# Global Network / Corporate Information (as of March 1, 2020)

Subsidiaries and Representative Offices Service Centers Affiliated Companies National Distributors

Asia
and Oceania
2 companies
(8 consolidated)
428
employees

FURUNO ELECTRIC CO., LTD.
and
8 companies
(6 consolidated)
2,030
employees

#### Europe

366

FURUNO (UK) LTD.
FURUNO NORGE A/S
FURUNO DANMARK A/S
FURUNO SVERIGE AB
FURUNO FINLAND OY
FURUNO POLSKA Sp. z o.o.
FURUNO DEUTSCHLAND GmbH
FURUNO EUROPE B.V.
FURUNO FRANCE S.A.S.
FURUNO ESPAÑA S.A.
FURUNO ITALIA S.R.L.
FURUNO HELLAS S.A.
FURUNO (CYPRUS) LTD

FURUNO EURUS LLC

▶ Operating income /

#### Japan

FURUNO KYUSHU HANBAI CO., LTD.
FURUNO KANSAI HANBAI CO., LTD.
KYORITSU RADIO SERVICE CO., LTD.
FURUNO SYSTEMS CO., LTD.
FURUNO LIFEBEST CO., LTD.
FURUNO SOFTECH CO., LTD.
LABOTECH INTERNATIONAL CO., LTD.

#### Asia / Oceania

FURUNO SHANGHAI CO., LTD.
FURUNO SOFTECH (DALIAN) CO., LTD.
FUNOTEC (DALIAN) CO., LTD.
FURUNO CHINA CO., LIMITED
FURUNO DONGGUAN CO., LTD
FURUNO HONG KONG CO., LTD.
PT FURUNO ELECTRIC INDONESIA
FURUNO KOREA CO., LTD.
FURUNO SINGAPORE PTE LTD
FURUNO ELECTRIC (MALAYSIA) SDN. BHD.
ELECTRONIC NAVIGATION LIMITED

#### America

FURUNO U.S.A., INC. FURUNO PANAMA, S.A.

## Financial Highlights (Consolidated)

Years ended the last day of February

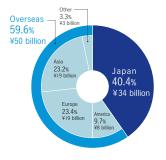


#### Net income attributable to owners of the parent / ROE



#### ▶ Net sales by business ▶ Net sales by business





## Company Outline

(as of February 29, 2020)

Company Name	FURUNO ELECTRIC CO., LTD.
Incorporated	May 23, 1951
Headquarters	9-52 Ashihara-cho, Nishinomiya City, Hyogo 662-8580, Japan
Capital	¥7,534 million
Number of Employees	2,926 (consolidated)
Consolidated Sales	¥83,066 million (\$757.4 million)*
President	Yukio Furuno
Website	https://www.furuno.com

\*US dollar amounts are converted at 1 USD – 109.67 JPY, the average exchange rate for 2019. These conversions do not mean the Japanese yen is subject to the above rate or any other rate when converted to US dollars.



 $<sup>\</sup>cdot\,\mbox{The information}$  in this pamphlet is current as of June 1, 2020.

All brand and product names are registered trademarks, trademarks or service marks of their respective holders.

Since our inception, FURUNO has been continually helping people see things that are beyond the realm of visibility. Through exhaustive research and development, we create and implement our innovative technologies to solve any problem, seen or unseen. This mentality resulted in our invention of the world's first fish finder.

However, the products FURUNO manufactures go far beyond making things visible

By making the invisible visible, we encounter new possibilities that we weren't aware of before. This not only benefits those who directly use our instruments, but it also affects the lifestyles of many people beyond them.

By looking at things from a customer's point of view, we can see the problems at hand and find new possibilities that were previously beyond the realm of visibility.

And by analyzing the way we live,

FURUNO continues to create new values that are not yet visible to the human eye.

# CHALLENGE the INVISIBLE.

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#### ■ Editorial Policy

This report was edited to combine the FURUNO Group Corporate Profile and CSR Report to make the group's business activities easy to understa

#### ■ Period Covered

March 1, 2019 - February 29, 2020 (some content from March 2020 onward also included

#### ■ Scope

f FURUNO ELECTRIC CO., LTD.

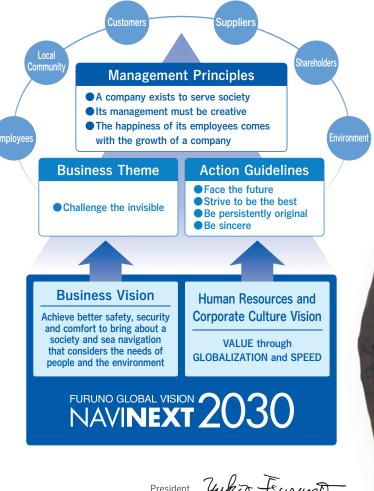
## PRESIDENT'S MESSAGE

## Contributing to Sustainable Development of Local Communities and Society through Increased Value to **Customers and Enhanced Corporate Values**

In 2018, the FURUNO Group formulated the "NAVI NEXT 2030" global vision consisting of a "Business Vision" and a "Human Resources and Corporate Culture Vision" to be achieved by 2030.

Our business vision is to achieve better safety, security, and comfort to bring about a society and sea navigation that considers the needs of people and the environment. This vision prioritizes not only safety and security in addition to the environment but also creates an inspiring, comfortable society for all. Meanwhile, our human resources and corporate culture vision, "Value through globalization and speed", is an extolment of the virtue of working together to create value through globalization and speed.

Through the development of various activities aimed at realizing this management vision, we will continuously and progressively enhance both the value we provide to customers and our corporate value.



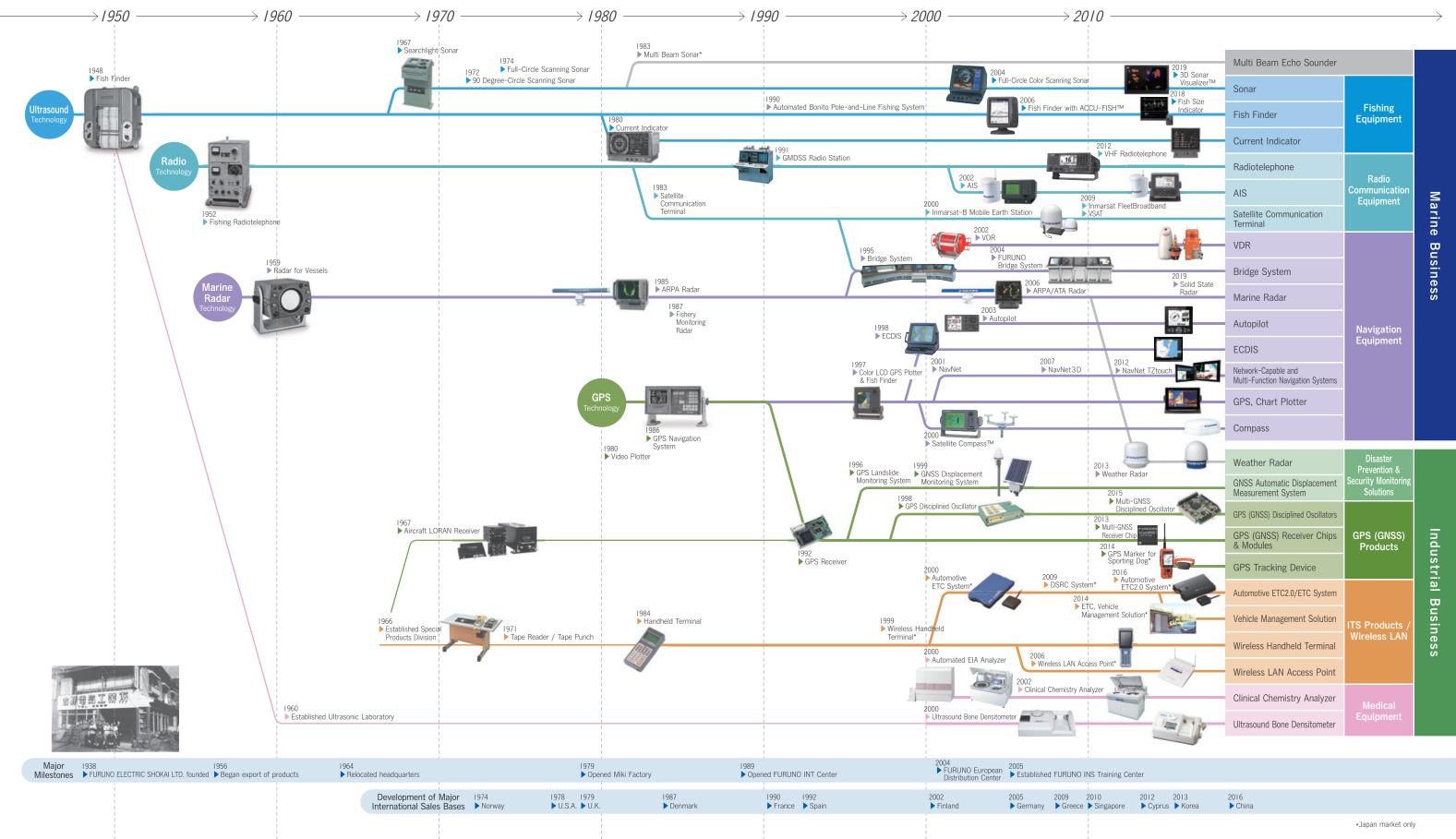
President Yukio Furuno



FURUNO will contribute to the development of society and industry by giving visual form to that previously invisible, using our SPC core competencies and our accumulated know-how.



Through "Integration" of the knowledge, experience, skills, and know-how accumulated through our business activities with our three core areas of technological expertise— "Sensing", "Processing" and "Communication"—we create solutions that are of great value to our customers.





Business Fields I

# Marine **Business**

# FURUNO equipment supports safe, secure navigation.

Since 1948, when we became the first company in the world to successfully commercialize a fish finder, we have offered a wide range of marine electronic equipment that serves the needs of our customers, including fishing boats, large merchant vessels, government vessels, and recreational boats. Today, our goal is to ensure a safe, secure, and comfortable life at sea, and to support further development of maritime culture.

#### Merchant

#### VDR (Voyage Data Recorder)

VDR records and stores navigation data and information. This data is obtained from onboard sensors, and can be analyzed in the event of a marine accident to pinpoint the cause and prevent further recurrence.

Merchant Fishing Recreational Gove

Merchant For Merchant Vessels Fishing For Fishing Vessels Recreational For Recreational Boats Government For Government Vessels

#### Satellite Communications Equipment / Service

We offer communications equipment and services employing communications satellites. This enables telephone and facsimile communication with the shore, as well as onboard connectivity to the Internet.



# 

Radar

Radar acts as the eyes of a ship, sending out radio waves as a means of detecting other vessels and obstructions in the surrounding area. Radar allows ships to navigate safely, even when dense fog reduces visibility.

# Coastal Monitoring System

These systems monitor the sea and harbor by combining surveillance radar, surveillance cameras and other equipment. They support a broad array of applications, from wide-range surveillance for marine traffic control, to surveillance over a limited range such as fishing grounds and aquaculture areas.

#### Autopilot

AIS (Automatic Identification System)

ocean-going ships and vessels. These systems

navigation. They also make it possible to detect

ships, which do not appear on radar because

heading direction) to be exchanged among

help prevent collisions and ensure safe

they are hidden in the shadow of islands.

AIS allows for ship information (e.g., ID, position,

Linked to the steering system and heading sensors, the autopilot automatically controls the ship to maintain the course, making steering much easier for the captain.

#### GPS, Chart Plotter

Navigating in the open seas requires accurate assessment of one's current position. GPS chart plotters pinpoint a vessel's position based on radio waves sent from GPS satellites. The position is displayed on a simplified navigational chart.

## Fish Finder / Sonar

Fishing Recreations

These systems detect fish schools using ultrasound waves, which travel in straight lines as they penetrate the water and bounce back to the original source after hitting fish, the seabed or other objects. The depth and distance to schools of fish can be calculated based on the time it takes for the ultrasound waves to return

#### Radiotelephone

A means of communication while at sea, used in times of distress or emergency and to receive maritime safety information (navigation warnings, weather information, etc.)







## For safe and efficient navigation

As part of our mission to contribute to safe and efficient navigation, FURUNO offers a variety of navigation and communications equipment. These products are designed for all types and sizes of merchant vessels, carrying both people and goods. With regards to newly-built vessels, we have built up a track record and global network commensurate with our top market share. Leveraging these assets, our business spans from new vessel construction to upkeep and lifecycle maintenance and retrofitting.



#### Marine Radar

Detects nearby vessels or obstructions using radio waves. Among many features that support safe navigation, our latest marine radar products automatically eliminate unwanted echoes and adjust the radar images according to sea conditions.



(Model FMD=3100 / 3200 / 3300)

# ECDIS (Electronic Chart Display and Information System)

This system supports course planning and navigation monitoring. The FURUNO ECDIS allows for smooth display switching between information from various types of equipment connected to the network. It contributes to safer and more efficient navigation by realizing natural operation based on an intuitive understanding of current conditions.



(Model FV-II0

#### **VSAT**

This system provides high-speed broadband communication while at sea anywhere in the world. In addition to operational communications, it contributes significantly to crew welfare by allowing communication with their families



#### For safe and comfortable life at sea

FURUNO offers high-quality products for users of all types of recreational boats, including sport fishing boats, sailboats and yachts. While continuing to supply innovative and highly reliable products to the users of small workboats, such as coastal security vessels and tug boats, we are expanding our efforts to enhance customer value.



**GPS/WAAS Chart Plotter** 

Fish finder with GPS navigation. Shows bathymetry chart on screen to check your own position and course as you enjoy fishing.



(Model NAVpilot-300)

#### **Autopilot**

An autopilot system automatically controls the rudder so that the ship travels in the designated direction. FURUNO's autopilots reliably maintain a designated course and realize stable and optimal automatic steering by taking vessel speed and hull shape into account and responding automatically to changes in sea conditions.



(Model DRS6A-NXT/DRS4D-NXT)

#### Solid State Doppler Radar

# This radar not only detects vessels in the vicinity, but also identifies birds

the vicinity, but also identifies birds and rain clouds. Obstructions that are approaching your own vessel are automatically displayed in a different color to support safe navigation.



# For safe fishing and sustainable use of fishery resources

Since our founding, FURUNO has offered electronic fishing equipment to modernize and improve the efficiency of commercial fishing. FURUNO is working to develop fisheries with resource management, through the fishery consulting capability that we have previously cultivated in countries around the world, and by providing products and services that are both innovative and optimally suited for the market.



(Model FCV-I

#### Hi-Res TruEcho CHIRP Fish Finder

Displays images in high resolution at various detection depths. This allows you to accomplish previously difficult functions such as detecting fish schools in shallow seas, as well as identifying individual fish swimming in tightly packed schools, which makes for easy identification of fish shadows.



(Model F3D-S)

#### 3D Sonar Visualizer™

Gather information at a distance and in a full 360° circle around the ship, converted into three-dimensional information in real-time. Enjoy a complete picture of schools of fish at-a-glance and determine the distribution of the school for greater operating efficiency.



(Model DR-100 / DM-200

Radiotelephone

This system supports safe and efficient operations with communication capabilities for transmitting and receiving not only voice communication, but also data. It also has a unit for ascertaining the real-time position of other vessels in addition to one's own vessel.

## **▶▶** TOPICS

## New NavNet TZtouch3 series with scalability

The NavNet TZtouch3 multi-function display—the latest network-capable multi-function navigation system in the NavNet series of products for recreational boats—is FURUNO's flagship model, featuring all of the functions needed for traveling at sea integrated into a single unit. The multi-touch functionality enables intuitive operation with just a fingertip, making it easy for any user to operate the MFD in a natural way.

This new series is also equipped with a high-speed quad-core processor for even greater processing power. Meanwhile, the IPS-type LCD panel offers excellent visibility for stress-free navigation. The digital fish-finder function is equipped with a dual-channel, I kW TruEcho CHIRP™ Fish Finder capable of detecting fish twice as fast as previous models, making it possible to determine the movements of schools of fish even at high speeds. In addition, the NavNet TZtouch3 is highly expandable and can be connected to such devices as the DI-FFAMP Fish Finder Power Amplifier for anglers and Solid-State DRS-NXT series Radars.





(Model DI-FFAMP)

HIGH-POWER TruEcho CHIRP™ FISH FINDER AMP "DI-FFAMP"

DI-FFAMP Power Amplifier features an extender function that makes it possible to capture schools of fish at greater depths, in shallow seas, and along the sea bottom.



(Model DRS12A-NXT/DRS25A-NXT

Solid-State Radars "NXT series" utilizing Doppler technology

The DRS-NXT series Radar includes a function for identifying potentially dangerous objects and for checking rain cloud conditions.

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Business

# FURUNO products are at work in many areas of daily life.

Based on technology developed for marine electronic equipment, FURUNO provides products and services for use in social infrastructures and automobiles, including products and services for positioning, navigation, and timing, as well as medical equipment and wireless LAN systems. Our goal is to achieve better safety, security, and comfort to bring about a society that considers the needs of people and the environment.

#### Infrastructure / Matagralagical Manitarian

#### Meteorological Monitoring and Analyzing System

As an application of small marine radar, we offer compact, low-cost weather radar, which can be installed at multiple locations. The system observes rain clouds, predicts sudden localized heavy downpours, and helps to mitigate damage due to regional disasters.

#### Infrastructure / Meteorological Monitor

PNT Positioning · Navigation · Timing (Medical Medical Equipment (Wireless LAN) Wireless LAN Systems

#### **GNSS Automatic Displacement Measurement System**

Infrastructure Maintenance/Management and Meteorological Monitoring and Analysing System

These systems determine displacement of features such as the earth's crust, the ground and man-made structures by using GPS (GNSS) based precision positioning technology. They are used for tasks such as monitoring volcanic activity and landslides, as well as managing safety and determining impact on the surrounding area during construction of high-rise buildings.



# PNT

#### GPS (GNSS) Disciplined Oscillator

Receiving GNSS satellite signals, these devices generate a high-precision reference frequency and a 1-second pulse accurately synchronized with UTC (Coordinated Universal Time). They are utilized in mobile phone base stations and broadcast relay stations for terrestrial digital TV.

## HOSPITAL

#### ETC, Vehicle Management Solution

Installed at a parking lot entrance, construction site entry gate or similar location, these systems enable exchange of vehicle information and other data with ETC systems. The result is smoother access, improved safety and enhanced security.

#### Clinical Chemistry Analyzer

These analyzers automatically take precise measurements of enzymes, fats, sugars, proteins and other substances in the blood.



#### **Ultrasound Bone Densitometer**

Devices that measure bone density by applying ultrasound to the heel bone, enabling quicker and safer screening than X-ray equipment.

## Wireless LAN

#### Wireless Handheld Terminal

These terminals are for central management of information and work support using a wireless LAN system. They make various kinds of work quicker and more efficient through real-time management of work status and product data at distribution warehouses, shopping centers, production sites and elsewhere.



#### Wireless LAN

#### Wireless LAN Access Point

These devices create an environment enabling wireless use of the Internet, at locations such as train stations, cafés and hotels. They allow connection to the Internet regardless of mobile carrier, resulting in growing demand at educational facilities, such as schools and private tutoring schools, as well as at hotels, tourist spots and other areas that attract tourists.



#### . .

#### Automotive ETC2.0/ETC System

These terminals allow for toll payment processing on toll roads without the need to bring the vehicle to a halt. Recently, applications have broadened to vehicle access control at parking lots and construction sites.

#### PNT

#### GPS (GNSS) Receiver

These high-precision position sensors can accurately pinpoint their current position anywhere on earth by receiving and processing signals from GPS (GNSS) satellites. These units are incorporated into automotive devices such as navigation systems, operation management terminals and car-to-car communication terminals. They are also used in mobile devices including mobile phones.



## **II** Industrial Business



## For a support of healthy life



#### **Clinical Chemistry Analyzer**

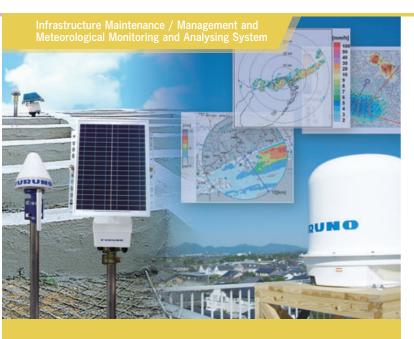
This analyzer contributes to early diagnosis and prevention of disease by measuring the composition of samples such as blood and urine. FURUNO provides small- to medium-sized analyzers and these product lines realize high-quality medical care while reducing the burden of introducing new equipment at healthcare facilities.

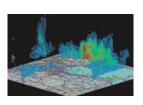




#### **Ultrasound Bone Densitometer**

This device measures bone density safely by using ultrasound. Measurement operation is simple and easy-to-use while the product itself has a compact and portable design. The device is best suited for osteoporosis screening tests and will contribute to early diagnosis of osteoporosis and reduction in





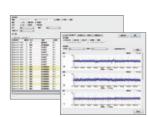


(Model WRII0)

#### **Meteorological Monitoring and Analyzing System**

This system provides detailed analysis of the movement speed and tracks the development of cumulonimbus clouds that bring sudden localized heavy downpours, and can display the information as a high-precision 3-dimensional observation image. The compact and lightweight design is easy to install and useful in cities for flood control measures, and in transportation management applications for railways and roads, thus contributing to a higher level of disaster preparedness.





#### **GNSS** Automatic Displacement Measurement System

This remote automatic monitoring system measures displacement of terrain and structures over the long term. It monitors terrain displacement to help avoid danger from volcanic activity, landslides, dam/tunnel construction, and similar conditions, and ensures people's safety and security by mitigating disasters.



#### For a safer and more convenient society

With a focus on positioning, navigation, and time synchronization, we provide products and services that are essential for social infrastructures, vehicle traffic, and other areas, while also strengthening our efforts toward future global expansion.



#### Multi-GNSS Disciplined Oscillator

Receives GNSS satellite signals and outputs a highly accurate time pulse and stable frequency. Suitable for receiving GNSS signals even in harsh environments, the oscillator helps to improve social infrastructure, and is ideal for digital terrestrial broadcasting and fifth-generation wireless systems (5G) for mobile phone communications.



#### Automotive ETC2.0/ETC System\*

This device allows vehicles to pass through places such as toll gates on toll roads without stopping. With GPS built-in, it can also supply information by voice to help drivers avoid traffic congestion and





#### ETC, Vehicle **Management Solution**

With automatic identification and IoT technologies that utilize in-vehicle ETCs, our vehicle management solutions allow automation of vehicle entry/exit, guidance, and management, and can be used to improve operational efficiency and save labor at logistics facilities.



## For greater comfort and safety in society







#### (finpad 900f)

#### Wireless LAN Access Point\*

Access points are devices that enable a wireless connection to the Internet regardless of the users' mobile carrier contract. They provide a pleasant Wi-Fi environment in companies, schools and other types of locations.

Note: This product is handled by FURUNO SYSTEMS CO., LTD.

## Wireless Handheld Terminal\*

finpad

These mobile data terminals acquire data by scanning bar codes. The information gathered can then be managed centrally. They make various kinds of work faster and more efficient through the real-time management of product data at distribution warehouses, shopping centers, and other facilities.

Note: This product is handled by FURUNO SYSTEMS CO., LTD.



#### Electromagnetic **Environment Testing** Service\*

This service allows one to confirm product safety and reliability by measuring the electromagnetic compatibility of electronic devices.

Note: This product is handled by LABOTECH INTERNATIONAL CO., LTD.

\*Japan market only

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# **CSR** Activities

#### **Our Efforts to Create Value**

The FURUNO Group's management philosophy is to "Contribute to Society by Creating New Value". With this value as our highest priority, we aim to incorporate the Sustainable Development Goals set forth by the UN into our business vision.



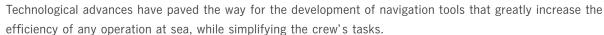


#### FURUNO ENVISION AR Navigation System, Developed in 2019









However, their effectiveness depends on how they are used and maritime accidents due to human error still occur

too frequently. To address this problem, Furuno has developed FURUNO ENVISION AR Navigation system, an augmented reality solution that provides support to large vessels for the execution of maritime maneuvers.

This system is meant to increase safety and security at sea by providing a visual aid to navigation. Furuno's ultimate goal is to push the technological potential of Augmented Reality to the limits for the realization of autonomous vessels.



https://www.furuno.com/special/en/envision/



Display image of the AR Navigation system. Azimuth, AIS, own ship position, ship speed, and other information such as the route and waypoints are superimposed over the live video imagery.

## Quality and safety initiatives

#### **Thorough Quality Management**

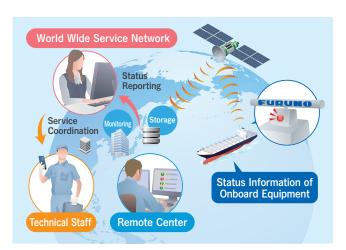
As a company that believes a product's quality is the result of the quality of work put into the product, FURUNO aims to

continue to be a company trusted by society by providing products and services that satisfy users. As specific initiatives, Furuno has acquired certification under the ISO 9001 international standard for quality management systems. To ensure that our products function properly in the harshest environments, we also set our own quality standards and employ reliability assessment techniques at each stage of development. Based on such standards we are able to achieve optimal quality for the countries and regions, the environment and applications in which each product is used.



#### A Global Service System for Safety and Security

FURUNO has four service centers-located in Japan, the U.S.A., Germany and Singapore, together with authorized distributors in more than 40 countries. Our online Service Management System (SMS) allows information to be shared among distributors and service centers related to equipment installation and maintenance for each vessel, which enables quick response for repairs and maintenance. We are developing a remote monitoring service for FURUNO products that can monitor the information of equipment installed onboard a ship from the shore. This system will help reduce downtime through a faster understanding of both the cause of a malfunction and how to solve the problem.



#### **Environmental Consciousness**

With global environmental issues becoming more serious, FURUNO considers the environment to be one of our vital management issues. The core mainstays of our environmental policy are protection of the global environment, the creation of a recycling-oriented society, and conservation of biodiversity. We are working to manufacture products that have low environmental impact and to reduce impact in our business activities in the effort to achieve sustainability in society.

In 2019, FURUNO developed Solid-State Radars (the NXT series) that use solid-state elements in the X- and S-bands of IMO-compliant radar and chart radar. This series offers greater stability with superior durability and maintainability with no need for regular magnetron replacement. Power consumption is also reduced by 13% for an even lighter environmental burden.



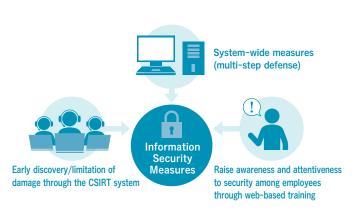
#### **Risk Management**

#### **Security Trade Control**

In order to ensure the proper implementation of security export controls aimed at maintaining international peace and security, FURUNO's President is the chief executive responsible for setting up the control system. Regarding all goods, software and technologies for export, we determine if anything is on a list subject to control and strictly implement screening of the prospective end user and end uses involved in each trade.

#### **Information Security Measures**

Because system-wide measures are unable to completely prevent increasingly sophisticated cyberattacks, FURUNO publishes an in-house newsletter on security and conducts drills simulating a cyberattack to raise awareness of and attentiveness to security among employees. We are also built a CSIRT (Computer Security Incident Response Team) system to carrying out an initial response should a cyberattack get through our defensive systems, which will reduce risk and quickly mitigate any damage.



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