

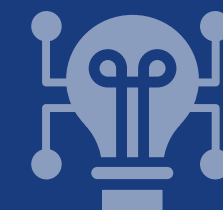
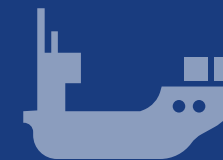


www.gcsc.co.kr

SAFE SEA, SAFE FUTURE

Published in 2023

GLOBAL CONTROL
Company Brochure



X5



CONTENTS

1 COMPANY

| | |
|-----------------------|----|
| CONTENTS | 02 |
| INTRODUCTION | 04 |
| CEO GREETINGS | 05 |
| CORE VALUE | 06 |
| VISION | 07 |
| OUTLINE | 08 |
| HISTORY | 09 |
| ORGANIZATION | 10 |
| OFFICE | 11 |
| R&D CENTER | 12 |
| CERTIFICATION 1 | 13 |
| CERTIFICATION 2 | 14 |

2 BUSINESS

| | |
|----------------------------|----|
| Business Area | 16 |
| VTs System | 17 |
| GMDSS | 18 |
| MDA | 19 |
| Surveillance | 20 |
| MTCS | 21 |
| Radio Communication | 22 |
| R&D | 23 |
| System Consulting | 24 |
| Business Performance | 25 |
| Annual Sales | 26 |

3 CONTACT

| | |
|---------------|----|
| CONTACT | 28 |
|---------------|----|



SAFE SEA, SAFE FUTURE!

WE CREATE A SAFE FUTURE WHERE PEOPLE, NATURE,
AND TECHNOLOGY HARMONIZE.

1

COMPANY

X5

GC

GC leads marine ICT technologies to preserve safe sea of Korea.

GC Co., Ltd. is a specialized IT company in establishing maritime surveillance system such as VTS, and contributes to the safety of sea in Korea by providing competent IT solutions through constant R&D.



CEO GREETINGS

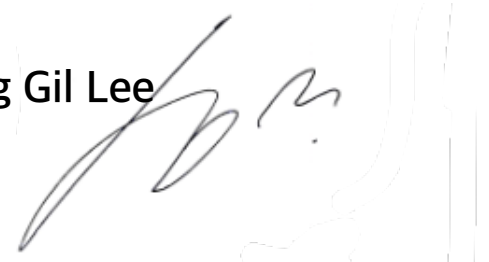
GC, Korea's best leader of marine technologies,
keeps creating 'Safe Sea, Safe Future' constantly.

In 1993, GC Co., Ltd., had established Vessel Traffic Service System in the port of Pohang which was the first VTS system in Korea. Since the first establishment, GC has established totally 19 VTS systems among all of 23 VTS systems in Korea with performing its maintenance.

Currently, most of major VTS centers in Korea take advantage of GC's VTS operating system which was developed with its own technologies. Furthermore, GC has produced radar system and various radio communication systems on its own.

To create a safer ocean on the harmony between human and nature, GC will catch up the 4th industrial revolution and take step forward continuously towards a safer future.

Chief Executive Officer **Sang Gil Lee**





1st. For Human

Contemplate future of human community.

GC develops smart, innovative, and standardized technologies to create sustainable, safe, and clean nature.

2nd. With Nature

Search for harmonization of human, nature, and technologies.

GC provides smart ICT service to realize coexistence of Human, Nature and Technologies in the current hyperconnected society.

3rd. Innovative Technologies

Spread good influence on basis of best technologies.

GC serves to cultivate positive future of community and social values, which leads us to grow up in pride.

VISION

GC will attribute continuously to develop the sustainable growth and prosperity of human community.

GC takes leading initiatives in maritime ICT area which is under changing situations by performing anticipative actions based on continuous investment and challenges.



1. Monitoring System based on GIS

VTS/GMDSS
VMS/FMC/ECDIS



2. Maritime Surveillance Radar System

Up-to-date SSPA Radar System for maritime surveillance system such as VTS



3. Global IT Company

Strong Partnership with global competent IT companies upon trust



4. Communication System

VHF, UHF, MF, HF
VCCS/ATIS
AIS, SAT & Mobile transponder



5. Source Technology Development through R&D

Decision-making Support System based on Big data Development national core technologies such as e-navigation, cloud VTS and etc. MASS Monitoring System



6. Knowledge Management

Knowledge management for sustaining growth



We create a safe future where People,
Nature and Technology harmonize.

OUTLINE

GC is an IT service specialist with a 22-year history of researching and developing maritime surveillance solutions.

GC is an IT service specialist which has led maritime industries in Korea since 2000. The nation's first VTS center has been established by the company. Additionally, most of VTS centers located in Korea major port has been built by the company.

GC has produced maritime surveillance solutions with its own technologies such as vessel monitoring software, radars, radio communication equipment including VHF, Intelligent CCTV systems, and etc. With its own technologies upon utmost efforts, GC pursues ultimately to conserve safe sea and safe future.



History

22
YearsCertifications
and Patents32
casesVTS
special engineers95
People

Company Profile

| | |
|--------------|--------------|
| Company Name | GC Co., Ltd. |
|--------------|--------------|

| | |
|----------------|------------------|
| Representative | CEO Sang Gil Lee |
|----------------|------------------|

| | |
|----------------|---------------------------------------------------------------------------|
| Business Areas | Vessel Traffic Monitoring System Maritime Surveillance System GMDSS |
|----------------|---------------------------------------------------------------------------|

| | |
|----------|--------------------------------------------------------------|
| Location | 3, Yangyeon, Yeonje-gu, Busan, 47607. Korea (Head Office) |
|----------|--------------------------------------------------------------|

| | |
|-----------|-----------------|
| Telephone | +82 51 850 5700 |
|-----------|-----------------|

| | |
|---------------|-------------------|
| Establishment | November 27, 2000 |
|---------------|-------------------|

| | |
|--------------------|----------|
| Period of Business | 22 years |
|--------------------|----------|

HISTORY

Competitiveness Reinforcement & Expansion of Business through continuous innovation

2020-2022

- Integrated Control System Purchase and Installation on Performance Demonstration Center for Monitoring Autonomous Ship's test run
- VTS Education and Training Equipment Purchase and Installation
- AI Maritime Security Support System Establishment
- Mobile-mounted Ground Control Platform Purchase and Establishment
- Establishment of maritime control system to support the demonstration of unmanned ships
- Coastal VTS System Establishment of Jeju Seogwipo
- VTS System Improvement of Central Regional Headquarters Korea Coast Guard
- Development of Cloud VTS Platform
- "Excellence Award" in the ICT sector at the Korea Software Competitiveness Awards
- VTS Facility Improvement of Busan Port
- VTS System Establishment of Coastal of Jindo and Wando Port
- Coastal VTS System Establishment of Mokpo Gunsan



2017-2019

- Establishment of Surveillance System at Hyundai Heavy Industries
- Yeosu Branch Office Open
- ISO 9001:2015 / KS Q ISO 9001:2015 certification revised
- Coastal VTS System Establishment of Gyeongin
- VTS Radar System Establishment on the Jeju Civilian-Military Combined Port

2010-2016

- Changed company name to "Global Control Systems Co., Ltd."
- Establishment of Vessel Traffic Analysis System on Incheon Port
- Elimination of Jindo Coastal VTS System



2007-2009

- Registered as a member of IALA
- Registered as a research institute affiliated with Korea Industrial Technology Association(KOITA)
- Awarded Innovative Technologies by Ministry of SEMs and Startups



2001-2006

- Technical Partnership with Norcontrol IT on VTS System
- Opened Incheon branch office
- Certified ISO 9001:2000
- Letter of Appreciation from Korea Coast Guard
- Medal of Honor on Industry from the President
- Opened Mokpo branch office



2000

- Established.
- Member of Korea Information & Communication Construction Association

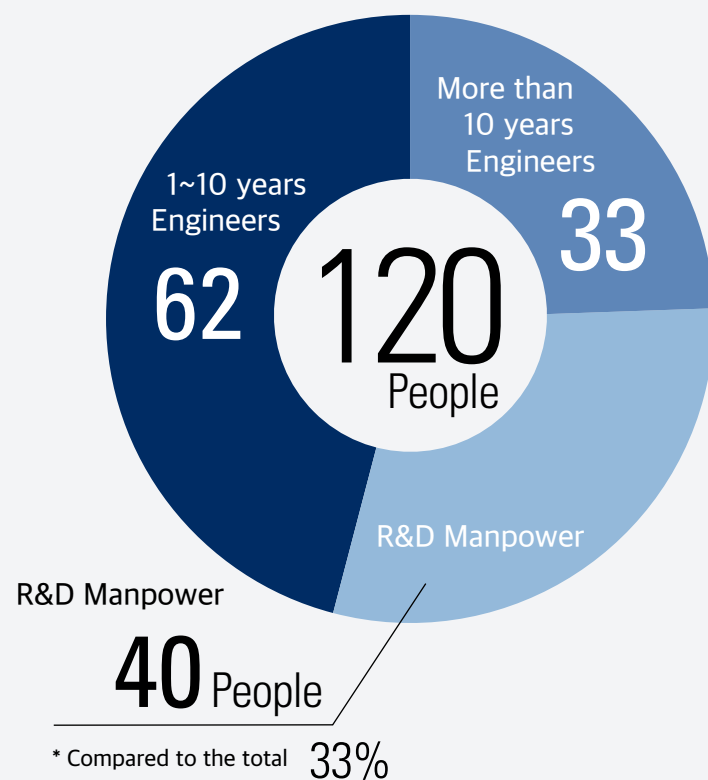


Organization

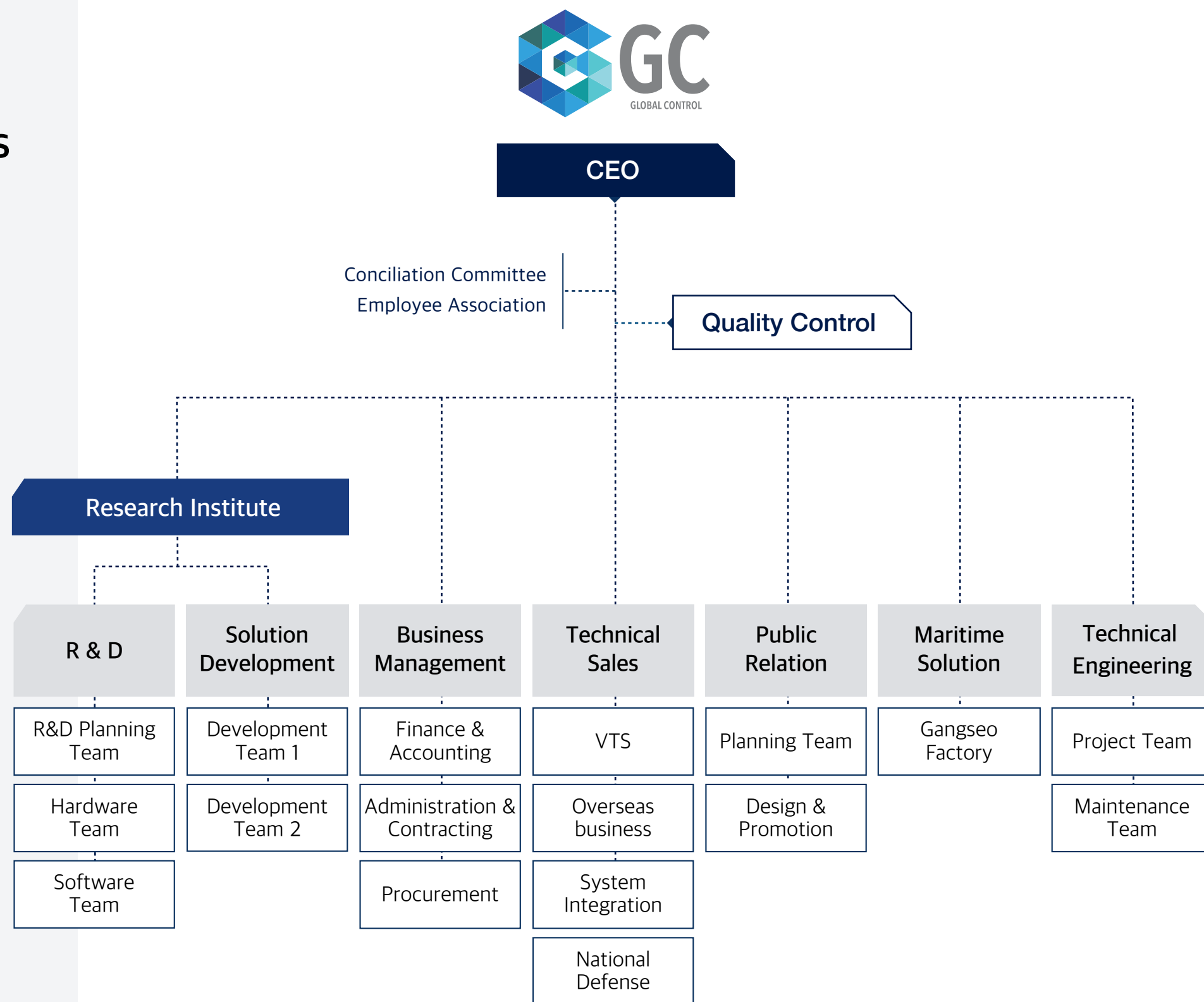
Technology-oriented Company with R&D on Core Technologies

Engineers and researchers of GC has led the maritime information and communication technology and intelligent Information Technology in Korea.

Professional Manpower in Maritime ICT.



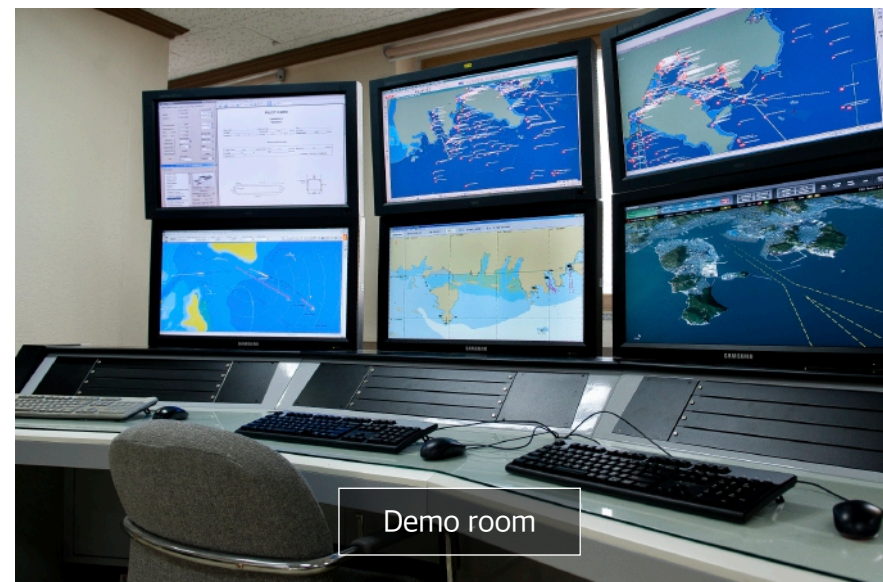
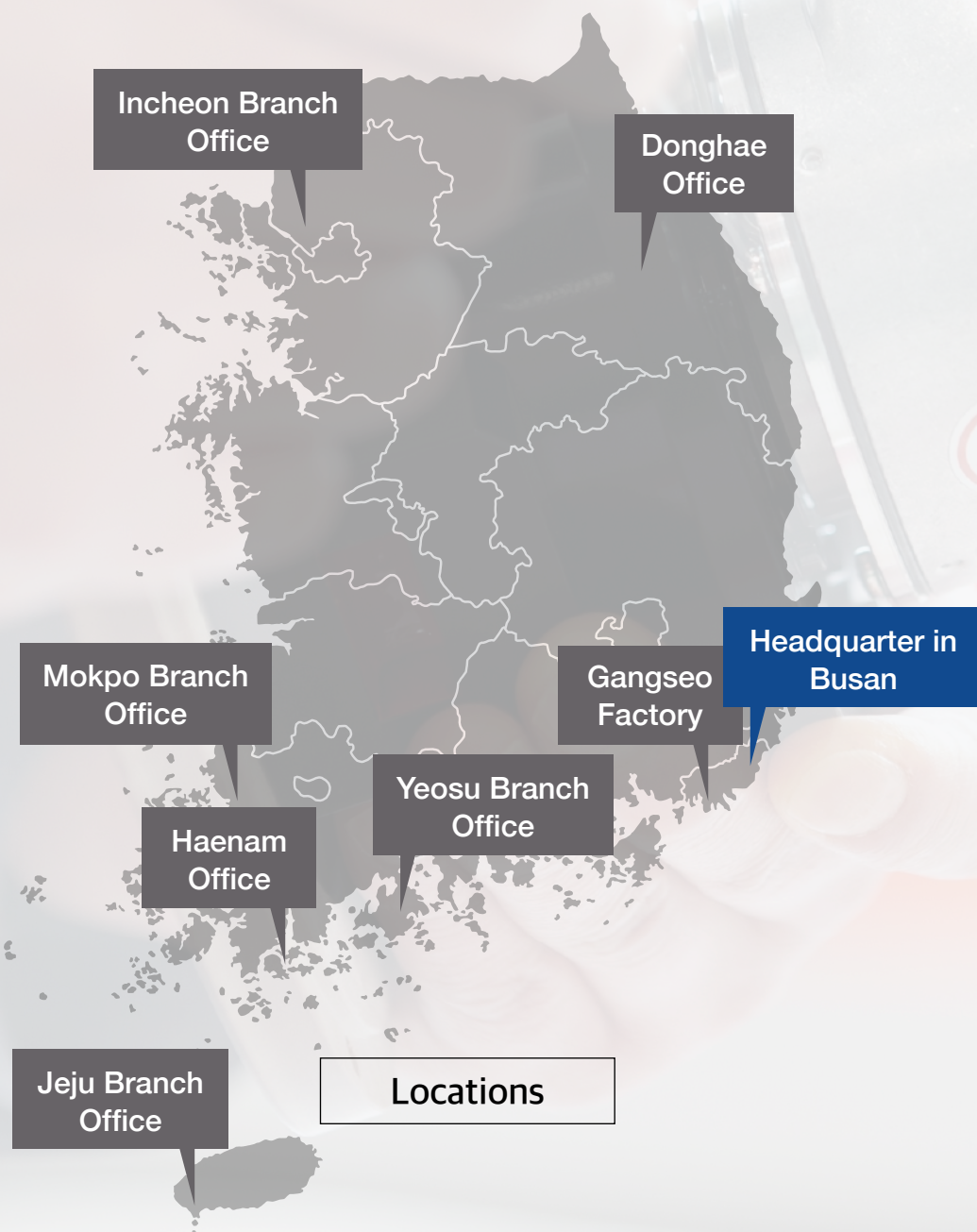
As of September 2023



Office

Systemic Organization

Regional Offices to provide technical support for major VTS systems in Korea.



With 22 years of professional technologies

GC provides stable and high-quality system.



Certification & Patent

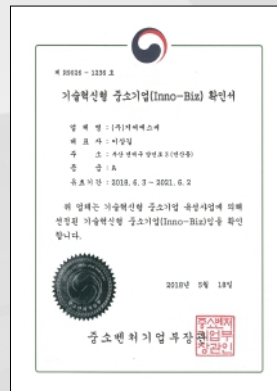
Creation and Innovation establish the independent technology system.

GC's own technology system has been established on basis of long business history regarding national R&D projects, academic-industrial collaboration, and technical partnership with world major ICT companies.

CERTIFICATION



Corporate R&D
Center accredited
by KITA



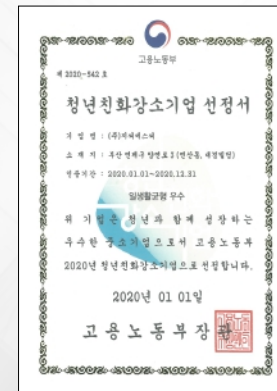
Innovative Technology
accredited by Ministry
of SMEs and Startups



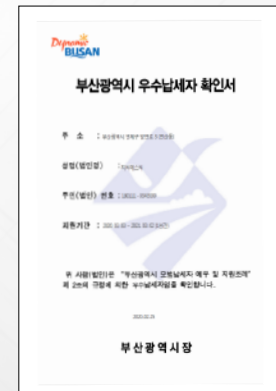
ISO 9001:2015



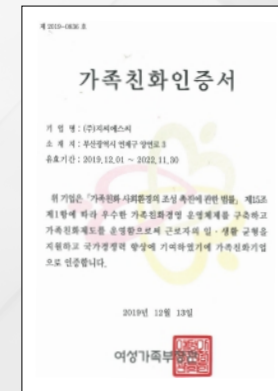
Certificate of
Software Quality



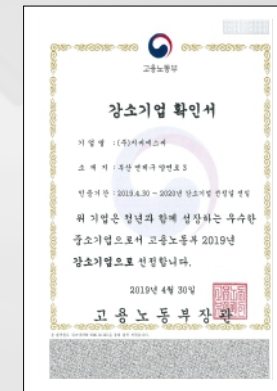
Youth-friendly
Company accredited
by Ministry of Gender
Equality and Family



Good Taxpayer
accredited by City
of Busan



Family-friendly
Company

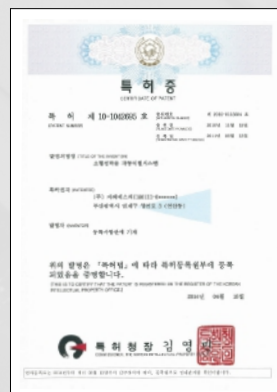


Hidden Champion
accredited by Ministry
of Employment and
Labor

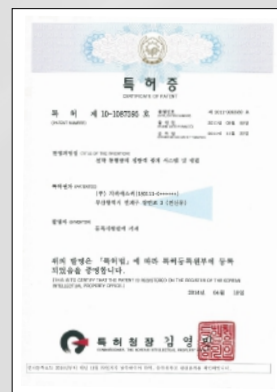
PATENT



Position
Management system
for moving objects



Automatic
Identification System
for Small Vessels



Quantitative
Statistical System
and Method of
vessel traffic volume



Marina Automatic
Mooring Information
Providing System Using
Mobile Communication
Network



Transit Vessel
Inquiry System and
Method based on
area and baseline



Small Ship Simulator
applied with the
equation of real
ship's motion



Search and Rescue
System for Small
Vessels using Mobile
Communicate Network



Standard Route
Generating System
for Ship and Decision
Support System

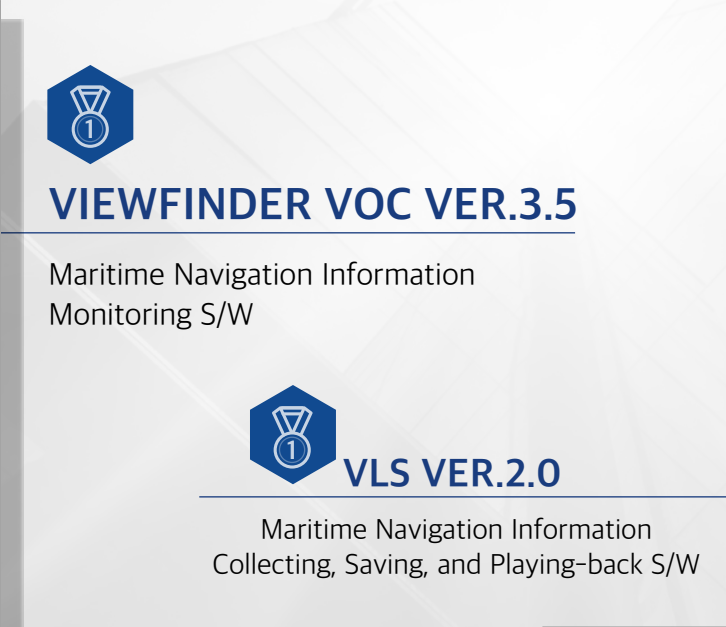
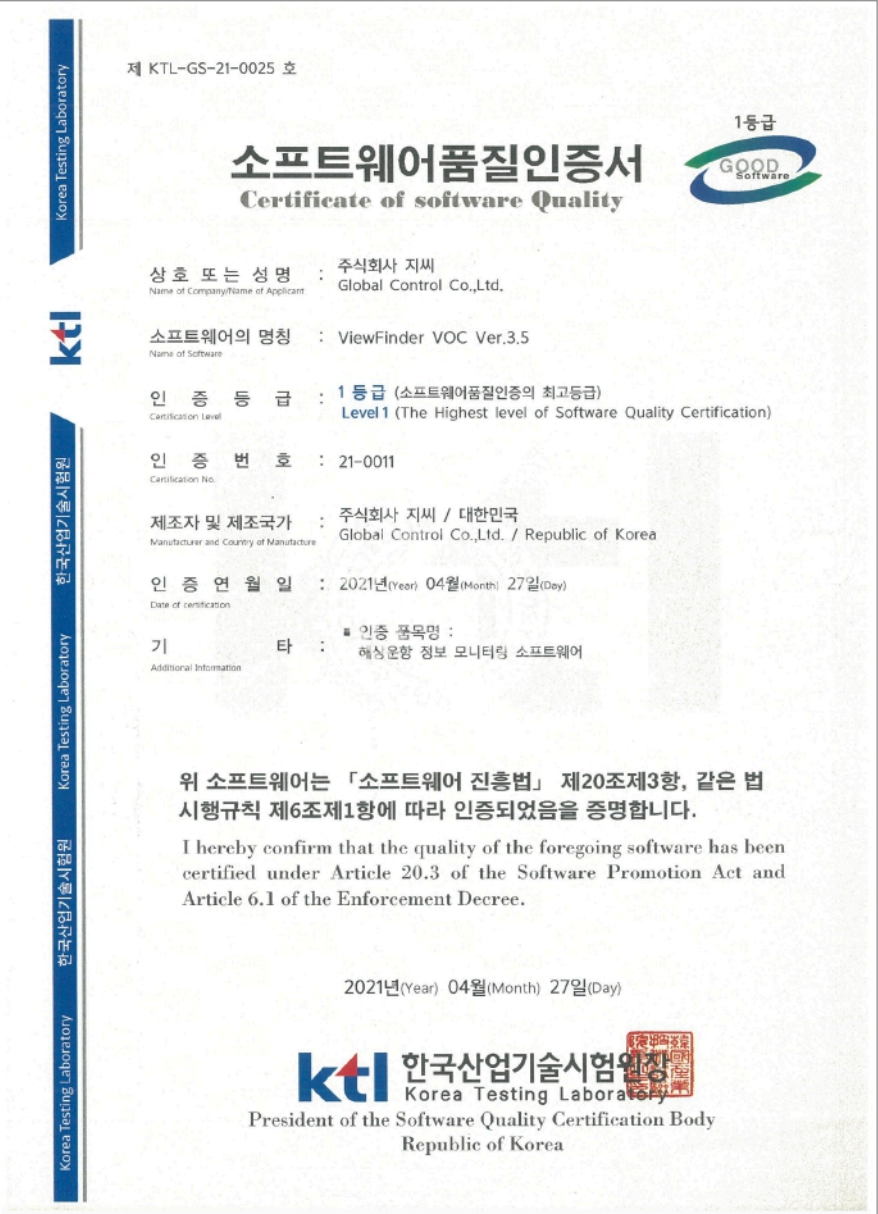


Prediction System
of Marine Accident
for Ships

Certification & Patent

Qualified Good Software '1st grade' for VTS Solution

GC has built up independent technologies through active investment on R&D with abundant experiences on national R&D projects, industry-university cooperation, and international technical partnership.



R&D Center

Independent Technology! High level of Quality!

Research results

- Cooperation with Mokpo National Maritime University on VTS Training
- Development on AIS and VMS for fishing vessels
- Development on high-precise tracking system based on VTS radar (u-VTS)
- Development on multi-functional SSPA SMART Radar System
- Development on individual mobile AIS for ocean leisure and integrated monitoring system
- Development on a simulator for VTS and web-based distress training applied with port-specific scenario generating technology
- Development on a smart yacht operating system and MARINA monitoring system
- Development on 3D small ocean leisure ship handling simulator
- Development on drunk diving enforcement system for ship through voice analysis
- Development on maritime big data processing technology and decision supporting system for a ship
- Establishment of big data for maritime traffic information and Development oh safety warning system technology
- Development on remote control and safe operation supporting technology of MASS
- Development on control and monitoring technology of safe departure and arrival for MASS
- Development of cloud-based next generation integrated VTS platform



Established the Corporate R&D Center on the year of 2008



Researchers: 30 people



Program registration: 29 cases

- VCCS USER CLIENT
- ENC Kernel Electronic Navigational Chart Kernel
- Radar Video Extractor & Tracker
- GMDSS DSC Operator Console ETC.



Design registration: 2 cases

- Electric console desk for maritime control (2018)
- Ship control simulator(2014)





SAFE SEA SAFE FUTURE

SAFE

2

BUSINESS

We create a safe future where people, nature, and technology **HARMONIZE.**

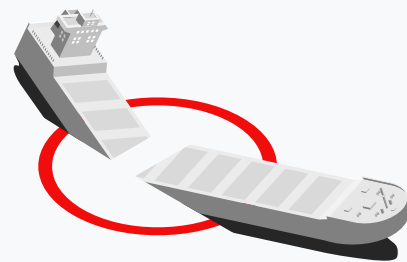
Copyright © 2023 by GLOBALCONTROL. All rights reserved

BUSINESS AREA

GC conducts 'future convergence business' with maritime ICT capabilities.

**VTS**

Vessel Traffic Service

**GMDSS**

Global Maritime Distress and Safety System

**MDA**

Maritime Domain Awareness

**Surveillance System**

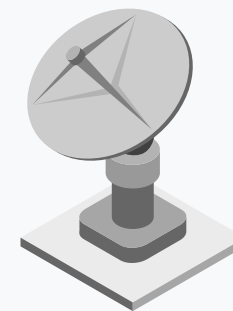
Security and Defense

**MTCS**

Offshore Wind Farm Surveillance

**R&D**

Research and Development

**Radio System**

wireless communications

**Consultation**

System Design and construction

Vessel Traffic Service

VTS system supports Vessel Traffic Service which prevents marine accidents, protects marine environment, and efficiently operates ports by observing vessel traffic situation using advanced scientific monitoring equipment such as radar, CCTV, Direction Finder, AIS and etc.

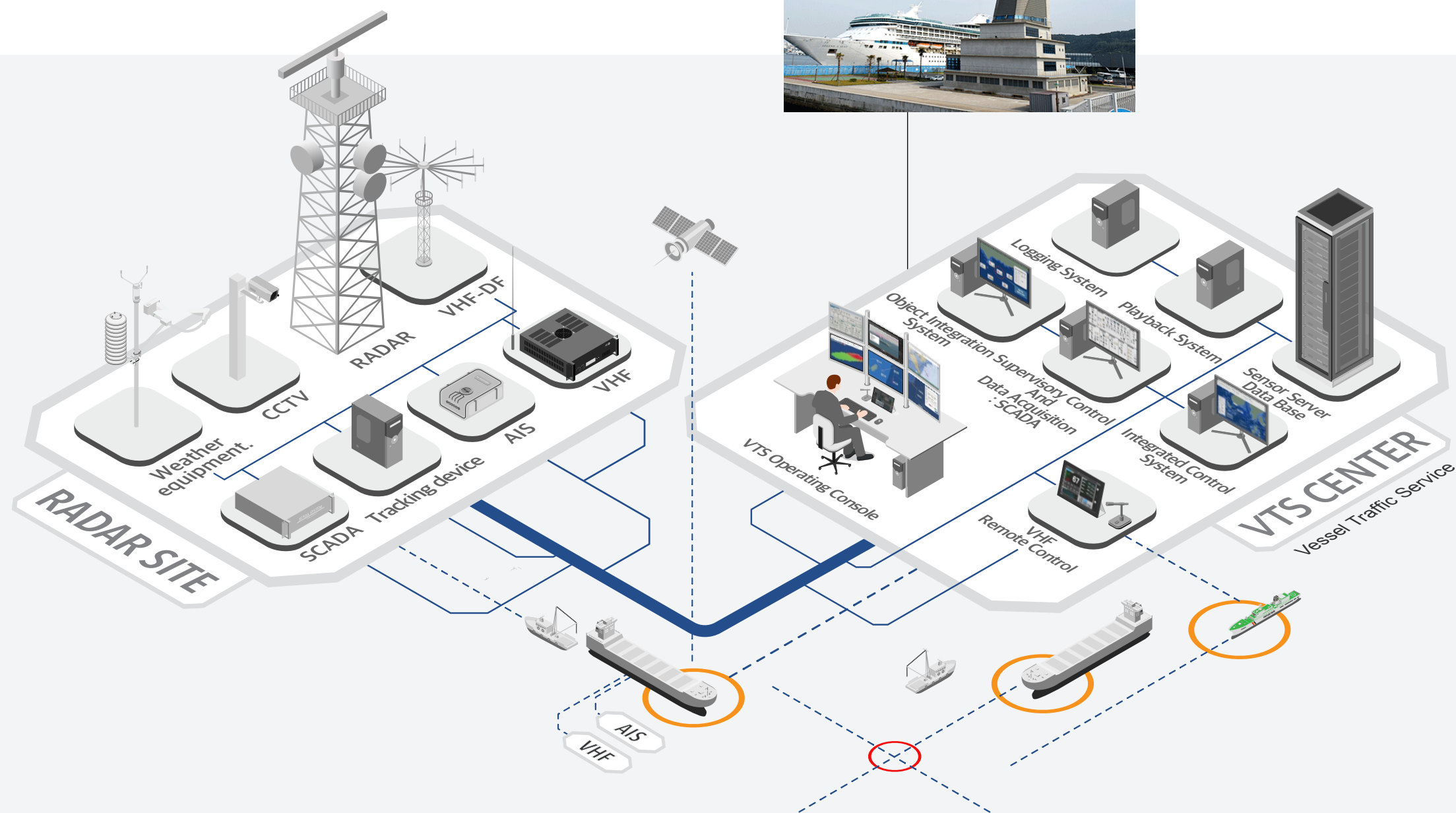
The center displays intuitive maritime conditions by linking ship information to CCTV images.

VTS Center



ViewFinderVOC

User-friendly VTS Operating Console
based on S-63 electronic navigational chart



GMDSS Global Maritime Distress and Safety System

Complying to SOLAS, GMDSS carries out a role of control tower to prevent maritime accidents and to perform search and rescue by providing emergency distress signals utilizing NAVTEX System, COSPAS-SARSAT, and satellite networks.

• LRIT (Long Range Identification and Tracking)

The Long-Range Identification and Tracking (LRIT) system provides for the global identification and tracking of ships to enhance security of shipping and for the purposes of safety and marine environment protection.

• VHF-DSC

When a distress occurs at sea, it receives a Distress Call and transmits a Distress Relay to nearby sailing ships to propagate the accident situation to prevent further accidents. .

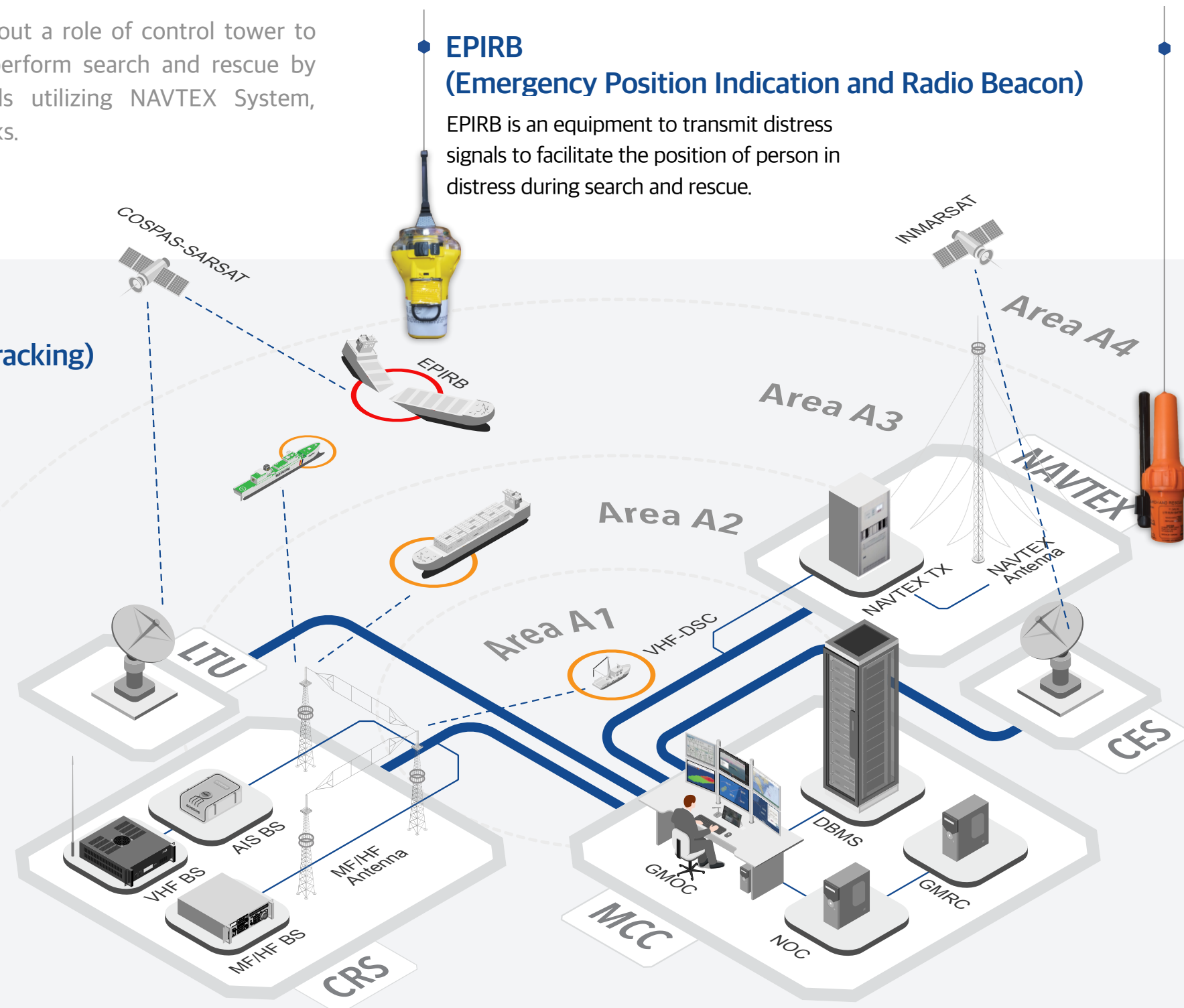
• EPIRB

(Emergency Position Indication and Radio Beacon)

EPIRB is an equipment to transmit distress signals to facilitate the position of person in distress during search and rescue.

• SART (Search And Rescue Radar Transponder)

In the event of marine accident, SART enables quick search and rescue by sending the position of ship in distress with 9GHz X-band radar transceiver.



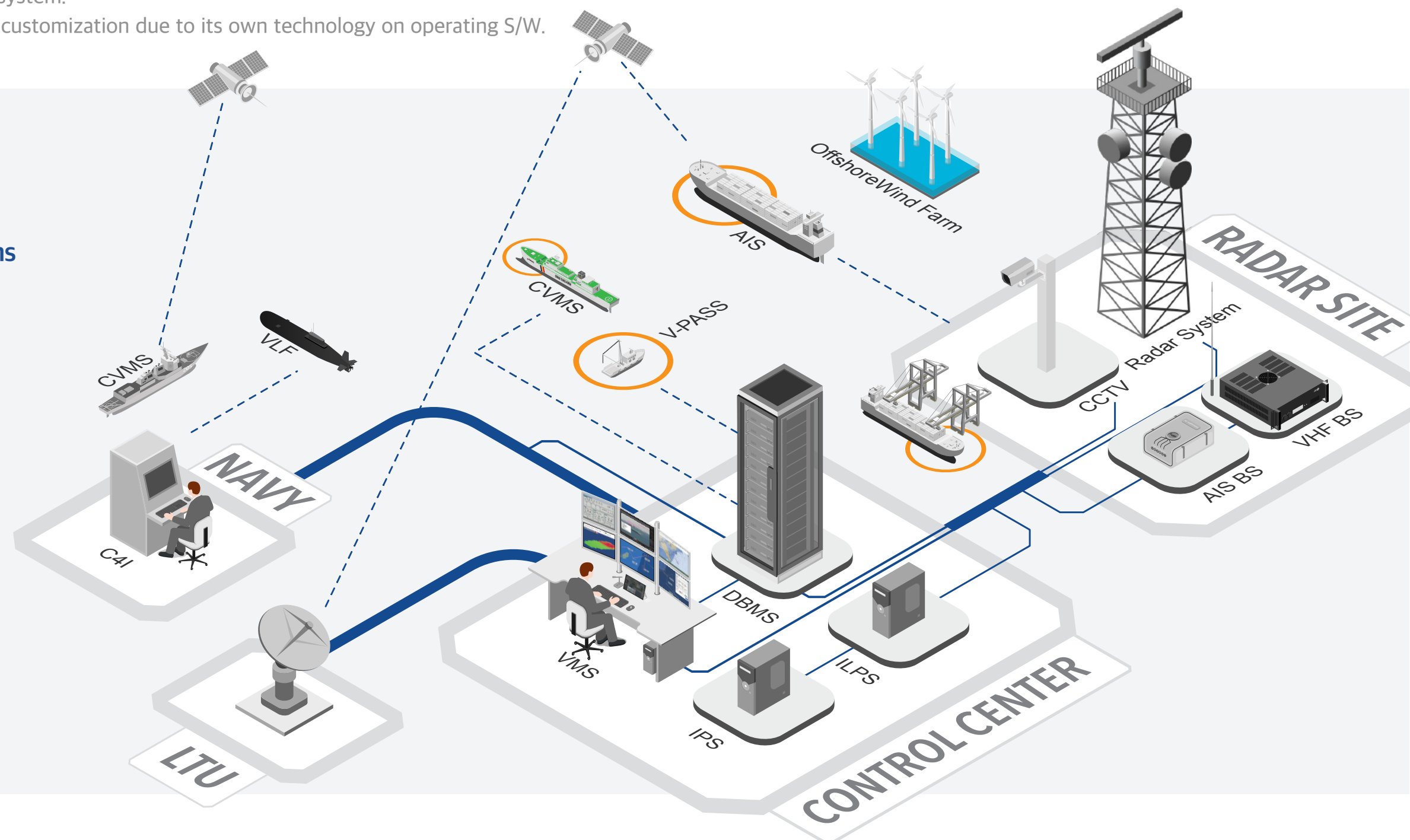
Maritime Surveillance System

GC carries out constantly research and development of various surveillance solutions such as radar surveillance system, satellite communication system, combat supporting system and video monitoring system.

Particularly, GC provides easy customization due to its own technology on operating S/W.

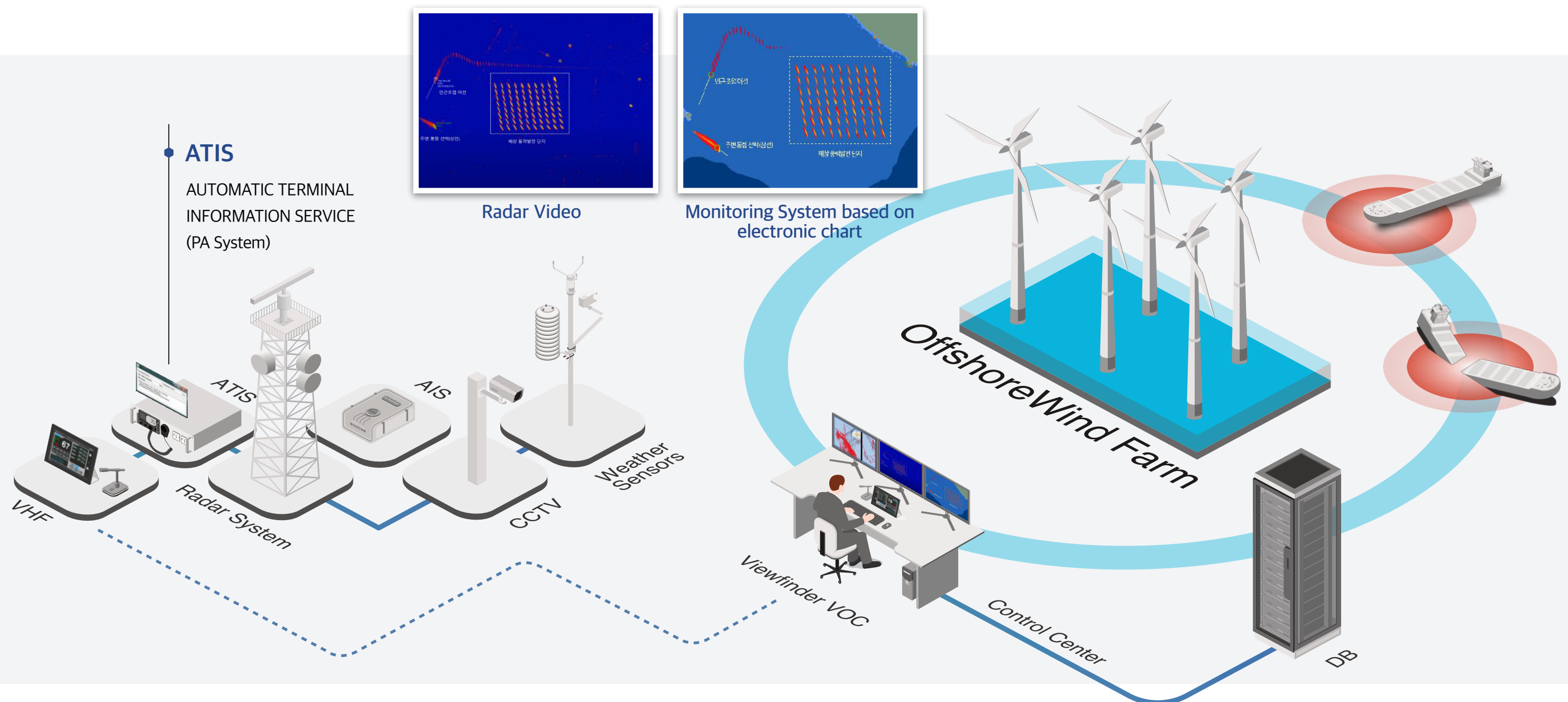
Maritime Surveillance Solutions

- SSPA Radar System
- Radar Display System
- Ship Detection Technology utilizing SAR satellites
- Maritime Surveillance and intelligent CCTV system



Maritime Traffic Control System for Offshore Wind Farm

Maritime Traffic Monitoring System for an offshore wind farm is to provide situation awareness information in the adjacent area of the offshore wind farm. The system helps operators identify the approach of unauthorized and unspecified vessels, and prevent potential marine accidents in advance through warning broadcasts using communication means.



Radio Communication System

GC provides total solutions for maritime radio communication such as VTS system, VLF, LF, MF, HF, and VHF with accumulated technologies over 20 years.

◆ VHF/MF/HF/NAVTEX/AIS System Establishment

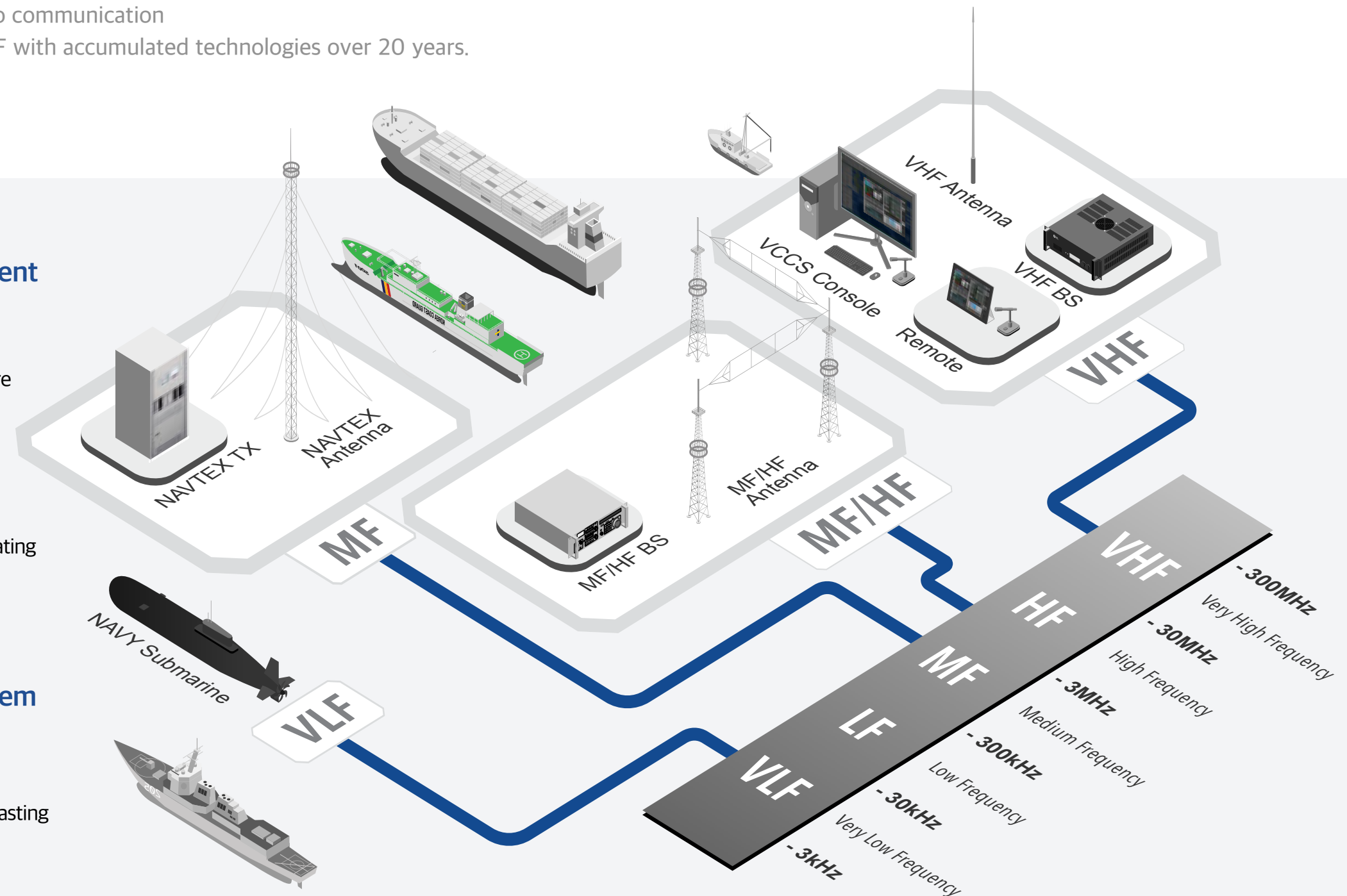
- VTS System, GMDSS System
- Government Vessels, Navy Ships, and other vessels
- NAVTEX system for Maritime and Port Authority of Singapore

◆ Maintenance for Naval Command Communication Systems of VLF and LF

- Development of antennas, tuning unit, transmitter and operating S/W for submarine command control
- Ship communication system for NAVY and Coast Guard

◆ Establishment of Radio Communication System

- Design, manufacturing, establishment, and test for special antenna for all ranges of frequencies
- Establishment of wireless communication system for broadcasting
- System integration of radio communication system over various bands



Research & Development

GC provides a variety of solutions to preserve safe ocean environment with continuous research and development on VTS, e-Navigation, AIS, VHF, PORT-MIS, and intelligent CCTV systems.



VCCS (Voice Communication Control System)

VCCS helps a VTSO use other VTSO's VHF equipment in emergency by consolidating VHF equipment. With remote control function and easy operation of touch screen, the system improves operational efficiency in VHF communications.



Safe Operation Support System for Korea Autonomous Surface Ship

GC develops a supporting system for autonomous ships to carry out operational support and accident response during navigation.



The Integrated VTS Platform using on Cloud Basis

GC develops the integrated platform of VTS based on cloud to collect, consolidate and process vessel traffic data generated from all VTS centers.



ViewFinder VOC

ViewFinder VOC is a user-friendly VTS operating system with GC's own technology to prevent and monitor accidents between vessels by displaying integrated object information and radar images on basis of ECDIS.

System Consulting

GC provides optimized strategic consulting service according to customers' requirements on basis of accumulated technologies in maritime ICT fields over 20 years.

CONSULTING PROCESS



Relevant Business : Vessel Traffic Service (VTS) System, Maritime Surveillance System, Offshore Surveillance System, Radar System, e-Navigation, Maritime Communication Equipment(VHF, AIS), R&D, System Integration and etc.

Business Performance

Korea Representative VTS solution GC ViewFinder!

As the pioneer in South Korea, GC developed its proprietary technology-based VTS operating system, ViewFinder, in 2012. Subsequently, ViewFinder was selected as the main operating system for the Jeju Harbor VTS in 2015. Continuous enhancements have led to its current status, with ViewFinder serving as the primary operating system in 14 out of 19 VTS centers across the nation as of 2023.

Current VTS Status

There are 19 VTS centers in Korea.

✓ Major Performance in 2023

- The 2nd Phase AI Maritime Security Support System Service (MDA)
- The Wide-area VTS System in Donghae and Pohang

19

VTS center
in Korea

14

VTS System
provided by GC

 VTS System
established by GC

Market Share 73%
more in VTS solutions



ViewFinder, Korea's
Representative VTS Solution

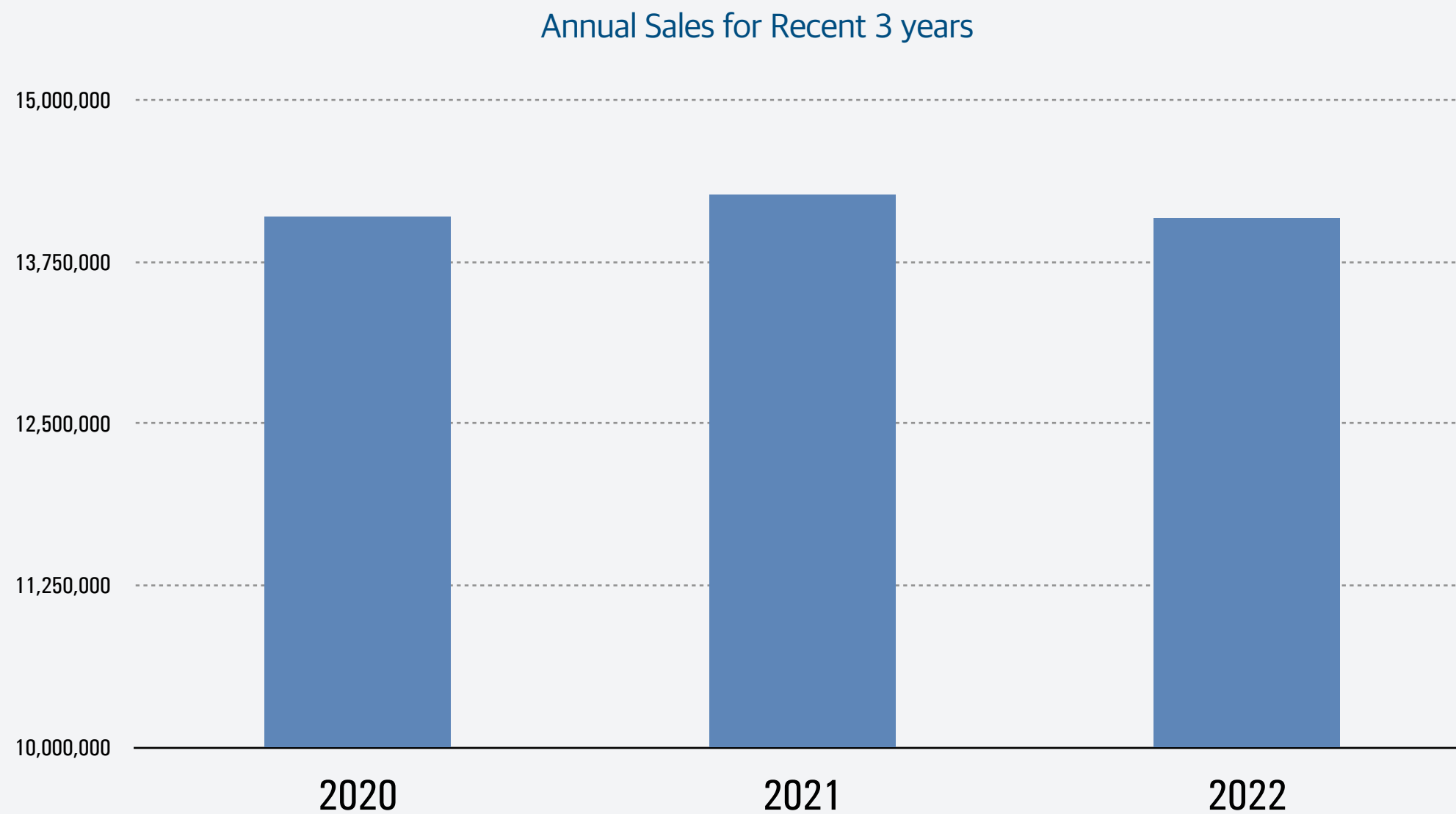
GMDSS, Navy Surveillance System, Coast Guard's VTS
Many Experience of Surveillance System Linking!



Annual Sales

Securing stable revenue leads to technological investments

GC has made a prominence in maritime ICT fields on basis of accumulated technologies and R&D experiences.



A safe future where people, nature, and technology HARMONIZE

HARMONY

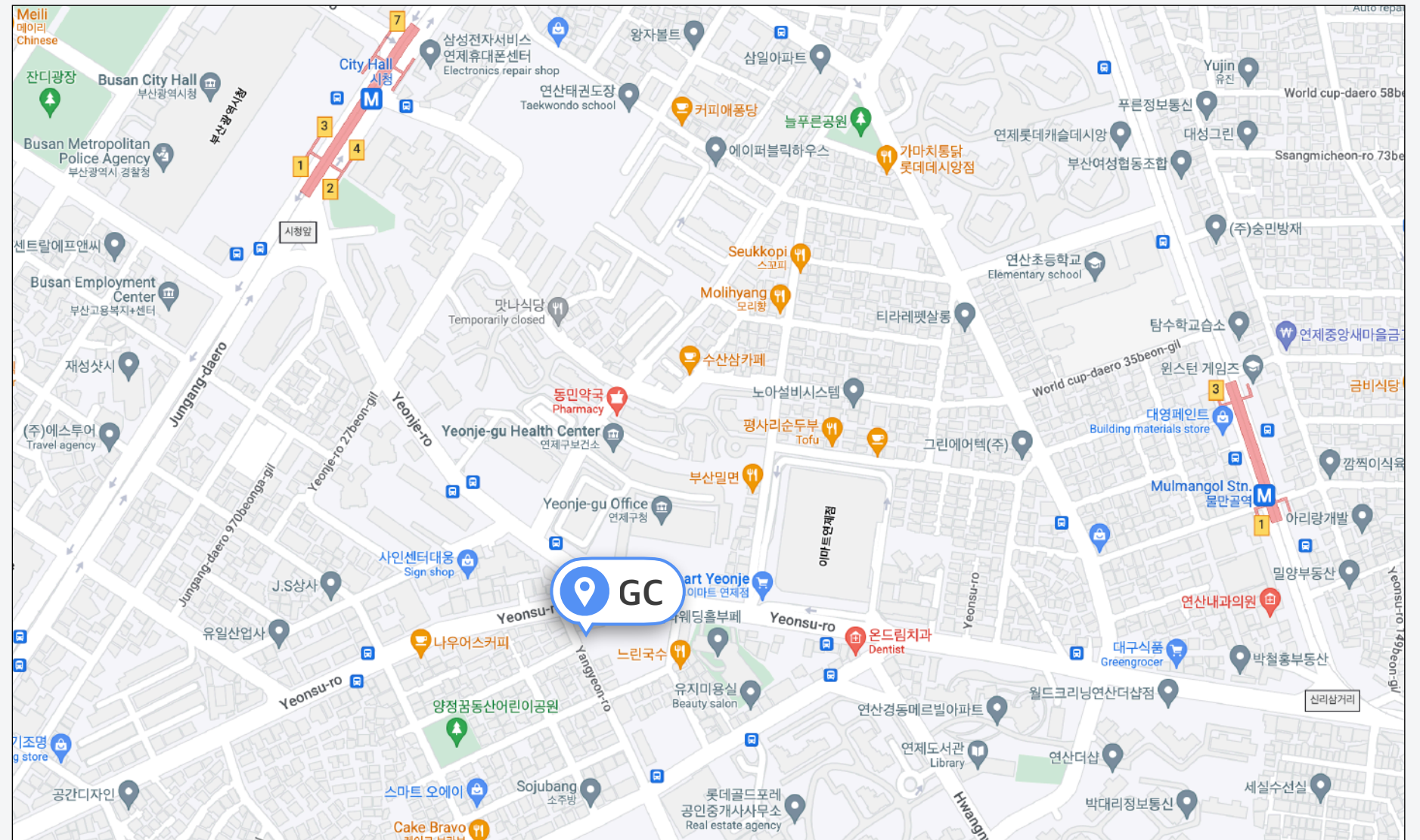
3

CONTACT

CONTACT

Customer First Best Solution High-quality Service

GC has continuously improved its quality management system to provide safe and reliable services.



E-MAIL

GC Co., Ltd.
gc@gcsc.co.kr

ADDRESS

Headquarter: (47607) 3, Yangyeon-ro, Yeonje-gu, Busan, Republic of Korea
 Seoul: (06224) 6, Nonhyeon-ro 76-gil, Gangnam-gu, Seoul, Republic of Korea
 Incheon: (21984) #1305, 70, Songdogwahak-ro, Yeonsu-gu, Incheon, Republic of Korea
 Mokpo: (58456) 35, Daebuljugeo 7-ro, Samho-eup, Yeongam-gun, Jeollanam-do, Republic of Korea
 Yeosu: (59700) 117, Munsu-ro, Yeosu-si, Jeollanam-do, Republic of Korea
 Jeju: (63223) #606, 1, Namgwangbuk 1-gil, Jeju-si, Jeju-do, Republic of Korea

TEL / FAX

+82 51 850 5700 / +82 51 637 8938

HOMEPAGE

www.gcsc.co.kr

GC makes safe ocean based on innovation, harmonization, and maximization.



