The new system will combine Awake.AI's Emission Monitor platform with Tidalis' widely used vessel traffic services and port management systems. Data from vessel calls, bunkering operations, cargo handling activities, shore power consumption and vessel movements will be automatically transformed into Scope 1, 2 and 3 emissions reports. The solution is expected to reduce the administrative burden of manual reporting while improving the accuracy, transparency and consistency of emissions data.

The partnership is designed to help the maritime industry meet growing reporting requirements driven by FuelEU Maritime, the European Union Emissions Trading System (EU ETS) and the International Maritime Organization's (IMO) decarbonization targets. Initial deployments are scheduled to begin at European ports later this year before expanding into the Asia-Pacific, Middle East and Americas regions during 2026 and 2027.

With more than 80% of global trade transported by sea and the maritime sector accounting for approximately 3% of worldwide greenhouse gas emissions, the companies believe the partnership will help ports and maritime operators accelerate decarbonization efforts while improving transparency, operational efficiency and compliance with evolving environmental regulations.

ARTI DENİZCİLİK

QUALITY IS AN *ARTI* FACT...

www.artidenizcilik.com | +90 216 350 10 66 | arti@artidenizcilik.com

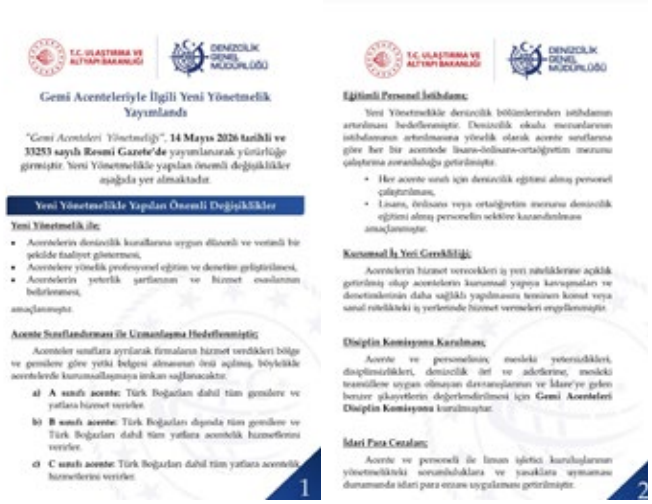
arti-denizcilik

Türkiye Introduces New Rules for Shipping Agencies

Türkiye has introduced a new Shipping Agencies Regulation, published in the Official Gazette, establishing revised operating principles, licensing requirements and inspection procedures for maritime agencies. The regulation aims to raise service standards, improve transparency and strengthen compliance with international maritime regulations and standards.

Under the new framework, shipping agencies will for the first time be classified into Category A, B and C according to their areas of operation. The regulation also introduces new criteria covering licensing requirements, minimum capital requirements, personnel qualifications and training obligations. In addition, new provisions have been introduced to govern the establishment of branch offices in different regions.

Prepared by the Ministry of Transport and Infrastructure, the regulation was published in the Official Gazette on 14 May 2026. While certain provisions entered into force upon publication, most of the regulation's requirements will take effect after a three-month transition period.



Gemi Acenteleriyle İlgili Yeni Yönetmelik Yayımlandı

"Gemi Acenteleri Yönetmeliği", 14 Mayıs 2026 tarihli ve 33253 sayılı Resmi Gazete'de yayımlanarak yürürlüğe girmiştir. Yeni Yönetmelikle yapılan önemli değişiklikler aşağıda yer almaktadır.

Yeni Yönetmelikle Yapılan Önemli Değişiklikler

Yeni Yönetmelik ile;

- Acentelerin denizcilik kurallarına uygun düzenli ve verimli bir şekilde faaliyet göstermesi,
- Acentelere yönelik profesyonel eğitim ve denetim geliştirilmesi,
- Acentelerin yeterlik şartlarının ve hizmet esaslarının belirlenmesi,

amaçlanmıştır.

Acente Sınıflandırması ile Uzmanlaşma Hedeflenmiştir:

Acenteler sınıflara ayrılarak firmaların hizmet verdikleri bölge ve gemilere göre yetki belgesi almasının önü açılmış, böylelikle acentelerde kurumsallaşmaya imkan sağlanacaktır.

a) A sınıfı acente: Türk Boğazları dahil tüm gemilere ve yatlara hizmet verirler.

b) B sınıfı acente: Türk Boğazları dışında tüm gemilere ve Türk Boğazları dahil tüm yatlara acentelik hizmetlerini verirler.

c) C sınıfı acente: Türk Boğazları dahil tüm yatlara acentelik hizmetlerine verirler.

1

Eğitimli Personel İstihdamı:

Yeni Yönetmelikle denizcilik bölümlerinden istihdamın artırılması hedeflenmiştir. Denizcilik okulu mezunlarının istihdamının artırılmasına yönelik olarak acente sınıflarına göre her bir acentede lisans-önlisans-ortaöğretim mezunu çalıştırma zorunluluğu getirilmiştir.

- Her acente sınıfı için denizcilik eğitimi almış personel çalıştırılması,
- Lisans, önlisans veya ortaöğretim mezunu denizcilik eğitimi almış personelin sektöre kazandırılması

amaçlanmıştır.

Kurumsal İş Yeri Gerekliliği:

Acentelerin hizmet verecekleri iş yeri nitelliklerine açıklık getirilmiş olup acentelerin kurumsal yapıya kavuşmaları ve denetimlerinin daha sağlıklı yapılmasını teminen konut veya sanal nitelikteki iş yerlerinde hizmet vermeleri engellenmiştir.

Disiplin Komisyonu Kurulması:

Acente ve personelinin, mesleki yetersizlikleri, disiplinsizlikleri, denizcilik örf ve adetlerine, mesleki teamüllere uygun olmayan davranışlarının ve İdare'ye gelen benzer şikayetlerin değerlendirilmesi için Gemi Acenteleri Disiplin Komisyonu kurulmuştur.

İdari Para Cezaları:

Acente ve personeli ile limanı işletici kuruluşların yönetmelikteki sorumluluklara ve yasaklara uymaması durumunda idari para cezası uygulaması getirilmiştir.

2

Ned Marine Expands Inspection Portfolio with Drone and ROV Technology

Dutch inspection and non-destructive testing (NDT) specialist Ned Marine has introduced new drone and remotely operated vehicle (ROV)-assisted inspection services for ships, offshore installations and industrial facilities. The company said the new technology is designed to make inspections faster, safer and more efficient while reducing operational disruptions.

The new system enables inspections of ship tanks, cargo holds, wind turbines and industrial structures without the need for scaffolding, rope access or diving operations. According to Ned Marine, drone-based inspections can be completed up to four times faster than conventional methods, significantly reducing downtime and improving operational efficiency.

In addition, the company will deploy ROV systems capable of operating at depths of up to 300 meters to perform hull inspections, cathodic protection assessments, structural monitoring and pre-drydocking surveys. By combining drone and ROV technologies with its existing non-destructive testing capabilities, Ned Marine aims to improve maintenance planning, enhance inspection efficiency and reduce the risk of unexpected equipment failures.

"Güvenilir Çözüm Ortağınız"
"Reliable Solution Partner"

DANIŞMANLIK
Consulting

MALZEME TEMİNİ
Material Supply

GEMİ ONARIM ve TEKNİK HİZMETLERİ
Ship Repair and Technical Services

SUALTI ONARIMLARI ve HİZMETLERİ
Underwater Repairs & Services

High Pressure Valves

Vacuum Jacketed Valves

NAVY SUPPLIER DENİZCİLİK TİCARET LİMİTED ŞİRKETİ

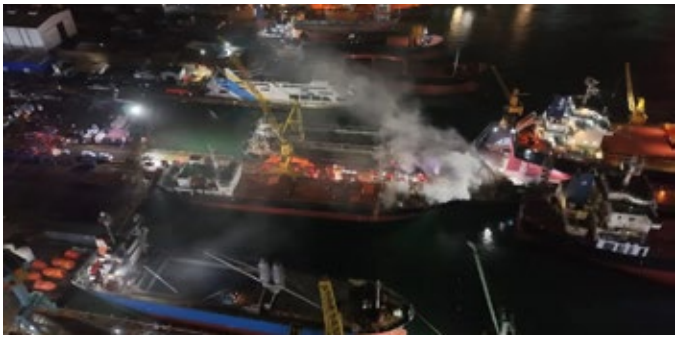
Adress HQ: Aydıntepe Mah. Sahilyolu Bulvarı Alize iş Merkezi No; 191/42 Tuzla / İSTANBUL
BRANCH :Nispetiye Cad. Çamlık Yolu Sk. Ortaklar Ap. No:2 Daire:9 Etiler / İSTANBUL
info@navy-supplier.com www.navy-supplier.com +90 532 549 49 94

Growing EV Trade Drives New Fire Safety Concerns at Sea

Fires involving lithium-ion batteries have emerged as one of the most significant safety challenges facing the maritime transport industry in recent years. As shipments of electric vehicles and lithium-ion batteries continue to increase, shipowners, operators, insurers and port authorities are placing greater emphasis on risk management and preventive safety measures.

Industry experts note that lithium-ion battery fires differ from conventional fires due to their ability to generate extreme heat, sustain combustion for extended periods and reignite even after they appear to be extinguished. Recent incidents involving vehicle carriers and container vessels have prompted the industry to reassess existing safety practices and emergency response procedures across the sector.

Maritime stakeholders emphasize that reducing these risks requires proper cargo declaration and classification, the deployment of advanced fire detection systems and enhanced crew training. At the same time, next-generation firefighting technologies and battery safety standards are moving higher on the agenda of shipping companies as the volume of battery-powered cargo continues to increase.



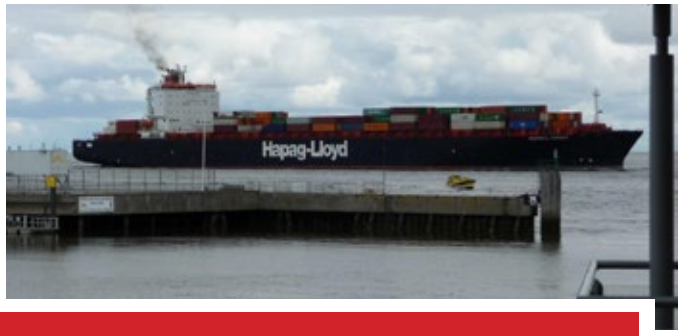
Arkas Holding Secures $335 Millionto Expand Maritime and Logistics Operations

Arkas Holding has secured a new financing package totaling USD 335 million to support its growth ambitions in the maritime and logistics sectors. The proceeds will be used to support fleet expansion, port operations and the development of logistics infrastructure across the group's operations.

In a statement, the company described the financing as a key component of its long-term growth strategy. Arkas Holding emphasized that, despite ongoing uncertainties in global trade, it remains committed to continuing its investment program without interruption. The financing package is also expected to strengthen the company's competitiveness in international markets.

As one of Türkiye's leading maritime transportation and logistics groups, Arkas Holding has focused in recent years on fleet modernization, port development and digitalization initiatives.

The new funding is expected to increase the company's operational capacity and accelerate its regional expansion plans. Company officials said the financing will contribute not only to Arkas Holding's continued growth, but also to the development of Türkiye's international trade and logistics ecosystem.



Hapag-Lloyd Launches 'Shefarer' Initiative to Support Women in Shipping

German container shipping company Hapag-Lloyd has launched a new initiative called "Shefarer" aimed at increasing female representation across the maritime workforce. The program seeks to encourage greater participation of women both onboard vessels and in maritime operations while promoting equal opportunities throughout the industry. Under the initiative, female seafarers will receive access to training, mentoring and career development support. Hapag-Lloyd also announced plans to introduce new recruitment and professional development measures designed to increase female representation, particularly in seagoing positions.

Company representatives noted that women remain significantly underrepresented in the global maritime workforce. They emphasized that diversity contributes significantly to both operational performance and corporate culture. Through the Shefarer program, Hapag-Lloyd aims to help create a more inclusive maritime workforce and support long-term cultural change across the sector. The initiative is being viewed as part of a broader effort within the international maritime industry to increase women's participation in the maritime workforce and promote diversity and inclusion across the industry. As shipping companies continue to focus on inclusion and workforce development, similar programs are expected to become more widespread throughout the sector.

Global Liquid Hydrogen Alliance Launched to Advance Zero-Emission Shipping

The Global Liquid Hydrogen Alliance has been established to support the maritime industry's decarbonization goals and accelerate the adoption of liquid hydrogen as a zero-emission marine fuel. The initiative aims to promote the wider use of liquid hydrogen in international shipping, positioning it as a key solution for achieving long-term emissions reduction targets.

The international platform seeks to establish a common knowledge platform covering the safe handling, transportation, storage and commercial viability of liquid hydrogen. It also aims to strengthen collaboration among ports, shipowners, technology developers and energy companies, paving the way for new projects and industry partnerships. The alliance brings together founding members from the maritime, energy and technology sectors, with activities expected to gain momentum in line with the International Maritime Organization's (IMO) net-zero emissions ambitions. Rather than focusing on hydrogen derivatives, the alliance places direct emphasis on liquid hydrogen, including green hydrogen produced from renewable energy sources, highlighting its potential as a fuel for long-distance maritime transport.

Industry representatives note that although hundreds of hydrogen-related projects have been announced worldwide, investment and infrastructure development remain fragmented. The new alliance is expected to encourage greater coordination in policy development, financing, standardization and infrastructure investment, helping accelerate the commercial-scale deployment of liquid hydrogen in the maritime industry.

ANGE
assistance

Your Premier Partner in Maritime Health Services

- Hospital admissions and referrals coordination
- 24/7 diagnosis and treatment capabilities
- Continuous alarm center operations
- Secure payment and insurance support
- Cost-effective strategies / Cost containment
- Ground and air ambulance provisions
- Medical / non-medical escort accompaniment
- Translation services
- Funeral arrangements
- Ticketing and hotel booking
- Drug and Alcohol Testing
- Seafarers' medical fitness certification

+90 850 241 72 85
+90 533 489 79 42

info@angeassistance.com
www.angeassistance.com

İstanbul (Head Office)
Ataturk Mh. Atasehir Blv. Gardenya
Residance Blok No 7/1 Kat 8 Daire 53
Atasehir - İstanbul - Turkey

Kuşadası (Branch Office)
Hacıfeyzullah Mah. Buyral Sok. No:9
İç Kapı No:1 Kat:5
Kuşadası - Aydın - Turkey

Tug Network Team Names Felipe Gouvêa as Executive Director

Global towage alliance Tug Network Team (TNT) has announced the appointment of maritime industry veteran Felipe Gouvêa as its new Executive Director. The appointment marks an important milestone in the alliance's transition from its formation phase to a period of operational growth and international expansion. TNT brings together independent tug operators through a network of nearly 200 tugboats serving 113 ports across the Americas and Europe. Under its new leadership structure, the alliance aims to strengthen commercial collaboration among its members while expanding its operational capabilities on a global scale.

With extensive experience in both the maritime industry and corporate management, Felipe Gouvêa will be responsible for leading TNT's international growth strategy. His appointment is expected to strengthen the alliance's position in the global towage market and support the development of new business opportunities for member companies.

In a statement, TNT said the appointment would support the alliance's long-term vision and enhance coordination across its membership network. The organization aims to provide independent tug operators with stronger global representation and expanded business development opportunities.

Türkiye Puts Forward Key Proposals for the Future of Shipping at IMO Environmental Summit

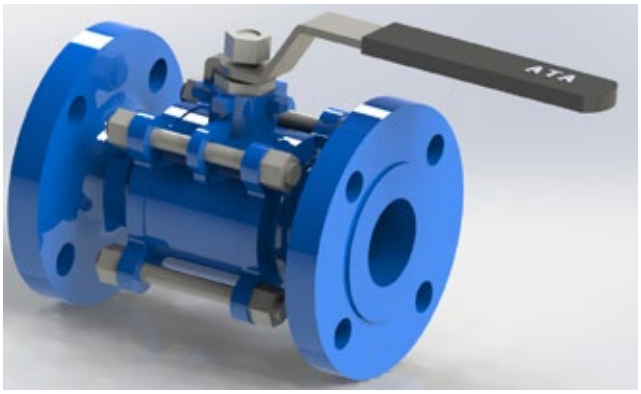
Major decisions shaping the environmental transformation of the maritime industry were discussed during the 84th session of the International Maritime Organization's (IMO) Marine Environment Protection Committee (MEPC 84), with Türkiye presenting a series of proposals on issues of strategic importance to the sector. The meeting, held in London, focused on reducing greenhouse gas emissions, advancing alternative fuels and strengthening environmental regulations across global shipping.

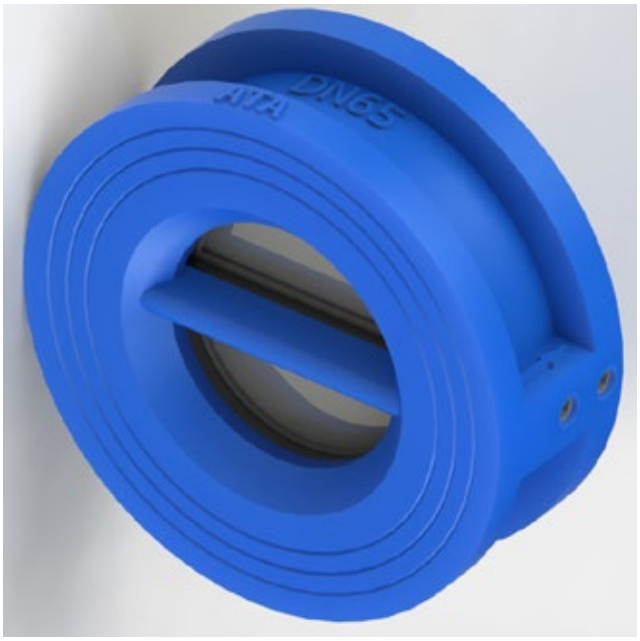
During the session, Türkiye submitted five separate proposals, including clarifying emissions definitions for combined-cycle gas turbines, assessing onboard blue hydrogen production from LNG, and revising the distribution criteria of the IMO Net-Zero Fund. Particular attention was drawn to Türkiye's proposal that fund revenues should be distributed not only to flag states but also to countries with ship ownership interests. The MEPC meeting also resulted in the adoption of new measures aimed at improving air quality and energy efficiency. Amendments to the NOx Technical Code were approved, while changes were introduced to emissions calculation methodologies for engines operating on low- and zero-carbon fuels. The committee also agreed to include biomethane within the classification of natural gas fuels.

In addition, the committee approved the establishment of a new Emission Control Area (ECA) in the Northeast Atlantic region and reached agreement on new strategies aimed at reducing plastic pollution from ships. The measures adopted at MEPC 84 are expected to play a significant role in shaping environmental policies across the global maritime industry in the years ahead.

Türkiye's proposals are expected to be revisited at future IMO meetings and could contribute to the development of international regulations governing the maritime sector's transition toward a lower-carbon future.

ATAVALVE





CONNECTING QUALITY WITH DURABILITY.

We deliver high-quality marine valves and connection equipment in full compliance with international standards, offering reliable, solution-oriented services as a trusted partner in the global maritime industry.

Evliya Çelebi Mah. Doğukan Sok. No: 13/A Tuzla İSTANBUL
info@atavalve.com.tr
+(90) 216 629 12 40

atavalve.com.tr

Digital Tracking Era Begins for Chartered Vessels

Rotterdam-based Shipping Technology has introduced ST Brain Lite, a plug-and-play data module developed for chartered vessels operating in inland waterway transportation. The first adopter of the system, Danser Group, has integrated its chartered vessels operating on the Rotterdam–Limburg route into a digital monitoring network, enabling the company to manage its operations through real-time data.

By expanding its existing platform, which currently covers approximately 380 vessels, Shipping Technology is now able to connect chartered vessels that were previously unable to join digital networks due to technical or financial constraints. Through data collected from GPS, AIS, and onboard vessel equipment, the system transmits information to operations centers via cloud-based dashboards, providing instant access to vessel position, speed, estimated time of arrival (ETA), and cargo details.

ST Brain Lite also calculates fuel consumption and emissions data, contributing to environmental reporting requirements. These insights enable vessels to benefit from environmental incentives and port fee reductions offered by various ports. Furthermore, the system can be upgraded in future phases to support autonomous navigation and collision avoidance solutions.

Ben Maelissa, CEO of Danser Group, stated that connecting chartered vessels to the digital network would provide significant advantages in operational decision-making processes. Donald Baan, Chief Operating Officer of Shipping Technology, emphasized that a substantial portion of Europe's inland waterway fleet still relies on analog methods, noting that the new system is expected to accelerate the sector's digital transformation.

ANT DENİZCİLİK MARINE
interior design

Activities

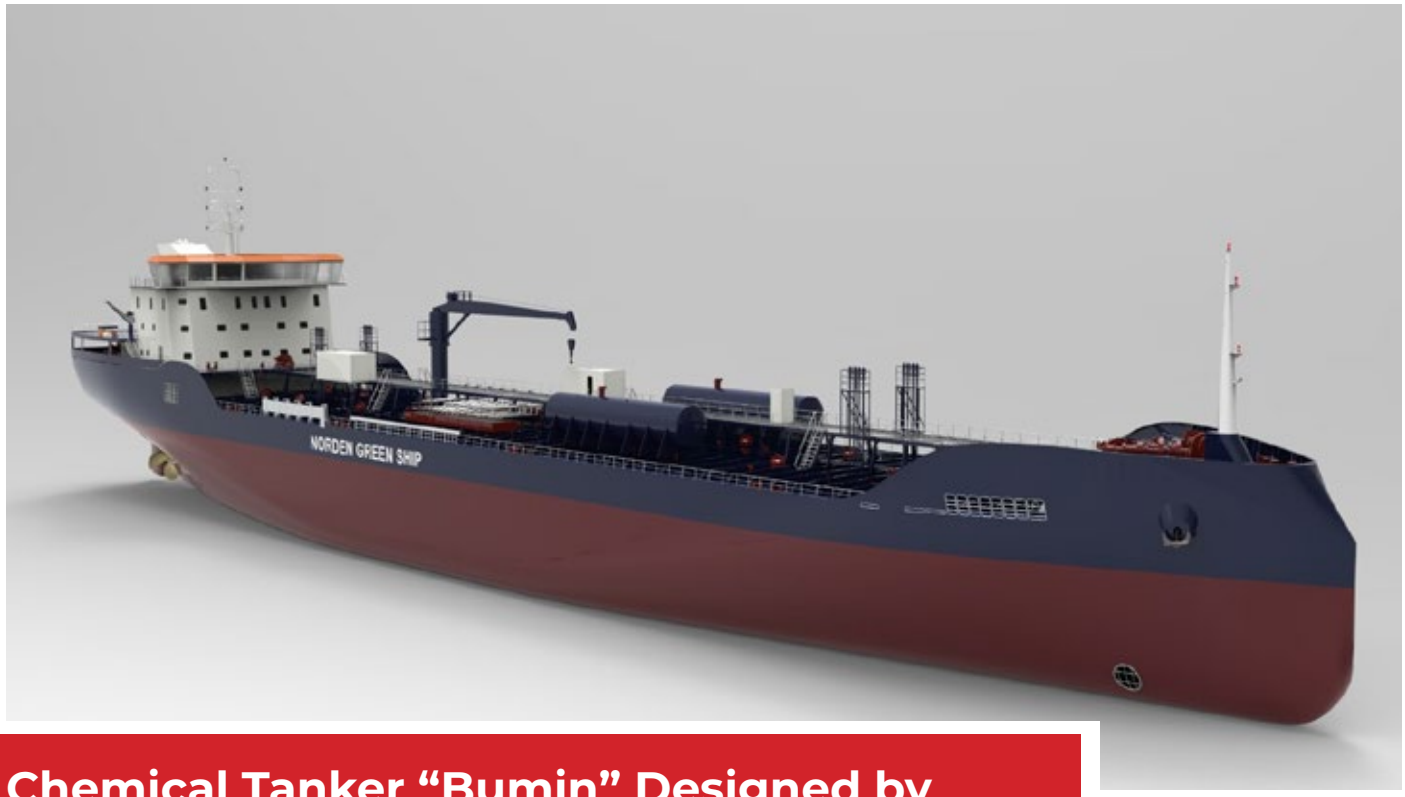
Marine Furnitures	Marine Aluminum Furnitures
Isolation	Decorative Panel
Air Conditioning	Decorative Sheet Coating
Floor Coating	CR-NI and Corridor Handrails
Intervention Covers	3D-2D Project and Design






"Your solution partner in the infinity of design"

+90 216 494 28 01
Anadolu Mahallesi Adak Sok. No:7 Tuzla - İSTANBUL / TURKEY
ant@antdenizcilik.com
www.antdenizcilik.com



Chemical Tanker “Bumin” Designed by Norden Ship Design Enters Service

Bumin, a chemical tanker designed by one of Türkiye’s leading ship design companies, Norden Ship Design House, has entered service and commenced commercial operations.

In a statement released by the company, it was emphasized that fuel efficiency, operational performance, and environmental responsibility were prioritized throughout the vessel’s design process. Norden Ship Design House highlighted that Bumin was developed to meet the evolving demands of modern maritime transportation.

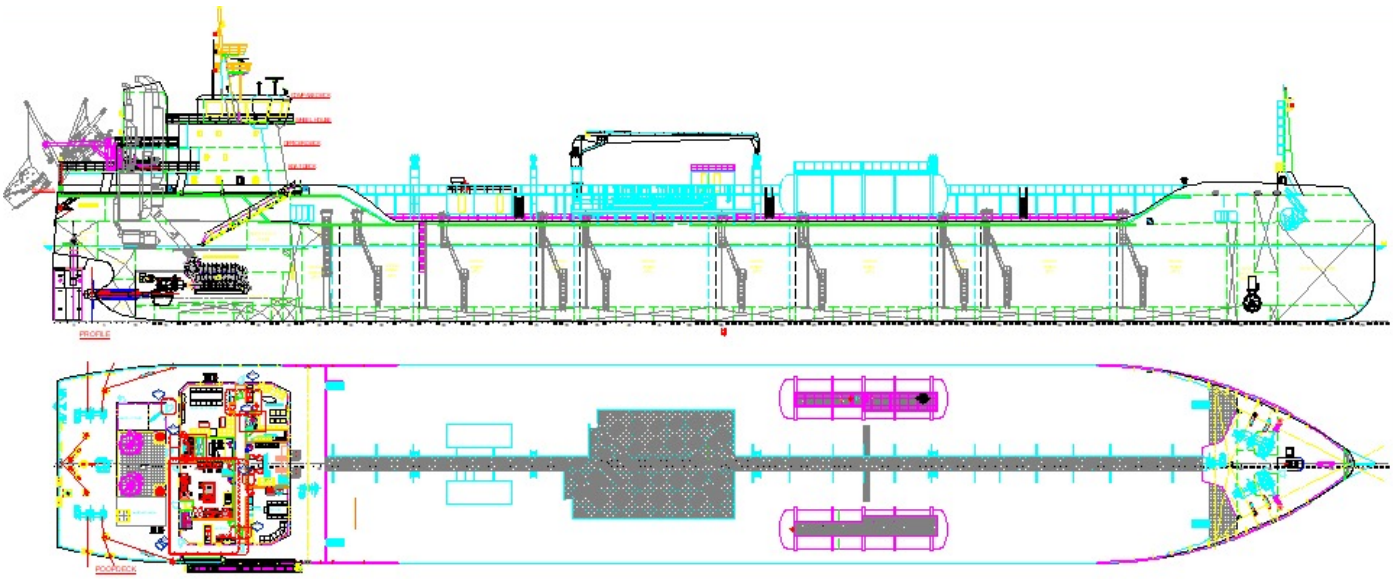
Özer Kaymak, CEO of Norden Ship Design House, expressed his satisfaction with the vessel’s entry into service and congratulated all teams involved in the project for their contributions.

Kaymak also wished Bumin a long service life marked by safe and successful voyages.

Based in Tuzla, Istanbul, Norden Ship Design House provides design and engineering services for a wide range of vessel types, including cargo ships, tankers, workboats, and floating docks.

Through the successful projects it has delivered in recent years, the company has also gained increasing recognition in international markets.

Bumin’s addition to the fleet is regarded as a notable example of the global competitiveness of Türkiye’s maritime engineering and ship design industry, further demonstrating the sector’s growing capabilities on the international stage.



GİZEM MÜHENDİSLİK A.Ş.

HYDRO WORKS HET

Power & Innovation

Delivering controlled power through engineering expertise and experience.
Designed for safety, sustainability, and **operational excellence.**

OUR SERVICES

Hydraulic Systems

- Deck Crane Hydraulic Systems
- Steering Gear Hydraulic Systems
- Windlass Hydraulic Systems
- Hatch Cover Hydraulic Systems
- Davit and Rescue Boat Hydraulic Systems
- Free-Fall Lifeboat Hydraulic Systems

Engineering & Manufacturing

- Manufacturing of Single- and Double-Acting Hydraulic Actuators
- Hydraulic Pistons and Cylinder Manufacturing
- Custom Hydraulic System Design and Manufacturing
- Hydraulic Components Engineering Solutions

Testing & Projects

- 600-Liter Closed- and Open-Circuit Hydraulic Test Unit
- System Testing and Performance Validation
- Custom Hydraulic Projects and Turnkey Solutions

Maintenance & Supply

- Hydraulic System Overhaul and Refurbishment
- Hydraulic Products and Spare Parts Supply
- Hose Manufacturing and Assembly Services

Safety is Our Priority | Sustainable Quality | Committed to the Future | Expert Team, Powerful Solutions

CONTACT: Head Office
Güzelyalı Mah. D100 Bulvarı No:124/A
Pendik, Istanbul – Türkiye

Yalova Facility: Altınova Industrial Zone
Yalova – Türkiye

+90 216 395 70 07
info@gizemmuhendislik.net
info@hydroworks.net
www.gizemmuhendislik.com

Engineering Built on Trust

Healthcare Operations in the Maritime Industry

Communication Saves Lives

In a medical emergency on board a vessel, sometimes seconds make all the difference. Effective communication between ports, hospitals, ambulance teams, and operations centers not only streamlines the process but also helps protect human life.

ANGE assistance

Gökçe ŞENGEZER
Founder

The Critical Role of Effective Communication in Healthcare Operations

The maritime industry is often perceived as being solely about ships, ports, and logistics. However, at the heart of every operation carried out at sea is a human being. For this reason, communication is not merely an operational necessity in the maritime industry; it is also one of the most important elements of healthcare, safety, and overall well-being. In healthcare operations, communication plays a critical role in a process where every minute counts and the margin for error must be kept to a minimum. When a medical issue occurs on board, the accurate exchange of information during the first few minutes can directly influence the outcome of the entire operation. What is the patient's condition? Where exactly is the vessel located? Which healthcare facility is the most suitable and nearest? Is an ambulance required, or is specialist medical guidance sufficient?

Providing accurate and timely answers to these questions ensures not only the successful management of the operation but also the protection of human life.

"When Communication Breaks Down During a Medical Operation, the Process Does Not Just Slow Down—The Risk Increases"

Maritime healthcare operations often require the simultaneous coordination of multiple organizations rather than a single institution. Port agencies, land ambulance services, hospitals, laboratories, insurance providers, ship management companies, and healthcare coordination teams may all be involved in the process at the same time. This is precisely where the quality of communication becomes crucial. Incomplete information, a misdirected team, or a delayed response can lead not only to operational disruptions but also to serious health risks. Especially in emergency situations, effective coordination and proper time management become key factors that directly determine the quality of healthcare services delivered.

Technology Exists, But the Human Factor Remains at the Center

Today, remote medical assessment systems, online physician consultations, and digital coordination networks are being used more actively throughout the maritime sector. Yet technology alone is not enough. For healthcare operations to be conducted successfully, the experience of the teams managing the process, the consistent flow of information among all parties, and the ability to make sound decisions during crises continue to play a decisive role. This is because managing healthcare operations at sea is not merely a technical process; it is also a human-centered discipline of crisis management.

The Impact of Communication on Seafarers' Psychological Well-Being

In maritime operations, communication is important not only for healthcare management but also for the psychological resilience of seafarers. Long contracts, demanding work schedules, confined living spaces, and months spent away from family can place significant pressure on crew members. In such circumstances, being able to reach someone when needed, receiving timely updates, and feeling supported can make a substantial difference. A healthy communication environment not only helps seafarers feel safer but also contributes to maintaining their motivation, morale, and overall job performance.

Maritime medical operations are about far more than medical care alone; they are a complex coordination effort involving multiple stakeholders. Success often depends on delivering the right information to the right person at exactly the right moment.

All imagery created using digital and AI tools.

From Passenger Ships to Tankers: Uninterrupted Coordination Is Essential in Every Operation

Passenger ships, cargo vessels, tankers, and shipyard operations all have their own unique dynamics. Nevertheless, one common requirement stands out in healthcare processes: uninterrupted communication. The effective management of communication during hospital transfers, laboratory arrangements, medication procurement, medical reporting, and emergency interventions directly impacts the success of the operation. For this reason, healthcare coordination in today's maritime industry is no longer viewed merely as an organizational service; it is regarded as an integral part of professional communication management and crisis planning.

Conclusion: Strong Communication Means Safe Operations in the Maritime Industry

In the maritime sector, communication can sometimes accelerate an operation, sometimes prevent a crisis, and sometimes directly save a life.

Through effective communication, healthcare operations can be carried out more safely and efficiently, while seafarers benefit from a healthier working environment both physically and psychologically.

Technology will continue to evolve. However, a people-centered approach, effective coordination, and strong communication management will always remain among the most critical needs of the maritime industry. ■

No matter how advanced technology becomes, human experience remains the decisive factor in a crisis. Sound judgment, clear guidance, and strong coordination are the invisible backbone of every successful medical response operation.

CAPRAMAR

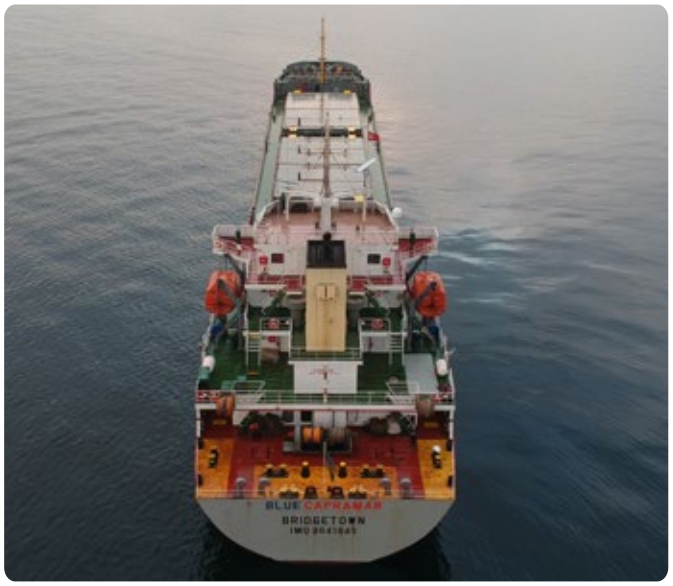
SHIP MANAGEMENT

WELCOME ON BOARD !

SAILING BEYOND EXPECTATIONS

Driven by integrity and trust, Capramar Ship Management provides transparent, safe and efficient services worldwide.

With dedicated teams on board and ashore, we ensure operational excellence, environmental responsibility and reliable performance-every voyage, every time.



SERVICES

Providing everything you need !

- TECHNICAL MANAGEMENT
- CREW MANAGEMENT
- MARITIME CONSULTANCY
- DRYDOCKING & REPAIR MANAGEMENT
- MARINE SAFETY SECURITY MANAGEMENT & AGENCY
- INSURANCE PLACEMENT & CLAIMS MANAGEMENT
- INSPECTIONS & AUDITS
- S&P MANAGEMENT
- INVESTMENT

SOGANLIK YENI MAHALLE ALIAGA SOKAK NO:8
BUMERANG KARTAL REZIDANS K:23 D:121
KARTAL / ISTANBUL

H. Kadri ÖNDER

From Discipline to Global Strength

H. Kadri ÖNDER, Founder and CEO of Navy Supplier, discusses his career journey that began in the Turkish Navy, the fundamental principles of trust in technical supply, and Türkiye's strategic rise in the maritime, energy, and defense sectors.

H. Kadri ÖNDER
Kurucu ve CEO

How did your career journey in maritime and technical supply begin? What were the critical turning points that enabled you to reach your strong position in the industry?

My journey in this field began with the military discipline, logistics, and supply training I received within the Turkish Navy. My 29-year service as a Supply Officer in the armed forces provided me with a very strong foundation in managing complex logistics processes, establishing strategic supply chains, and operational planning. After leaving the military, I transferred this experience to the private sector and shaped my career through four major turning points:

Defense Industry (ASFAT):
During my tenure as Chief Procurement and Logistics Specialist for the Istanbul Region, I had the opportunity to transfer my military discipline and operational approach to large-scale civilian projects.

National Energy Initiative (TP-OTC):
As Logistics Coordinator (Marshalling Yard Manager), I managed the logistics operations of Türkiye's offshore natural gas exploration platforms and support vessels. This process enabled me to gain significant experience at the intersection of the energy and maritime industries.

Global Industry Leadership (ODIN Ship Supply):
During my tenure as General Manager, we managed vessel logistics requirements in accordance with international standards. I actively participated in the procurement of medical equipment for four naval vessels built for the Pakistan Navy and in supplying the initial outfitting materials for the Babur vessel.

Entrepreneurship Period (Navy Supplier Maritime):
By combining all the knowledge and experience I gained throughout my military and corporate career with my own vision, I established the Navy Supplier brand. Today, as the Founder and CEO, we continue to provide services on a global scale.

Your company name is a distinctive choice. While there are thousands of companies in the industry using the title "Ship Supplier," why did you choose the name "Navy Supplier"?

Our decision to use the name "Navy Supplier" instead of "Ship Supplier" is a natural reflection of both our professional background and our corporate vision. This choice is not merely a branding decision; it is also a strategic statement that reflects the way we conduct business. I can summarize the key reasons behind this name as follows:

Military Discipline and a Zero-Error Approach
My background in the Navy and my experience in the defense industry constitute the primary inspiration behind this brand. Naval forces operate under significantly higher standards than civilian vessels. Their tolerance for error is extremely low, and all processes are managed through detailed procedures. We aimed to apply the same discipline while serving our civilian customers.

Capability to Manage Challenging Operations
Our work is not limited to supplying materials. Delivering critical technical equipment completely and on time under harsh weather conditions and within narrow time windows requires a high level of operational capability. The concept of "Navy" represents this operational competence and commitment to high standards.
Global Brand Positioning
As a company operating in the international market, we wanted our brand to immediately convey quality, discipline, and trust. The name Navy Supplier reflects our commitment to operational excellence and our corporate identity much more effectively. In short, while "Ship Supplier" defines a field of activity, "Navy Supplier" represents our way of doing business, our understanding of quality, and the vision we aim to bring to the industry.

What is the core vision that differentiates Navy Supplier from traditional ship supply companies? How do you create a difference in the sector?

The fundamental factor that differentiates Navy Supplier from conventional ship supply companies is that we position ourselves not merely as a supplier, but as a strategic solution partner supporting the operational sustainability of our clients. Traditional supply approaches are often limited to receiving orders, pricing, and delivery processes. We go beyond this perspective by aiming to create direct value for our customers' operations. I can summarize this vision under four key pillars:
1. Integration and Technology
We aim to digitalize every stage of the supply chain. We are working on digital infrastructures that will make the logistics processes of shipowners and vessel operators more transparent, faster, and fully traceable.

2. Proactive Solution Partnership
We are not merely a company that supplies requested products. By analyzing the order histories of the vessels we serve, we seek to anticipate future needs and develop solutions before problems arise.

3. Local Strength at Global Standards
We effectively utilize Türkiye's strategic location and logistics advantages. At the same time, we aim to maintain our operational quality at the highest level of international military and civilian standards, including ISO, IMPA, and ISSA. By combining the capabilities of the Turkish maritime industry with global standards, we provide our customers with a competitive advantage.

4. Sustainability and Future-Oriented Thinking
We closely follow the green transformation process within the maritime industry. Environmentally friendly products, sustainable procurement methods, and energy-efficient solutions are among the core components of our long-term vision.

As a result, while traditional companies generally focus on immediate commercial needs, our goal at Navy Supplier is to become a reliable solution partner that delivers maximum efficiency and minimum time loss in global maritime operations.

We know that your company serves not only vessels in operation but also shipyards and various industrial sectors. Could you tell us more about this extensive service network extending from sea to shore and the synergy it creates?

At Navy Supplier, we have never limited our activities solely to vessels in operation. We have also made shipyards and heavy industrial facilities—both of which form the backbone of the maritime industry—an important part of our service network. While the services we provide to vessels generally require mobile and immediate solutions, shipyards and industrial facilities demand large-scale, project-based, and highly engineering-focused work. By bringing these two distinct structures together under one roof, we aim to offer integrated solutions to our customers. I can summarize this service network under four key areas:
a) Shipyards and New Building Projects
In new vessel construction projects and major dry-docking operations, we aim to serve as a strategic solution partner to shipyards together with our partner companies. By adhering to strict project schedules, we contribute to the uninterrupted progress of construction and maintenance processes.

b) Vessel Retrofit Projects
In modernization projects carried out in line with global environmental regulations, such as BWTS (Ballast Water Treatment Systems) and Scrubber (Exhaust Gas Cleaning Systems), we support the management of technical equipment procurement and logistics processes. Together with our partners, we aim to provide turnkey solutions.

c) Industrial Facilities and Heavy Industry
We transfer our expertise in materials suitable for demanding maritime conditions to land-based industries as well. We supply technical equipment and specialized alloy materials to facilities that require high performance and operate in high-risk environments, such as refineries, power plants, pipelines, and dams.

d) Integrated Engineering and Supply Services
Thanks to the discipline and technical expertise gained from our Navy background, we are able to thoroughly evaluate the technical specifications prepared by shipyard and facility engineers. In the process of selecting the right product for the right project, we provide not only procurement services but also engineering consultancy.

This multidimensional structure provides Navy Supplier with sustainable, flexible, and powerful operational capabilities both at sea and on land.

How is your motto, “The Right Material, The Right Quality, The Right Price, and The Right Time,” implemented in Navy Supplier’s operations?

For us, these four principles are not merely a slogan; they represent a management philosophy that forms the foundation of our operations. We define this approach as the 4R Model:
Right Material – Right Quality – Right Price – Right Time

In maritime operations, managing time and cost effectively is only possible when these four elements are applied together and without compromise.

1. Right Material
Using incorrect or incompatible materials can lead to operational delays and significant cost increases. For this reason, we conduct detailed analyses of technical suitability during the product selection phase and ensure that the correct equipment reaches the field.

As a result, operational teams do not lose time dealing with compatibility issues, and workflows remain uninterrupted.

2. Right Quality
Although low-quality equipment may seem to offer a short-term cost advantage, it ultimately creates much greater expenses due to failures, maintenance requirements, and operational downtime.

We view quality not merely as a product standard but as a key factor in operational safety and sustainability.

By ensuring the right quality, we extend equipment life while minimizing operational risks.

3. Right Price
Our approach is not to find the cheapest product but to establish the most appropriate cost-benefit balance.

By considering total cost of ownership, we help our customers use their budgets more efficiently.

We prioritize long-term efficiency rather than short-term savings.

4. Right Time
In the maritime industry, every delayed delivery directly translates into increased costs.

Therefore, we manage logistics planning with great precision and place significant emphasis on delivering critical requirements on time.

Timely delivery is one of the most important factors in ensuring uninterrupted operations.

In summary, this approach enables us to provide our customers with reduced downtime, more effective inventory management, improved workplace safety, and more predictable cost structures.

Materials supplied by Navy Supplier.

In recent years, the concept of localization has become increasingly important, particularly in defense and maritime industries. As a leader with a Navy background who now manages global operations, how do you evaluate this transformation?

I view localization not merely as an industrial policy but as a critical transformation process for Türkiye's strategic independence, technological development, and economic strength.

The defense and maritime sectors are among the industries most affected by external influences. Therefore, localization is also an essential component of national security.

We can evaluate this transformation under four key headings:

1. Strategic Independence and Historical Experience

Domestic production is one of our strongest safeguards against embargoes and external restrictions. In fact, this understanding is not new. Localization initiatives carried out within the Turkish Navy, particularly since the 1990s, have yielded significant results.

The ship rope and ship filter localization projects conducted within the Turkish Naval Forces Inventory Center Command, where I served in 1996, are among the successful examples. The level we have reached today is built upon these long-term efforts.

2. A Model of a Technology-Producing Nation

In the past, the system was largely based on assembling imported technologies.

Today, however, there is a strong transition toward a model based on indigenous design, domestic subsystems, local software development, and export-oriented production.

University-industry collaborations, engineering capabilities, and the domestic manufacturing ecosystem form the cornerstone of this transformation.

3. A New Era in Maritime Industry

Through projects such as MİLGEM, Türkiye has become not only a country that builds ships but also one that designs, integrates, and exports them.

Significant progress has been achieved in areas ranging from combat management systems and sonar technologies to automation solutions and various subsystems.

Today, our shipyards have also evolved into centers of advanced engineering.

4. Economic Added Value and Export Capability

Localization is not merely about reducing costs.

The real value lies in producing high value-added products and competing successfully in global markets.

The rise in defense exports, the participation of SMEs in production chains, and technology transfer are among the economic outcomes of this transformation.

As a result, localization is no longer a choice; it is one of the fundamental pillars of Türkiye's vision for technological advancement, economic growth, and strategic independence.

Today, in which areas are the largest supply demands concentrated within Turkish shipyards and the maritime industry? Considering both military and commercial projects, what does the current landscape tell us?

Today, the most significant supply demands of Turkish shipyards are concentrated in high-technology and high-value-added equipment.

When both military and commercial projects are examined, the picture is quite clear: although we hold a globally competitive position in hull construction, our dependence on foreign sources continues in critical subsystems such as engines, automation, and electronics.

We can evaluate the current needs and development areas under the following headings:

Propulsion and Power Systems

The greatest external dependency of our shipyards lies in marine engines, gearboxes, shaft systems,

and propeller equipment. Without a propulsion system, a vessel cannot function operationally. Therefore, power and propulsion systems are among the highest-priority areas for localization efforts.

Electronic, Navigation, and Communication Systems
Localization rates in military projects have reached significant levels. However, in commercial vessels, foreign manufacturers still dominate areas such as radar systems, autopilots, satellite communication systems, and bridge electronics.

Shipboard Automation and Control Systems
European solutions remain widely used in fields such as Integrated Platform Management Systems (IPMS), energy management systems, and machinery control software. Yet this is one of the areas where Türkiye has the potential to achieve rapid progress thanks to its software and automation capabilities.

Critical Mechanical Components
We possess domestic production capacity for seawater pumps, valves, separators, and crane systems. However, due to certification requirements imposed by international classification societies such as DNV, Lloyd's Register, and Bureau Veritas, shipyards may still prefer imported products in certain cases.

Next-Generation Energy Technologies
The global maritime industry is rapidly advancing toward a green transition. Marine lithium-ion batteries, hybrid propulsion systems, energy storage solutions, and emission-reduction technologies represent some of the most important supply areas of the future.

In summary, the most critical needs of Turkish shipyards revolve around engine systems, electronic equipment, automation solutions, critical mechanical components, and next-generation energy technologies. These same areas also present major opportunities for domestic industry.

Navy Supplier's areas of operation also include helicopter facilities, natural gas and oil fields, Ex-proof equipment, and special projects. What kind of expertise is required to work in these critical sectors?

These fields go far beyond ordinary industrial experience; they involve working environments characterized by high risk, strict regulations, and zero tolerance for error. For this reason, we structure our activities around four core areas of expertise.

1. Helicopter Facilities and Aviation Infrastructure
Working in heliports, hangars, and maintenance facilities requires full compliance with aviation standards established by organizations such as the Directorate General of Civil Aviation (SHGM), ICAO, and EASA.

Detailed technical knowledge is required in areas such as wind load calculations, vibration analysis, fuel systems, and safety infrastructure.

The margin for error in the aviation industry is extremely small.

2. Oil and Natural Gas Fields
Onshore and offshore energy facilities involve high-pressure systems, corrosive environments, and explosive atmospheres.

Therefore, expertise in international standards such as API, ASME, NFPA, and other relevant regulations is essential. A strong culture of occupational health, safety, and environmental responsibility is equally indispensable.

3. Ex-Proof Systems
Equipment used in explosive environments represents a highly specialized field of expertise. It requires deep technical knowledge of ATEX and IECEx standards, protection methods (Ex d, Ex e, Ex i, etc.), temperature classifications, and hazardous area zoning. Even a minor mistake in this field can create serious safety risks.

4. Defense and Specialized Technology Projects
Defense projects require compliance with military standards such as MIL-STD, STANAG, and similar specifications. These projects involve the integrated collaboration of mechanical, electrical, electronic, automation, and software disciplines. In addition, information security and confidentiality processes are inseparable components of operations.

For this reason, at Navy Supplier, we have adopted a multidisciplinary engineering approach as a core principle.

Maintenance work is currently being carried out on the thruster of the drilling vessel Yavuz.

Why is quality standardization so critical, especially in Ex-proof equipment and technical safety products?

In Ex-proof equipment, quality is not merely important—it is a matter of life and death.

These products constitute the final safety barrier protecting personnel working in explosive atmospheres, the integrity of facilities, and the continuity of operations. I can explain this approach under four key headings:

The Final Safety Barrier

The primary function of Ex-proof equipment is to prevent explosions caused by sparks, electrical arcs, overheating, or static electricity.

A minor equipment failure in an environment containing explosive gases can result in extremely serious consequences. For this reason, quality is not an option; it is an absolute necessity.

International Certification Requirements

ATEX, IECEx, and EN 60079 standards are the primary criteria that determine the safety of Ex-proof equipment.

The use of uncertified or non-compliant equipment is unacceptable from both technical and legal perspectives.

Operational Continuity

Low-quality equipment does not only create safety risks. It also increases maintenance costs, causes system downtime, and leads to production losses.

Therefore, quality is an integral component of operational efficiency.

Protection of Human Life

Portable equipment and hand tools used in hazardous environments are directly linked to employee safety.

For this reason, there can be no compromise regarding certification, quality control, and technical compliance during product selection.

This sensitivity becomes even more critical in high-risk environments such as offshore platforms, helicopter facilities, and energy fields.

As a result, quality in Ex-proof equipment is the guarantee not only of the equipment itself, but also of human life, facility safety, and operational sustainability.

You operate at the intersection of the defense, energy, and maritime industries. How do you see the future shaped by the convergence of these three sectors? Where does Türkiye stand within this strategic ecosystem?

Defense, energy, and maritime industries are no longer independent sectors; they are interconnected components of a strategic ecosystem that continuously supports and transforms one another.

The future emerging at the intersection of these three fields will create new opportunities centered on technology, security, and economic power.

1. Technological Transformation

Autonomous marine vehicles, artificial intelligence-supported systems, hybrid propulsion technologies, and energy-efficiency solutions will find common applications across defense, energy, and commercial maritime sectors.

The platforms of the future will be smarter, more autonomous, and more efficient.

2. Energy Security and Maritime Power

Energy security and maritime dominance have become inseparable concepts.

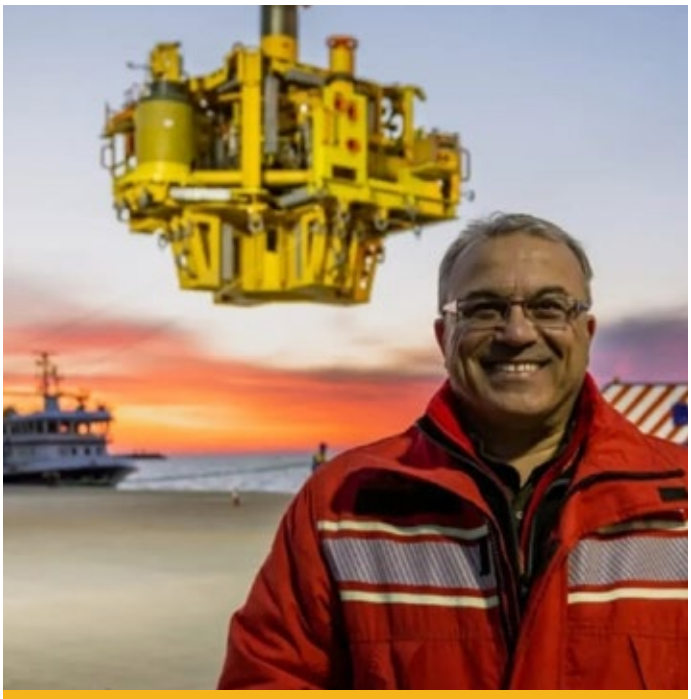
The energy fields in the Black Sea, resources in the Eastern Mediterranean, and global maritime trade routes clearly demonstrate this reality.

Protecting energy infrastructure requires strong maritime and defense capabilities.

3. High Value-Added Exports
Many advanced technologies can be utilized simultaneously in defense, energy, and maritime sectors. This provides companies and nations with the opportunity to leverage the same technologies across multiple markets.

Turkish shipyards are no longer merely facilities that build ships; they are evolving into centers that develop offshore platforms, energy systems, and advanced technological solutions.

This transformation significantly enhances Türkiye's global competitiveness. As a result, the defense–energy–maritime triangle will be one of the most important drivers of Türkiye's technological production capacity, strategic influence, and export strength in the years ahead.



The 65-ton subsea Christmas Tree, the first valve assembly to be installed on the oil well, was successfully positioned on the seabed at a depth of approximately 2,200 meters.

Global supply chain crises and geopolitical tensions have profoundly affected the maritime industry. How did this process impact Turkish maritime sectors, and what strategy did you follow while managing these crises?

The pandemic, extraordinary increases in freight costs, and geopolitical tensions in various regions—particularly the Red Sea—have caused significant disruptions in global supply chains over recent years.

The maritime industry was directly affected by this process. However, this period should not be viewed solely as a crisis but also as a major transformation process. Delivery times for critical equipment extended by several months, fluctuations in raw material prices intensified, and logistics bottlenecks clearly exposed the risks associated with external dependency.

During this period, Türkiye took significant steps along three key axes:
1. Localization and Supply Diversification
Efforts to reduce dependence on foreign suppliers for critical equipment accelerated through domestic production initiatives. At the same time, shipyards and industrial organizations shifted toward multi-supplier models rather than relying on a single source. A more balanced supply structure consisting of European, Far Eastern, and domestic manufacturers began to emerge.

2. Technology- and Energy-Focused Growth
Many technologies developed within the defense industry gradually began to be transferred to the civilian maritime sector. Major energy projects such as the Black Sea natural gas field created new opportunities in offshore support vessels, logistics operations, and maritime infrastructure. These developments supported Türkiye's emergence as a regional manufacturing and supply hub.

3. Operational Experience in the Field
During the crisis period, I was actively involved in projects within ASFAT and TP-OTC. I had the opportunity to closely observe global supply difficulties affecting both military projects and offshore energy operations. Creating alternative supply sources, planning critical inventories in advance, and anticipating logistics risks proved to be of vital importance. One of the most important lessons I learned during this period was the following:

Success during times of crisis is determined not only by having a strong supply network but also by the ability to make rapid decisions and adapt with flexibility. Today, compared to the period before these crises, the Turkish maritime sector is far more resilient, experienced, and prepared.

In today's world, customers are not only looking for products; they are also seeking solution partners they can trust. In your opinion, how is trust built in the technical supply sector?

In the technical supply industry, trust is built through keeping promises, demonstrating technical competence, and delivering consistent service. Customers no longer simply want to purchase products; they seek a solution partner who can reduce their risks, simplify their operations, and stand

by them whenever needed. We build trust upon four fundamental pillars:

Technical Competence and a Solution-Oriented Approach

Technical knowledge is the most valuable asset in this industry. Customers do not buy products—they buy solutions. Therefore, accurately analyzing needs, evaluating technical alternatives, and providing proper guidance form the foundation of trust.

On-Time Delivery and Certification

Timely delivery is one of the most tangible indicators of reliability in technical supply. Certification processes are particularly important for Ex-proof equipment and products used in defense projects. Compliance with standards such as ATEX, IECEx, MIL-STD, and similar regulations provides customers not only with products but also with assurance.

Field Support and Accessibility

True trust becomes evident when problems arise. Being accessible when customers need assistance, providing on-site support, and actively contributing to the solution process are the foundations of long-term business relationships.

Consistency

A single successful project does not create trust. What makes trust permanent is maintaining the same quality, discipline, and professional approach in every project. If customers can predict how you will act under various circumstances over time, genuine trust has been established. Our goal is to be viewed not merely as a supplier but as a reliable stakeholder in our customers' operational sustainability.

In field operations, there is always a dilemma: speed, quality, or the right engineering approach. Which one is the most important?

In my opinion, the most critical factor in field operations is neither speed nor quality—it is the right engineering approach. This is because speed and quality are not alternatives to one another. When the correct engineering approach is applied, both naturally emerge. I would explain this balance as follows:

Speed Alone Is Not Enough

Acting quickly without planning and technical analysis often creates new problems. Incorrect equipment selection, incomplete implementation, and safety risks are the inevitable consequences.

Quality Alone Is Not Enough

Associating quality excessively with bureaucratic procedures can also slow operations unnecessarily. This approach is not sustainable, particularly in industries such as energy, defense, and maritime, where time is critical.

Proper Engineering Combines Both

Through accurate analysis, proper equipment selection, effective planning, and risk management, it is possible to achieve both quality and speed simultaneously. For this reason, we place engineering at the center of every project.

Because:

- Speed is the result of proper engineering.
- Quality is the output of proper engineering.
- Safety is the guarantee provided by proper engineering.
- Customer satisfaction is the natural outcome of proper engineering.

Ultimately, speed achieved without proper engineering is temporary, while quality achieved without proper engineering is unsustainable.

We see that Türkiye has achieved significant localization success in the maritime and defense industries. However, in which areas do you believe foreign dependency still continues?

Based on both industry developments and my field experience, the areas where foreign dependency remains strongest are power systems and advanced electronic technologies. These can be examined under three main categories:

1. Engines and Power Systems

In the defense industry, jet engines, helicopter engines, and UAV engines; and in the maritime sector, high-power diesel engines and propulsion systems continue to represent critical areas of foreign dependency. Engine technologies are among the most challenging fields in the world because they require advanced engineering, sophisticated materials technology, and long-term R&D investments. Dependence on engines ultimately translates into dependence on platforms.

2. Microelectronics and Sensor Technologies

Although significant progress has been achieved in radar modules, advanced sensors, processors, and defense-grade microchips, dependence on external sources for critical components has not been entirely eliminated. Future competition will largely be shaped within this field.

3. High-Technology Maritime Equipment

Azimuth thruster systems, CPP propeller systems, high-capacity generators, bridge navigation systems, and certain specialized safety equipment are still predominantly imported. One of the most significant barriers to domestic production in this field is the complexity of international certification processes. Nevertheless, Türkiye's recent achievements are highly valuable.

Projects such as the TS1400 engine, indigenous radar systems, sonar technologies, and various defense innovations demonstrate that we are moving in the right direction. However, achieving full independence will require long-term and determined investments in these areas.

In light of everything you have discussed, what are Navy Supplier's growth targets, vision, and new project areas for the next five years? Where do you see the company in the future?

We are now living in an era where companies that manage risks, generate engineering solutions, and provide integrated services are becoming more prominent than those that simply supply products. At Navy Supplier, we are shaping our five-year strategy in line with this understanding. We have built our growth vision upon three primary pillars:

Transformation from Product Supplier to Technical Solution Partner

One of our most important goals is to evolve from being a company that merely supplies materials into a solution partner capable of providing end-to-end services. By combining engineering support, field consultancy, risk analysis, installation processes, certification management, and maintenance services, we aim to deliver greater added value to our customers. Our objective is to establish a structure capable of managing the entire "Product + Engineering + Implementation + Certification" process from a single center.

Deepening Expertise in Ex-Proof, Offshore, and Defense Sectors

We aim to strengthen our position in specialized fields located at the intersection of defense, energy, and maritime industries. Within this framework:

In Ex-proof solutions, we plan to expand our focus beyond equipment supply to include field applications, zone classifications, and periodic inspection services. In offshore energy projects, we aim to develop solutions for Black Sea gas fields and future offshore wind energy investments.

In the defense industry, we plan to take a more active role in areas such as MIL-STD-compliant equipment, radar and sonar support systems, hybrid propulsion technologies, and energy solutions.

Building a Strong and Resilient Supply Chain

One of the most important lessons we learned from global crises is that dependence on a single source creates significant risks.

For this reason, we continue to develop a multilayered supply network based in Europe, the Far East, and Türkiye.

We are also pursuing strategic collaborations with domestic manufacturers and evaluating opportunities to develop products under our own brand in selected product categories.

Within the next five years, we aim to establish Navy Supplier as a preferred brand not only in Türkiye but also in international markets for projects requiring high security standards and advanced technical expertise.

As someone who has spent many years in leadership and management positions, what advice would you give to young entrepreneurs and maritime professionals who wish to enter this field?

Success in the maritime, defense, and technical supply sectors is only possible when knowledge, character, and discipline develop together.

I always try to share not only what young professionals should do but also how they should think.

In this regard, I would like to share several principles that I believe will be valuable throughout their careers:

1. Get to Know the Field

Maritime is not a sector that can be learned solely behind a desk.

Without closely understanding shipyards, ports, vessels, and operational environments, it is impossible to become a true expert.

2. Prioritize Accuracy Before Speed

Being fast is important, but mistakes often result in far greater losses of time.

Always prioritize accurate analysis and sound decision-making.

3. Continuously Improve Your Technical Knowledge

Technical knowledge is the most valuable capital in these industries.

Continuously follow international standards, equipment developments, and emerging technologies.

4. Never Compromise on Quality
In defense and maritime sectors, quality is not merely a commercial preference; it is a matter of safety and reliability. Do not sacrifice quality standards for short-term gains.

5. Build Trust
People need trustworthy individuals as much as they need knowledge. Keep your promises, remain transparent, and never avoid responsibility.

6. Think Globally, Support Domestic Production
While keeping up with global developments, also contribute to collaborations that strengthen domestic industry.

7. Never Stop Learning
Technology is evolving rapidly. Autonomous systems, artificial intelligence, hybrid propulsion technologies, energy storage solutions, and Ex-proof systems will become key areas of expertise in the future.

8. Strengthen Your Character
Technical knowledge can be learned, but honesty, discipline, and responsibility are developed over many years. Build your career on a foundation of strong values.

9. Specialize
Rather than knowing a little about everything, developing deep expertise in a specific field will make you more valuable.

10. Become a Solution Partner, Not Just a Supplier
Customers do not simply need products. Professionals who understand problems, develop solutions, and take responsibility will always stand out.

In summary, young professionals who embrace technical competence, discipline, reliability, and continuous improvement will not only build successful careers but also become among the individuals shaping the future of the industry.

Finally, as H. Kadri ÖNDER, what is the fundamental motivation behind all your experience and vision?

My greatest motivation is to be part of the major transformation that Türkiye is experiencing in the fields of maritime, energy, and defense, and to create lasting value throughout this process.

This motivation is driven by three main sources:
Contributing to Türkiye's Strategic Independence
Maritime, energy, and defense sectors are among the fundamental pillars of our nation's strategic strength.

Every project that supports domestic production, accelerates technological development, and reduces foreign dependency represents not only a commercial activity but also an investment in our country's future.

Opening New Paths for Future Generations
I strongly believe that the knowledge and experience accumulated over many years should be transferred to younger generations.

Contributing to the success of young engineers, managers, and entrepreneurs is a significant responsibility for me.

Leaving a Lasting Mark Through Future-Oriented Standards
Preparing for tomorrow's needs is just as important as meeting today's requirements.

Making lasting contributions in fields such as Ex-proof technologies, autonomous systems, offshore energy solutions, and high-security supply models is among my greatest aspirations.

Ultimately, my motivation is to contribute to Türkiye's strategic transformation, inspire younger generations, and leave a lasting mark on our nation's global rise in maritime, energy, and defense sectors. Because I firmly believe that work carried out with knowledge, discipline, and vision not only meets today's needs but also shapes the future. ■

ON-SITE MOBILE PROCESSING

KGM
Korkmaz Gezgin Mühendislik

MOBILE LINE BORING MACHINES

LINE BORING MACHINES

ABOUT US

As KGM Machinery, we are committed to providing high-quality, durable, and innovative solutions in the industrial machinery sector.

OUR SERVICES

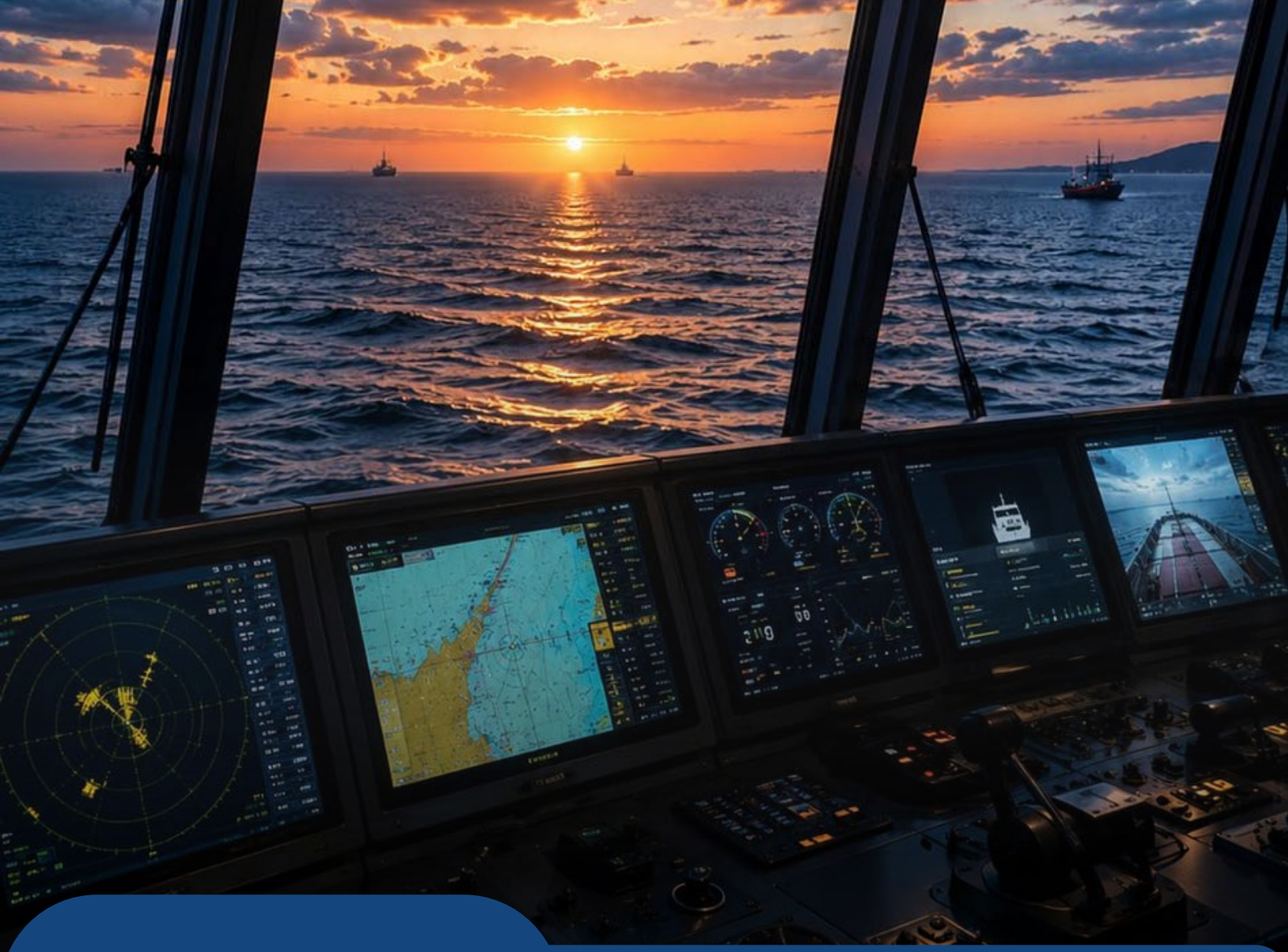
- Production of portable line boring machines
- Marine equipment and technical support services
- Mobile boring solutions with welding capability
- Maintenance, repair, and service services
- Project development and engineering solutions
- Industrial machinery manufacturing
- Custom-made industrial machines
- Mobile machine rental services
- Hydraulic system solutions
- End-to-end machine design and manufacturing

QUALITY
TECHNOLOGY
RELIABILITY

+0216 313 43 67
+90 532 354 19 24
INSTAGRAM : @KGMAKINE

info@kgmmakine.com
korkmazgezgin@gmail.com
www.kgmmakine.com

Meclis, Perpim Sanayi Site
Sarigazi B Block No:31/D62,
Sancaktepe/Istanbul



FEATURE:
MARITIME COMMUNICATIONS

Communication systems, once used solely to connect vessels with shore-based operations, have evolved into critical infrastructure that now shapes nearly every aspect of the maritime industry—from operational management and cybersecurity to crew welfare and artificial intelligence applications.

In this month's feature, we explore the current role of maritime communications and the role it is expected to play in the years ahead, through the insights of leading companies in the sector. From satellite technologies and digital transformation to data management and the growing need for uninterrupted connectivity, we take a closer look at one of the maritime industry's most critical—yet often unseen—components.

We would like to extend our sincere thanks to **İsmail Küpçü**, General Manager of ALM Marine, for his valuable insights and contributions to the preparation of this feature.

We look forward to seeing you in our next issue, where we will continue to explore the evolving agenda of the maritime industry.

DENİZ GÜNDEM

New Era in Maritime Communications
2026 and Beyond

Starlink Maritime, hybrid communication infrastructures, digital VHF systems, and cybersecurity solutions... ALM Marine General Manager İsmail Küpçü evaluates the next-generation technologies shaping the digital transformation of the maritime industry.

İsmail KÜPÇÜ
General Manager

The maritime industry today is undergoing not only an operational transformation but also a major digital revolution. Communication technologies are no longer simply systems that provide connectivity for vessels; they have become central to operations management, safety, cybersecurity, and efficiency.

As of 2026, shipowners' expectations have also changed significantly. A system that merely functions is no longer considered sufficient. The expected infrastructure now includes integrated communication systems capable of providing:
» uninterrupted connectivity,
» high data capacity,
» low latency,
» strong cybersecurity,
» remote access,
» rapid technical support,
and maximum operational continuity.

The rapid digitalization of the maritime industry in recent years has transformed communication systems from being "one of the auxiliary systems" on board into the direct backbone of vessel operations.

Starlink and LEO Technologies Are Changing the Rules of Maritime Communications

One of the biggest transformations of 2026 has been the widespread adoption of low Earth orbit (LEO) satellite systems. In particular, Starlink Maritime solutions have opened the door to a new era in maritime communications. Compared to traditional GEO satellite systems, these technologies offer:
» significantly lower latency,
» higher data speeds,
» more stable connections,
» wider coverage areas,
» lower operational costs.
Thanks to these systems, vessels can now share real-time data with onshore operation centers even while sailing on the open sea.

Today, many modern vessels actively use:
» live technical support services,
» remote device access,
» cloud-based maintenance systems,
» remote survey operations,
» real-time machinery performance analysis,
» high-quality video conferencing infrastructures.
Starlink technology has also created a major transformation for crews. In the past, limited internet access was considered normal, whereas today seafarers expect an internet experience close to onshore connection quality.

This change is important not only for comfort, but also for personnel motivation, mental well-being, and crew retention.

Hybrid Communication Systems Are Becoming the New Standard

The era of relying on a single communication system in the maritime sector is gradually coming to an end. Modern vessels today can operate multiple systems within the same communication architecture, including:
» Starlink,
» VSAT,
» 4G/5G,
» Inmarsat,
» MF/HF,
» VHF,
» GMDSS infrastructures.
The primary objective is clear: ensuring uninterrupted connectivity for vessels anywhere in the world.

Thanks to next-generation hybrid infrastructures, systems can automatically select the most suitable connection. This ensures communication continuity while significantly improving traffic optimization, cost control, and operational safety. Redundant communication systems have now become essential, especially in tanker, bulk carrier, and offshore operations.

2028 VHF Regulations and the Digitalization of Maritime Communications

The transformation in maritime communications is not limited to satellite technologies. In line with studies conducted by IMO and ITU, major regulatory changes in VHF communication infrastructures are expected by 2028.

In next-generation VHF systems, the focus is shifting beyond voice communication to include:
» digital data transfer,
» advanced DSC management,
» automated distress communications,
» integrated safety messages,
» bridge network integration.
Particularly with the development of VDES (VHF Data Exchange System) infrastructures, traditional VHF systems are becoming smarter and more data-oriented. This transformation will enable:
» ship-to-shore data communication,
» traffic management,
» safety messaging,
» digital navigation support
to be managed much faster, more securely, and more efficiently. In the coming years, VHF systems are expected to evolve from being simple radio equipment into intelligent data platforms integrated into the vessel's digital communication network.

A New Era for MF/HF Systems and the Decline of Telex Usage

MF/HF systems continue to be one of the core components of GMDSS infrastructures, particularly in A3 and A4 sea areas. However, these systems are also undergoing significant digital transformation. Next-generation MF/HF devices now emphasize:
» advanced DSC control,
» automatic frequency optimization,
» IP-based integration,
» remote diagnostic systems,
» digital distress management,
» faster message routing infrastructures.

It is also anticipated that NBDP/telex operations, which were heavily used in the past, will significantly decline in the future.
Today:
» meteorological data,
» safety messages,
» operational reports,
» distress communications
can all be managed much faster through digital systems.

With the spread of LEO satellite infrastructures, the advancement of IP-based communication solutions, and the digital GMDSS transformation, manual telex usage is gradually losing its operational importance. Nevertheless, MF/HF systems will continue to maintain their importance for redundant communications, long-range distress operations, and international regulatory requirements.

Cybersecurity Is Now an Integral Part of Communications

As vessels become increasingly digitalized, cybersecurity has become one of the most critical issues in the maritime sector.

Today, communication systems not only provide internet access, but are also directly connected with:
» bridge systems,
» machinery monitoring infrastructures,
» remote access solutions,
» operational networks.

For this reason, the following areas have

become major investment priorities for shipowners:

» network segmentation,
» firewall systems,
» access management,
» secure remote connection infrastructures,
» IMO cybersecurity compliance.

ALM Marine Solutions and Services

As ALM Marine, we closely follow technological developments in maritime communications and provide next-generation systems to our customers as reliable and sustainable solutions.

Next-Generation MF/HF Systems

The MF/HF solutions offered by ALM Marine provide strong and sustainable communication solutions for commercial vessels with features such as:

» GMDSS-compliant infrastructure,
» high DSC performance,
» reliable distress communication,
» long-range operation support,
» digital integration infrastructure,
» low energy consumption.

Modern VHF Solutions

Our next-generation VHF systems feature:

» high audio quality,
» advanced DSC functions,
» bridge integration,
» digital communication support,
» IMO and SOLAS compliance.

These systems are becoming an important component of modern bridge operations. We believe that digitalized VHF infrastructures will become even more critical for the industry as the 2028 regulations approach.

Where connectivity is lost, more than communication is lost—operational advantage disappears as well. In the new era, maritime success will belong to those who manage data the fastest, share it the most securely, and ensure uninterrupted access.

Starlink Maritime Systems

Through the Starlink Maritime solutions we provide at ALM Marine, we offer vessels:

» high-speed internet,
» low-latency connectivity,
» uninterrupted crew access,
» remote technical support,
» cloud-based operations management.

Especially when used within hybrid infrastructures, Starlink systems provide significant advantages in operational efficiency, personnel satisfaction, and technical accessibility.

Network and Integrated Communication Infrastructures

Modern vessels now demand not only devices, but fully integrated communication ecosystems.

Within this scope, as ALM Marine, we contribute to vessels' digital transformation processes by providing:

» network infrastructures,
» firewall solutions,
» crew internet management,
» bridge network integration,
» remote service solutions,
» cybersecurity support.

Conclusion

As of 2026, maritime communication systems are no longer merely equipment used for communication; they have become strategic technologies positioned at the center of operational continuity, safety, and digitalization. In the coming years:

» more connected vessels,
» smarter bridge systems,
» stronger cybersecurity infrastructures,
» more integrated communication solutions

will become the new standards of the industry.

Maritime operations are no longer only about navigating at sea.

Today, the maritime industry is entering a new era shaped by companies that manage data effectively, maintain uninterrupted connectivity, and use digital infrastructures efficiently.

As ALM Marine, we are proud to be part of this transformation and to provide reliable solutions tailored to the needs of the industry. ■

demmarine

Anchoring Trust, Ensuring Quality

Trusted provider of comprehensive maritime services, operating across all ports.

- Cargo Pump Services & Spare Parts Supply (Framo, Marflex, Hamworthy, Svanehøj, Kosaka, and HQ)
- Electric Motor Supply & Maintenance Solutions
- Stern Tube & Propulsion Services, Class Approved Seals
- Marine Lighting & Electrical Systems
- Emergency Repair, Berthing & Logistics
- Global Repair & Technical Maintenance Teams
- Underwater Diving & ROV Services
- Maritime Security & Risk Management & Guard Services
- Survey, Inspection & Classification Services

İstanbul Office:
Güzelyalı, Yakut Sokağı No: 26
Daire:8, 34890 Pendik/İstanbul

+90 532 496 74 77
+90 555 624 51 70

www.demmarine.com

sales@demmarine.com
operation@demmarine.com

We are here to be your safe port!

Deep Technology
Quiet and Ambitious

Pharus Tech, which develops life-saving emergency locator systems, is challenging global players with the technologies it creates for the maritime and aerospace industries.

Mehmet DOĞAN
General Manager

First, let's get to know you a little better. How did the founding story of Pharus Tech begin? What was the biggest strategic gap you identified when entering the field of domestically manufacturing emergency locator systems in Türkiye? What unresolved problem are you still solving today?

Pharus Tech was founded in Ankara by an experienced team of engineers who had previously worked at leading organizations within the Turkish defense industry. What began as a startup operating from the living room of an apartment has today evolved into a respected technology company in Türkiye capable of designing and manufacturing emergency locator systems end-to-end.

In our product development processes, we place particular emphasis on implementing innovative, patentable solutions that simplify user experience and provide cost efficiency. While our company currently operates in the maritime and aerospace sectors, our core focus is the design and production of high-technology devices aimed at saving human lives.

EPIRB, ELT, and similar devices are products designed to save lives when they are needed most. In your opinion, what is the critical factor that truly determines engineering quality in this market?

The freedom and discipline of the personnel within the manufacturing company. Regardless of the project, these two elements always form the foundation of quality. A quality engineer who can raise concerns without hesitation when noticing a potential issue, a hardware engineer who can directly state that a design has failed, a production technician who can openly express inefficiencies in production planning, or a software engineer who wants to test a new development tool believing it could accelerate the R&D process...

If this culture exists within a company, no error goes unnoticed, and all problems are resolved before they are reflected to the customer. Today, R&D and quality processes have already become indispensable components for the sustainability of any manufacturing company.

The phrase "local and national" is used very frequently in Türkiye. Technically speaking, what truly differentiates Pharus Tech, and what capability do you possess that cannot easily be copied from the outside?

Based on the feedback we receive from the field and our own observations, we identify critical technical problems that competing companies have failed to solve. We then focus our R&D team on determining how these problems can be solved in the most effective and efficient way possible.

For us, a design is never considered complete unless it delivers a solution innovative enough to qualify for a patent or utility model and efficient enough from a cost perspective. For example, our Pharus EPIRB Lume PH7001 product features a first-of-its-kind design capable of automatic water-triggered release without requiring an HRU. This solution eliminates periodic HRU maintenance procedures and additional costs for users. We conducted the relevant patent processes under the PCT framework, making them valid in approximately 150 countries worldwide. We adopt this approach not only in a single project but throughout all of our product development processes.

Defense industry, maritime, and aviation each require very different disciplines simultaneously. Today, how do you position yourselves more: as a defense technology company, a safety technology company, or a deep technology venture?

We can very clearly say that we are a deep technology company. The areas of expertise and sectoral experience of our personnel strongly support this.

Within the company, we also have several confidential patent projects that have not yet been shared publicly. As these projects mature, we will continue to announce and commercialize them. If a company is truly producing deep technology, it inevitably begins addressing the needs of multiple sectors over time. Today, we may operate in maritime, defense industry, and aerospace; tomorrow, wearable electronics and semiconductor technologies will be added to these fields as well.

Why is your “HRU-free EPIRB” solution important? What does it actually change for the user?

When we started the EPIRB indigenization project, the first thing we did was conduct field observations and meet with potential customers. HRU systems, which are used for automatic water release and need to be replaced every two years, seemed outdated to us both in terms of cost and operational processes. Drawing on our own engineering experience, we developed an innovative design through a multidisciplinary approach that would enable the EPIRB to automatically release in water, and we quickly filed a patent application. Until the patent process was completed, we did not share this feature publicly.

In addition to the positive feedback we received from potential customers in Türkiye, this also opened the door for many marine companies abroad to contact us.

Many companies aiming to produce high technology in Türkiye remain stuck at the prototype stage. What was the turning point that enabled you to move your products from the laboratory into real-world field deployment?

The main problem I have observed in many companies is this: projects are abandoned due to high costs and scheduling delays encountered during the transition from the prototype phase to commercialization. If a project is likely to face funding or resource limitations, institutional investment support absolutely needs to be secured — just as we did. In addition, I do not believe it is right to enter the high-technology field with expectations of quick short-term profits. This is because producing high technology is, by nature, a process that requires patience. There is another issue I have especially observed in some technology companies founded by academics in our country: products are developed in isolation from the field, without sufficient interaction with potential customers, and then directly launched into the market. Unfortunately, the vast majority of this approach ends in failure. Even the smallest customer can provide feedback valuable enough to fundamentally reshape a product’s design. For this reason, it is essential to listen to both the field and the user from the very beginning.

If we asked what Pharus Tech’s goal is for the next five years in a market dominated by global players, what would you say? At what point would you be able to say, “We succeeded”?

The day our products become the world leader in annual sales volume, we will be able to say, “We succeeded.” We are working toward this goal patiently, with discipline and determination.

For the young engineers and investors listening to you today: what is the core vision that makes Pharus Tech not just a product company, but an important long-term technology company?

Pharus Tech is not a company focused solely on a specific product or sector. The company is managed with a strategy that supports the innovative approaches of its employees and continuously follows global needs. For this reason, developing long-term deep technology projects and transforming them into products is not a preference for us, but a natural necessity. Our most fundamental goal is to become a lasting technology company that contributes to the industrial strength and technological expertise of the Republic of Türkiye. ■

SANDBLASTING AND PAINTING FACILITIES

PRODUCTS

Sandblasting Cabinet
In-Cabinet Sandblasting
Sandblasting Tanks
Painting Booth
Drying Ovens
Airless Spray Machines
Industrial Fan Heater
Dehumidifier
Granule Collection Unit
Spare Parts

0216 766 39 88
info@akgmakine.com
www.akgmakine.com
Postane Mah, Erman Aydıner Sk.
No 2E, Tuzla/İstanbul

Digital Transformation and Next-Generation Communications in the Maritime Industry

A New Standard Is Emerging in the Industry

Ships now carry not only cargo but data as well... Deckhouse Communications evaluates the impact of uninterrupted connectivity on everything from operational efficiency to artificial intelligence applications, while sharing its vision for the future of the industry.

Yiğit KALYON
Director of Sales and Marketing

First of all, we would like to hear about Deckhouse from you. What services does your company provide in the fields of maritime communications and digitalization, and how do you position yourselves within the industry today?

As Deckhouse Communications, we have been operating in the maritime communications sector for more than 25 years, providing reliable, uninterrupted, and high-performance communication solutions between vessels and shore-based operations. We offer a wide range of services, from satellite communication systems and network infrastructures to cybersecurity solutions and crew internet services. With the acceleration of digitalization in the maritime industry in recent years, we have positioned ourselves not only as a communications provider but also as a strategic solution partner supporting our customers throughout their digital transformation journeys.

For many years, the concept of "maritime communications" was seen merely as a communication necessity. Today, however, it has become central to operations. In your opinion, when did this paradigm shift occur in the maritime sector?

For many years, maritime communications were viewed primarily as a tool for meeting email and operational communication needs. However, with the widespread adoption of digital systems onboard vessels, the advancement of remote monitoring applications, and the changing expectations of crew members, communications have become central to vessel operations. In particular, the introduction of Low Earth Orbit (LEO) satellite technologies marked the beginning of a new era for the maritime industry. Connectivity is no longer a support service; it has become one of the fundamental components of operations.

What consequences can arise in operations, safety, and commercial processes when a vessel loses connectivity for even a few minutes? Could you share some striking examples from the field?

A loss of connectivity onboard a vessel does not simply mean a breakdown in communication. Today, operational processes, fleet management, maintenance planning, performance monitoring, and safety applications are all heavily dependent on continuous data flow.

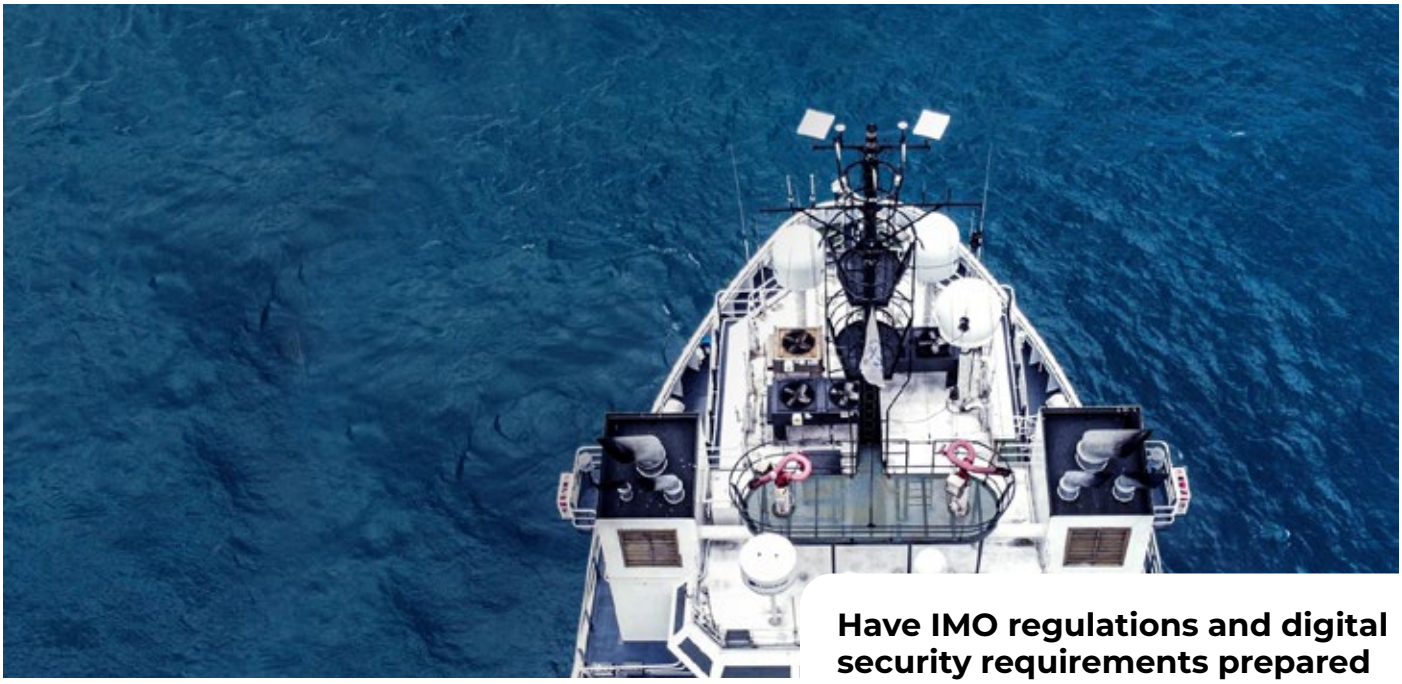
From a human perspective, the inability of crew members to communicate with shore during emergencies can create serious risks.

On the commercial side, delays in port operations, the inability to transmit critical documents, or the inability to provide remote technical support can result in significant costs. Particularly in recent years, as remote technical support applications have become more widespread, uninterrupted connectivity has become one of the essential prerequisites for operational efficiency.

Are next-generation LEO satellite systems, particularly Starlink Maritime, truly a revolution for the industry? Or should they simply be regarded as an advanced version of existing systems?

We definitely consider them a revolution. Thanks to LEO satellite systems, it is now possible for the first time to achieve internet connectivity at sea that is comparable to, and in some regions even better than, the experience on land.

This development has not only increased internet speeds but has also fundamentally transformed onboard applications, operational processes, and crew expectations. Today, high-speed and low-latency connectivity forms the foundation of many digitalization projects.



Today, shipowners' primary expectation is uninterrupted connectivity wherever they operate. From a technical standpoint, how difficult is it to achieve this?

To achieve this, redundant systems must be utilized. Although Low Earth Orbit satellite systems offer global coverage, service availability may vary in certain countries due to licensing and regulatory restrictions. Therefore, we recommend redundant systems to shipowners. These include communication solutions such as Ku/Ka-Band VSAT, Iridium, and FBB systems.

Redundant systems are indispensable for uninterrupted communications at sea. For example, one of the vessels we serve was transporting cargo along the Russia–Yemen route when it came under missile attack in a conflict zone, causing damage to one of its primary antenna systems. Despite this, connectivity continued without interruption thanks to the backup communication system that was already in operation, allowing both operational processes and crew communications to continue unaffected.

Cybersecurity in the maritime industry has gone far beyond traditional IT security. In your opinion, where does the industry face its greatest threat today?

One of the biggest risks in the maritime industry is that the pace of digitalization sometimes surpasses cybersecurity investments. Modern vessels operate with numerous interconnected systems, significantly expanding the attack surface. Today, the threat is no longer limited to data loss. Operational disruptions, unauthorized access to systems, and commercial losses also pose serious risks.

For this reason, we provide our customers not only with communication services but also with a comprehensive cybersecurity approach that includes firewall management, advanced email security systems, and real-time monitoring solutions.

Have IMO regulations and digital security requirements prepared companies sufficiently, or is the industry still experiencing growing pains in this transformation process?

IMO regulations regarding cybersecurity and digitalization have created significant awareness across the industry. However, it would be difficult to say that the transformation process is progressing at the same pace throughout the entire sector. Preparedness levels can vary considerably, especially among companies of different sizes. At this point, technology providers like us have important responsibilities. Our goal is not only to provide solutions but also to raise awareness among our customers regarding potential risks and contribute to sustainable and secure digital transformation processes.

What does internet access mean today in terms of crew welfare? How do you think a strong communications infrastructure affects workforce productivity and life onboard from a psychological perspective?

Easier access to the internet significantly enhances crew welfare. Crew members can now stay informed about developments at all times, almost as if they were working ashore, and continue many of their land-based habits while at sea. This boosts morale onboard and reduces the psychological distance between life at sea and life ashore. The ability for crew members to communicate with their families whenever they wish provides substantial emotional support and motivation during life at sea.

How do hybrid communication infrastructures, remote monitoring systems, and real-time data flows improve efficiency in vessel operations?

Remote monitoring systems and real-time data flows provide shore-based operations with the freedom to receive instant information from vessels. As a result, potential risks and maintenance requirements can be identified and planned in advance.

Rather than leaving responsibility solely to the crew onboard, these systems allow shore operations to actively support vessel management, resulting in more efficient and effective processes. At Deckhouse, we continue to develop solutions that help our customers prepare for this transformation.

As AI-powered operational management becomes increasingly discussed, what kind of communication infrastructure will the "smart ships" of the future require?

The smart ships of the future will require communication infrastructures that provide high bandwidth, low latency, and continuous availability. AI-powered systems will analyze vast amounts of data, including camera footage, machinery performance data, navigational information, and operational parameters.

Therefore, communication infrastructure will not only transport data but will also form the foundation of artificial intelligence applications. Real-time data flows and remote decision-support systems will become even more critical in the coming years, paving the way for autonomous navigation systems.

A loss of connectivity is no longer just a communication problem; it can simultaneously disrupt operations, safety, and the entire supply chain. In today's maritime industry, internet access is no longer a convenience—it has become critical infrastructure that keeps vessels running.

The smart ships of the future will not be efined by artificial intelligence alone, ut by the flow of data that powers it. Without high-speed, uninterrupted communications, remote operations, autonomous systems, and real-time decision-making will simply not be possible.

When evaluating Türkiye in terms of maritime technologies and digitalization, are we closing the gap with the rest of the world, or do we still have critical shortcomings?

With the widespread adoption of Low Earth Orbit communication systems, Türkiye has largely closed the digitalization gap with international markets in the field of maritime technologies. However, the widespread implementation of live monitoring of onboard operational parameters, advanced camera systems, and digital voyage planning applications still requires time.

Finally, if you had to choose one technology that will fundamentally transform the maritime industry over the next 10 years, what would it be, and why?

I believe that uninterrupted, high-speed communication infrastructures will be the technology that transforms the maritime industry the most over the next decade. This is because all future technologies—including artificial intelligence, remote operations management, autonomous systems, digital applications, and advanced data analytics—depend on robust connectivity infrastructures.

In recent years, the emergence of Low Earth Orbit satellite systems has completely changed the concept of connectivity at sea. Today, vessels can remain in continuous interaction with shore-based operations regardless of where they are in the world.

In my opinion, the most important factor shaping the future of the maritime industry will not be artificial intelligence or automation alone, but rather the next-generation communication technologies that make all of these systems possible. ■

BALDEN

Building Boats Saves Lives

* Freefall Lifeboats
* Enclosed Lifeboats
* Rescue Boats
* Service Boats
* Release Hooks
* Repair and Maintenance
* Spare Parts

MED CERTIFIED

BALDEN GEMİ VE YAT SANAYİ TİCARET LİMİTED ŞİRKETİ

Head Office: Evliya Çelebi Mh. Genç Osman Cd. No: 44A/1 Tuzla/İstanbul-Türkiye

Factory: Nazmi Balcı Cd. No: 15 Şekerpınar/Çayırova/Kocaeli-Türkiye

E-mail: balden@baldenboat.com.tr Web: www.baldenmarine.com

Phone: +90 216 444 74 03 Gsm: +90 543 903 37 62

BALDEN BOAT SAVES LIVES

www.baldenmarine.com

The Uninterrupted Frequency

One Malfunction, Three Continents, One Night

Emergency service missions reaching Japan, malfunctions resolved from across the Atlantic Ocean, and operations racing against the clock... This is exactly where the world of GRL Marine Electronics begins.

A. Baki UĞURLU
General Manager

Many technologies in the maritime industry operate “invisibly” until a critical moment arises. In your opinion, what is the most vital problem that GRL Marine Electronics solves for ships?

That is a very accurate way of putting it. As long as equipment functions properly, no one pays attention to how it works or to the processes running in the background. At the heart of this lies the right product selection and quality workmanship. The most important contribution we bring to the industry is our principle of applying the right product in the right way.

How decisive have communication systems become in the safety operations of a commercial vessel today? Compared to ten years ago, what has been the biggest change on the bridge?

Without question, the biggest change has been the internet. Communications have revolutionized ship-to-shore connectivity, enabled crew members to stay in touch with their families, and significantly improved coordination between ship management and operational teams. In parallel with these developments, we provide industry-specific solutions combined with our own quality standards to deliver maximum value to our customers.

When people think of maritime communications, they usually think of radios. However, there is a much more complex technological ecosystem behind it. How would you define it?

The foundation of maritime communications lies in systems operating within the framework of GMDSS regulations. The process begins with conventional radio systems, continues with MF/HF systems that enable long-range communication, and expands further with satellite communications as technology evolves. Today, thanks to the internet, maritime communications have reached an entirely different level.

How does operating in Tuzla, one of Türkiye’s leading maritime hubs, provide an advantage for your company in the field?

As is widely known, Tuzla is the heart of Türkiye’s shipbuilding industry. When we established our company, we deliberately chose this location as our headquarters. Being only 20–30 minutes away from Yalova, where shipyard activity is highly concentrated, and having close proximity to numerous ports have enabled us to secure a strong position within the industry. This also allows us to operate with greater speed and efficiency in planning and execution.

In ship electronics, what is the difference between a “good product” and a “system that inspires confidence at sea”?

In reality, these two concepts are closely interconnected. From a technical standpoint, a good product is one that holds the necessary type-approval certification. However, its performance in the field may not always reflect that alone. For example, even if you select the correct product, incomplete connections, the use of an incorrect interface component, or installation by unauthorized personnel can prevent the system from delivering its full performance.

Furthermore, it would be incorrect to assume that a newly introduced product, manufacturer, or a device still undergoing certification is necessarily of poor quality. For this reason, the safest approach for shipowners and operators is to make informed decisions through clear communication with the companies they choose to work with.

Sea conditions are extremely demanding due to salt, humidity, vibration, and the requirement for uninterrupted operation. In your opinion, what technical discipline truly makes a marine electronics company strong?

I would say the ability to perform the job correctly under all circumstances. In other words, never compromising on quality or accuracy. Behind this principle lies nearly a quarter-century of experience and accumulated expertise.

A failure in communication systems can sometimes result in consequences far beyond operational costs. What has been the most critical intervention or the most challenging technical operation you have handled so far?

Our priority is to identify and resolve any fault before it develops into a serious problem. In practice, this means sometimes creating simple yet highly effective solutions and, at other times, responding rapidly with knowledge, experience, and foresight when an emergency arises. One of the most critical incidents occurred over a weekend. A gyro compass failure had developed on an ocean-going vessel bound for Japan. Since the vessel would remain in port for only a very short time, we had to catch a flight that very same evening. Based on the fault report we received, we quickly identified the problem and secured the necessary spare parts within approximately two and a half hours before departing for Japan. We reached the vessel on time and successfully completed the operation.

In another case, we received a service request from the United States regarding a device failure aboard a vessel sailing in the Atlantic Ocean. After reviewing the fault report, we determined that an onboard service visit was unnecessary. We advised that the issue could be resolved if the next port provided an internet connection and a computer capable of remote access. One week later, while the vessel was berthed along the Amazon River, we successfully solved the problem using nothing more than a fifty-dollar internet connection device. In another incident, an electrical fault in mid-ocean caused the vessel's GPS systems to fail, triggering alarms across all communication equipment. Having previously identified the absence of a backup system on board, we had already implemented a system backup ourselves. As a result, we were able to resolve the problem quickly and ensure that the vessel safely reached its next port. Our approach in these and similar situations continues to strengthen the trust placed in us by shipowners, shore-based operations teams, and onboard personnel. That trust remains our greatest source of motivation.

Today, what type of solution do shipowners request most frequently from you: connection quality, integration, cybersecurity, remote access, or operational efficiency?

Today, the strongest demand is for internet connectivity solutions. Companies that invested in this area early on are primarily focused on connection quality and cybersecurity. For companies that are just beginning their digital transformation journey, remote access and operational efficiency have become key priorities.

As digitalization accelerates across the maritime industry, the concept of the "connected ship" continues to gain momentum. What role do you think communication systems will play aboard the smart ships of the future?

This is one of the questions everyone is curious about. However, we have no doubt that communication will remain one of the most critical elements of maritime operations.

Today, deck officers communicate through radios and computers. In the future, those same systems may well be operated by artificial intelligence-supported robotic platforms. Hopefully, we will never witness such a scenario, but it is possible to imagine a future where robotic systems transmit "Mayday, Mayday" distress calls and autonomous rescue vehicles respond to them. Regardless of how technology evolves, communication will still rely on radio systems, internet connectivity, and digital messaging platforms.

Türkiye is generally recognized for its manufacturing capabilities in maritime technologies. In the field of marine electronics, where do you believe Türkiye has the potential to become globally competitive?

In many ways, we are a nation that is only beginning to discover its own capabilities. The achievements of the defense industry provide some of the clearest examples of this potential. Of course, nothing happens overnight. Progress requires time, support, and incentives. Nevertheless, Türkiye has a promising future in this field, and there is still significant ground to cover.

Trust in the maritime industry is built over many years. What is the fundamental approach that makes shipowners and captains place their trust in GRL Marine Electronics?

The answer is embedded in our motto:
"Professionalism – Trust – Quality."

Professionalism is reflected in every stage of our work, from product selection and workmanship to after-sales support and technical solutions. When it comes to trust, we operate according to a simple principle: Trust is not given; it is earned. Through the services we provide, the quality of the products we recommend, and our commitment to after-sales support, we continuously strengthen that trust among all our stakeholders. As for quality, we apply the highest level of care and attention to every product we recommend, every material we use, and every installation we perform. Most importantly, we always stand behind our commitments.

Looking ahead, what do you believe will be the game-changing development in maritime communication technologies: satellite internet, AI-supported systems, remote vessel management, or something entirely different?

While we acknowledge that these technologies will make life significantly easier for ship officers, crew members, and shore-based operational teams, we firmly believe that the human factor will remain the most important element. From a communications perspective, satellite internet has already become indispensable and will continue to play a central role in the future of maritime operations.

Finally, a question that may resonate particularly with young engineers and maritime professionals: What is the vision that transforms GRL Marine Electronics from a technical service provider into a long-term technology brand?

The most important factor is that we genuinely love what we do and approach our work with dedication and passion. At the same time, we combine knowledge and experience with a professional mindset, constantly striving to deliver better solutions and higher-quality work. Just as we do today, we are determined to maintain this vision in the years ahead. ■

YOROZ MARITIME SHIPPING AGENCY

Istanbul–Çanakkale Strait Agency Services

Tuzla–Yalova Shipyard Agency Services

Crew & Personnel Transfer Services

Airport Personnel Agency Services (With/Without Visa)

Provisions, Fresh Water & Lube Oil Supply Services

Agency Boat Services

0216 395 30 06

yorozdenizcilik

www.yorozshipping.com

yoroz@yorozshipping.com

A New Equation in Maritime Communications
When Data Stops, Operations Stop

Ships that once communicated through Morse code can now share data in real time from the middle of the ocean. As artificial intelligence, autonomous systems, and digital integration reshape the maritime industry, Navser Marine General Manager İskender Civil sheds light on both the present and future of the sector.

İskender CİVİL
General Manager

First of all, we would like to hear about Navser Marine from you. How was the company founded, what areas does it operate in today, and what kind of position does it aim to establish within the industry?

Like many successful businesses, Navser Marine was founded with the goal of responding to the needs of the industry. Its foundations were laid in 2007 under different names, and in 2009 the company completed its corporate identity and began operating under the name Navser Marine. Derived from the combination of the words “Navigation” and “Service,” the Navser brand has since been providing sales, installation, maintenance, troubleshooting, repair, certification, and survey services for marine bridge electronic systems Operating with a 24/7 uninterrupted service approach both domestically and internationally, Navser Marine has become one of the trusted solution partners of the maritime industry with more than 17 years of experience. The rapid development of technology in the maritime sector has created new requirements that extend far beyond ship-to-shore communication. Today’s electronic systems not only support safe navigation but also contribute to protecting the lives of crew members, reducing operational risks, and ensuring the proper execution of insurance processes in the event of accidents.

While these technological advancements provide significant advantages for both shipowners and maritime professionals, they also help raise safety and efficiency standards across the industry.

Maritime communication systems have evolved into structures that affect the entire operation, not just ship-to-shore communication. How do you observe this transformation in the field?

Today, a significant number of shipowners are making cost-focused decisions due to financial pressures created by global economic fluctuations and geopolitical developments in our region. However, one of the most common issues we encounter and emphasize in our industry is the expectation of obtaining “the cheapest and the best solution” at the same time. Unfortunately, there is no such thing as the cheapest and the best solution at the same time.

Our observations from 17 years of industry experience show that focusing solely on initial investment costs does not generate long-term savings. On the contrary, choices that appear to offer short-term financial advantages often lead to higher operational expenses and technical problems in the future.

The maritime industry is built upon international regulations and standards. Therefore, the equipment used must also be selected and implemented in accordance with these requirements.

For example, we occasionally see autopilot systems designed for yachts and pleasure craft being installed on commercial vessels engaged in international voyages. While such choices may initially seem cost-effective, they can be insufficient for the operational requirements of large-tonnage ships and may negatively affect navigational safety. When performance issues later arise and support is requested, it often becomes evident that the root cause lies in the incorrect equipment selection. For this reason, we believe that equipment selection in the maritime industry should not be based solely on price but should also consider safety, performance, compliance with international standards, and long-term operating costs.

When a shipowner or ship operator invests in communication infrastructure today, which criteria receive the greatest attention? How have priorities changed regarding cost, coverage, speed, continuity, and technical support?

For vessels operating in international waters, a strong and extensive global service network is of great importance. Today, many ships belonging to the Turkish maritime sector continue transporting cargo and delivering services in different parts of the world. As a result, technical requirements encountered in Turkish waters may also arise in ports across the globe. However, the cost of technical services abroad can reach levels significantly higher than those in Türkiye. We often see operations that can be carried out at reasonable costs domestically being offered at substantially higher prices in other countries. This situation directly affects both shipowners and service providers.

As Navser Marine, we aspire to bring the same quality and service standards that we provide in Turkish ports to every corner of the world as a Turkish company. However, visa procedures continue to be a major obstacle. Delays caused by visa processes in urgent technical service operations can create significant difficulties for both service providers and shipowners.

Therefore, I would like to reiterate a view we have expressed for years. Implementing regulations that facilitate visa procedures for maritime professionals who have actively worked in the industry for a certain period would provide substantial benefits to our sector.

We believe such a step would strengthen the international competitiveness of the Turkish maritime industry and contribute positively to service exports.

On the other hand, trust has become one of the most discussed topics not only in the maritime sector but throughout society.

We believe that mutual trust should form the foundation of the relationship between service providers and clients. However, we also recognize that this is not always the case in practice.

Technical service companies operating in the maritime industry work with great dedication around the clock to support vessels in different parts of the world.

Despite this, there are times when payment for services rendered or equipment supplied cannot be collected. There are even cases where long-established and highly respected companies have been forced to pursue legal action to recover their receivables.

For this reason, we believe trust should not be viewed as a one-sided expectation but as a shared responsibility among all stakeholders. A healthy and sustainable maritime ecosystem can only be built on mutual trust, transparency, and sound commercial ethics.

How critical has worldwide service support become, especially for vessels engaged in international voyages? Do you think a marine electronics company must sell not only products, but also trust?

From an operational efficiency standpoint, the uninterrupted and accurate functioning of onboard systems is of great importance. The regular operation of technical equipment and the timely execution of maintenance processes are among the most critical factors in cost control, time management, and operational continuity. Since the maritime industry operates within a framework of international regulations and inspection mechanisms, even seemingly minor technical deficiencies can lead to serious consequences.

Based on our years of accumulated knowledge and field experience, we often find ourselves informing customers in advance about potential risks they may encounter. Unfortunately, we also observe that these warnings do not always receive the attention they deserve. We have repeatedly witnessed maintenance or renewal decisions that were postponed in pursuit of short-term cost savings return as significantly higher costs and operational losses.

Such situations not only lead to financial losses but also disrupt ship operations, interfere with planning, and cause time delays. In contrast, when the recommendations of companies and professionals with extensive industry expertise and experience are taken into account, these processes can generally be managed smoothly.

We believe that a preventive approach in maritime operations is far more valuable than solving problems after they occur. Decisions guided by experience support operational continuity and provide shipowners with significant long-term advantages.

In today's maritime industry, the challenge is no longer simply establishing connectivity; it is ensuring that the right data is delivered at the right time, without interruption. Where the flow of data stops, operations slow down, risks increase, and costs rise.

Technology is evolving rapidly in the maritime industry. In your opinion, what has been the most important paradigm shift in communications in recent years?

Technological advancements have brought significant transformations to the maritime industry, just as they have in every other sector. In particular, developments in communication technologies have fundamentally changed the way the industry operates. Comparing the communication capabilities available when I first entered the profession with those of today clearly illustrates the scale of this transformation. Today, uninterrupted communication can be established between a vessel in the middle of the ocean and a company headquarters. Likewise, crew members can communicate with their families through voice, video, and data-based channels thanks to internet infrastructure. In a sense, technology has brought distant places closer together while significantly improving the living conditions of personnel working at sea.

Moreover, advanced connectivity technologies have also made substantial contributions to technical service processes. Certain technical problems can now be addressed remotely through remote access tools and video communication platforms. For example, in specific equipment failures onboard, crew members can be guided through video calls, allowing initial troubleshooting procedures to be carried out remotely. This reduces time loss and contributes to more efficient operational management. In short, developments in digitalization and communication technologies have not only improved operational efficiency but have also transformed life at sea, technical service practices, and the overall functioning of the industry.

Today, different brands and systems on ships need to operate together within the same infrastructure. What are the most common technical challenges encountered during integration processes?

From a technical perspective, software incompatibilities are among the most common challenges we encounter today. While technological progress simplifies operational processes, it can also create new issues related to the integration and interoperability of systems produced by different manufacturers.

The information gathered is rapidly evaluated by our operational and technical teams, enabling effective coordination between the vessel, ship management, and technical service units. In this way, we accelerate decision-making processes while striving to provide our customers with the most accurate and timely solutions. Strong communication, rapid coordination, and the effective management of field data form the foundation of Navser Marine's service philosophy. Through this approach, we aim to contribute to the uninterrupted continuation of maritime operations.

As the number of electronic systems onboard vessels increases and digitalization accelerates, data exchange and software compatibility between different platforms have become increasingly critical. This can occasionally lead to technical disruptions or require additional intervention during integration processes.

Nevertheless, thanks to the industry's investments in technology and the innovative solutions developed by manufacturers, we believe these issues will largely be overcome over time.

We foresee a future in which systems operate in a far more integrated and compatible manner—either directly or through intermediary processors—and where data sharing becomes faster and more seamless. These developments will enhance operational efficiency while making onboard technical management processes more effective.

In communication systems, continuity is just as important as proper technical support. How does Navser Marine structure its service organization? What kind of response mechanism do you develop, especially in emergency operations?

At Navser Marine, we build our operational processes around the principle of direct communication with vessels. Our technical and operational teams work in close contact with ship personnel to accurately identify needs and accelerate solution processes.

Particularly in cases involving technical failures or operational issues, we place great importance on obtaining information directly from the primary source. Accordingly, we communicate directly with captains and relevant vessel representatives, listen carefully to the details of the problem, collect the necessary technical data, and conduct a thorough analysis of the situation.

When you look at the failures encountered in the field, which operational or user-related problems appear most frequently on vessels?

One of the most common issues we encounter involves incorrect user configuration of navigation and communication systems. We occasionally come across situations where crew members modify system settings without reviewing the relevant documentation or following established operating procedures, resulting in misconfigured devices.

In such cases, technical support requests are often submitted under the assumption that the system has malfunctioned. However, when technical teams arrive onboard, it frequently becomes clear that there is no hardware or software fault at all; the issue can be resolved simply by restoring the settings to their proper configuration.

All navigation and communication systems installed on vessels are delivered together with user manuals and technical documentation. These resources explain in detail how the equipment should be used under various operational scenarios and the purpose of different settings.

For this reason, it is essential to review the relevant documentation and follow manufacturer recommendations before making changes to system configurations. Proper usage habits not only reduce the need for technical service but also contribute to operational continuity and help prevent unnecessary time losses.

Crew expectations have also changed significantly. How do you assess the impact of internet access and digital communication opportunities on life at sea today?

The evolution of communication technologies has brought about perhaps one of the most significant transformations in the maritime industry. In the past, seafarers had to rely on SSB (Single Sideband) radio systems and shore radio stations to communicate with their families across oceans. In even earlier times, communication was carried out through messages transmitted in Morse code.

Although these methods provided valuable opportunities within the conditions of their era, they were subject to serious limitations in terms of continuity and accessibility. Seafarers often had to wait for specific communication windows and could go weeks without hearing from their loved ones during long voyages.

Today, thanks to advances in satellite communications and internet technologies, the situation has changed completely. Crew members can now maintain continuous voice, video, and text communication with their families and loved ones, even while in the middle of the ocean.

This transformation has not only enhanced communication capabilities but has also improved quality of life onboard, contributing significantly to crew motivation, psychological well-being, and productivity. The opportunities provided by technology make extended periods at sea far more manageable.

Today, maritime communication infrastructures are used not only for communication but also for data flow, remote support, performance monitoring, and operational management. How prepared do you think the industry is for a data-driven structure?

In reality, this transformation is the result of a process that has been developing for many years. The foundations of data exchange between ships and shore offices were laid through simpler communication and reporting systems used in the past. However, with improvements in communication infrastructure, higher data transfer speeds, and advances in software technologies, this process has evolved into something much more comprehensive.

Today, integration between shipboard and shore-based operations continues to strengthen. Data generated through communication systems, sensors, navigation equipment, and operational software can now be transmitted to shore in real time and monitored through centralized platforms.

We expect this integration to advance even further in the future. All operational and technical data generated onboard will likely be consolidated into a single digital platform, enabling office teams to monitor and analyze information in real time. As a result, decision-making processes will accelerate while operational efficiency and safety standards improve significantly.

There are already pioneering companies utilizing such integrated data management systems. However, as digitalization continues to accelerate, we believe these technologies will become widespread across the industry and eventually become an indispensable component of maritime operations.

Has there been a technical intervention or operation in the field that Navser Marine considers particularly critical? Could you share a striking example with our readers?

The continuity of technical systems onboard vessels is critical not only for operational efficiency but also for compliance with international inspection procedures. From a shipowner's perspective, even a seemingly minor VHF radio failure can have serious consequences during Port State Control (PSC) inspections and directly affect a vessel's operations.

Throughout our many years in the industry, we have encountered countless critical situations of this nature. We have carried out numerous projects in which we raced against time, intervened within extremely limited timeframes in different countries, and ensured that vessels could resume operations without disrupting their voyages. As the Navser Marine team, we work with great dedication to resolve technical issues as quickly as possible and enable ships to continue sailing safely. We take pride in having completed many projects successfully, safely, and within the planned timeframe.

From a navigational safety perspective, autopilot, radar, and gyrocompass systems are generally among the most critical systems onboard.

Failures in these systems can directly affect a vessel's operational capability and navigational safety, making them top priorities for intervention. Depending on the vessel's operating area, operational profile, and equipment configuration, other systems may also become critically important.

Over the years, we have participated in many highly demanding technical operations. In some cases, faults were resolved while vessels remained underway, allowing operations to continue uninterrupted. In others, critical equipment such as depth measurement systems was replaced while the vessel was still afloat. The successful completion of such projects is made possible by accumulated knowledge, field experience, and strong team coordination.

How do you evaluate Türkiye's development in maritime electronics and communication technologies? In your opinion, where do Turkish companies have the strongest competitive advantages internationally?

This issue should not be evaluated solely from the perspective of electronics and communication systems. Technological transformation has become one of the primary factors shaping virtually every aspect of the maritime industry. As the number of software and hardware systems used onboard ships and other marine vessels continues to grow, new opportunities are emerging for domestic production and research and development activities.

In recent years, we have observed a significant acceleration in investments and R&D initiatives within Türkiye's maritime technology sector. Important steps are being taken toward developing products that meet European standards, particularly in ship equipment, automation systems, and various technical solutions. As Navser Marine, we value being part of this transformation and contributing projects that create added value for the industry.

However, time, sustainable investment, and well-directed support mechanisms remain critical factors. Türkiye's recent achievements in the defense industry clearly demonstrate the importance of planned support and long-term strategies. We believe that if a similar approach is implemented more strongly in maritime technologies and equipment manufacturing, the country's international competitiveness will increase substantially. Such support could pave the way for Turkish maritime companies to compete more effectively with their European counterparts.

Based on our field experience and feedback from vessel personnel, we also believe that Turkish companies possess significant advantages in international competition. In particular, we are strong in technical problem-solving capabilities, rapid response, operational flexibility, and cost management. We do not limit this assessment solely to electronics and communication systems. Across many different segments of the maritime industry, Turkish companies demonstrate significant competitive advantages in service quality, technical expertise, and solution-oriented approaches.

Looking ahead, which topics do you think will become more prominent in maritime communications? What kind of future do you envision in areas such as AI-supported monitoring, hybrid connectivity systems, automation, and remote technical support?

Autonomous systems and artificial intelligence technologies have emerged as some of the most important drivers of transformation in the maritime sector, just as they have in many other industries. Considering the pace of technological development, it is clear that the impact of these systems on maritime operations will become even more pronounced in the future.

Today, autonomous vehicles are actively operating in different parts of the world and can safely navigate even under complex traffic conditions. It is reasonable to expect that the level reached by AI-supported systems on land will increasingly be reflected in the maritime industry. Consequently, the widespread adoption of vessels managed by smaller crews or capable of performing certain operations autonomously would not be surprising.

Naturally, this transformation will have various effects on workforce structures and personnel requirements. However, technological advancement does not mean that the human factor will disappear entirely. On the contrary, knowledge, experience, and expertise will remain essential for the design, installation, management, supervision, and sustainable operation of these systems.

Communication and data management, in particular, form the foundation of autonomous systems. Without a healthy flow of data, autonomous systems cannot make accurate decisions or operate safely. For this reason, communication infrastructure, data transfer systems, and technical support services will remain indispensable components of the industry.

The development of artificial intelligence and automation technologies appears more likely to transform the role of technical service providers rather than eliminate it. Throughout the maritime sector's digitalization journey, we believe there will always be a need for the knowledge and experience of expert technical teams to install, integrate, maintain, and keep these systems running efficiently. ■

AVRUPA INDEPENDENT INSPECTION SERVICES CO. LTD.

RELIABILITY, QUALITY, EXPERIENCE AND INDEPENDENCY..., THIS IS WHO WE ARE...

A-SERVICES

- -Loading/Discharge supervision
- -Production Control/preshipment Inspection
- -Sampling/Urine Collection/Quality Inspection
- -Quantity Inspection (By Draft,By W/B,By Tally)
- -P&I Surveys (Damage,Salvage,Incident surveys)
- -On/Off Hire Condition/ Bunker Surveys
- -Containers Condition,cleanliness and stuffing/de-stuffing surveys

B-CARGOES

- -Steel Scrap/products
- -Crude oil-Products/Chemicals
- -Fertilizier,Salt
- -Agricultural products
- -Industrial Project Cargo/commodity







ADDRESS: Cumhuriyet Mah. Esatpasa Cad. Ayik sok. No:3A D.35 Uskudar/ISTANBUL/TURKEY
Phone number/Fax: +90 216 481 38 47 / **Mobile:** +90 533 256 64 61(Ertugrul ÖZBEY)
E-mail : avrupa@avrupainspection.com.tr / eozbey@avrupainspection.com.tr

www. avrupainspection.com.tr

A New Era in Maritime
Smart Ships

According to Veri Deniz, modern ships are no longer merely vessels navigating the seas; they are digital operations centers that continuously generate data, operate through constant connectivity, and are managed in real time.

Ergür ULUS
Company Owner

Maritime communication is no longer limited to radio systems. How do you define the concept of "maritime connectivity" today? What exact need does Veri Deniz address?

In the past, communication in the maritime industry was largely limited to enabling ships to maintain contact with shore. The focus was primarily on message transmission, radio communication, voice communication, and emergency communications. Today, however, "connectivity" means much more. Ships no longer simply communicate; they continuously generate data, exchange information, and manage operations in real time. We define maritime connectivity as a digital ecosystem that enables uninterrupted, secure, and intelligent data flow between vessels, shore-based operation centers, onboard equipment, and crew members. This is because data continuity has become critical in modern maritime operations. Processes ranging from fuel optimization and route management to machinery performance, cybersecurity, crew welfare, and remote technical support now depend on robust connectivity infrastructures.

This is exactly where Veri Deniz comes in. We are not merely an internet service provider; we are a technology solutions partner supporting shipping companies end-to-end in operational efficiency, security, and digital transformation. We provide flexible and sustainable solutions, particularly in hybrid communication systems, intelligent management of satellite and coastal connectivity, uninterrupted data access, and operational continuity. In short, we help ships not only stay connected, but also operate more efficiently, more securely, and more intelligently.

How critical is internet connectivity for ships today? When a communication system fails, what actually stops onboard?

Today, internet connectivity is no longer a luxury for ships; it is a core operational necessity. Many processes onboard modern vessels — from navigation and operational management to technical monitoring, port operations, and crew communication — depend on continuous data flow. When a communication system fails, it is not simply a matter of losing internet access. Operational efficiency declines, coordination with shore becomes more difficult, technical support processes are disrupted, and in some cases, serious safety risks may arise. Modern vessels now function as digital operations centers. As a result, uninterrupted and reliable internet connectivity has become one of the most critical infrastructures in the maritime industry.

Why have internet and data communication become operational necessities onboard ships? What kind of solutions are shipowners demanding most today?

The maritime industry is undergoing rapid digital transformation. Today, internet and data communication onboard ships are critically important for operational management, fuel optimization, remote technical support, maintenance monitoring, and crew communication. Connectivity no longer simply means communication; it means operational sustainability. Shipowners' biggest expectation is uninterrupted, reliable, and cost-efficient connectivity solutions. Hybrid systems — where Starlink, VSAT, and LTE technologies are integrated and managed together — are currently in particularly high demand. In addition, requests related to cybersecurity, onboard network infrastructure, CCTV systems, and real-time ship-to-shore data transfer are steadily increasing.

How has Starlink transformed maritime operations? How is the right communication infrastructure selected for a ship?

Starlink and OneWeb technologies have initiated a major transformation in maritime connectivity. While ship connectivity was previously more limited, high-speed, low-latency, and continuous communication has now become possible. Ships can operate through real-time data exchange. Starlink, in particular, has changed the rules of the game thanks to its accessible high-bandwidth capabilities. However, no single technology is sufficient for every vessel.

The right communication infrastructure depends on the ship's operational area, voyage routes, data usage requirements, and level of operational criticality. We generally recommend hybrid architectures. Integrating Starlink, VSAT, LTE, and redundant backup systems enables both continuity and maximum efficiency.

Communication systems onboard ships are critical not only for communication, but also for safety, operations, and crew welfare. Which of these areas do you see as the most critical today?

In reality, these three areas are now inseparable. Safety, operational efficiency, and crew welfare have become parts of the same connectivity ecosystem.

However, if I had to choose one priority, I would say operational continuity. Because uninterrupted connectivity ensures that safety systems function properly, ship operations are managed efficiently, and crew communication with shore remains sustainable.

Particularly during long voyages, internet access has become a major necessity for crew members. This directly affects both motivation and crew retention. As a result, fast and uninterrupted connectivity solutions are no longer merely technology investments; they have become investments in operational performance and human capital management.

As digitalization increases in maritime operations, cybersecurity is becoming increasingly important. What kinds of cyber threats are ships facing today? What operational consequences could an attack create?

Digitalization in maritime operations is no longer confined to shore offices; it has spread across nearly every onboard system, from the bridge and engine room to cargo operations and satellite communications. This exposes ships not only to conventional IT attacks, but also to far more critical operational technology threats.

Today, the primary cyber threats facing vessels include ransomware attacks, GPS/GNSS spoofing and jamming, interference with ECDIS and navigation systems, AIS manipulation, attacks targeting machinery and automation systems, supply chain attacks, phishing attempts, and human-related security vulnerabilities. The operational consequences of a cyberattack can be extremely severe. These may include route deviations, disruptions to port operations, collision or grounding risks, cargo losses, environmental incidents, significant increases in fuel consumption, threats to crew safety, interruption of commercial activities, and major reputational damage. For example, when the operational system of a container shipping line is compromised, the impact extends far beyond a single vessel. Cargo unloading operations at ports may be delayed, container tracking systems disrupted, and a domino effect triggered across the global supply chain.

For this reason, the industry no longer views cybersecurity merely as an "IT issue," but as a matter directly linked to navigational safety

and operational security. The International Maritime Organization (IMO) is also urging ship operators to integrate cyber risk management into their safety management systems. In addition, organizations such as BIMCO are publishing dedicated cybersecurity guidelines for ships.

How have IMO regulations on cyber risk management changed the industry? Do you believe shipowners and operators have reached a sufficient level of awareness on this issue?

The IMO's cyber risk management framework has created a significant shift in mindset within the maritime industry. In the past, cybersecurity was often viewed solely as the responsibility of IT departments. However, particularly with the integration of cyber risk management into the ISM Code, the issue is now treated as a direct component of safety management, operational continuity, and the protection of life and property. As a result of these regulations, companies have started analyzing both shipboard and shore-based networks more systematically. Risk assessments and cybersecurity procedures have been integrated into Safety Management Systems (SMS). Crew training programs have become more widespread, while technical measures such as network segmentation, access control, and backup systems have become increasingly common. Classification societies and auditors now consider cybersecurity one of their inspection criteria, and insurance companies have also begun factoring cyber risks into policy processes.

Large tanker, container, and LNG operators in particular have made substantial investments in recent years. It is now clearly understood that a cyber incident can result not only in data loss, but also voyage cancellations, port delays, environmental risks, and operational losses worth millions of dollars. That said, it would be difficult to say that awareness across the industry has reached a fully sufficient level. Significant differences still exist between large international operators and small- to medium-sized shipowners. In some companies, cybersecurity is still viewed as an "additional cost," while expertise in operational technology systems remains limited.

I believe the industry has already moved beyond asking, "Could a cyberattack happen?" The real question today is: "How effectively can we sustain operations when an attack occurs?" This approach is bringing the concept of cyber resilience to the forefront of maritime operations. In other words, the critical issue is not only preventing attacks, but also detecting them early, minimizing their impact, and recovering operations quickly.

The new reality of shipping is this: when a vessel loses connectivity, it loses more than communication. It also loses data, visibility, and a significant part of its operational capability.

Crew members' expectations regarding internet access and digital life have changed dramatically. How is technology affecting maritime human resources from a crew welfare perspective?

Technology has fundamentally transformed the concept of crew welfare in the maritime industry. In the past, good living conditions for crew members were mainly associated with physical facilities such as food quality, cabin comfort, and recreational spaces. Today, internet access and digital connectivity have become almost basic necessities.

Especially for younger seafarers, remaining connected is no longer a luxury; it is an essential part of staying in touch with family, maintaining psychological well-being, and remaining connected to social life. Considering long contracts and extended periods of isolation, the importance of this becomes even clearer. Technology's impact on human resources can be seen in areas such as motivation and mental well-being, employee retention, recruitment advantages, education, and professional development.

However, there is also a more challenging side to continuous connectivity. It does not always produce entirely positive outcomes. The boundaries between work and private life can become blurred, crew members may be expected to remain constantly reachable, social media-related pressures can increase, and cybersecurity risks may grow. In some

cases, unequal internet access onboard can also create morale and motivation issues. Another important aspect is that digitalization is changing the nature of maritime work itself. On next-generation vessels, seafarers are now expected to possess not only traditional seamanship skills, but also competencies in data systems, automation, software interfaces, and cyber awareness. In other words, the industry is moving toward a hybrid workforce profile — professionals who are both maritime specialists and digital system operators. As a result, crew welfare is no longer merely a social responsibility matter for companies; it has become directly linked to safety, operational efficiency, employee retention, and long-term workforce sustainability.

What differentiates Veri Deniz within the industry? What separates you from a conventional satellite communication company?

I believe the biggest factor that differentiates us from a conventional satellite communication company is our extensive experience in cybersecurity and IT. Maritime operations are digitalizing rapidly, and onboard electronic systems are no longer isolated pieces of equipment; they have become integrated structures at the center of operations, safety, and data flow. We position ourselves according to this transformation. At Veri Deniz, our approach is built on system continuity, integration, cyber awareness, operational efficiency, and long-term technical partnership.

In conventional service models, a problem occurs, a team arrives, and the issue is fixed. Our approach is different. We aim to anticipate potential problems in advance, evaluate systems holistically, and consider vessel and company operations together. Another important difference is our understanding of real operational dynamics in the field. In maritime operations, theoretical knowledge alone is not enough. When operations are ongoing, port time is extremely limited, or a critical issue occurs at sea, fast and practical solutions are essential. We combine this operational reflex with technical expertise. Customer expectations are also evolving. Shipowners are no longer looking solely for service providers; they are looking for business partners capable of offering consultancy, understanding digital transformation, and assessing cyber risks.

For this reason, we do not see ourselves simply as a communications provider, but as one of the technical stakeholders driving digital transformation in the maritime industry. We believe smart ship systems, remote monitoring, data analytics, cybersecurity, and connected operational management will reshape the industry in the years ahead. Companies that adapt early to this transformation will stand apart from the rest.

When connectivity is lost, it is not only the internet that disappears. The invisible bridge between shore-based decision-making and operations at sea is broken as well. Today's vessels are only as strong as the connectivity they have.

Cybersecurity is no longer just an IT concern; it has become an essential component of maritime safety. A single digital vulnerability can impact not only a vessel, but an entire supply chain.

What kinds of field operations challenge you the most?

The most challenging field operations are usually not the technical problems themselves, but situations where multiple difficult conditions arise simultaneously. Being at sea, operating under time pressure, dealing with limited spare equipment, harsh weather conditions, and the inability to stop ship operations all make these situations even more critical.

In such moments, crisis management and correct prioritization become just as important as technical expertise. Proper planning before operations and arriving onboard with complete equipment are also among the most critical elements of the process.

Compared with the global maritime industry, where do you think Türkiye stands in terms of communication and digitalization? What are the biggest gaps and opportunities?

In terms of communication and digitalization, Türkiye's maritime industry can be described as "late to start, but quick to adapt." Large European shipowners and the Northern European maritime ecosystem began digitalizing much earlier. However, Türkiye has gained significant momentum in recent years, and its young engineering ecosystem is rapidly closing the gap. The overall picture can be evaluated at three different levels. Large shipowners and internationally operating companies are now quite close to global standards. Medium-sized shipowners, however, are currently going through the real transformation process. Although many companies have invested in digital systems, these systems are not yet always fully integrated, and data utilization often remains limited. Among smaller fleets and local operators, digitalization is progressing at a more basic level. While email communication, standard satellite internet solutions, and simple tracking systems remain the primary focus, operational technology and cybersecurity are often treated as secondary priorities.

In my opinion, Türkiye's most critical gaps involve data culture, system integration, cybersecurity awareness in operational technology, standardization, and qualified human resources. At the same time, there are also major opportunities. A young workforce that adapts rapidly to technology, a strategic geographic position, high operational volume, and strong engineering capabilities are among Türkiye's greatest advantages.

If the right investments continue, Türkiye could evolve from a technology follower into a regional hub producing maritime technology solutions. Istanbul, in particular, has very strong potential to become a major maritime technology center.

Over the next five years, which technologies do you think will reshape maritime communications? What kind of future awaits the industry in areas such as artificial intelligence, remote monitoring, hybrid connectivity, and cybersecurity?

Over the next five years, maritime communications will evolve beyond simply providing connectivity and become fully data-driven, autonomous, and security-centered systems. In my opinion, the most transformative shift will be this: ships will no longer be platforms that merely communicate, but digital network nodes that continuously generate data, analyze it, and operate through decision-support mechanisms. With AI-powered systems, operational decision-making processes will become far more predictive and efficient. Thanks to uninterrupted connectivity, the concept of operational intelligence will gain far greater importance. In terms of hybrid connectivity, we are approaching the end of the single-satellite era. Today, many ships still depend on a single primary satellite connection. However, with the growing adoption of LEO-based systems, hybrid architectures will become the industry standard. GEO + LEO, LTE/5G + satellite, and coastal network + private network combinations will become much more widespread. A major transformation will also take place in remote monitoring and shore-based operations. Critical onboard systems will increasingly become remotely monitored, managed, and serviced when necessary. Cybersecurity will remain one of the industry's most critical priorities. Soon, not only computers and portable devices, but also a wide range of operational equipment onboard ships will be connected to the internet. As a result, network segmentation, secure remote access, and advanced system protection will become even more important. The crew experience will also evolve significantly. Remote training, telemedicine support, and connected living solutions will become standard features of the next generation of maritime operations.

In short, maritime communications are no longer a separate technical discipline; they are becoming the digital backbone of ship operations. ■

BİRLİKSAN
GEMİ BAKIM ONARIM İNŞAAT
İÇ VE DIŞ TİCARET LTD. ŞTİ.

WE ARE BEHIND EVERY ROTATING FORCE AT SEA

BIRLIKSAN, HAS BEEN OPERATING IN THE MARITIME INDUSTRY SINCE 1998

Providing **qualified** maintenance, repair, and manufacturing **solutions**, the company delivers high-quality services for critical marine components such as shafts, propellers, rudder systems, and chrome liners.

With its strong presence in Tuzla and expert team,
Birliksan delivers reliable, high-performance solutions.

CHROME LINER

Crome Plating Overhaul
Chrome Plating
Manufacturing

PROPELLER

Propeller Services
Balancing / Repair
Optimization

SHAFT

Shaft Manufacturing
Shaft Overhaul
Steering Systems

SHAFT SYSTEMS FOR TANKERS, CARGO & PASSENGER VESSELS
PROPELLER SOLUTIONS FOR COMMERCIAL & SPECIAL PURPOSE SHIPS
CHROME LINER APPLICATIONS FOR MARINE ENGINES ACROSS ALL VESSEL TYPES

Tersaneler Bolgesi, Evliya Celebi Dist. Tuzla Gemi Yan Sanayi Site, Fersah St. Block A No:10-11

birliksangemi@gmail.com / www.birliksangemi.com.tr

0216 447 24 55 / 0532 287 03 59 / 0543 217 54 10

Navigational Safety
When Ships Fall Silent...

A communication failure can trigger a chain of consequences ranging from loss of navigation and commercial damage to cyberattacks and risks to human life. Akhan Marine Electronic explains the present and future of maritime communications.

Marine Electronic Service

Tolga CİHANYANDI
General Manager

Maritime communication is no longer merely a means of contact; it has become one of the fundamental pillars of operational safety. How do you evaluate this transformation?

In the past, communication was regarded simply as a tool that enabled vessels to establish contact with ports, shipping companies, or other ships. Today, communication systems have evolved into an indispensable safety element that protects the vessel itself, its cargo, its crew, and the marine environment.

As Akhan Marine Electronic, we act with a full awareness of this transformation. We not only provide maintenance and repair services for communication equipment but also help ensure uninterrupted data flow and navigational safety for vessels. Ships that fail to keep their communication infrastructure up to date and adapt to technological developments are finding it increasingly difficult to remain competitive at sea. Moreover, we believe that this transformation will continue to accelerate in the years ahead.

In practical terms, what are the consequences when a vessel's communication systems fail? What are the most critical scenarios?

The failure of communication systems can lead to numerous adverse consequences. A loss of communication essentially leaves a vessel blind and deaf at sea. This creates serious risks in terms of safety, commercial activities, and operational processes. Emergency situations are among the most critical scenarios. During incidents such as fires, collisions, machinery failures, or medical evacuations, the inability to communicate with the outside world means that distress calls cannot be transmitted and assistance cannot be requested.

If the VHF radio system fails during canal or strait transits, the vessel becomes unable to receive instructions from Vessel Traffic Services (VTS). Safe maneuvering coordination with nearby tankers or container ships cannot be established. The inability to exchange navigational intentions may result in chain-reaction collisions or even grounding incidents. Another critical issue concerns meteorological and navigational safety warnings. Without access to NAVTEX broadcasts and real-time weather information, a vessel may be unable to alter its course in time, may become trapped in severe weather conditions, and could even face the risk of sinking. Such situations pose a direct threat to human life.

From a security perspective, if the Ship Security Alert System (SSAS) is not functioning or if VHF and satellite communication systems are disabled during an attack or piracy attempt, the vessel cannot send distress alerts to military units or relevant authorities. In such cases, the ship becomes completely vulnerable, making it significantly easier for pirates to take control.

From a commercial standpoint, communication breakdowns between the vessel, ports, agents, and shipowners can bring operations to a halt. This may result in substantial delays, loss of time, and costly penalties.

In short, a vessel that loses its communication systems becomes a floating risk in every sense. At Akhan Marine Electronic, all our efforts are dedicated to keeping ships away from these risks.

What are the areas of expertise that distinguish Akhan Marine in the sector? How are you positioned particularly in communication technologies?

Akhan Marine Electronic has been operating under its corporate structure since 2004. However, our history in the sector goes back much further. Including our period under the partnership structure of Zener Marine Electronic, we possess nearly 30 years of accumulated knowledge and experience. Today, we provide round-the-clock services to both the fleets of Türkiye's leading maritime companies and vessels operated by international shipowners across various regions of the world. We place great emphasis on the continuous training of our technical team and closely follow emerging technologies to further strengthen our problem-solving capabilities and technical expertise.

We provide comprehensive annual maintenance, repair, spare parts supply, and technical support services for bridge navigation equipment. Our expertise extends to brand-independent servicing of a wide range of systems, including gyrocompasses, radars, autopilots, VDRs, MF/HF SSB radios, and many others.

We are also particularly proud that many of our former colleagues have gone on to establish their own companies and continue serving the maritime sector. Together with our company founder and my father, İbrahim Cihanyandı, we take great satisfaction in having contributed skilled professionals to the industry.

In the field of communication technologies, our strength lies especially in troubleshooting and fault resolution. Our ability to service equipment from multiple manufacturers is one of the primary reasons customers choose us. Considering the volume of work we handle and the service capacity we have achieved in annual gyrocompass maintenance and repair, I can confidently say that we rank among the top five companies in our sector.

GME AIS EPIRB MT606G

Considering GMDSS, AIS, VHF, satellite communications, and other systems, how does the communication infrastructure of modern vessels function as an integrated whole?

Today, bridge communication systems are no longer standalone devices operating independently. They have evolved into integrated systems that function collectively within a unified structure. The Global Maritime Distress and Safety System (GMDSS) provides emergency, safety, and security communications, while AIS enables real-time monitoring of vessel traffic. VHF radio systems serve short-range communication needs, whereas satellite communication systems make intercontinental data transfer possible. All these systems are supported by positioning data obtained from GPS and operate through continuous data exchange with one another.

As a result, a malfunction in any one of these systems directly affects the overall efficiency of the communication infrastructure. On modern vessels, it is not sufficient for a single device to function properly; all systems must operate in flawless synchronization.

Therefore, focusing solely on the maintenance and repair of individual bridge devices is no longer enough. The compatibility, integration, and uninterrupted operation of these systems are just as important as the devices themselves.

What new responsibilities have communication systems assumed as digitalization has accelerated in the maritime industry in recent years?

With digitalization, bridge communication equipment has evolved beyond its traditional role as a communication tool. It has become a critical component that continuously generates data, contributes to safe navigation, and enhances operational efficiency. Today, in line with the regulations of the International Maritime Organization (IMO), communication infrastructures carry two major responsibilities: cybersecurity and real-time data transmission.

Ships now operate within a constantly connected environment, maintaining online integration with port authorities, classification societies, and shipowners' offices. This makes it essential for communication systems to be protected against cyber threats at a much higher level than before.

At the same time, decarbonization targets and Carbon Intensity Indicator (CII) requirements demand that route optimization data, fuel consumption records, and operational performance metrics be transmitted accurately and completely to shore-based stakeholders. The reliable delivery of this information depends directly on the performance of communication systems.

All these developments clearly demonstrate how critical communication equipment has become for maritime operations and why digitalization is now indispensable for the industry.

When a vessel loses communications, it loses more than connectivity; it also loses its ability to monitor its surroundings, call for assistance, and manage risks effectively. At sea, silence often means far more than a simple technical failure.

Ships can now share real-time data with shore-based offices. How has this development changed operational management?

During my university years, I completed an internship in the operations department of Deniz Nakliyat A.Ş. At that time, operational decisions were based on noon reports received from vessels only once per day. We monitored the quantities of diesel oil, fuel oil, and other consumables through these reports and planned replenishment operations accordingly.

Today, thanks to real-time data sharing, fuel consumption, machinery performance, route deviations, and the impact of weather conditions on operations can all be monitored live from shore. Technical teams can analyze incoming data and prepare intervention plans before a malfunction or performance loss even occurs. This advancement has accelerated not only technical processes but also the planning of port operations. We are witnessing significant savings across the industry in terms of fuel management, scheduling, and overall operational efficiency.

What are the most common mistakes made by the industry regarding the maintenance and certification of communication systems?

One of the most common mistakes we encounter is the neglect of periodic maintenance for communication equipment, with intervention being requested only after a failure has already occurred. For example, when annual maintenance of gyrocompass systems is not performed regularly, more serious and costly problems may emerge later, including failures of electronic boards or issues related to the gyrosphere.

Similarly, rushed maintenance procedures carried out shortly before GMDSS Radio Surveys and certification inspections can create substantial risks. Deficiencies identified during Port State Control (PSC) inspections may lead to severe consequences, including vessel detention.

At Akhan Marine Electronic, we always recommend a planned and preventive maintenance approach to our clients. Regular maintenance not only reduces costs but also ensures operational continuity and safety.

Cybersecurity is becoming an increasingly important topic in maritime operations. How are communication systems affected by these threats?

Cybersecurity is no longer a concern limited to shore-based computer systems. It has become a critical issue directly affecting bridge equipment as well. Since communication systems serve as a vessel's gateway to the outside world, they are among the primary targets of cyber threats.

One of the greatest risks involves intrusions through satellite communication networks that vessels use for continuous data exchange with shore. An inadequately secured communication network may allow malicious software to penetrate onboard systems, enable GPS spoofing, and even lead to the manipulation of critical navigation systems such as radar and ECDIS.

AIS is another platform that requires special attention in this regard. While it enables ships to identify one another and communicate with coastal stations, it can also be vulnerable to malicious interference. Cyber attackers may generate false AIS signals to create phantom vessels, make existing vessels disappear from the system, or disrupt emergency signals. Such scenarios may cause not only operational disruptions but also loss of navigational awareness and serious threats to navigational safety.

For this reason, the security of communication systems should now be regarded as being just as important as their physical maintenance.

As Akhan Marine, what has been one of the most challenging communication or electronic system cases you have encountered in the field? What lesson did you learn from it?

Over the years, we have dealt with many complex failures. However, one incident that remains unforgettable and taught us valuable lessons involved a malfunction in a master gyrocompass. Before our involvement, several service teams had visited the vessel and concluded that the problem originated from the electronic boards. As a result, some of the system's expensive boards had already been replaced. Despite these replacements, the fault persisted. During our inspection, we determined that all electronic boards were functioning properly. To identify the exact source of the problem, we boarded the vessel with another gyrocompass set of the same model and conducted a series of cross-comparison tests between the two systems.

Our detailed analysis revealed that the failure was not caused by the electronic boards at all. Instead, it originated from intermittent contact failures at specific points within the master compass connection cable. By simply replacing the affected cable, we restored the entire system to full functionality without the need for thousands of dollars' worth of unnecessary board replacements. The lesson we learned from this incident remains one of the core principles of our business philosophy today:
"Replacing parts blindly is not craftsmanship."

At Akhan Marine Electronic, our priority is always to make an accurate diagnosis and deliver sustainable solutions. We understand that unnecessary component replacements create additional costs for shipowners while also wasting valuable resources. In the field, the real difference is made through experience, attention to detail, and the ability to recognize even the smallest clues.

How are remote access, remote diagnostics, and technical support applications transforming the marine electronics sector?

Remote access, remote diagnostics, and technical support applications offer significant advantages for both service providers and shipowners. In particular, they are fundamentally changing the industry's approach to time and cost management.

Today, many faults no longer require a vessel to wait until reaching port before intervention can begin. Thanks to advanced satellite communication infrastructure, bridge systems on vessels operating at sea can be accessed instantly from shore-based offices. This allows software updates, calibration procedures, and fault-code analyses to be performed remotely. The ability to identify fault codes in advance enables service teams to determine exactly which spare parts will be required before attending the vessel.

In an industry where time is extremely valuable, this creates substantial cost advantages for shipowners and significantly reduces the need for vessels to spend days waiting for technical service in port. At Akhan Marine Electronic, we have fully integrated these technologies into our operational processes. When a problem occurs onboard, we can often determine the likely source of the fault before the vessel even reaches port. If physical intervention is required, our technicians arrive fully equipped with the necessary tools and spare parts, allowing them to focus directly on solving the issue.

Through remote diagnostic applications, we reduce unnecessary travel, prevent time losses, and help vessels continue their operations without interruption.

How do you evaluate the level of the Turkish maritime industry in terms of communication technologies? How large is the gap between Türkiye and the rest of the world?

I believe that the Turkish maritime industry has made significant progress in communication technologies and marine electronics in recent years. The achievements and technologies developed, particularly in the defense sector, clearly demonstrate our country's capabilities in this field. I am confident that these successes will continue to advance in the coming years.

A similarly encouraging picture can be seen within the private sector. The work carried

No matter how advanced maritime technology becomes, nothing can replace a correct diagnosis. Sometimes, the root cause of a failure costing thousands of dollars can be no more than an overlooked section of cable.

out by our colleagues and industry companies operating in the same field clearly reflects the level the sector has reached. Today, many products such as VDRs, Speed Logs, EPIRBs, Repeaters, and GMDSS test equipment can be manufactured using domestic capabilities. In the near future, I believe that systems such as Radar, Gyrocompass, NAVTEX, and GPS equipment—capable of fully equipping a commercial vessel's bridge—can also be developed through local production. We possess more than enough technical expertise and accumulated knowledge to achieve this goal.

It is true that the technological gap between Türkiye and other countries has narrowed considerably compared to the past. Nevertheless, the decades of experience, production capacity, business volume, and technological infrastructure possessed by long-established international companies should not be underestimated.

However, I firmly believe that if our government and private sector continue to move forward with a shared vision, our country will achieve a much stronger position in this field.

Concepts such as autonomous vessels, AI-supported operations, and continuous data flow are increasingly being discussed. How will these developments shape communication systems?

Autonomous vessels and artificial intelligence technologies will transform communication systems from supportive components into the very center of maritime operations. In the future, communication infrastructures will no longer serve merely as channels for transmitting data; they will become strategic platforms that directly support decision-making processes.

At the same time, we should never overlook the importance of the human factor in maritime operations. The captain's experience, the seafarer's intuition, and practical knowledge gained in the field will always remain among the most important elements of safety. Artificial intelligence will serve as a powerful assistant that supports these processes by providing alternatives, analyzing risks in advance, and contributing to decision-making mechanisms. In the coming years, communication systems will evolve beyond devices that simply transmit voice or data. They will become intelligent systems capable of analyzing meteorological information, surrounding vessel traffic, machinery performance, and operational risks, while providing real-time reporting both to bridge teams and shore-based operation centers. Whether operations are conducted under direct human control or supported by autonomous systems, data transmission speed, uninterrupted connectivity, and cybersecurity infrastructures will become more critical than ever before.

If you had to describe maritime communication technologies over the next ten years in a single sentence, what would you say?

Over the next decade, maritime communication technologies will transform vessels into highly autonomous data centers capable of maintaining shore-level communication speeds, uninterrupted data flow, and enhanced cybersecurity, even in the most remote regions of the oceans. ■

GME AIS SART SR500

VENCO-AIR
HVAC TECHNOLOGIES

NEXT GENERATION
HVAC SOLUTIONS

At Vencoair, our mission is to deliver high-performance HVAC and ventilation solutions for industrial and marine sectors, providing our clients with fast, reliable and engineering-driven systems.

Vencoair positions itself as a reliable solution partner in the HVAC industry by combining fast production capabilities with strong engineering expertise, delivering tailored solutions for each project.

MAKE A CALL:
+90 532 657 2966

ENGINEERED FOR PERFORMANCE
BUILT FOR RELIABILITY.

TARGET MARKET

- **MARINE SECTOR**
  Shipyards, Offshore Projects
- **INDUSTRIAL FACILITIES**
- **ENERGY PLANTS**
- **PRODUCTION PLANTS**
- **MECHANICAL CONTRACTING COMPANIES**

SERVICES

- Axial Fan Manufacturing
- Explosion-Proof (Ex-Proof) Fan Systems
- Industrial Ventilation Solutions
- Louver And A-60 & A-30 Fire Damper Systems
- Silencer Solutions
- HVAC System Design And Engineering
- Custom Manufacturing And Project-Based Solutions

BULUT ALİ ÖZCAN
DEPUTY GENERAL MANAGER / OWNER

Sepetlipinar Dist. Sanayi St.No:69,
Basiskele/Kocaeli-Turkiye

+90 532 657 29 66
vencoair@vencoair.com

wwww.vencoair.com

Digital Transformation at Sea

The New Crew Member on Board: AI

Experience is still at the helm; artificial intelligence (AI) is now taking its place at the table as a next-generation digital advisor that validates decisions. SeaProfs develops secure, fast, and verified information solutions for vessels by combining maritime expertise with AI.

Gürbüz CAN
General Manager

What structural gap or transformation need in the maritime industry led to the founding idea behind SeaProfs?

The story of SeaProfs actually began with our desire to share the experience we had gained in the industry over many years. In 2024, we set out to transfer this accumulated knowledge to the sector through consultancy services. As of 2025, we opened a new chapter in our journey by combining this expertise with AI. Today, SeaProfs brings together both human experience and the power of AI to produce safe, efficient, and sustainable solutions for the maritime industry.

How do you see the paradigm difference between traditional maritime operations and the technology-oriented structure you are trying to build today?

Traditional maritime operations rely heavily on human experience. While this structure is critical in terms of safety and regulations, it has remained limited in terms of speed and efficiency. As SeaProfs, starting from 2025, we initiated a transformation by combining our expertise with AI. Today, our technology-oriented structure significantly shortens decision-making and problem-solving processes in operations, offering vessels a safer and more efficient working model.

Operational inefficiency, access to information, or decision security... Which core problem did you focus on while developing SeaProfs AI?

The core problem we focused on while developing SeaProfs AI was the risk of misinformation. With the widespread use of the internet on ships, crew members relying on open-source AI tools for information was leading to misinformation and operational risks. At this point, we developed and launched our products called “Digital Compliance Officer” and “Digital Service Engineer” under the title of “Risk Reduction Tools,” operating with the logic of a Verified Information Engine. SeaProfs AI delivers AI-enhanced information to users very quickly, based solely on the company’s and the vessel’s own documentation.

The maritime industry operates with a balance of strong regulations and high risks. What kind of approach do you adopt while integrating AI into such a sensitive structure?

In the maritime industry, every decision carries great responsibility. Filling out a form incorrectly or responding improperly to a malfunction can lead to serious consequences. While developing SeaProfs AI, we carefully considered this sensitive balance. Our approach was simple: “Trust no source other than the ship’s own documents.” In this way, instead of the inaccurate information crew members may find online, every answer is clearly linked to a specific page and document. Thanks to this approach, AI is becoming a standard in the industry that reduces risks, inspires confidence during inspections, and accelerates operations.

Today, how should the balance between human experience and AI-supported analysis be established in ship operations?

Human experience is indispensable in maritime operations. The intuition a captain develops over years, or the meaning a chief engineer derives from the sound of machinery, cannot be replicated exactly by any algorithm. While establishing the balance between human experience and AI-supported analysis in ship operations, our fundamental approach has been to keep human judgment at the center while positioning AI as a reliable support mechanism. SeaProfs AI does not aim to replace the crew’s experience, but to strengthen it.

What is the main factor that positions SeaProfs not only as a consultancy company but also as a technology brand?

What differentiates SeaProfs is that it does not focus solely on technology. Our starting point is years of maritime experience. When we take this experience and reshape it with AI, the result is not just another technology solution, but tailor-made solutions for ships and companies. In fact, we are not simply a technology company; we are more like a bridge transforming maritime knowledge through technology.

At a time when digital transformation in the global maritime industry is accelerating, how do you evaluate Türkiye's position in this transformation?

I clearly remember that when I first started working on ships, officers who could effectively use Excel and Word stood out among their peers. At the time, this seemed like a small difference, but in reality, it was a sign of the future. Today, the same applies to AI and digital solutions. Those who position technology correctly and use it effectively will always stay one step ahead. Türkiye's position in this transformation depends exactly on this: the faster we adapt and the earlier we become part of this transformation, the stronger the role we will play in the global maritime industry. As SeaProfs, we combine our experience with technology to contribute to accelerating this process.

How has the experience you gained across different segments such as cruise, dry cargo, tanker, and yacht operations shaped SeaProfs' vision?

Each segment has its own unique operational dynamics, risk profiles, and regulatory requirements. We saw this diversity as an advantage and designed our AI solutions not only for a single type of operation, but in a way that can be adapted to the needs of different vessel types. This approach has made SeaProfs not only a consultancy firm in the sector, but also a versatile solution partner.

Why will data security and verified information become even more critical in the maritime industry in the coming period?

The most important truth I learned in maritime operations is this: information without documentation is like navigating at sea without a compass. When a deficiency is identified during inspections, vague statements will never protect you. But when you speak with verified information from a known source, you can stand confidently before authorities. This is exactly where the vision of SeaProfs AI comes into play: ensuring that crews and companies stand on solid ground and that every decision is backed by proven and reliable information. In the coming period, companies and vessels that use technology correctly in this sense will be more confident.

Operational transformation, global scalability, or establishing a new technology standard in maritime... What kind of sphere of influence does SeaProfs aim for in the long term?

The journey of SeaProfs is actually focused on a single goal: bringing experience together with technology in maritime operations and introducing innovations to the industry. Today, we have AI assistants that guide crew members in ship operations; tomorrow, we will have initiatives focused on HR and training departments. Because we know that transformation in maritime actually begins with the development of human resources. Our vision is to expand these products not only in Türkiye, but globally as well. In this way, we aim to play a strong role in the industry on behalf of our country and to establish the safe use of AI in maritime operations as a new standard. Finally: Information with a known source is a safe harbor. Use tools that provide verified references instead of open-source tools, and keep your vessels secure. ■

SMART NAVIGATION TOTAL CONTROL

NSR marine

ALM MARINE
YOUR TRUSTED PARTNER AT SEA

Advanced Marine Electronics
for Safer Seas and Smarter Voyages

- ADVANCED VDR & S-VDR SOLUTIONS
- HIGH-PRECISION GYRO COMPASS SYSTEMS
- INTEGRATED NAVIGATION & BRIDGE SYSTEMS
- RELIABLE MARITIME COMMUNICATION
- PROFESSIONAL INSTALLATION, MAINTENANCE & SERVICE
- 24/7 TECHNICAL SUPPORT & CONSULTANCY

PRECISION RELIABILITY PERFORMANCE
BUILT FOR THE MARITIME WORLD

www.almmarine.com
@almmarine
Alamatra Marine Electronic LTD

Alm marine

service@almmarine.com
+90 545 539 24 53
Yayla, Cengiz Topel Cd. No:20,
34944 Tuzla / İstanbul

Digital Ocean

Algorithms: The New Architects of Navigation

STT, the Turkish representative of the century-old technology brands Sperry Marine and Cobham/Sailor, is among the key players building the infrastructure of a new maritime era that extends from data flow and cybersecurity to remote access and autonomous vessels.

Kpt. Hakan ARAL
STT-Istanbul
Sales & Marketing Manager

Could you tell our readers a little about Sperry Marine and your operations in Türkiye? What role does the company play today in maritime communications, navigation, and bridge technologies?

First of all, I am pleased to state that, through our STT-London and STT Istanbul offices, we have been serving the maritime industry for 43 years.

The company we represent, Sperry Marine, is a century-old organization well known worldwide for its expertise in manufacturing navigation equipment for all types of civilian and naval vessels. Through advanced R&D activities aligned with current regulations and user requirements, the company develops and manufactures state-of-the-art technologies. Another company we represent, Cobham/Sailor, which has an equally long-standing history, specializes in communication equipment.

Cobham/Sailor is also a solution partner of Sperry Marine. Within this framework, we are able to provide all supply, service, and warranty services under a single roof.

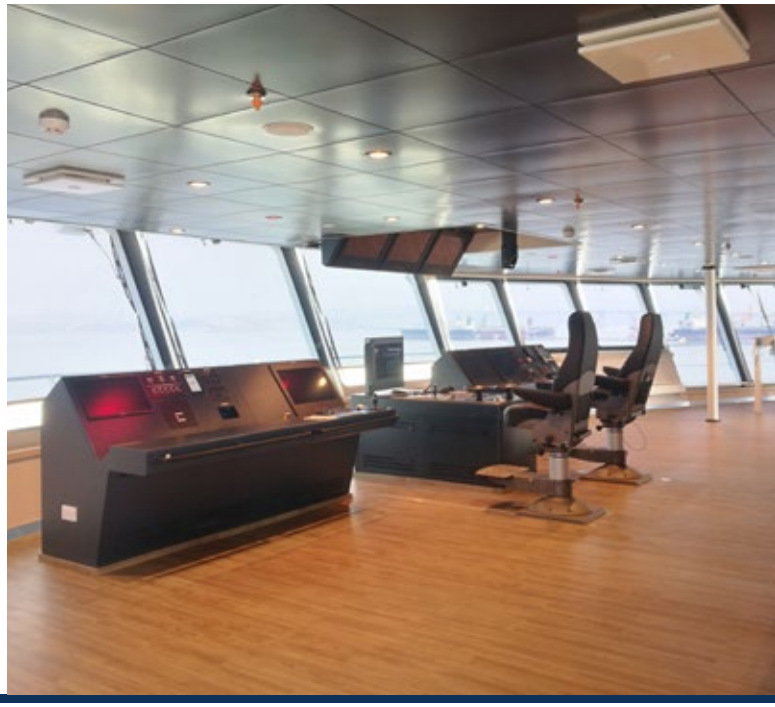
As part of the worldwide authorized sales and service agency network of Sperry Marine and Cobham/Sailor, we provide services to more than 400 domestic and international customers, including Turkish shipowners as well as owners of vessels calling at Turkish ports or transiting through the Turkish Straits. Our service operations are carried out by 12 certified service engineers, all of whom have been trained directly by the overseas manufacturers.

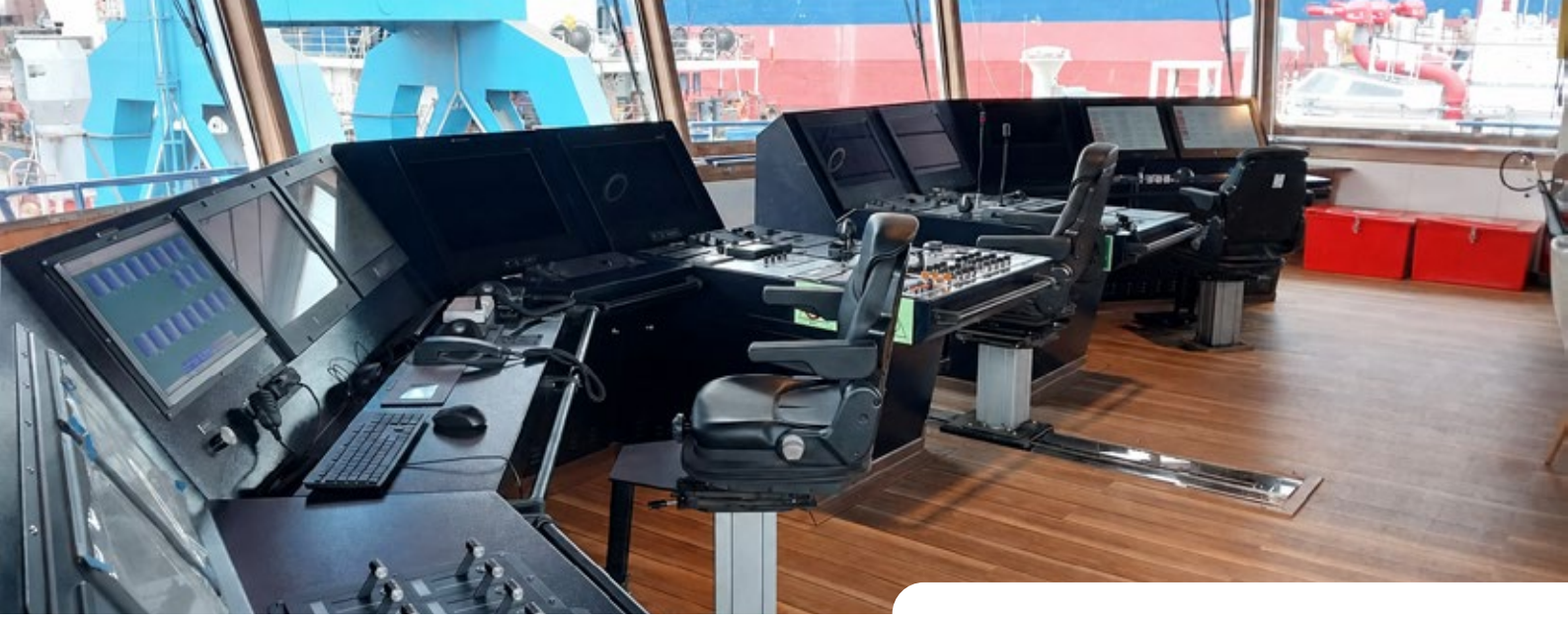
In addition, we undertake the turnkey supply, installation, and commissioning of complete bridge navigation and communication systems for newbuild vessels constructed in Turkish shipyards.

To date, we have successfully completed and delivered more than 150 civilian and military projects.

Maritime communication is no longer limited to radio systems. Why is uninterrupted communication infrastructure on board a vessel so critical for operations today?

There is much that can be said on this subject, but to summarize, I believe the most appropriate statement would be: “Communication is the most important element of maritime operations.” In fact, it would not be entirely accurate to limit this observation to the maritime sector alone. Today, fast and effective communication has become one of the most critical components of nearly every industry.





What advantages does the integration of radar, ECDIS, GMDSS, and other bridge systems provide in ship management?

Integration between navigation and communication systems is one of the most important factors in maximizing the benefits users derive from their equipment and ensuring safety. Without going into excessive technical detail, the exchange of data between devices has become indispensable in terms of safety and rapid analysis.

Major waterways around the world that once accommodated only one or two vessels per day have now become routes through which hundreds of vessels pass daily. Unlike in the past, officers navigating narrow waterways no longer have ample time to avoid vessels that obstruct their passage, stay clear of hazards, make rapid decisions, and execute the necessary maneuvers. They require integrated displays that provide accurate data inputs and outputs and deliver critical information within seconds.

Digitalization has accelerated in recent years. How has the approach of shipowners toward communication and navigation investments changed?

Shipowners and operators around the world are now fully aware that avoiding accidents—which can carry extremely heavy consequences—is only possible through advanced navigation and communication systems.

Cybersecurity is also on the agenda of the maritime sector. How decisive has this issue become for communication systems?

In my opinion, describing cybersecurity merely as an agenda item for the sector is somewhat insufficient. Cybersecurity is no longer an optional matter; it has become a regulatory requirement. You are obligated to implement the necessary measures and ensure compliance.

What are the most common technical needs or requests you encounter from shipowners in Türkiye?

Ensuring that bridge navigation and communication equipment remain complete and in good operational condition at all times is both a legal requirement and an indispensable element of safety. Within this framework, all systems involved in navigation and communication—each critical in its own way—must operate flawlessly. To provide just a few examples, the most common technical requirements involve responding quickly to malfunctions in key equipment such as radar, ECDIS, GPS, VHF, and gyrocompasses, as well as supplying the necessary spare parts and completing repairs without delay.

However, as I mentioned earlier, I believe it is more accurate to say that all systems are equally important, not only from an operational perspective but also in terms of legal compliance. For example, under normal operating conditions, one might think that having EPIRB or SART devices onboard offers little practical benefit in daily operations. Nevertheless, maintaining these devices in complete and operational condition is a legal obligation, which is why they must be carefully protected. Of course, in the event of an emergency, both devices can play a crucial role in ensuring the survival of personnel, which I believe sufficiently highlights their importance.

Decisions made in seconds on the bridge are shaped by millions of data points working behind the scenes. In modern maritime operations, both safety and competitive advantage are increasingly defined by invisible digital networks.

How does a strong communication infrastructure affect operational safety, particularly in high-traffic areas, port maneuvers, and narrow passages?

Without reliable communication—both with shore-based authorities and with other vessels during transits and maneuvers—the risk of accidents increases significantly. It is also worth adding that even if no accident occurs, you may still face legal penalties.

How have remote technical support and remote access technologies transformed service processes?

This is a relatively new development, and the technology is still being refined. Even at this stage, however, manufacturers or service agents can remotely connect to systems to monitor their condition, perform fault diagnostics, and in some cases carry out software updates.

With the arrival of next-generation vessels, what changes have you observed in crews' use of technology?

I worked at sea for many years as a captain. Today, I participate in sea trials aboard the vessels we equip and help train crews on the latest systems. The new generation was born into a world of computers and the internet, and their ability to adapt to new technologies is significantly better than that of my generation.

How are IMO and international maritime regulations driving transformation in communication systems?

As you know, environmental pollution has become one of the most important issues on the agenda not only of the International Maritime Organization (IMO), a specialized agency of the United Nations, but also of governments and related institutions worldwide. Within this framework, IMO continuously introduces regulatory changes related to safety, along with new system and application requirements. Consequently, navigation and communication systems are subject to ongoing regulatory revisions and new implementation standards. Once a regulation is published, there is no way around it—you must comply.

How would you evaluate the Turkish maritime industry in terms of technology adoption?

Compared with previous decades, I see a much faster rate of adaptation today. In fact, it would be impossible to argue otherwise. Maritime shipping is an international arena; if you fail to adapt, you disappear. Smart ships and autonomous shipping are being discussed more than ever. What will be the main trends in communication technologies in the coming years?

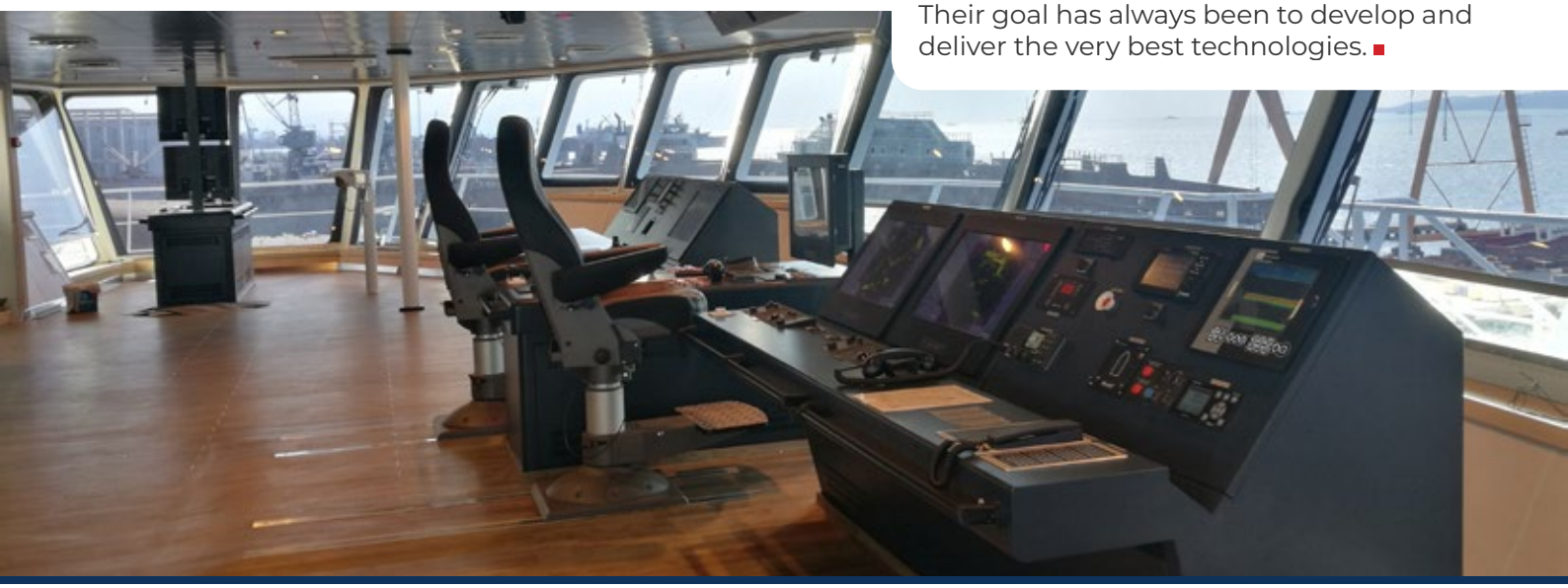
The infrastructure for automation systems is still being prepared. Classification societies and manufacturers are continuously collaborating to identify the safest solutions for autonomous vessels.

Flawless communication and uninterrupted data flow are the most critical elements for autonomous ships. If you ask what the most significant development will be, I can answer simply and briefly: when the Starlink constellation expands to 12,000 satellites and artificial intelligence begins operating at full capacity, today's communication technologies will look like the black-and-white televisions of the past.

Finally, what is the fundamental approach that distinguishes Sperry Marine from similar technology providers in the industry?

In a single word, I would say "pioneering." The company's name itself originates from Mr. Sperry, the inventor of the gyrocompass, a revolutionary innovation in maritime navigation.

They maintain an extensive R&D organization, and the work they carry out—particularly in the military sector, where they are often not constrained by budgetary limitations—also benefits the civilian market. Their goal has always been to develop and deliver the very best technologies. ■

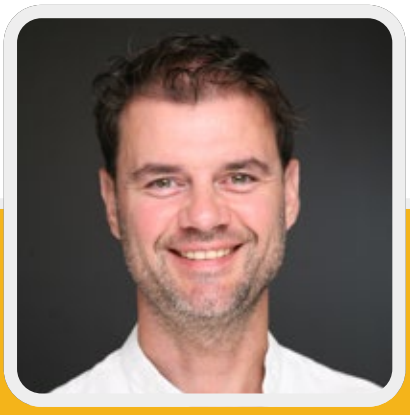



ekspoship
GEMİ ACENTELİĞİ
· SHIPPING AGENCY COMPANY ·
WE ARE THE BEST IN OUR BUSINESS
· CASH TO MASTER SERVICE · MEDICAL ASSISTANCE FOR CREW · CREW CHANGE · CARGO TRANSSHIPMENT ·
· SHIP TRACKING · FRESH WATER · PROVISIONS & STORES · STEVEDORING · DRIVER SERVICES ·
EKSPOSHIP GEMİ ACENTECİLİĞİ LTD. ŞTİ.
Kemalpaşa Mah. Şahabettin Bilgisu Cad. Çağlayan İş Merkezi K/2 D/12 | İzmit KOCAELİ
+90 (262) 321 42 02 | agency@ekspoship.com
www.ekspoship.com

Communication in the Yachting World: The Invisible Network of Comfort

Without Communication, There Is No Yachting

There was a time when establishing a connection at sea was considered an achievement in itself. Today, superyachts aim to provide guests with an experience surrounded by seamless communication, advanced security, and invisible technology, regardless of where they are in the world. At the heart of this transformation—from navigational safety to AI-powered maintenance systems—lies a single element: communication.



Alper GÜNORAL
Yacht Surveyor, CE Inspector

When I first began my career as an officer in the Turkish Navy, one of the subjects that occupied most of my time was communications—what today we would simply call connectivity. As an officer, I was required to learn how and under what circumstances all communication channels aboard the vessel should be used, and even which coding systems should be preferred on specific communication channels. And I am not referring solely to electronic systems. Sound-powered telephones and voice pipe systems were also part of the equation. Yes, I am talking about the pipes through which a person could shout at one end and be heard at the other.

This knowledge constantly resurfaced during bridge watches, manoeuvres, combat training exercises, and military drills. Through days and nights of study, we reinforced what we had learned, spending countless hours in the intensive communications training sessions of NATO exercises. When we managed to get a few hours of sleep between drills, we would sometimes hear each other talking on the radio in our sleep. One lesson was deeply ingrained in our minds: without communication, there can be no combat. Years later, I continue my professional maritime career in the yachting sector. Although the terminology has changed, one truth remains unchanged: without communication, there can be no yachting.

The Communication Network

When communication in yachting is discussed, it should not be limited to the connection between the captain and the shore. Coordination between manoeuvring teams, internal crew communications, guests' connection to the outside world, data exchange between onboard systems and service providers, and satellite links supporting navigation systems are all integral parts of this concept. Today, all these elements form a highly complex structure consisting of systems operating on different frequencies, utilizing different electrical infrastructures, and requiring careful management to ensure they do not interfere with one another. For this reason, specialist companies within the sector no longer provide only equipment; they deliver comprehensive communication solutions.

The Bridge Between Captain and Shore

A yacht captain's primary responsibility is to ensure that guests enjoy a flawless experience while safely navigating the yacht from one destination to another. To achieve this, reliable shore-side support is critical. Marina reservations, restaurant arrangements, guest transfers, technical service requests, and logistical requirements represent only a small portion of daily operations. As a result, internet access, email systems, mobile communications, and satellite telephony have become indispensable tools for captains. The other dimension of communication is navigational safety. Connections established with coastal stations via VHF or HF radio remain fundamental components of safe operations. Professional radio systems specifically designed to support maritime communication channels play a particularly important role in this regard.

At sea, luxury is no longer defined solely by design or performance. The real privilege is staying seamlessly connected to life ashore, no matter how remote the destination.

Illustration: Digital / AI-generated

The Silent Language of Manoeuvring

On yachts above a certain size, the distance between the bow and stern can make verbal communication during manoeuvres extremely difficult. Moreover, speaking loudly may negatively affect guest comfort.

For this reason, manoeuvring teams rely on dedicated radio systems that operate at low transmission power and use frequencies different from those of marine radios. This allows seamless coordination between the captain and crew while ensuring that manoeuvres are conducted calmly and in a controlled manner.

Seamless Communication On Board

Communication needs aboard superyachts extend far beyond navigation and manoeuvring. Different communication requirements arise throughout every aspect of daily life on board. While telephone systems located in cabins and workspaces provide the basic solution, today these infrastructures are increasingly integrated with public address systems and alarm management systems. As a result, communication has become one of the central pillars of yacht operations.

Connected to the World in the Middle of the Ocean

A yacht exists for its guests. Therefore, maintaining uninterrupted communication is essential to ensuring comfort and satisfaction.

The author has experienced making telephone calls via Turkish Radio over VHF, as well as using modern satellite internet services. For that reason, I can genuinely say that I have witnessed both the old and the new eras of maritime communication.

The developments of the last thirty years have been truly remarkable. Watching live sporting events in the middle of the Pacific Ocean or off the coast of Antarctica is now considered entirely normal. Furthermore, thanks to advanced healthcare technologies, guests can communicate with their doctors in real time while at sea and benefit from remote consultations and diagnostic services.

The Era of Smart Yachts

Using voice commands to place a call or send a message through your smartphone has become commonplace. On superyachts, however, this concept has evolved much further. Some systems can identify guests via their watches or wearable devices and automatically adjust lighting levels, temperature settings, and ambient conditions before they even enter their cabins. Energy management systems optimize lighting according to natural daylight conditions, while battery management systems ensure the most efficient use of onboard power resources. In short, the yacht is becoming a living organism whose systems continuously communicate with one another.

Illustration: Digital / AI-generated

AI-Powered Technical Support

Modern superyachts have evolved into highly complex platforms in which numerous systems operate simultaneously. This complexity is transforming maintenance and technical support processes as well. Thanks to AI-powered management tools, tasks such as automatic fault detection, remote technical assistance, identification of suitable service locations, and recommendations for alternative equipment can now be managed much more efficiently. Developments in this field continue to accelerate with each passing day.

The Most Critical Element of Connectivity: Security

The more connected we become, the more critical security becomes. Cybersecurity solutions, network protection systems, data backup infrastructures, and the protection of AIS data have become indispensable components of modern yachts. After all, the full benefits offered by communication technologies can only create real value when supported by a secure digital environment.

When Connectivity Becomes Invisible

The communication capabilities of yachts will continue to evolve rapidly in the years ahead, both to enhance navigational safety and to elevate the guest experience. So, what comes next?

Giovanni Varone, a project manager specializing in the luxury yachting sector and Yachting Sales Manager at Videoworks SpA, describes the future of yacht communications as follows:

“The future of yacht connectivity technologies will be shaped by greater integration, increased automation, and continuous advancements in satellite communication technologies. As owners’ expectations continue to evolve, the industry’s focus will remain on delivering secure, reliable, and high-speed connectivity regardless of location. The objective is not simply to provide internet access, but to create a seamless digital environment that supports every aspect of the onboard experience. Ultimately, the goal is quite simple: connectivity should be invisible. Guests should never have to think about how they are connected; wherever their journey takes them, they should simply enjoy a flawless digital experience.” ■

Electrical Actuators
Rubber Expansion Joints
Compressed Air Systems
Fuel/Chemical Transfer Hoses
Tank Level and Pressure Transmitters
Breakaway and Dry Disconnect Couplings
Yacht Hoses and Exhaust Hoses
Plastic Pipes and Fittings

Key Parts marine

key parts all you need.

@keypartsmarine

www.key-parts-marine-equipment

www.keypartsmarine.com

IEC Telecom Türkiye's Perspective

Communication at Sea Is No Longer a Luxury—It Is the Operation Itself

Ships no longer carry only cargo; they carry data, decisions, and entire operations. Reflecting on the post-Starlink era, IEC Telecom Türkiye argues that the future of maritime connectivity is not defined by speed alone, but by secure and uninterrupted communications that perform reliably under all conditions. This shift is also redefining the roadmap for the smart ships of tomorrow.

Ahmet AYBAR
General Manager
IEC Telecom Türkiye

As IEC, celebrating 10 years in Türkiye, do you believe Starlink has truly disrupted the traditional maritime VSAT model, or is the industry still reliant on a hybrid communications approach?

Starlink has undoubtedly disrupted maritime communications by making high-speed, low-latency broadband available at sea and fundamentally changing customer expectations. However, the Turkish market clearly demonstrates why the future remains hybrid rather than purely LEO-based. A key consideration in Türkiye is the regulatory environment. As Starlink is not currently licensed for operation within Turkish territorial waters, vessels cannot rely on Starlink alone when operating close to shore or entering Turkish ports. In practice, vessels typically transition to Starlink only after leaving territorial waters—approximately 12 nautical miles from the coastline—while alternative communications systems continue to support operations closer to shore.

For this reason, professional shipowners increasingly adopt a hybrid architecture combining LEO, GEO, LTE and L-band technologies. The objective is not simply to achieve the highest speeds, but to ensure uninterrupted communications regardless of location, regulatory requirements or operational conditions.

From our perspective at IEC Telecom Türkiye, Starlink is not replacing traditional maritime communications.

Rather, it has become a powerful new layer within a broader connectivity ecosystem designed to deliver resilience, operational continuity and business-critical reliability.

This is particularly important in Türkiye, where vessels regularly transition between international waters, territorial waters, ports and coastal operations.

Where has low-latency internet connectivity onboard vessels created the most significant operational impact?

While crew welfare has experienced the most visible transformation, the greatest operational impact has arguably been in remote technical support and fleet management.

Turkish shipowners increasingly rely on real-time diagnostics, remote monitoring, digital reporting, video collaboration, and shore-to-ship communication.

Low-latency connectivity enables faster decision-making, reduces downtime, and allows technical experts ashore to support vessels without the need for physical intervention.

Low-latency connectivity has a strategic impact on crew welfare as well. Today's seafarers expect to remain connected with family, friends, and the digital services they use in everyday life.

High-speed internet enables video calls, messaging, online learning, and entertainment, helping reduce isolation during long deployments at sea.

As the maritime industry continues to face a global shortage of qualified personnel, connectivity is increasingly recognised as an important factor in attracting and retaining the next generation of seafarers.

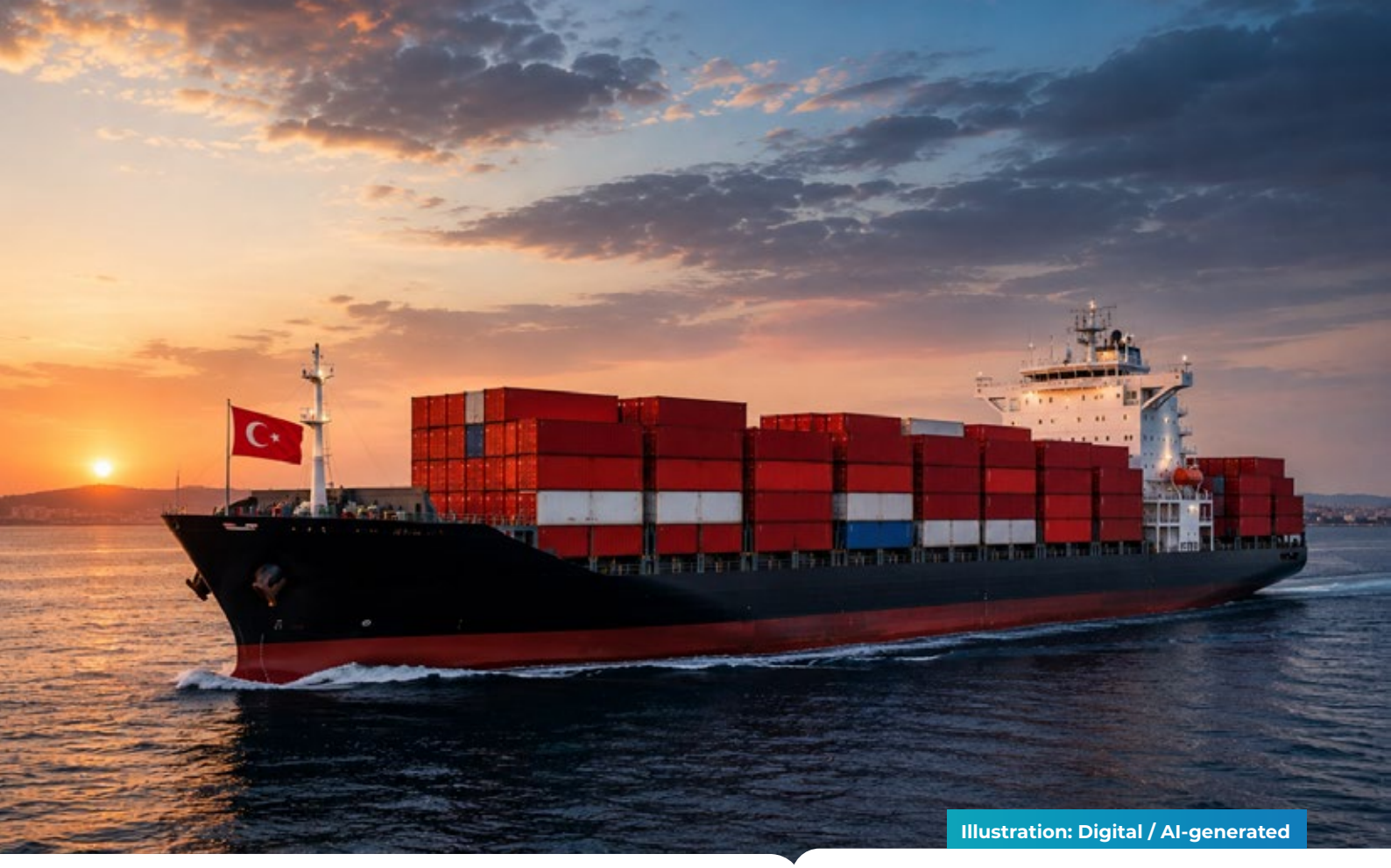


Illustration: Digital / AI-generated

Internet access onboard ships was once considered a luxury. Has connectivity now become an operational necessity?

Absolutely.

Today, connectivity underpins virtually every aspect of vessel operations—from reporting and compliance to cybersecurity updates, maintenance, procurement, and crew welfare. The modern vessel is becoming a connected digital platform, and reliable internet access is now as essential as many other core operational systems onboard.

What are the most common connectivity-related challenges that captains and technical teams face today at sea?

The challenge is no longer simply obtaining bandwidth. Today's priorities include ensuring service continuity across multiple networks, controlling costs, managing different user groups onboard, maintaining cybersecurity, and delivering predictable performance across global routes.

For Turkish operators, an additional challenge is managing connectivity seamlessly as vessels move between international waters, Turkish waters, port environments, and coastal zones. This is where IEC Telecom's network management plays a key role. Through our OptiView ecosystem, shipowners gain access to advanced network management capabilities that extend far beyond simply combining multiple communication channels. OptiView provides centralised visibility and control across LEO, GEO, LTE, and onboard networks, enabling intelligent traffic routing, bandwidth optimisation, cybersecurity enforcement, user segmentation, voucher management, and real-time performance monitoring. This allows operators not only to stay connected, but also to maximise the value of every Mbps while maintaining security, operational efficiency, and cost control across the entire fleet.

To what extent has the always-connected vessel model increased cybersecurity risks in the maritime sector?

Significantly.

The maritime industry is experiencing the same digital transformation as other critical industries, which naturally expands the attack surface. Every connected application, remote access point, IoT sensor, and crew device creates potential vulnerabilities. As vessels become more connected, cybersecurity can no longer be treated as a separate function. It must be integrated directly into the communications architecture through segmentation, traffic management, filtering, monitoring, and cyber-protection services.

As IEC, do you provide only connectivity services for vessels, or do you also offer traffic management, cybersecurity, and centralised control solutions?

Connectivity is only one part of the equation. At IEC Telecom Türkiye, we support shipowners with a complete digital communications ecosystem, including network management, cybersecurity, traffic routing, usage analytics, voucher systems, credit control, centralised fleet visibility, and hybrid network management through our OptiView platform. The objective is not simply to provide internet access, but to ensure that every Mbps delivers measurable operational value.

How have shipowners' expectations evolved in the post-Starlink era? Is the demand for "faster internet" alone still sufficient?

No. Starlink has changed expectations dramatically. Faster internet is now assumed.

Shipowners increasingly ask how connectivity can reduce costs, improve operational efficiency, enhance cybersecurity, support crew retention, and enable digital transformation initiatives.

The conversation has shifted from bandwidth to business outcomes.

How do connectivity requirements differ among tanker, dry bulk, and offshore vessel segments?

Each segment has distinct priorities.

Tanker operators typically focus on safety, compliance, cybersecurity, and operational continuity.

Dry bulk operators often prioritise cost efficiency, fleet standardisation, and crew welfare across long voyages.

Offshore operators generally require the highest level of connectivity due to remote operations, large numbers of personnel onboard, real-time monitoring requirements, and intensive data exchange with shore-based teams.

From artificial intelligence to remote maintenance, communication is the common foundation of every digital transformation. At sea, connectivity is no longer an option—it is a necessity.

Illustration: Digital / AI-generated

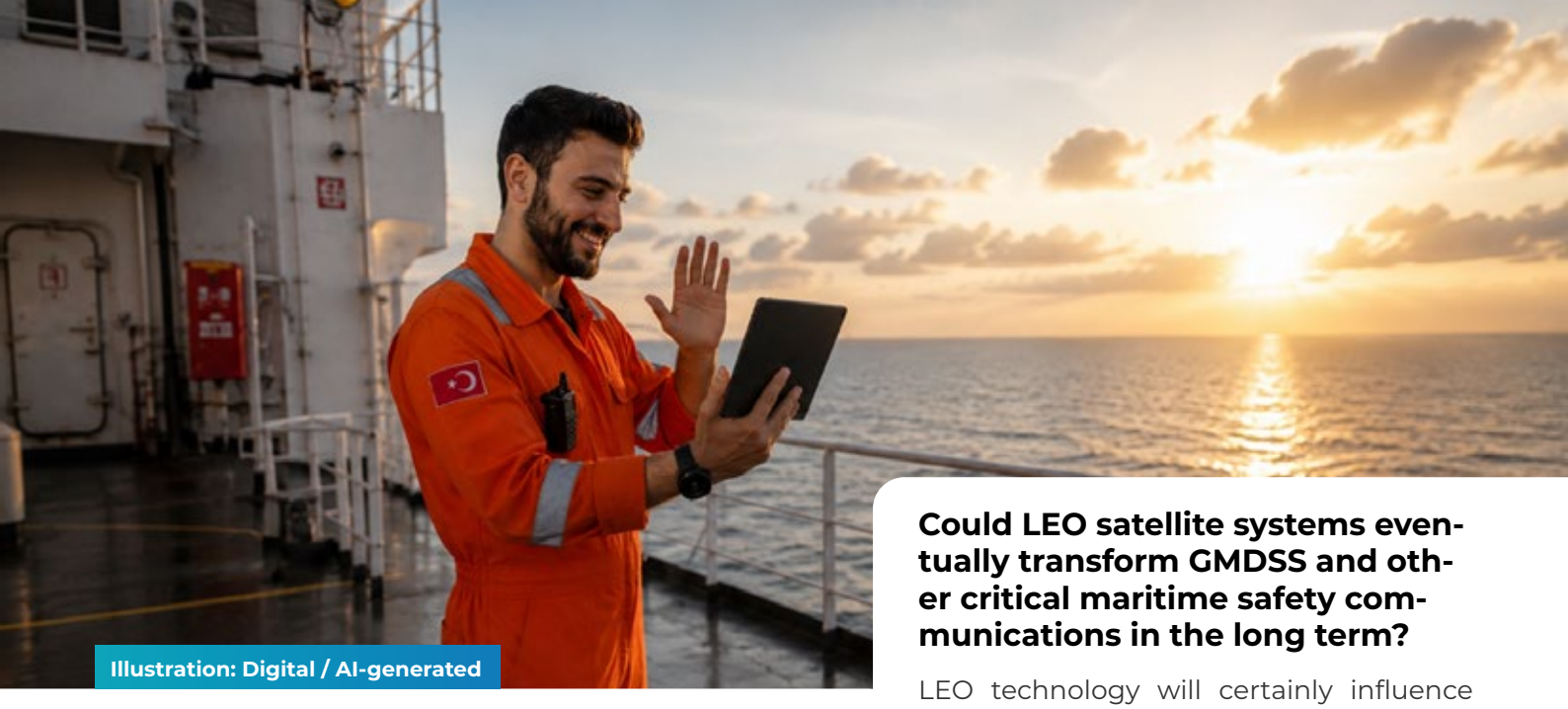


Illustration: Digital / AI-generated

How has next-generation satellite communications transformed maintenance operations?

The ability to remotely access vessel systems has fundamentally changed maintenance strategies.

Today, technical teams can conduct diagnostics, analyse performance data, guide onboard engineers via video, and support troubleshooting from shore. In many cases, issues can be resolved before a specialist is dispatched, reducing costs and minimising operational disruption.

Are you observing a measurable impact of crew internet access on employee satisfaction and the ongoing maritime workforce shortage?

Yes, and this is becoming one of the most important strategic issues for the maritime sector.

Crew connectivity is no longer only about welfare; it is becoming a decisive factor in employment. The new generation of seafarers sees digital engagement as part of everyday life, not as an optional benefit. When maritime careers require prolonged periods of disconnection, many young professionals who are willing to build a career in the maritime sector increasingly choose shore-based positions, allowing them to preserve the digital lifestyle and connectivity they consider an integral part of everyday life. This has long-term implications. The global shortage of qualified seafarers is not only a recruitment issue; it directly affects knowledge transfer between experienced crews and the next generation. If fewer young professionals enter or remain in the sector, the industry risks losing operational expertise, safety culture, and technical know-how built over decades.

In this context, high-speed crew internet is a strategic investment in workforce sustainability. By enabling regular communication with families, access to digital services, online learning, and entertainment, shipowners can improve morale, strengthen retention, and make maritime careers more attractive. Ultimately, crew connectivity supports not only employee satisfaction, but also the sustainable development of maritime operations.

Could LEO satellite systems eventually transform GMDSS and other critical maritime safety communications in the long term?

LEO technology will certainly influence the future of maritime safety communications. However, safety services require extremely high levels of reliability, resilience, certification, and regulatory oversight. In the foreseeable future, we expect LEO to complement rather than replace existing safety communications frameworks.

Are there still significant challenges in maintaining connectivity continuity during port approaches, in high-traffic areas, or under severe weather conditions?

Yes. Even with modern LEO systems, vessel operators must manage regulatory restrictions, coastal transitions, network congestion, weather events, and varying coverage conditions. This is precisely why hybrid connectivity remains a best practice. The ability to automatically switch between LEO, GEO, LTE, and other communication layers is becoming increasingly important for uninterrupted operations.

Looking ahead five years, what will be at the centre of the maritime “smart ship” transformation: artificial intelligence or uninterrupted and secure connectivity?

Artificial intelligence will be one of the most powerful enablers of maritime transformation, but connectivity will remain the foundation. Without reliable, secure, and always-available communications, AI cannot access the data required to generate value. The smart ship of the future will be built on three pillars: uninterrupted connectivity, cybersecurity, and intelligent automation. AI will drive decisions, but connectivity will make those decisions possible. ■

IEC telecom
TÜRKİYE

STARLINK
AUTHORIZED RESELLER

DISCOVER STARLINK MARITIME PORTFOLIO

EXCLUSIVELY BROUGHT TO YOU BY IEC TELECOM

NOW AVAILABLE

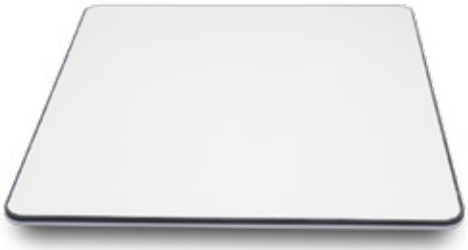
Enjoy 400+ Mbps speed & stay connected over advanced power supply options

Starlink Performance Gen 3

SPECIAL OFFER

FREE terminal with 12-month contract
1000 USD with no commitments

Starlink Performance Gen 2



VALUE-ADDED SERVICES

- Network management
- Voucher system
- Resilient back-up
- Cyber-security
- 24/7 support
- and more…

IEC Telecom Türkiye

+90(0) 216 970 16 08 | info-tk@iec-telecom.com

DenizGündem

Denizcilik Dünyası Haber Merkezi

INTERNATIONAL

Make Your Mark in the Maritime World!

Would you like to announce your company's successes and projects in the *Deniz Gündem* we prepare?

The content we prepare with interviews, special files and high-quality visuals allows you to introduce your company to the industry in the strongest way possible.

You can contact us for advertising and cooperation via info@denizgundem.com.

Contact

E-Mail

info@denizgundem.com
editor@denizgundem.com
reklam@denizgundem.com

Address

Yavuzsultan Selim Mah. Osmangazi Cad. 2. Etap Kent Konut A8C Daire: 26 Körfezkent Körfez / KOCAELİ