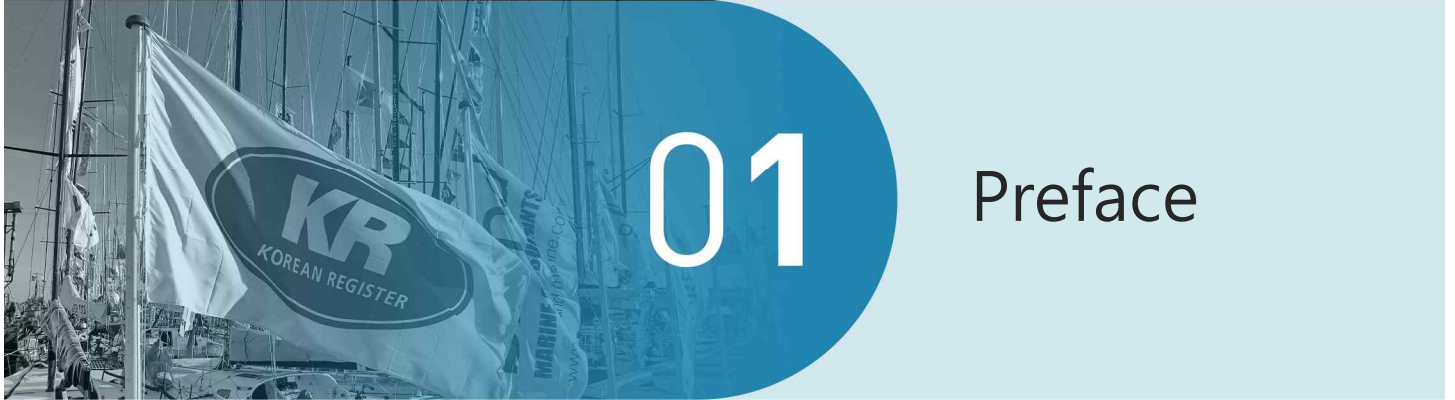




Port State Control Annual Report 2022



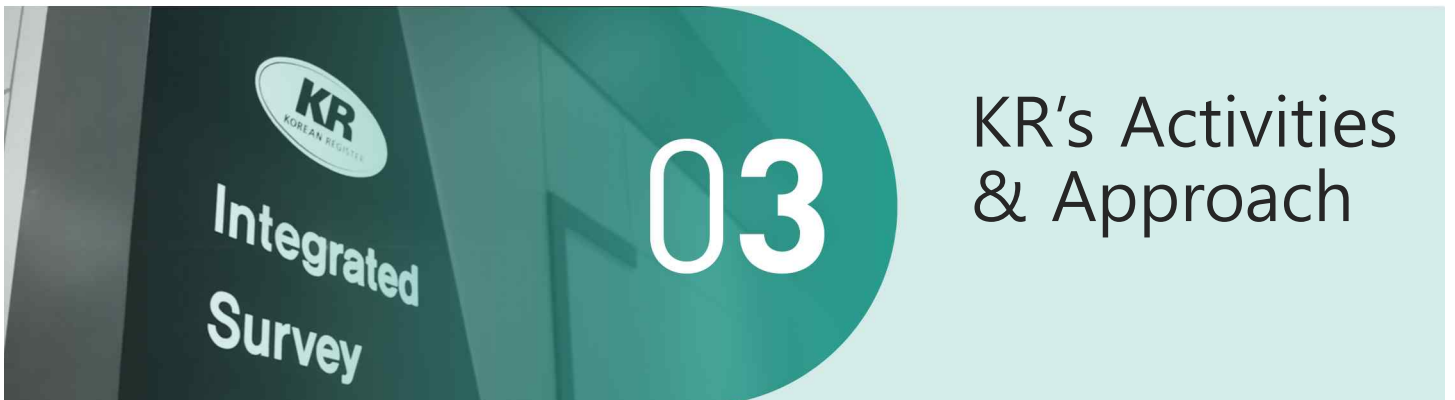
KOREAN REGISTER
Published in September 2023



Preface



PSC Statistics 2022



KR's Activities & Approach

Note

Data and information provided in this report are for informational purpose only and are not intended for commercial purpose. Although every care has been taken to ensure the accuracy of the information provided herein, Korean Register accepts no liability for any errors on data, or conclusions that may appear in this report.



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01

Preface

- Preface

Preface

We are pleased to present the 2022 KR Port State Control Annual Report.

This report covers the period between 1 January and 31 December 2022, amid COVID-19.

With the easing of pandemic impacts and worldwide restrictions, the activities of PSCO have shown further recovery.

Aligned with these circumstances, KR has been dedicated itself to promoting the safety of lives and ships at sea and protecting the maritime environment as a part of our core mission. KR's dedication has led to a remarkable achievement in major PSC MoUs such as Tokyo MoU, Paris MoU and USCG.

In 2022, our priorities continued to involve implementing a proactive approach to PSC inspection. We employed a systematic ship route tracking system joining with the PSC pre-inspection scheme, a PSC seminar/practical training for crew members and/or superintendents even under the pandemic by means of online provision of valuable PSC information, and more.

On 28 April 2022 KR instituted the "KR Integrated Survey Center" referred to as "KR ISC", to provide a more systematic and integrated survey as an in-house developed digital platform. The establishment will aid customers in finding appropriate solutions when confronted with unexpected matters, bringing us closer to our goal of performing safe and clean seas.

In addition, KR introduced PSC mobile app. 1 January 2023.

This app. incorporated all the helpful functions from KR "e-Fleet" and its website, providing a more convenient approach to accessing real-time info. on PSC matters for our valued customers.

We hope this annual report delivers valuable and collective insights to shore up risk-informed decision-making on safety operations in PSC matters.

Also, we are grateful for the support and contributions to KR.

Survey Director
Korean Register





02

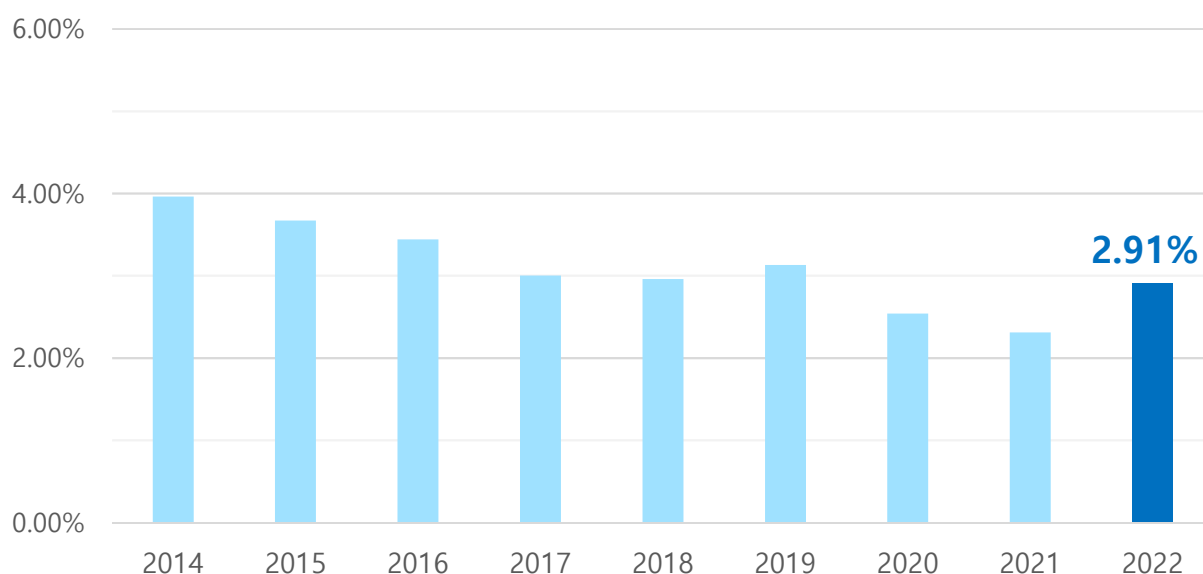
PSC Statistics 2022

- Tokyo MoU
- Paris MoU
- USCG
- KR

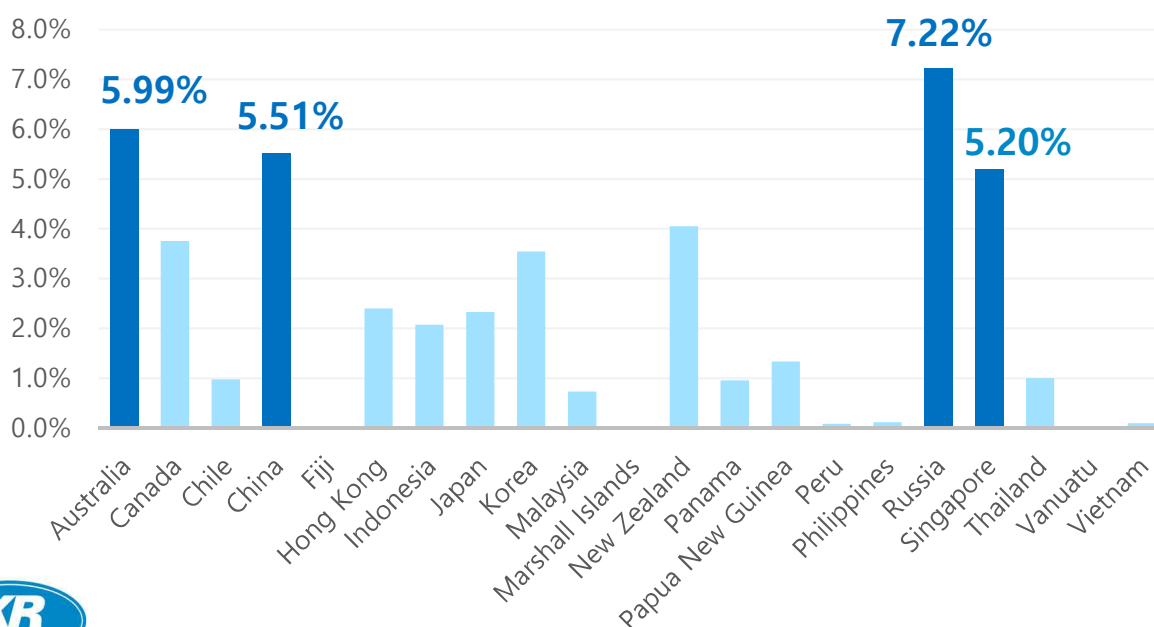
Statistics (Tokyo MoU)

- The Detention ratio has slightly risen. In particular, the number almost recovered to the previous detention ratio.
- Russia shows the top detention ratio in 2022, followed by Australia, China and Singapore.

Overall detention ratio



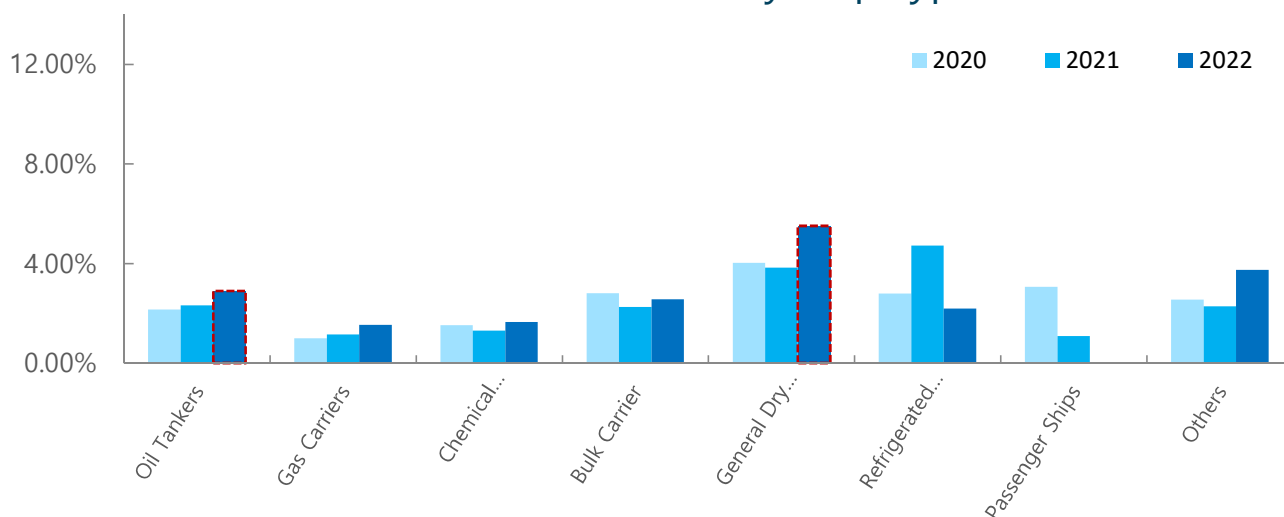
2022 Detention ratio by PSC Authority



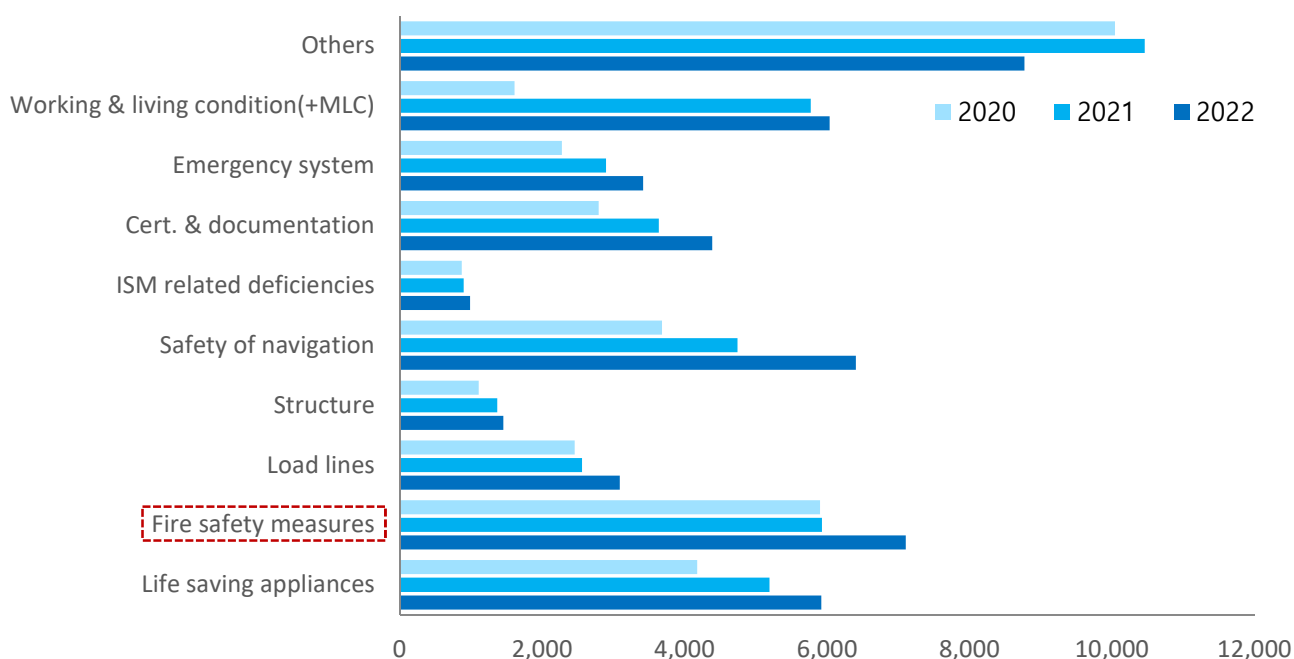
Statistics (Tokyo MoU)

- General dry cargo ships and Oil tankers ranked at the top level in the detention ratio.
- With no change, the top PSC deficiencies, including detainable ones were fire safety-related deficiencies that should be considered more carefully and prepared for PSC inspections.

2022 Detention ratio by ship type



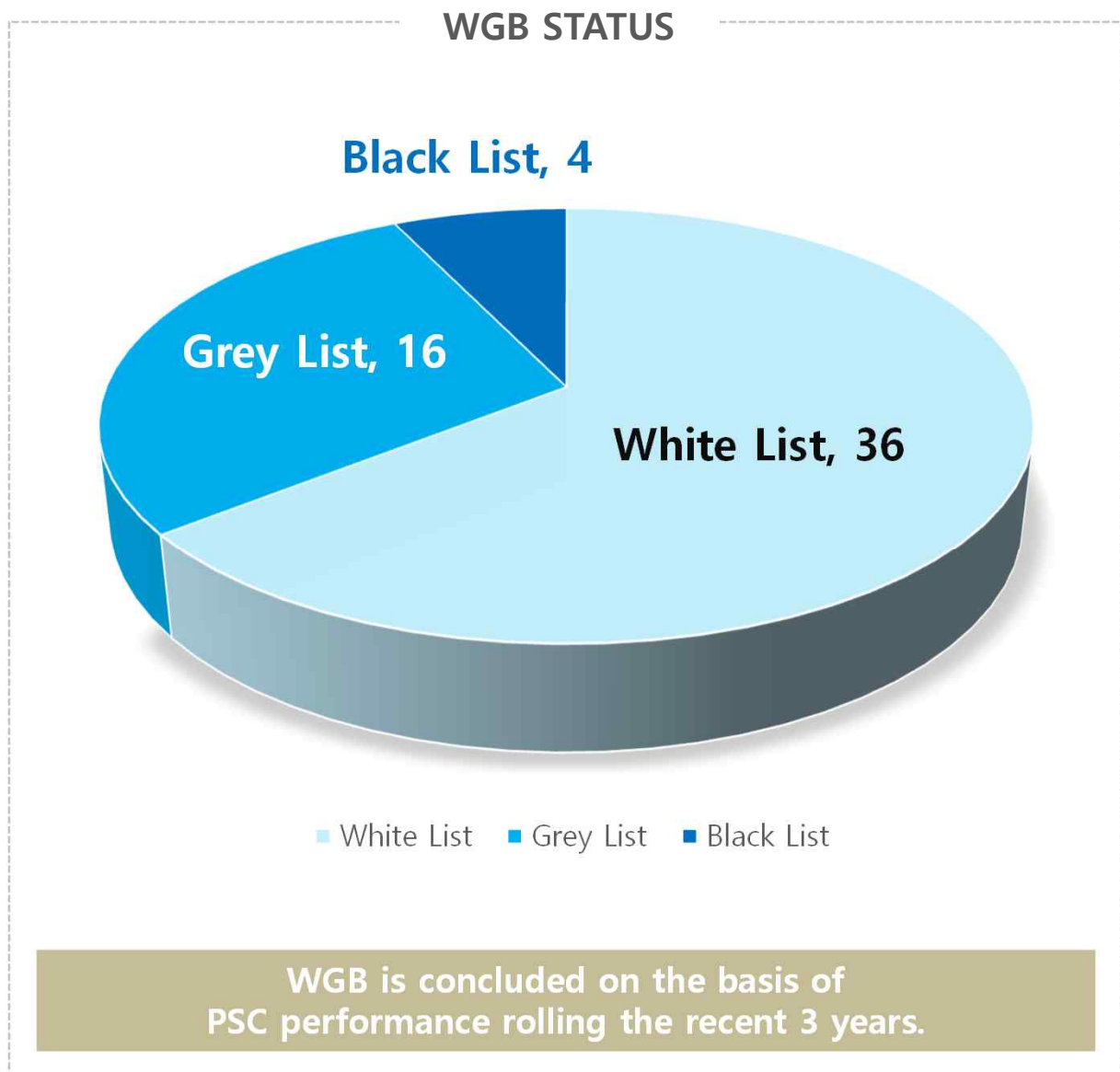
2022 Number of deficiencies by category



Statistics (Tokyo MoU)

- 36 flag Administrations recorded 'White List' while 37 ranked it at the previous year.
- The number of the flag Administrations that recorded 'Grey List' was 16 and 'Black List' was 4.

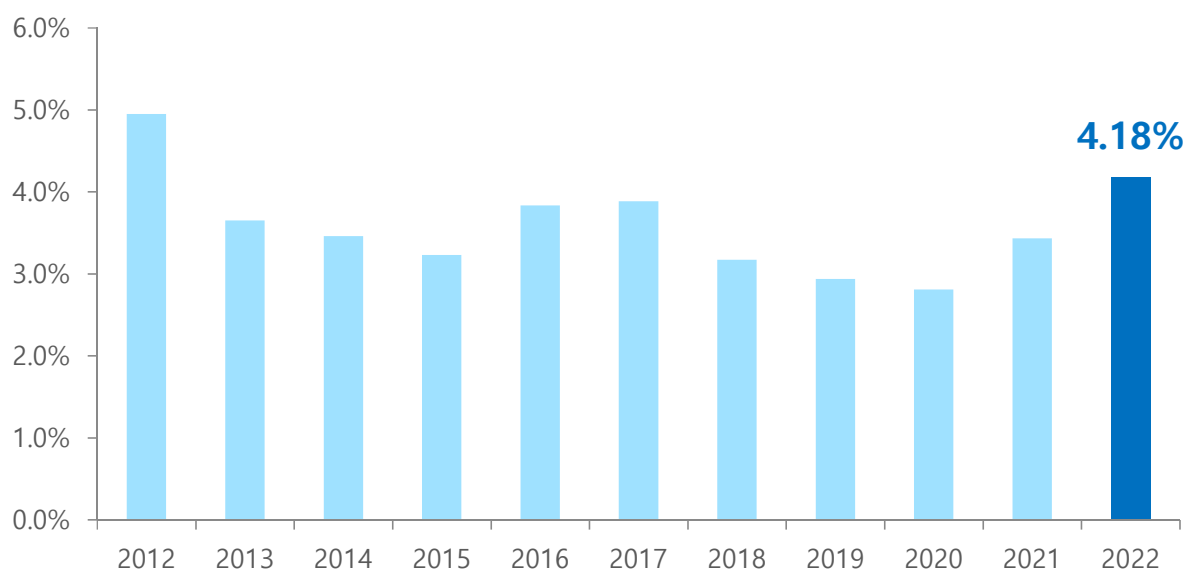
Status of WGB(White-Grey-Black)



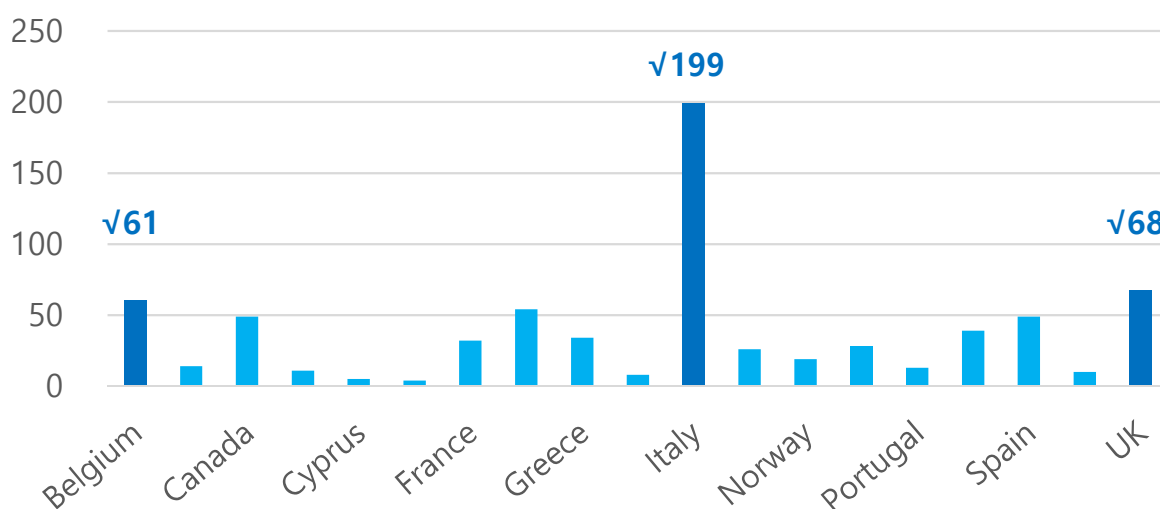
Statistics (Paris MoU)

- The Detention ratio has risen in 2022 compared with the previous year.
- Italy has been one of the high-rank countries in several detentions to be imposed, but UK and Belgium are countries to be careful with.

Overall detention ratio



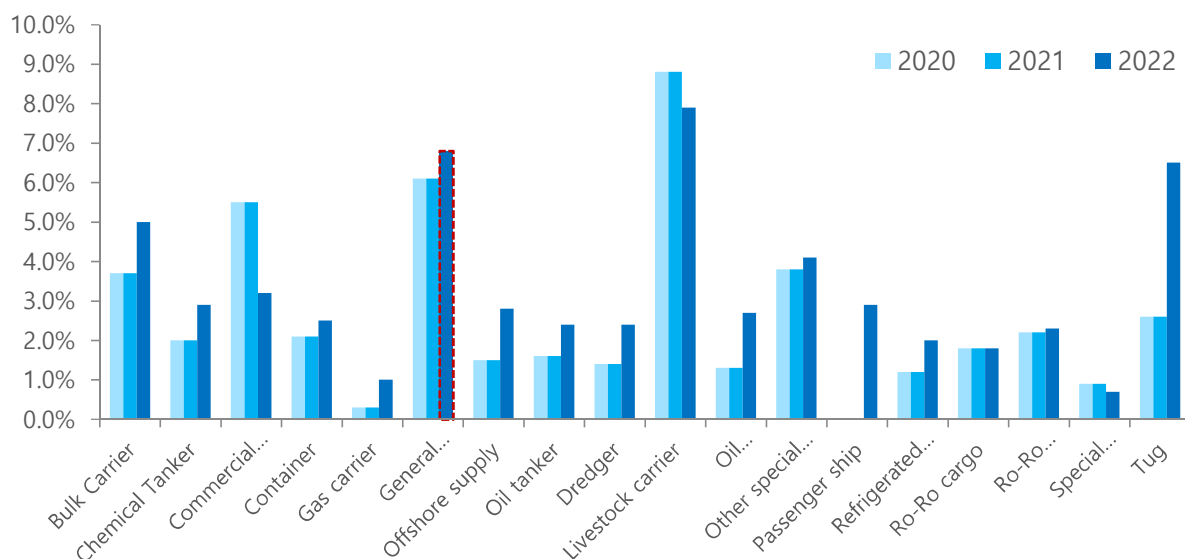
2022 Number of detention by PSC Authority



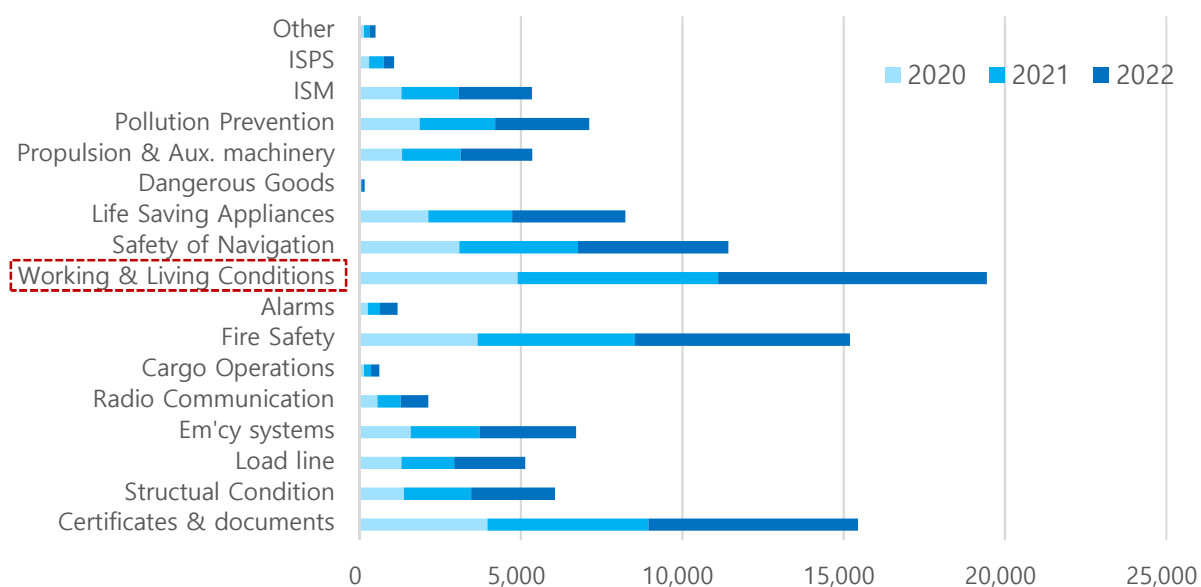
Statistics (Paris MoU)

- Consistently, general dry cargo ships have ranked higher than others in a detention ratio and held the top position in terms of frequency.
- Among PSC deficiencies related to Working and Living Conditions(MLC), issues have ranked the highest, especially considering the challenges posed by COVID-19 and PSC CIC.

2022 Detention ratio by ship type



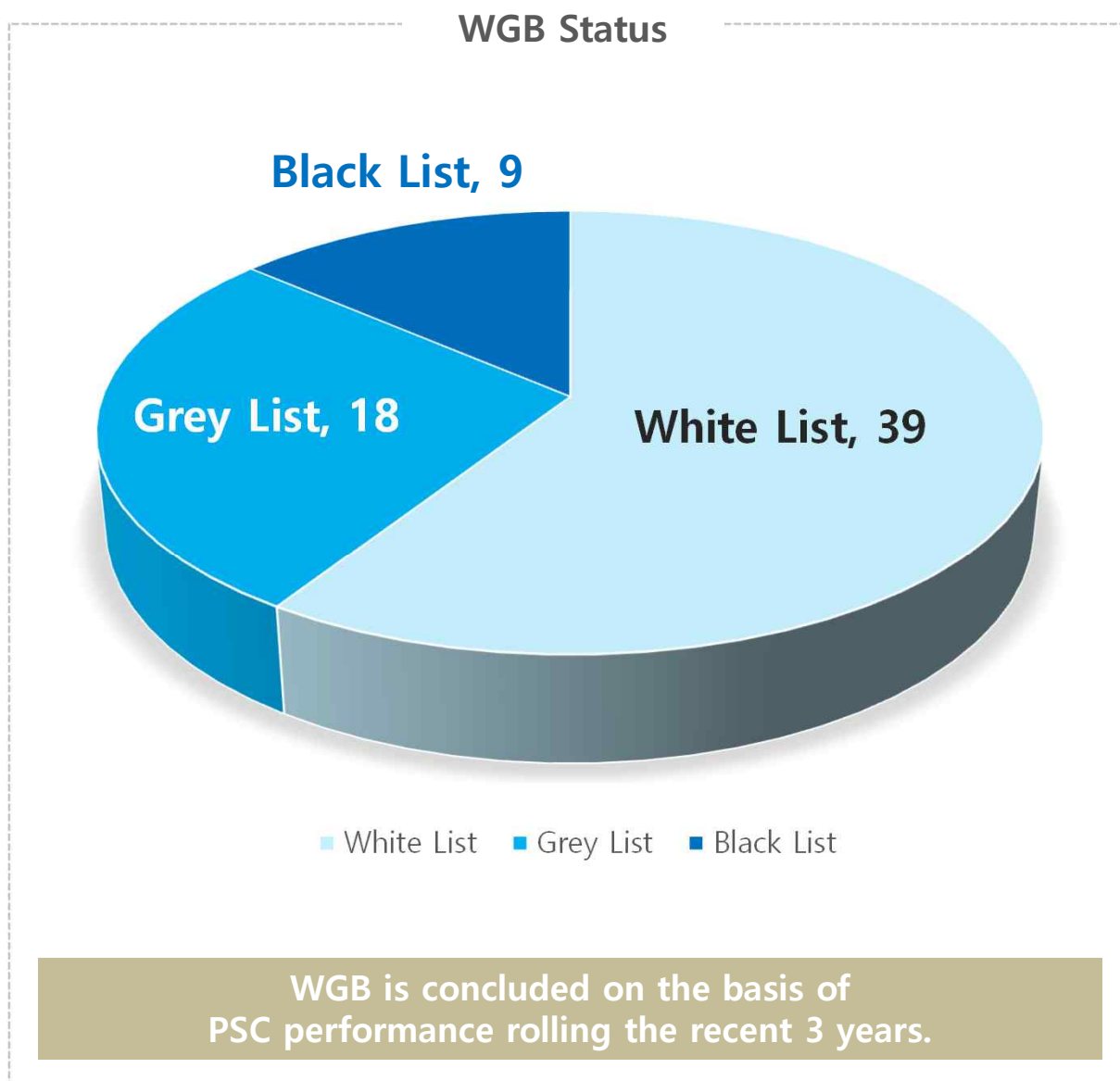
2022 Number of deficiencies by category



Statistics (Paris MoU)

- The number of the flag Administrations which ranked White/Grey/Black has been changed compared with figures of 2021 as follows;
 - White List: 40 → 39(↓1)
 - Grey List: 21 → 18(↓3)
 - Black List: 7 → 9(↑1)

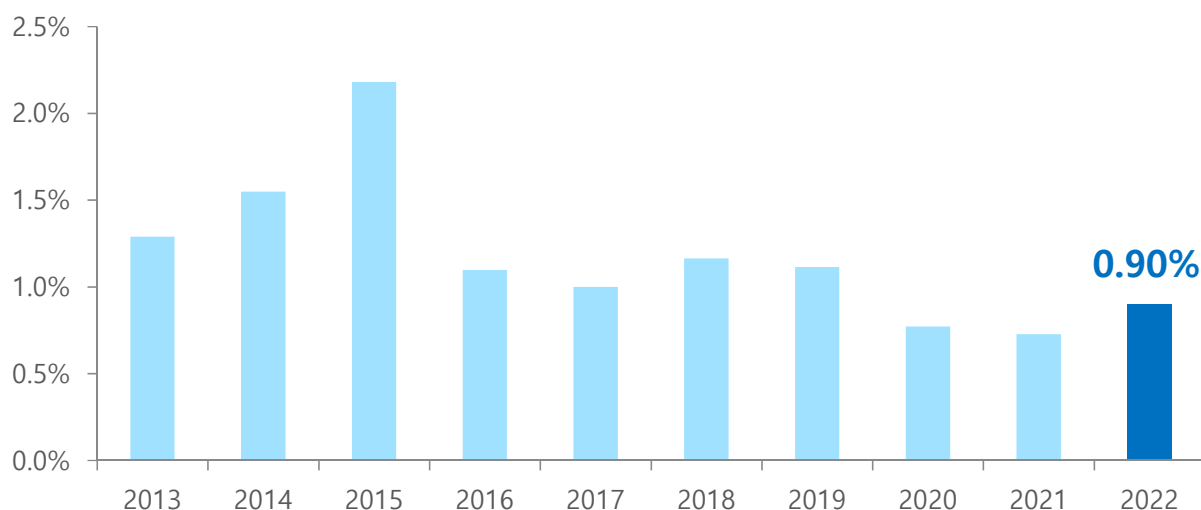
Status of WGB(White-Grey-Black)



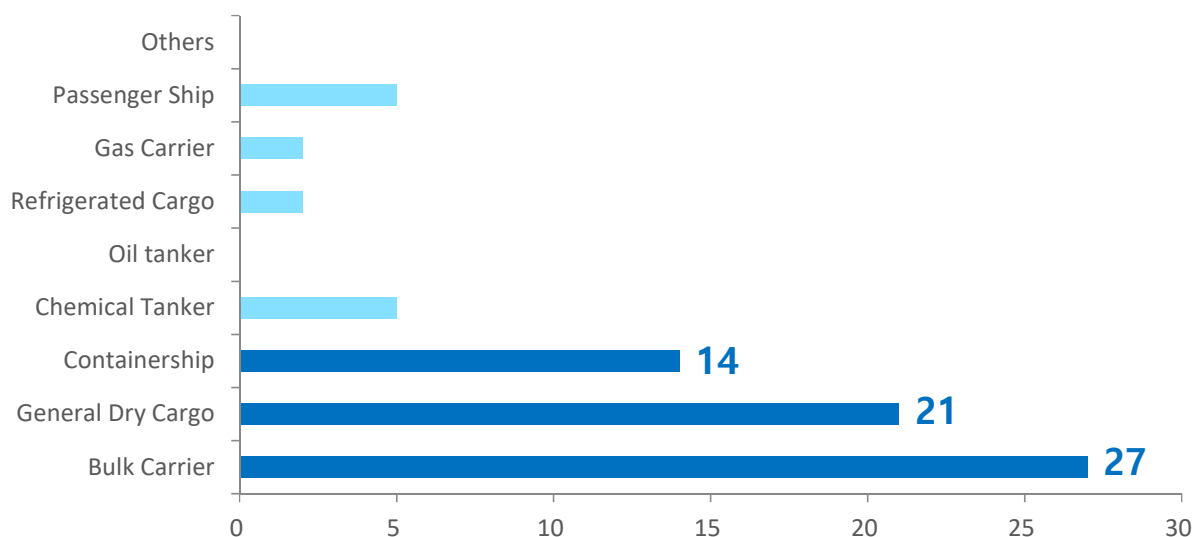
Statistics (USCG)

- The Detention ratio has been maintained at around 1% for the last few years. However, due to COVID-19, it has remained below 1% for three consecutive 3 years.
- Bulk carriers have consistently shown the highest number of detentions yearly with no change. General dry cargo ships follow the next.

Overall detention ratio



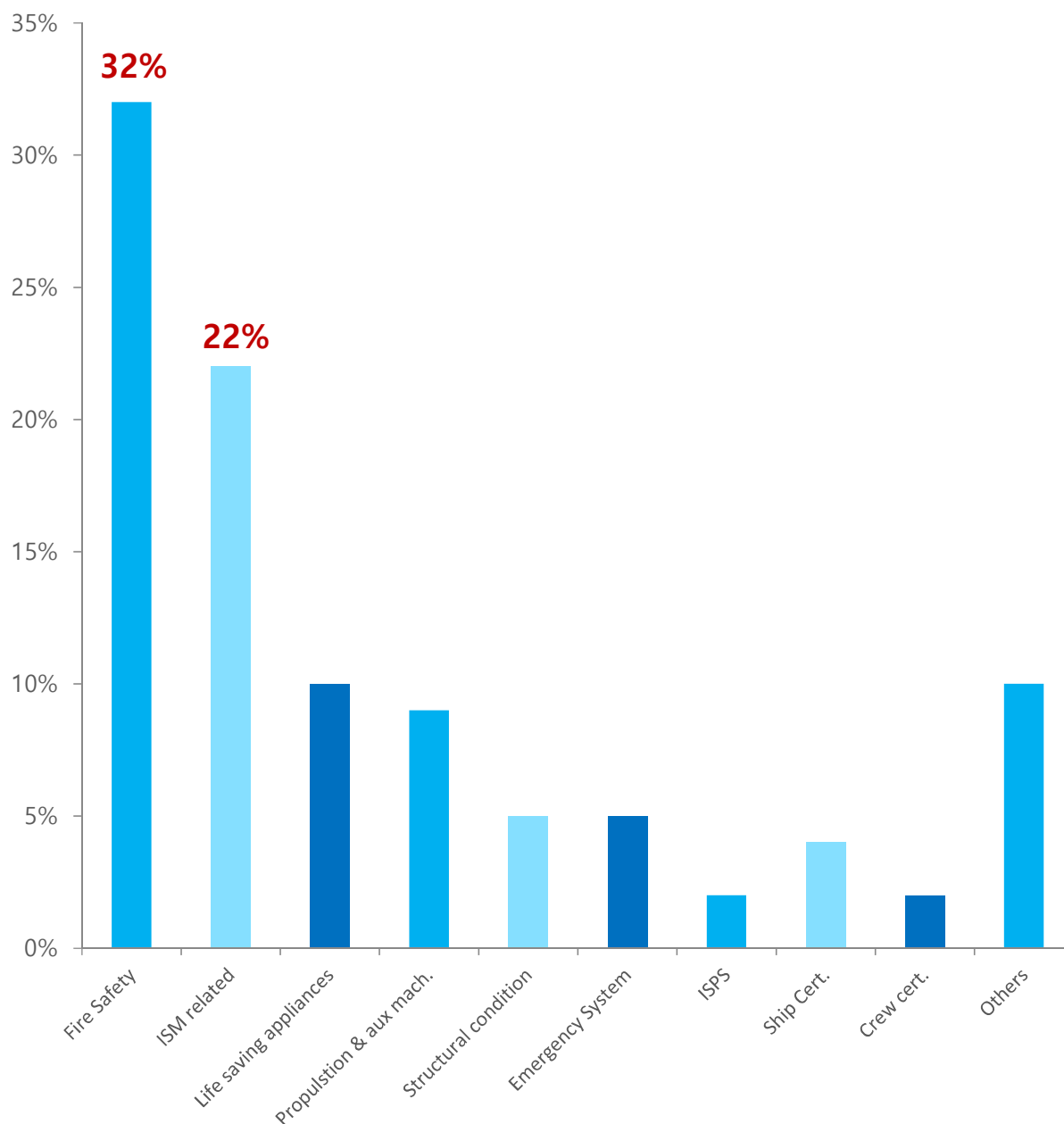
2022 Number of deficiencies by ship type



Statistics (USCG)

- Detainable deficiencies related to fire safety have mostly ranked top last years, which should be, of course, considered critical.
- However ISM-related detainable deficiencies are also focused on since they ranked top several times before, and USCG officers tend to inspect those areas strictly.

2022 Ratio by detainable deficiency



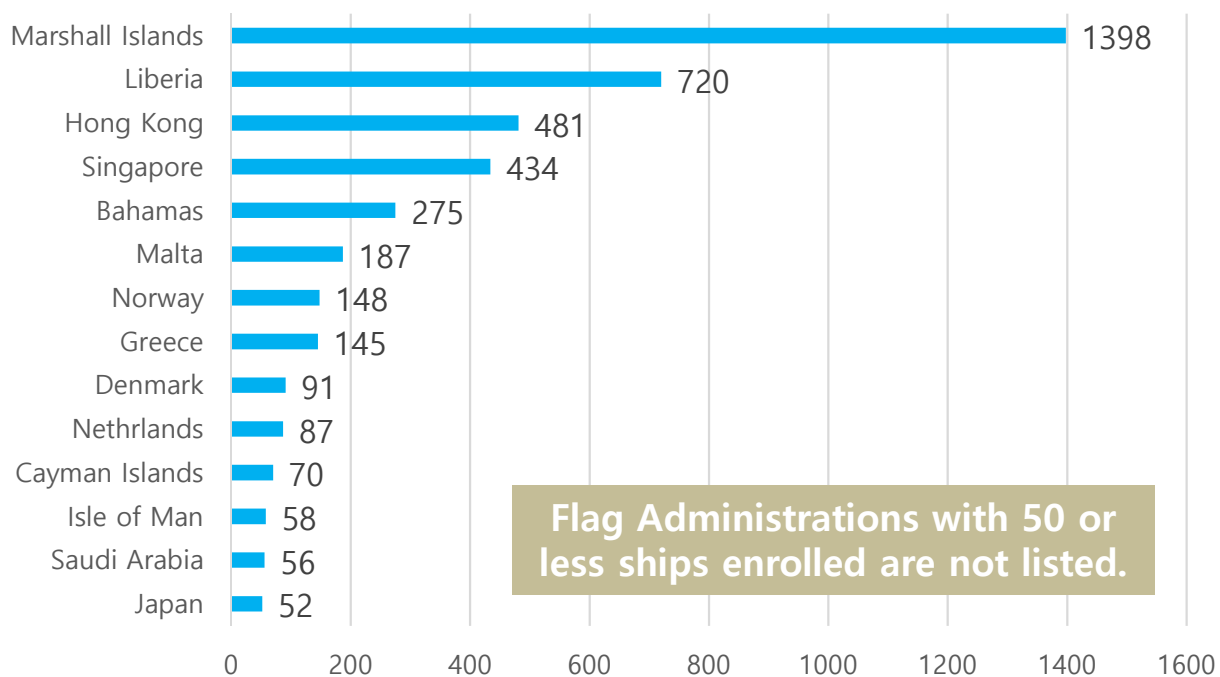
Statistics (USCG)

- Total 23 flag Administrations are eligible for QUALSHIP21 Program for the period of 1 July 2023 through 30 June 2024.
- Marshall Islands has the largest number of qualified ships under QUALSHIP21 Program which is followed by Liberia and Hong Kong.

QUALSHIP21(Flag Administration)

- | | | | |
|------------------|-------------|--------------------|---------------------|
| • Barbados | • Greece | • Marshall Islands | • Republic of Korea |
| • Belgium | • Hong Kong | • Netherlands | • Saudi Arabia |
| • Bermuda | • Jamaica | • Norway | • Singapore |
| • Cayman Islands | • Japan | • Panama | • United Kingdom |
| • China | • Liberia | • Philippines | • Vanuatu |
| • Denmark | • Malta | • Portugal | |

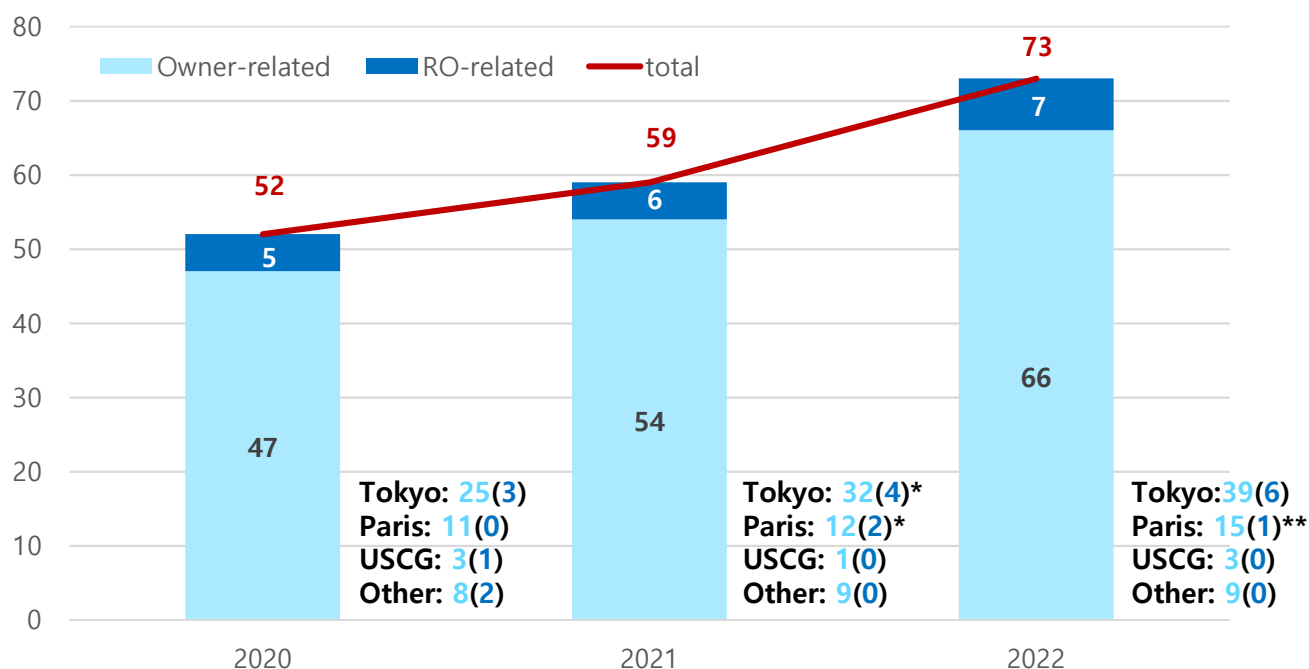
QUALSHIP21(Ship)



Statistics (KR)

- Total number of detention has risen due to the relaxation of restrictions in some areas. RO-related detention cases have increased compared to the previous year as well.
- KR is maintaining a high performance on RO-related detention ratio in Tokyo/Paris MoUs & USCG.

Status of ship detention



* One detention case in Canada was included to both Tokyo & Paris MoUs.

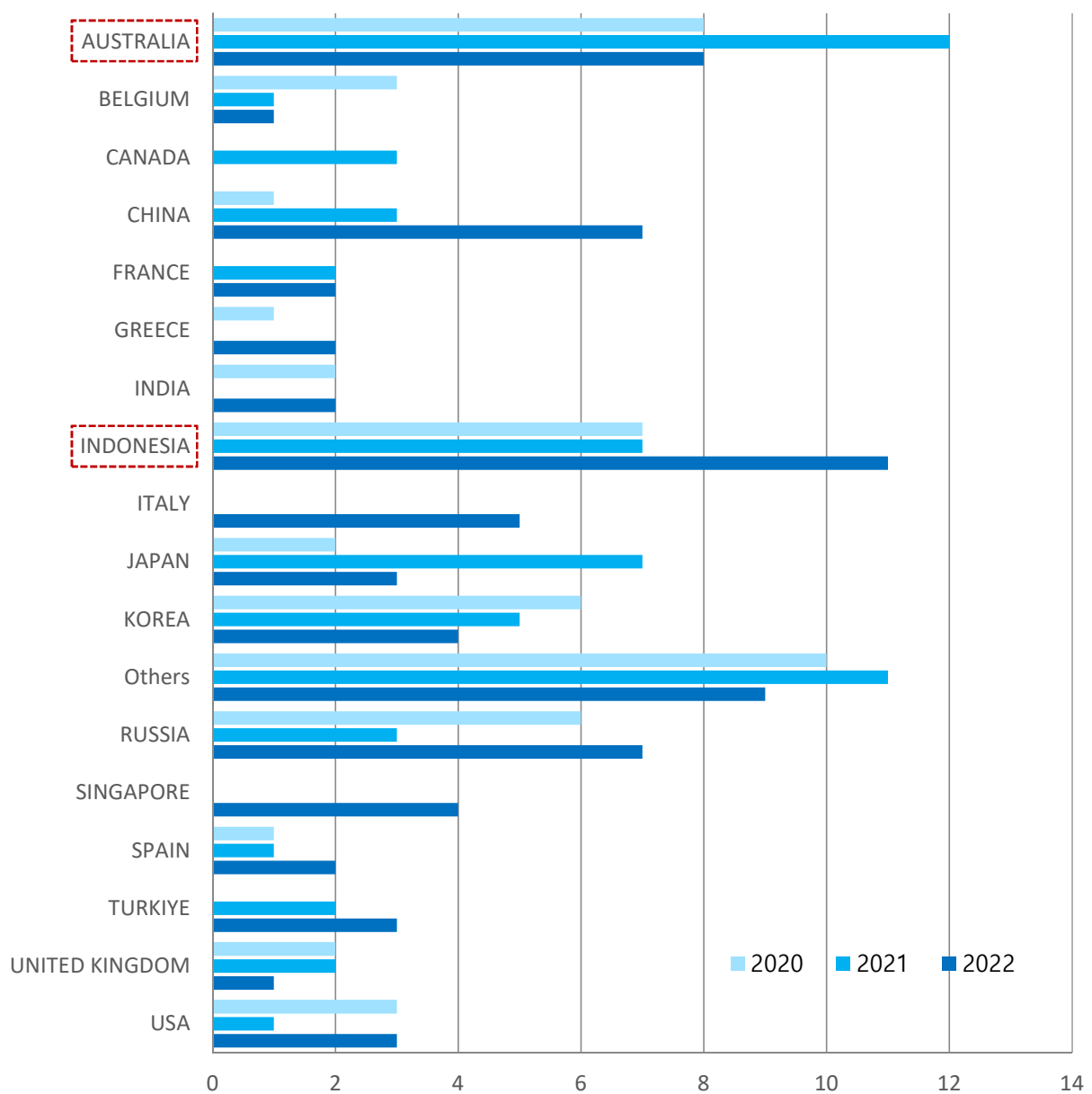
** One class-related case decided in 2023 was included.

| 2020 -2022 | | Tokyo MOU | Paris MOU | USCG |
|--------------------------|----|---------------------------|---------------------------|---------------------------|
| No. of ship Inspected | KR | 6,037 | 1,602 | 1,089 |
| No. of ship Detained(RO) | KR | 13 | 3 | 1 |
| Detention Ratio(RO) | KR | 0.22% High Performance | 0.18% High Performance | 0.09% High Performance |

Statistics (KR)

- Indonesia shows the top detention cases in 2022, followed by Australia, China and Russia.
- Detention cases have emerged in Italy and Singapore since 2022.

2022 Number of Detention by PSC Authority

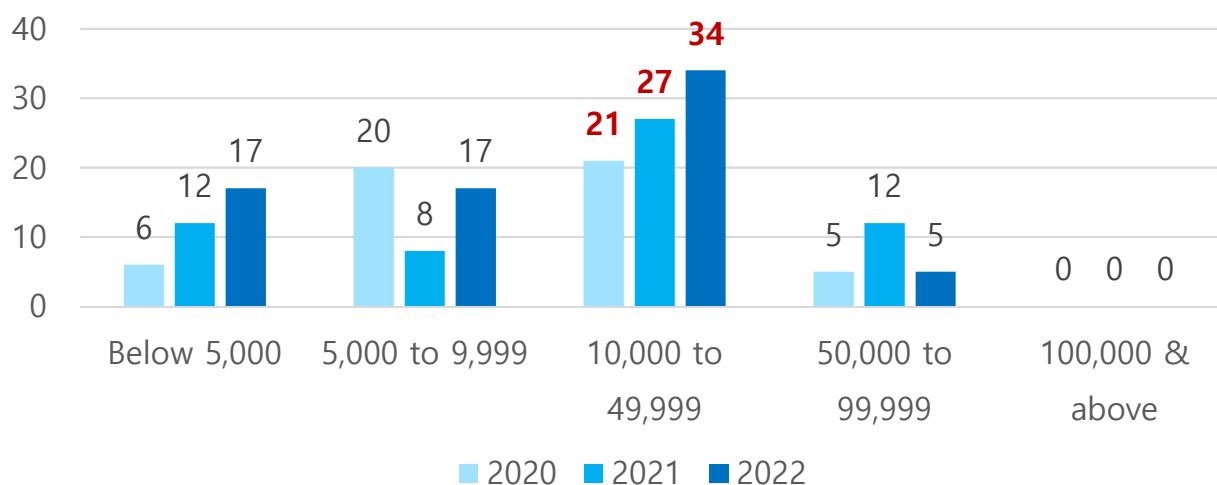


Statistics (KR)

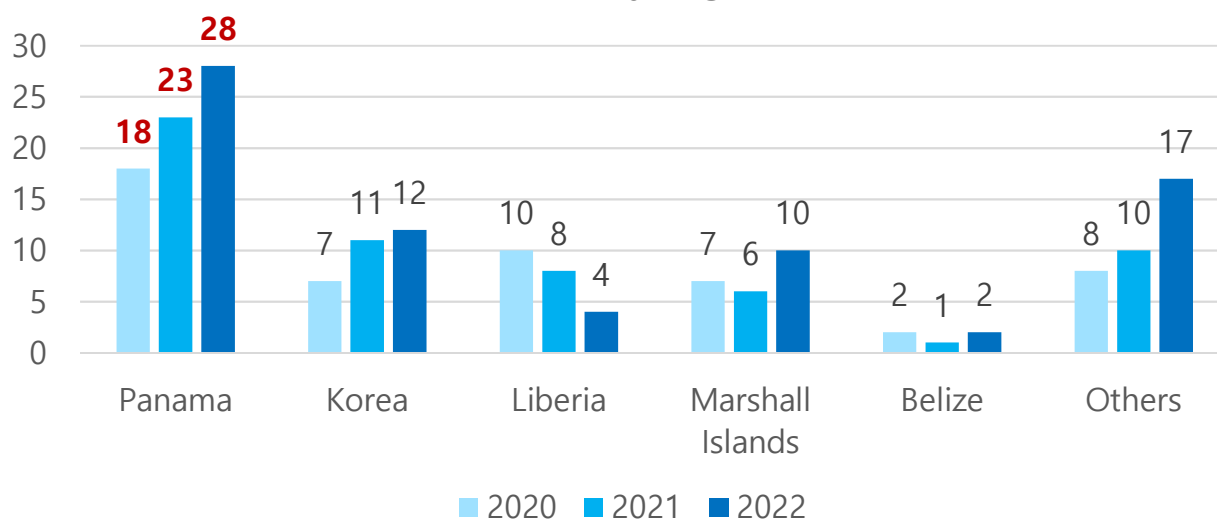
- Ships ranging from 10,000GT to 49,999GT showed the highest number of detention as of 21/27/34 over the last three years.
- Panamanian vessels, the largest fleet in KR, recorded the highest number of detentions as of 18/23/28 for the last three years.

Detention by tonnage and flag State

Detention by tonnage(GT)



Detention by flag State

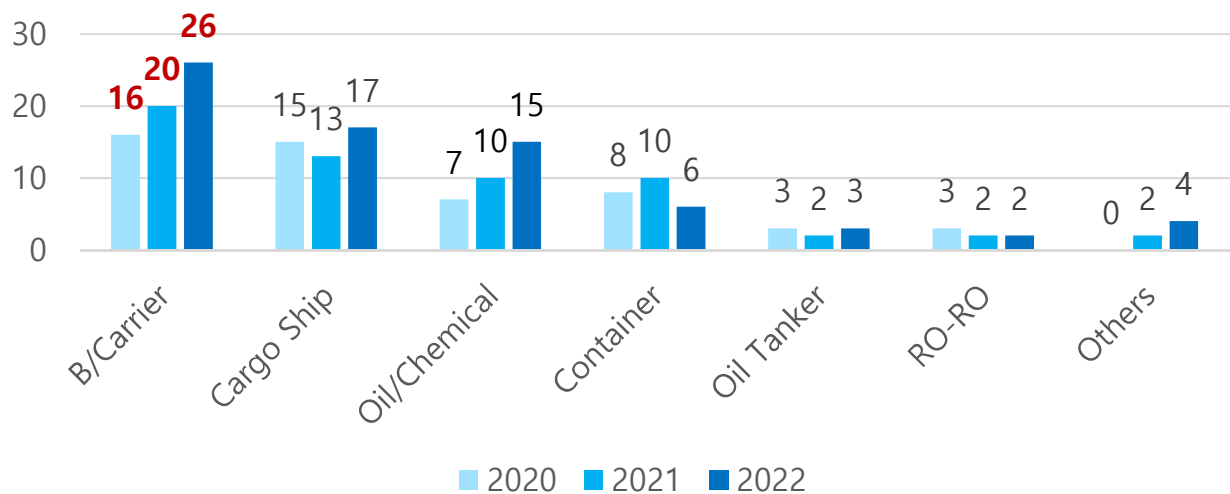


Statistics (KR)

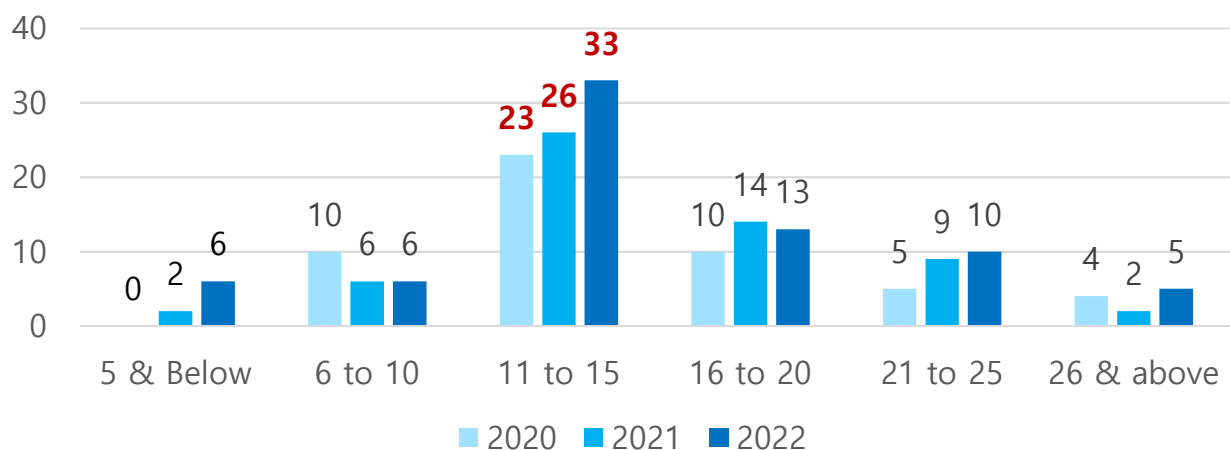
- Bulk carriers have shown the highest number of detention yearly, and cargo ships have ranked the second.
- Ships ranging from 11Y to 15Y have shown the most number of detentions. It is a result since the number of inspections is higher than that of other age groups.

Detention by ship type and age

Detention by ship type



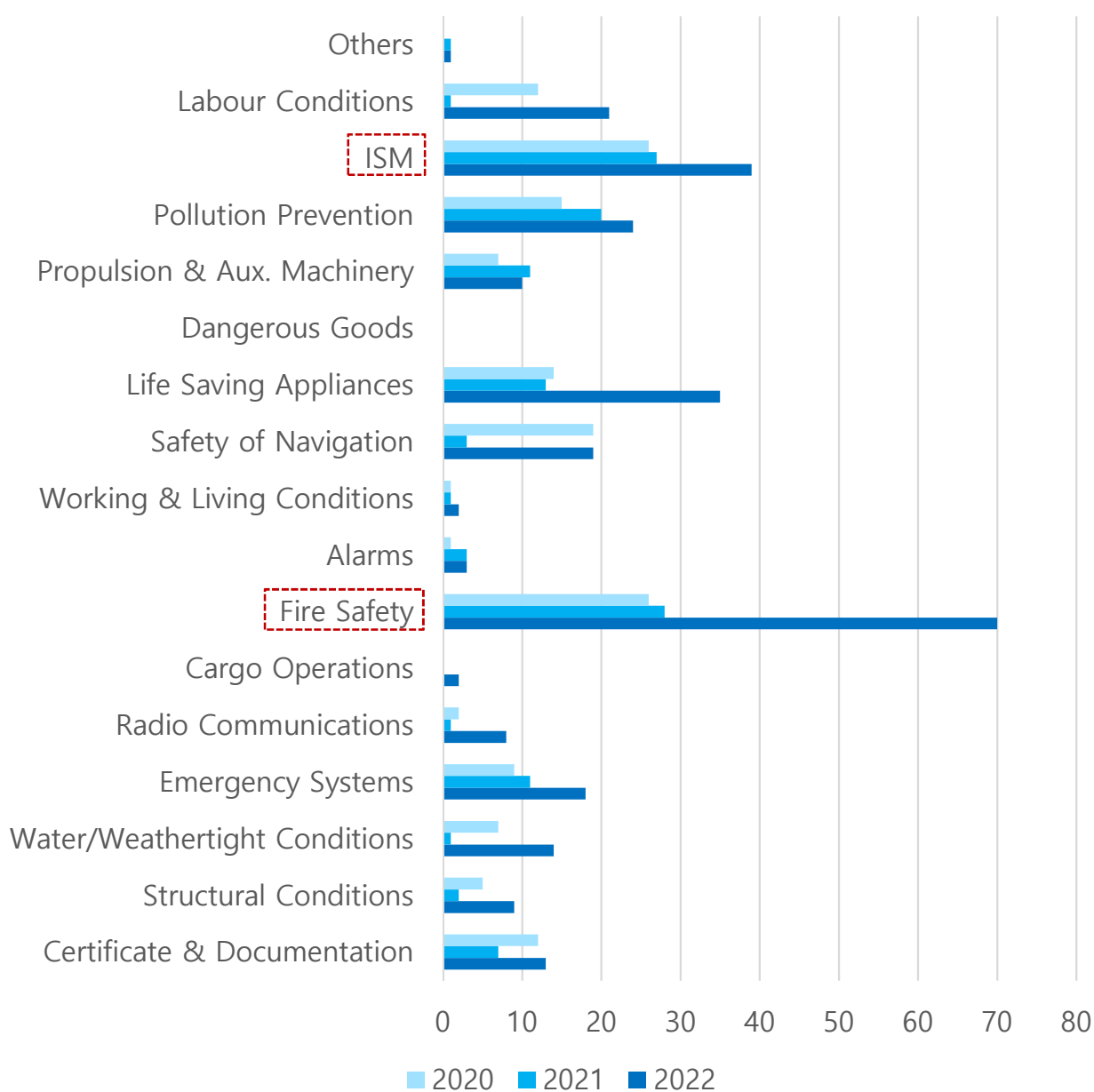
Detention by ship age



Statistics (KR)

- The 'Fire Safety' area has consistently secured the top-ranked alongside other PSC MoUs.
- 'ISM' area maintains its second position, yet its significance has steadily within KR and across most MoUs.

Detainable deficiencies by category





Integrated Survey Center

03

KR's Activities & Approach

- Proactive approach to PSC inspection
- Risk-based and customized service
- PSC seminar and training
- PSC information
- KR ISC
- KR PSC ADVISOR

KR's Activities & Approach (Proactive approach to PSC inspection)

- KR's ship route tracking offers an effective tool to prevent possible PSC detention.
- KR employs ship route tracking to identify targeted vessels. Based on information, KR endeavors to prevent PSC detentions through PSC pre-inspections and/or PSCO accompanying inspections.



COLLECTING



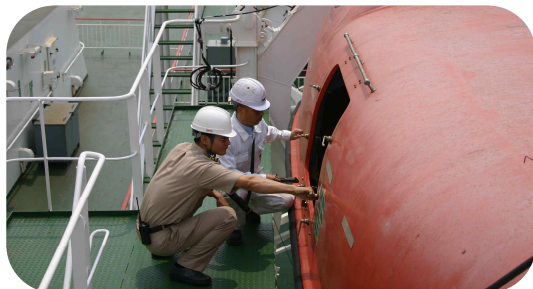
PROCESSING



NOTICE



TARGETING



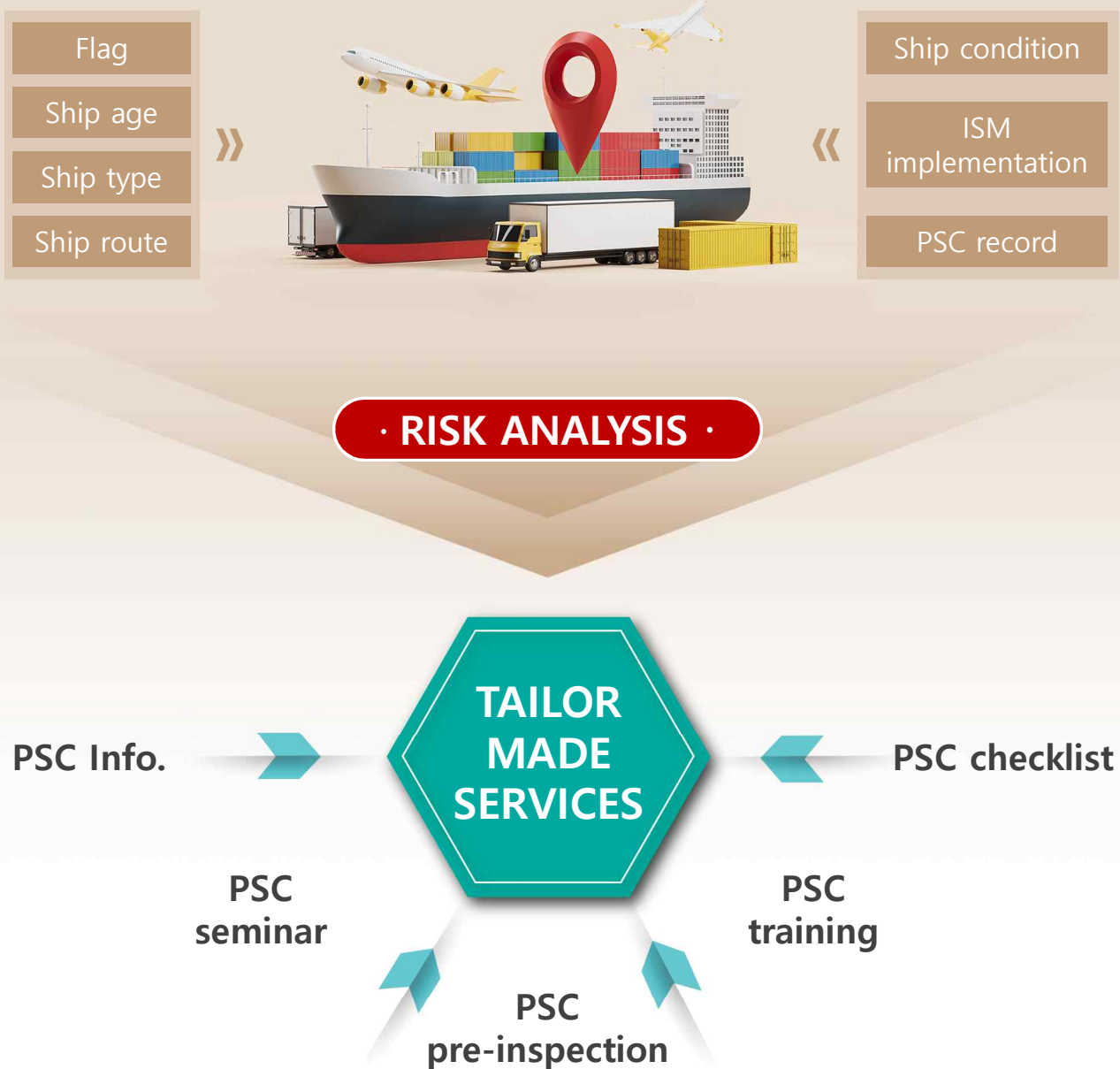
PSC PRE-INSPECTION



PREVENTION

KR's Activities & Approach (Risk-based and customized service)

- KR evaluates the ship's risk of multiple factors to determine the most suitable services for effective and efficient PSC inspections preparation.
- Employing risk analysis, KR delivers tailor-made services including relevant PSC info., checklists, seminars/training, PSC pre-inspection, and more.



KR's Activities & Approach (PSC Seminar & training)

- KR PSC seminar provides up-to-date PSC trends and information, enhancing the attendance's abilities to respond PSC inspections effectively.
- To meet numerous requests from shipping institutes, the Korean government and shipping companies, KR organized several PSC training programs.

SEMINAR

KR conducts annual PSC seminars.

TRAINING



Requested by shipping institutes
for seafarers



Requested by the Korean Government
for shipping companies

**Shipping
Company**

Requested by shipping companies
for seafarers and superintendents



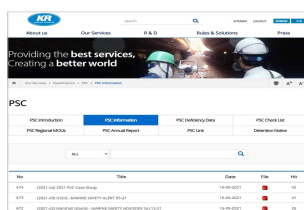
Hosted by KR
for surveyors and auditors

KR's Activities & Approach (PSC information)

- KR ensures seamless access to PSC-related information via our extensive website, emails and the intuitive KR "e-Fleet".
- KR's proactive PSC trend research guarantees the timely delivery of critical PSC information and insights.

Provision of PSC information

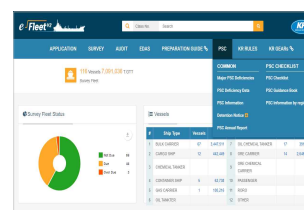
MEANS



KR website



E-mail



KR "e-Fleet"

CONTENTS



KR's Activities & Approach (KR ISC)

- Launched on 28 April 2022, "KR Integrated Survey Center(KR ISC)" operates as an internally developed a digital platform and aims to elevate KR's survey services, providing an integrated solution.
- In case of emergency, KR-ISC offers swift technical assistance, analyzing real-time vessel data and images to support well-informed decision making grounded in the ship's condition..



**Existing ship
Survey/Audit
management mode**



**PSC emergency
response mode**



**Marine accidents
monitoring/support mode**



**Ship during/after construction
management mode**



**LNG technology &
VR/AR survey simulator mode**



**KR promotion/Video
meeting/HSE mode**



Eco-ship support mode



KR's Activities & Approach (KR PSC ADVISOR)

- Debuting on 1 Jan. 2023, KR's advanced PSC Mobile app. seamlessly integrates KR "e-Fleet" & its website functions, enriching the user experience for PSC matters.
- With its user-friendly design, the app. offers swift access and real-time info.

KR PSC Mobile application



Map-Based Main Screen

Real-Time Update

User-friendly

Customized PSC Information

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