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THETIS

The PSC Target and Information System

Holger Meyer

Senior Project Officer Port State Control



Disclaimer

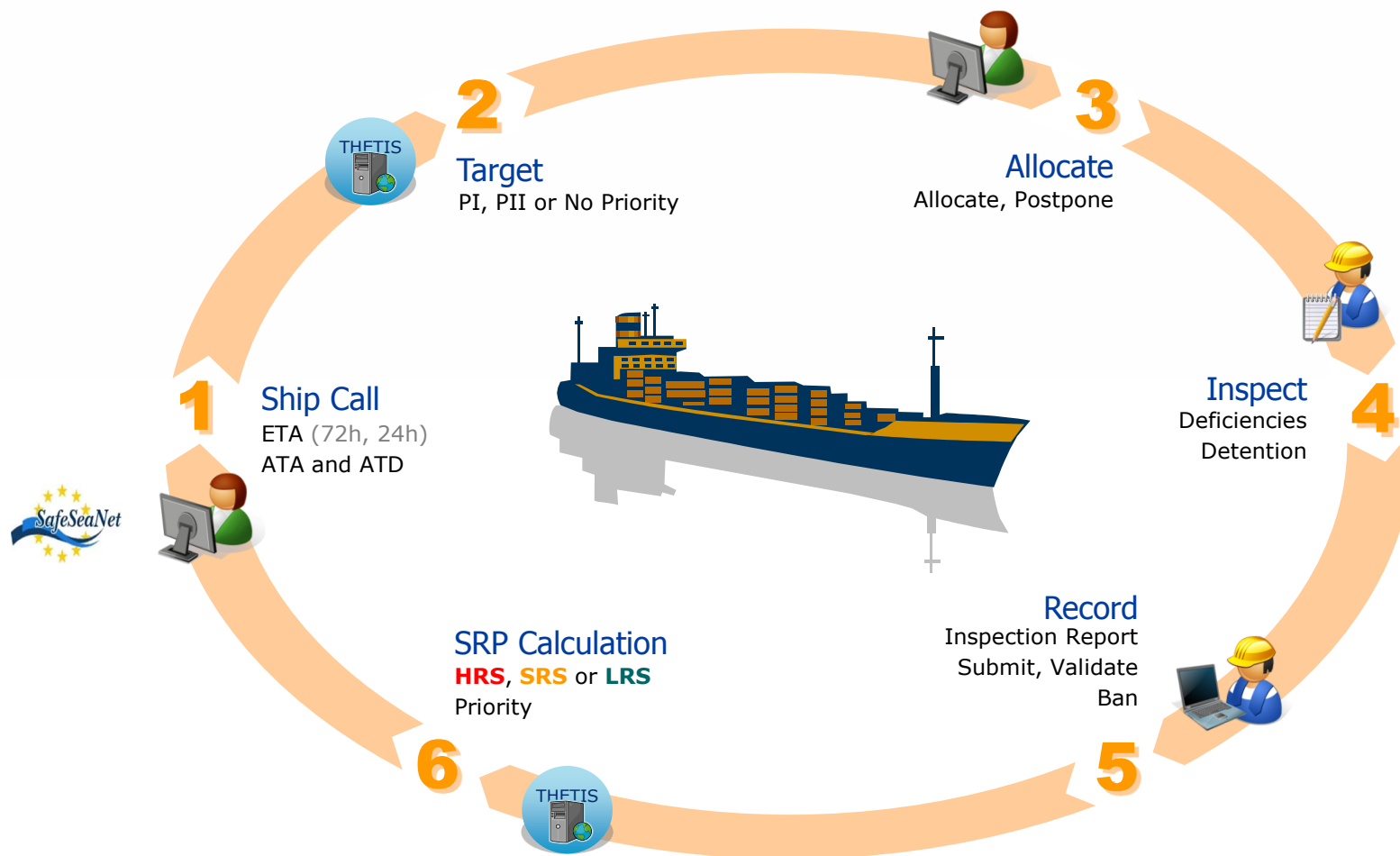
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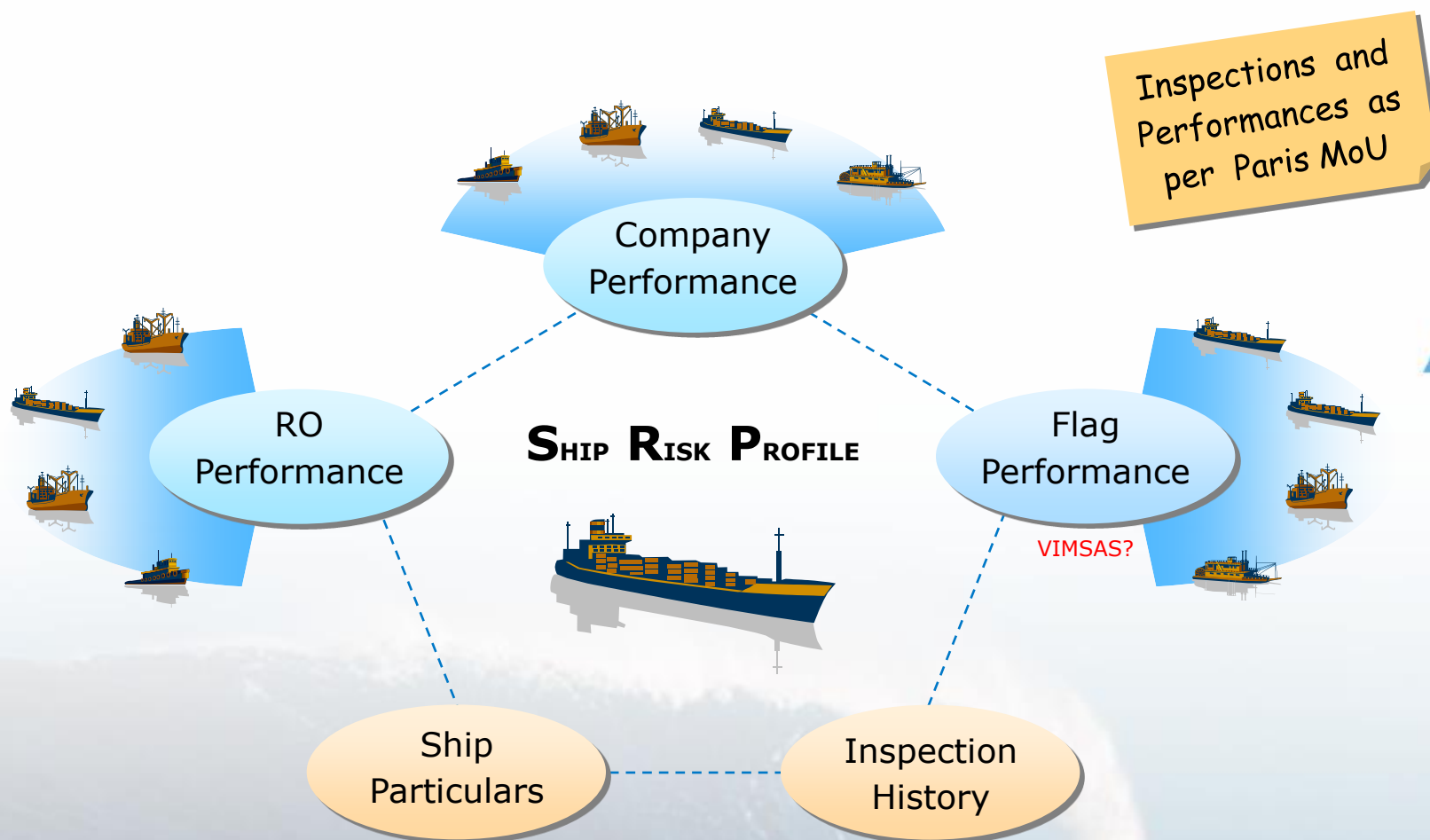
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PSC Directive 2009/16/EC (NIR)

Basic PSC Process



Basic PSC Process – SRP Calculations



NIR / PSC Directive 2009/16/EC consequences

- Improved targeting
Risk based targeting
- Less flexibility for MS in selecting ships for inspection
SRP, PI and PII, Overriding Factors, Unexpected Factors
- Regional commitments vs. national commitments
Fair Share, Postponement
- Further refusal of access provisions
Banning, All ship types
- Benchmarking of Flags, ROs and Companies
Inspection Intervals, Company and ROs Performance
- Widened scope from ports to ports **and anchorages**
Full coverage of ships visiting Paris MoU region

PSC Directive/NIR core elements

Core elements as stipulated in the (legal) text are the drivers for the design of the information system

New or Revised Elements compared to today's methodology

- RoPax references
- Ship Risk Profile
- Inspection frequency
- Postponement
- Quota (Over and Under burdened)
- Fair Share
- Banning
- Ship Reporting

References to Ropax in PSC Directive

Recital 22

Reduce Burden for MS

Ropax surveys count as PSC inspections

Diff. Flag

(21) Some ships pose a diminished risk to maritime safety due to the nature of their business because of their poor condition, flag performance and history. It is therefore legitimate for the Commission to encourage ships from entering the ports and anchorages of Member States. The measures should be proportionate and could result in a permanent refusal of access to the port or anchorage of the ship if the flag State or the managing company of the ship persistently fails to take corrective action in spite of several refusals of access and detentions in ports and anchorages within the Community. Any third refusal of access can only be lifted if a number of conditions designed to ensure that the ship concerned can be operated safely in Community waters, in particular relating to the flag State of the ship and the managing company, are fulfilled. Otherwise, the ship should be permanently refused access to ports and anchorages of the Member States. In any case, any subsequent detention of the ship concerned should lead to a refusal of access to its ports and anchorages within the Community.

(22) With a view to reducing the burden placed on Member States and companies by the implementation of the provisions of Directive 1999/35/EC of 29 April 1999 on a common system of inspection of high-speed ferries and high-speed passenger craft services¹, carried out on ro-ro ferries or high-speed passenger craft by a flag State which is not the flag State of the ship, and which include at least all the items listed in Annex VI to this Directive, the Commission should examine whether it is appropriate that Directive 1999/35/EC be amended in the future with a view of ensuring the level of safety required for the operation of ro-ro ferries and high-speed passenger craft services from ports of Member States.

¹ OJ L 138, 1.6.1999, p. 1.

Article 15.3

Ropax surveys

1. count as PSC inspections MD/EI

2. count for MS commitment

Ropax subject to PSC regime

Rectification of deficiencies, Detentions, Banning

As long as security checks are conducted, Member States shall apply the relevant procedures set out in Annex VI of this Directive to all ships referred to in Articles 3(1), 3(2) and 3(3) of Regulation (EC) No 725/2004 relating at their ports and anchorages. The provisions of Article 14 of this Directive concerning expanded inspections shall apply to ro-ro ferries and high-speed passenger craft, referred to in Article 2(a) and (b) of Directive 1999/35/EC. The provisions of Article 14 of this Directive concerning expanded inspections shall apply to ro-ro ferries and high-speed passenger craft, referred to in Article 2(a) and (b) of Directive 1999/35/EC by a host State which is not the flag State of the ship, such specific survey shall be recorded as a more detailed than expanded inspection, as referred in the inspection database in accordance with the provisions of Article 12 of this Directive. The provisions of this Directive concerning the fulfilment of the inspection obligations of the Member States shall apply to all the items referred to in Annex VI to this Directive are covered.

4. If necessary, the Commission may, in accordance with the procedure referred to in Article 31(2), adopt the rules for the harmonised implementation of paragraph 1 and 2 of this Article.

MD/EI

high-speed passenger craft

Directive 1999/35/EC, the provisions of this Directive concerning rectification of deficiencies, detention, refusal of access, follow-up to inspections, detentions and refusal of access, as appropriate, shall apply.

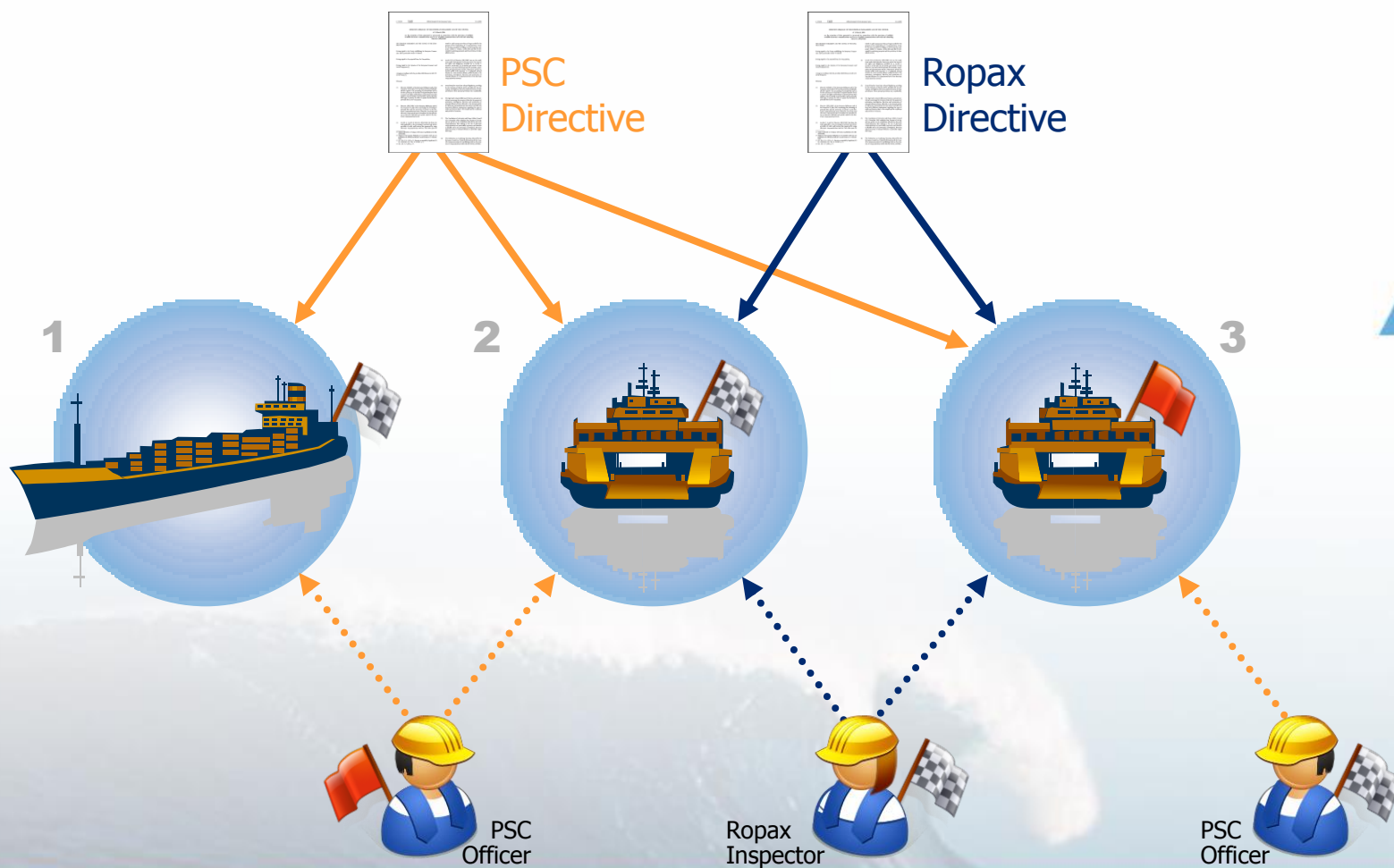
Article 16.1

Banning

Article 16
Access refusal measures concerning certain ships

1. A Member State shall ensure that any ship which
 - flies the flag of a State whose detention rate falls into the black list, adopted in accordance with the Paris MOU on the basis of information recorded in the inspection database and as published annually by the Commission, and has been detained or has been issued with a prevention of operation order under Directive 1999/35/EC more than twice in the course of the preceding 36 months in a port or anchorage of a Member State or of a State signatory of the Paris MOU; or
 - flies the flag of a State whose detention rate falls into the grey list, adopted in accordance with the Paris MOU on the basis of information recorded in the inspection database and as published annually by the Commission, and has been detained or has been issued with a prevention of operation order under Directive 1999/35/EC more than twice in the course of the preceding 24 months in a port or anchorage of a Member State or of a State signatory of the Paris MOU,is refused access to its ports and anchorages, except in the situations described in Article 21(6).
- Refusal of access shall become applicable as soon as the ship leaves the port or anchorage where it has been the subject of a third detention and where a refusal of access order has been issued.

PSC and Ropax Exercise



NIR: Ship Risk Profile

- Generic Factors

- Type of Ship
- Age of Ship
- Flag
- RO
- Company

- Historical Factors

- Deficiencies
- Detentions



HRS – High Risk Ship

SRS – Standard Risk Ship

LRS – Low Risk Ships

(SRP is recalculated on a daily basis)

NIR: How will Ship be HRS?

- HRS have Weighting points ≥ 5

- Ship Type

Chemical, Gas, Oil, Bulk or Passenger Ship

2 points

- Ship Age > 12 yrs

1 point

- VHR, HR, and MR to HR Flag

2 points

- MR Flag

1 point

- Very Low or Low RO Performance

1 point

- Very Low or Low Company Performance

2 points

- Detentions in previous 36 months ≥ 2

1 point

Example: Oil Tanker, HR Flag and Low RO performance.

NIR: How can Ship be LRS?

- **Generic Factors**

- Ship Type and Age have no influence
- Flag is **White** and **IMO-Audit**
- RO is **Recognised** at least by one PMoU MS and **High Performance**
- Company is **High Performance**

- **Historical Factors**

- **Equal or less than 5 deficiencies** in each inspection in previous 36 months
- **No detentions** in previous 36 months
- **Has been** inspected in previous 36 months

NIR: How to know Flag Performance?

- Consult Paris MoU website
www.parismou.org
- Calculated taking in account previous 3 years
- Calculated each year
Renewed every 1st of July
- Also covered by implementing Regulation
- Renewed annually on 1st July

Black List

Black List 2005 - 2007

Rank	Flag	Inspections	Defects	Black to Grey Limit	Grey to White Limit	Excess Factor
80	Romania	308	1071	30	14	7.89
79	Bolivia	30	14	30	14	7.15
78	Albania	300	78	29	14	5.97
77	Cambodia	448	63	29	14	4.59
76	Slovakia	280	51	29	14	4.18
75	Georgia	622	140	29	14	3.64
74	Serra Leone	131	29	29	14	3.45
73	St Kitts and Nevis	198	28	29	14	3.29
72	Syrian Arab Republic	170	31	29	14	3.02
71	Honduras	64	16	29	14	2.59
70	Kambodia	550	34	29	14	2.11

Grey List

Black - Grey - White lists
Grey List 2005 - 2007

Rank	Flag	Inspections	Defects	Black to Grey Limit	Grey to White Limit	Excess Factor
51	Comoros	138	14	10	4	1.55
50	Algeria	123	12	14	3	0.83
49	Morocco	106	13	17	5	0.69
48	Thailand	203	16	23	9	0.55
47	Bulgaria	310	23	30	14	0.58
46	Kazakhstan	105	6	12	3	0.53
45	Turkey	1862	126	149	112	0.44
44	Austria	34	2	5	0	0.44
43	Dominican Republic	34	2	5	0	0.44
42	Taiwan, China	37	2	6	0	0.40
41	Croatia	209	10	2	0	0.40
40	Cook Islands	44	2	6	0	0.34
39	Korea, Republic of	189	11	20	7	0.32
38	Sierra Leone	210	10	20	12	0.30
37	Latvia	138	7	10	4	0.23
36	Saudi Arabia	53	2	12	0	0.20
35	France	106	6	12	3	0.24
34	Poland	174	6	18	6	0.24
33	Malaysia	96	6	1	2	0.25
32	Romania	44	1	6	0	0.18
31	Turkey	48	7	10	17	0.17
30	Antilles, Netherlands	748	43	64	40	0.11
29	Japan	62	1	8	1	0.08

White List

Black - Grey - White lists
White List 2005 - 2007

Rank	Flag	Inspections	Defects	Black to Grey Limit	Grey to White Limit	Excess Factor
30	San Marino	77	1	2	1	0.00
29	Iran, Islamic Republic of	244	10	24	10	0.00
28	Malta	171	6	18	6	0.00
27	Israel	35	0	1	0	0.00
26	United States of America	181	6	10	7	-0.13
25	Russian Federation	2062	153	211	165	-0.17
24	Finland	162	4	17	9	-0.25
23	Cayman Islands, UK	360	14	36	19	-0.46
22	India	4410	222	347	256	-0.49
21	Manuatu	128	2	14	4	-0.62
20	Barbados	381	11	35	18	-0.73
19	Kiribati, UK	609	31	76	50	-0.79
18	Belgium	184	16	17	9	-0.88
17	Cyprus	2100	85	212	167	-0.95
16	Portugal	832	13	47	27	-1.02
15	Anguilla and Barbuda	4542	155	346	264	-1.04
14	Saint	203	4	20	11	-1.10
13	Liberia	3430	101	285	215	-1.18
12	Hong Kong, China	1100	30	85	66	-1.20
11	Greece	1557	40	126	62	-1.22
10	Bahamas	3603	100	275	222	-1.26
9	Luxembourg	181	17	9	5	-1.30
8	Norway	2626	63	200	162	-1.35
7	Italy	1210	54	102	73	-1.41
6	Marshall Islands	1820	54	131	97	-1.42
5	Netherlands	2012	65	220	182	-1.43
4	Philippines	116	10	10	7	-1.45
3	Denmark	1271	23	104	74	-1.46
2	Main Isle of UK	628	16	76	35	-1.51
1	Singapore	867	15	84	58	-1.57
	Finland	587	7	52	30	-1.56
	Germany	1243	16	102	72	-1.58
	United Kingdom	1882	24	135	100	-1.67
	Sweden	1001	11	84	56	-1.73
	China	300	27	12	11	-1.75
	Barbuda, UK	300	1	20	13	-1.79
	France	313	1	30	14	-1.81

Flags meeting low risk criteria

- In accordance with Annex 7, paragraph 12 of the (amended) MoU, an up-to-date list is published on this page of flag States which meet the flag criteria for a low risk ship (white list + IMO Audit).
- Flags who's total number of inspections over a 3-years rolling period does not meet the minimum of 30 are not included in the Paris MoU Black-Grey-White list. Consequently some flags cannot meet the criteria for their ships to qualify as Low Risk Ships under the Paris MoU, despite having undergone the IMO VIMSAS audit.
- The listing of flags having met the flag criteria for a Low Risk Ship is for Paris MoU inspection purposes only and should not be used in any other context.

Flags meeting low risk criteria

- Antigua & Barbuda
- Bahamas
- Belgium
- Bermuda (UK)
- Cayman Islands (UK)
- China
- Cyprus
- Denmark
- Estonia
- Finland
- Faroe Islands
- France
- Germany
- Gibraltar (UK)
- Greece
- Hongkong, China
- Ireland
- Isle of Man (UK)
- Italy
- Japan
- Latvia
- Liberia
- Lithuania
- Luxembourg
- Marshall Islands
- Malta
- Netherlands
- Norway
- Panama
- Poland
- Republic of Korea
- Russian Federation
- Singapore
- Spain
- Sweden
- United Kingdom

NIR: How to know RO Performance?

- Consult Paris MoU Website
www.parismou.org
- Calculated taking in account previous 3 years
- Calculated each year
Renewed every 1st of July
- RO Performance is the RO, not the Class
- Paris MoU calculation, not the EU Directive
- Renewed annually on 1st July

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Paris MOU The Paris Memorandum of Understanding on Port State Control

Recognized Organization performance table 2005 – 2007

Rank	Recognized Organisation	RO	Inspections	Deficiencies	Low to Medium Limit	Medium to High Limit	Excess Factor	Performance Level
27	Korea Classification Society (DPR Korea) ¹	KCS	112	8	5	0	2.75	Very Low
26	International Register of Shipping (USA)	IS	790	38	23	9	2.65	Low
25	Shipping Register of Ukraine	SRU	441	19	14	3	1.80	Low
24	Register of Shipping (Albania)	RSA	287	13	10	1	1.77	Low
23	Bulgarski Korabni Registar	BKR	264	12	10	1	1.72	Low
22	INCLAMAR (Cyprus)	INC	171	7	7	0	1.03	Low
21	Panama Maritime Documentation Services	PMDS	165	5	7	0	0.75	Low
20	Isthmus Bureau of Shipping (Greece)	IBS	206	5	8	0	0.62	Medium
19	International Naval Surveys Bureau (Greece)	INSB	730	14	21	8	0.46	Medium
18	Hellenic Register of Shipping (Greece)	HRS	837	15	24	10	0.38	Medium
17	Panama Register Corporation	PRC	143	2	5	0	0.37	Medium
16	Croatian Register of Shipping	CRS	307	4	11	2	0.28	Medium
15	Polski Rejestr Statkow	PRS	1018	13	28	13	0.00	Medium
14	China Corporation Register of Shipping	CCRS	78	0	4	0	0.00	Medium
13	Indian Register of Shipping	IRS	148	0	5	0	0.00	Medium
12	RINAVE Portuguesa	RIP	75	0	4	0	0.00	Medium
11	Korean Register of Shipping	KRS	598	5	18	6	-0.19	Medium
10	Russian Maritime Register of Shipping	RMRS	7080	50	161	122	-1.11	Medium
9	China Classification Society	CSC	620	2	23	9	-1.29	Medium
8	Lloyd's Register (UK)	LR	12036	70	285	232	-1.36	Medium
7	Nippon Kaiji Kyokai	NKK	5623	28	137	100	-1.37	Medium
6	Turkish Lloyd	TL	1144	3	31	18	-1.41	Medium
5	Bureau Veritas (France)	BV	10108	48	228	179	-1.42	Medium
4	American Bureau of Shipping (USA)	ABS	4848	18	113	80	-1.50	Medium
3	Registro Italiano Navale	RINA	2647	6	65	41	-1.64	Medium
2	Germanischer Lloyd	GL	13271	30	292	238	-1.73	Medium
1	Det Norske Veritas	DNV	11170	21	248	199	-1.77	Medium

¹ formerly Register of Shipping

In this table only Recognized Organizations that had more than 60 inspections are taken into account. The formula used is identical to the one used for the Black Grey and White list. However, the values for P and Q are adjusted to P=0.02 and Q=0.01.

Where a country is shown after a Recognized Organization this indicates its location and not necessarily any connection with the maritime administration of that country.

NIR: How will Ship be SRS?

If neither a **LRS** or a **HRS**!



NIR: How can Company be High Performance?

- Must have **Deficiency Index** below average

$$\text{Deficiency Ratio} = \frac{\text{No. of deficiencies(*) in ALL inspections in ALL Ships}}{\text{No. of inspections in ALL Ships}} \quad (\text{in last 36 months})$$

(*) each ISM deficiency counts as 5.

- Must have **Detention Index** below average

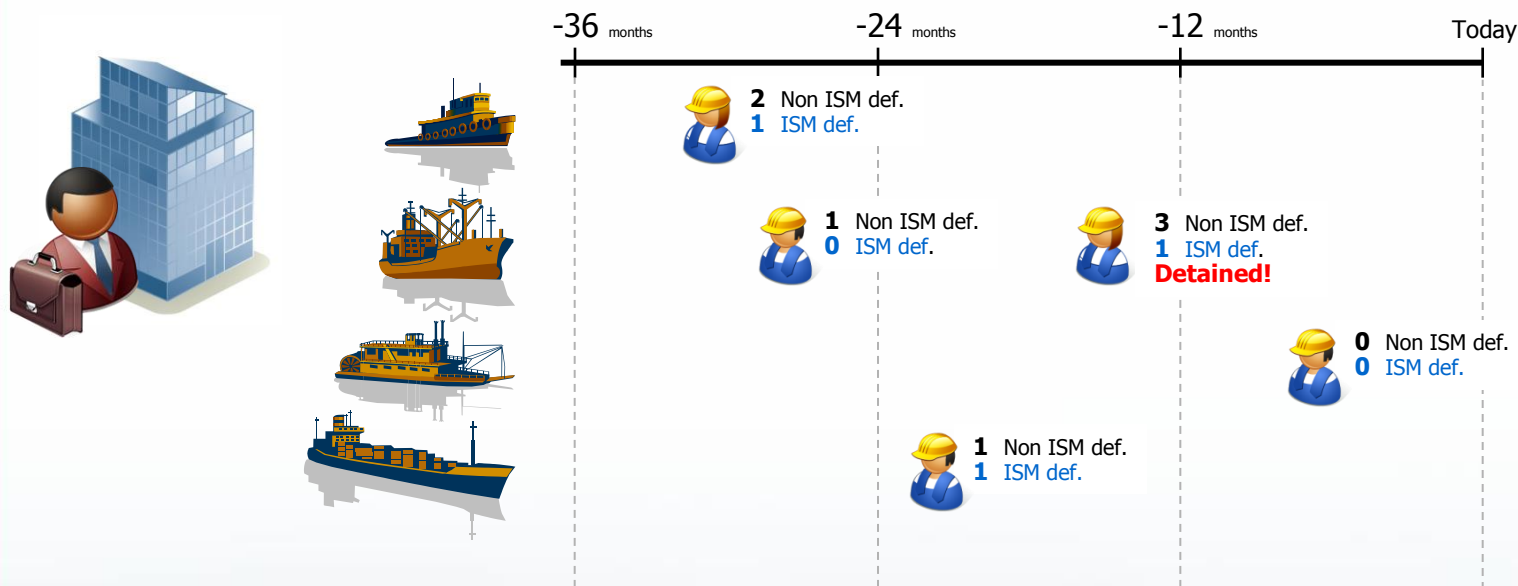
$$\text{Detention Ratio} = \frac{\text{No. of detentions of ALL Ships}}{\text{No. of inspections in ALL Ships}} \quad (\text{in last 36 months})$$

Only possible if no
banning of any of
the ships in last 36
months

NIR: Determine Company Performance Exercise

- 1st** Calculate Company Ratios
- 2nd** Calculate Average Ratios
- 3rd** Determine Company Indexes
- 4th** Get Company Performance from Matrix

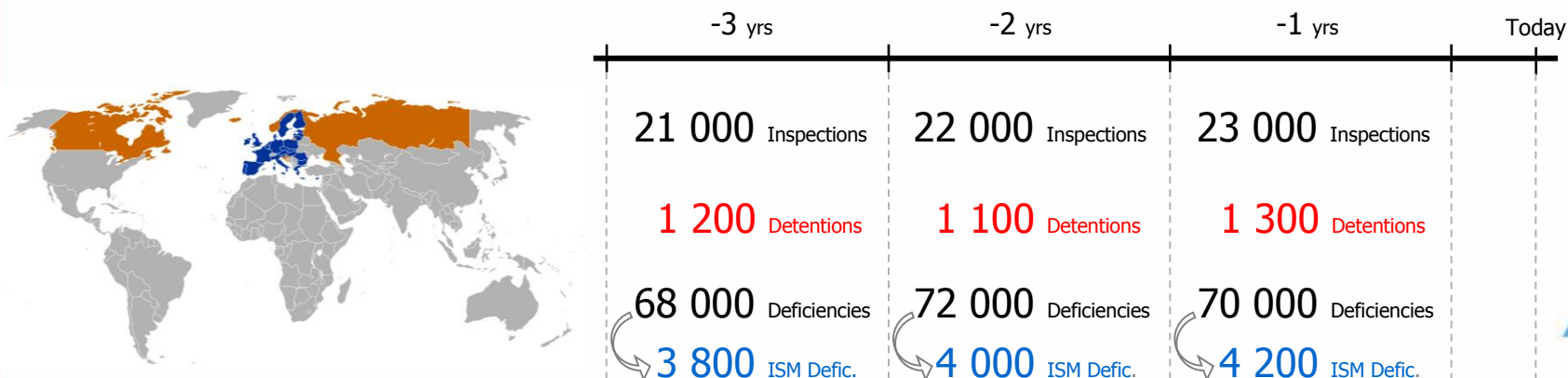
NIR: 1st Calculate Company Ratios



$$\text{Detention Ratio} = \frac{1 \text{ Detention}}{5 \text{ Inspections}} = 20 \% \text{ det./insp.}$$

$$\text{Deficiency Ratio} = \frac{7 \text{ Non-ISM def.} + (3 \text{ ISM def.} \times 5)}{5 \text{ Inspections}} = 4.4 \text{ points/insp.}$$

NIR: 2nd Calculate Average Ratios

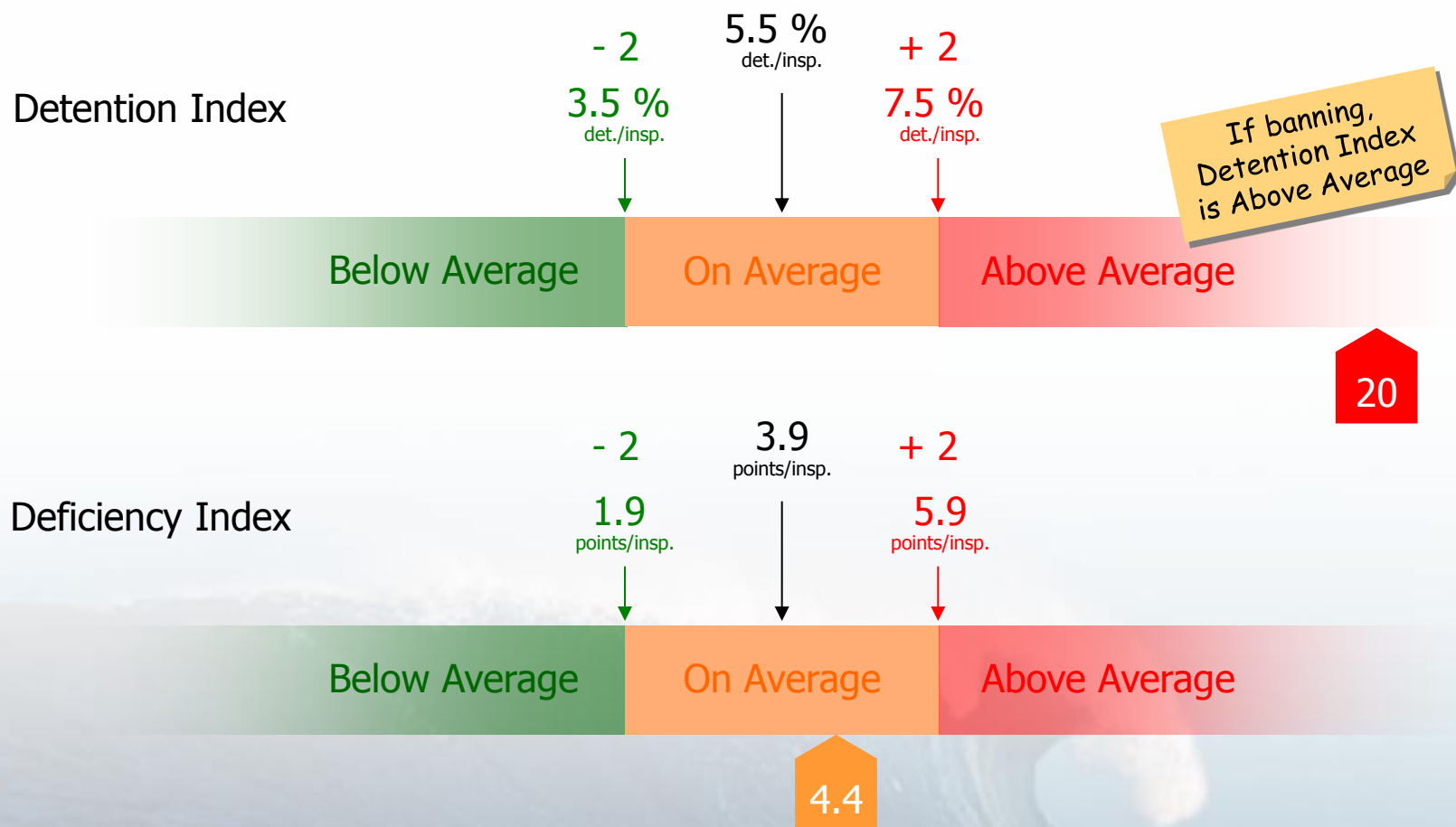


Average : 22 000 Inspections, 1 200 Detentions, 70 000 Deficiencies from which 4 000 are ISM related

$$\text{Average Detention Ratio} = \frac{1\,200 \text{ Detention}}{22\,000 \text{ Inspections}} \sim 5.5 \% \text{ det./insp.}$$

$$\text{Average Deficiency Ratio} = \frac{66\,000 \text{ Non ISM def.} + (4\,000 \text{ ISM def.} \times 5)}{22\,000 \text{ Inspections}} \sim 3.9 \text{ points/insp.}$$

NIR: 3rd Determine Company Indexes (PSCC 43)



NIR: 4th Get Company Performance from Matrix

Detention Index	Deficiency Index	Company Performance
Above Average	Above Average	Very Low
Above Average	Average	Low
Above Average	Below Average	
Average	Above Average	
Below Average	Above Average	
Average	Average	Medium
Average	Below Average	
Below Average	Average	
Below Average	Below Average	High

If no Inspections,
Company
Performance is
Medium

NIR: Inspection Priority



... MS still may
inspect outside
the regime!

Inspection Window

If not inspected within
Window, ship becomes

Priority II

Priority I

Ship **may** be
inspected

Ship **must** be
inspected

But...

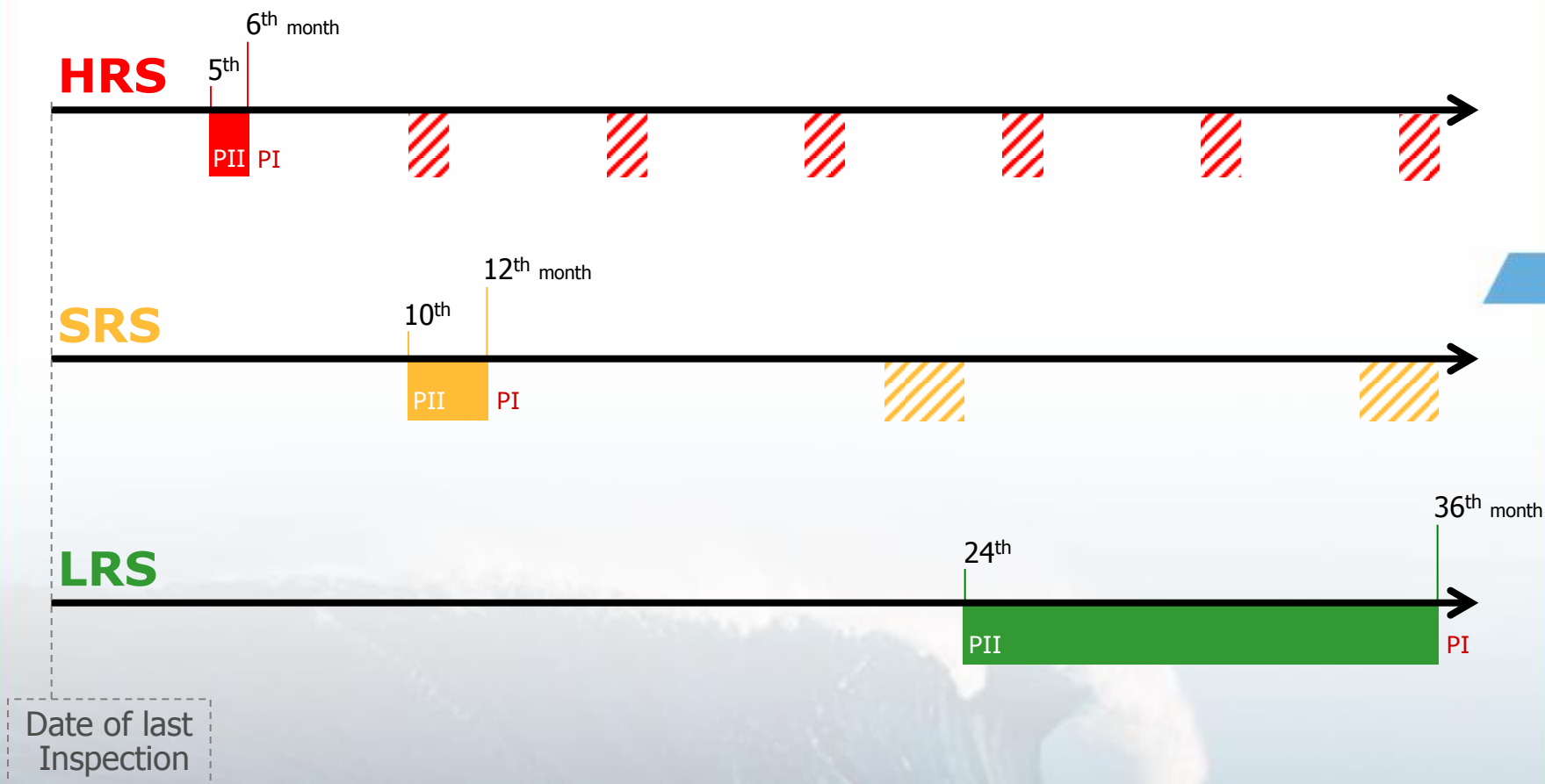
Overriding Factors

Priority I

Unexpected Factors

Priority II

NIR: SRP Inspection Window



Reporting Obligations

- 72H Before ETA if eligible for Expanded Inspection
PSC Directive (2009/16/EC) – *Article 9 and Annex III*
- 24H Before ETA for every ship
VTM Directive (2002/59/EC) – *Article 4*
- ATA and ATD within a reasonable time
PSC Directive (2009/16/EC) – *Article 24.2*

NIR: Overriding Factors (triggers PI)

- Ships reported by another Member State
Excluding Unexpected Factors
- Collision, grounding or stranding
- Discharge of harmful substances or effluents
- Erratic or unsafe manoeuvring
whereby routing measures adopted by IMO, or safe navigational practices and procedures not followed
- Class suspension/withdrawn for safety reasons after last PSC inspection
- Ships not identified in the database

NIR: Unexpected Factors (triggers PII)

- Ships reported by pilots or relevant authorities
- Fail to comply with reporting obligations
ETA
- Outstanding deficiencies
Only for Code 15 (rectify at next port) and 18 (rectify in 3 months)
- Previously detained more than 3 months ago
- Complain from crew, person or organization with legitimate interest
Safe operation, living/working conditions and pollution
- Ship operated in a manner to pose a danger
- Reported cargo problems
Noxious or dangerous cargo in particular
- Presumption of SRP higher than the provided by THETIS
- Certificates by a formerly (PMoU) RO where recognition was withdrawn

Type of Inspections - Where to look

- Initial inspection

Annex 9 of the Memorandum and the guideline on type of inspection / PSC Directive (2009/16/EC) – Article 13.1

- More detailed inspection

Annex 9 of the Memorandum and the guideline on type of inspection / PSC Directive (2009/16/EC) – Article 13.3 and Annex V

- Expanded inspection

Annex 9 of the Memorandum and the guideline on type of inspection / PSC Directive (2009/16/EC) – Article 14 and Annex VII and the Implementation Regulation 428/2010

NIR: Type of inspections

HRS or **LRS/SRS** of a Risk Type and >12 yrs

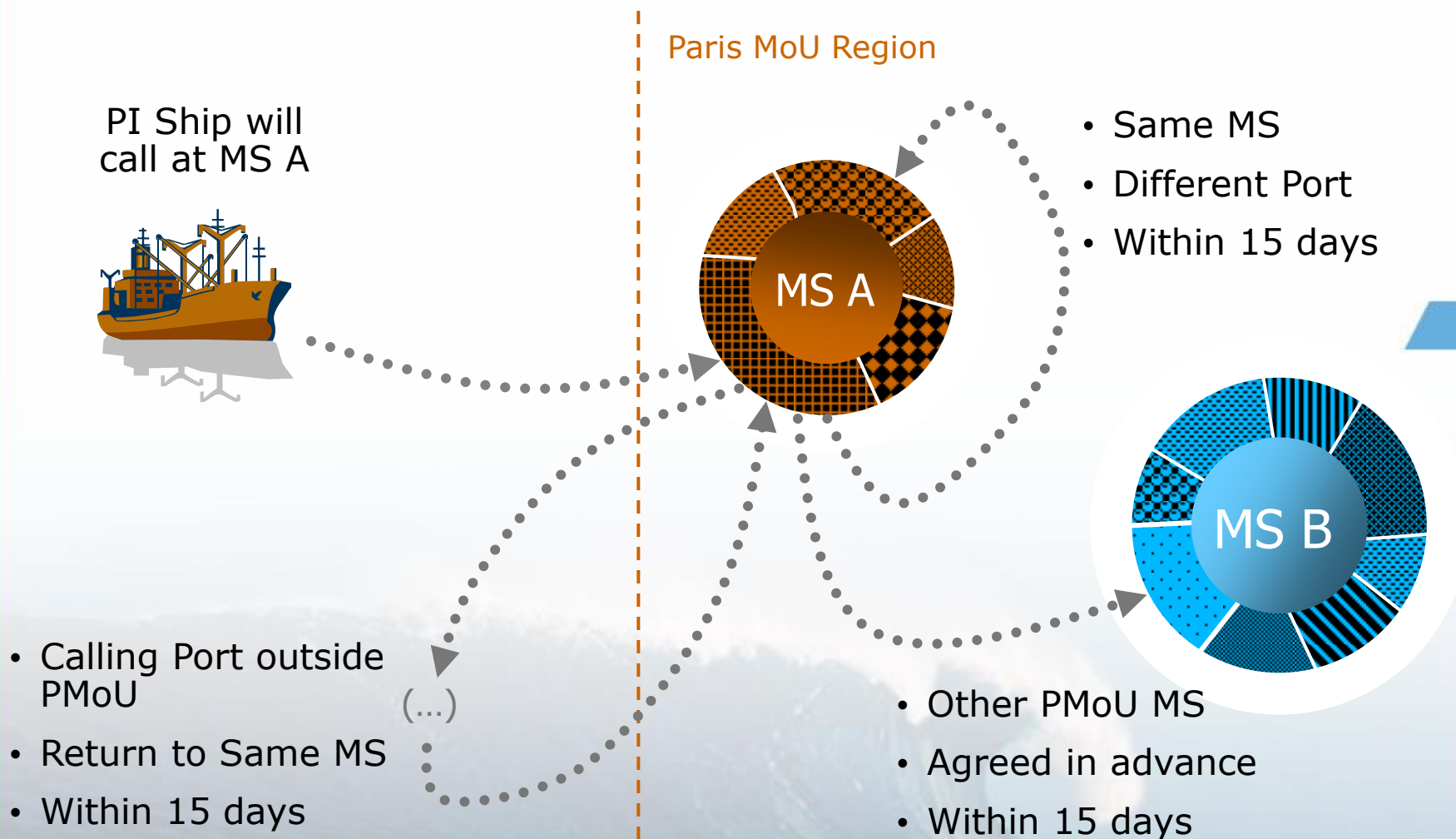
	Initial	MD	EI
Periodic	-	-	✓
Additional	-	✓	✓ *
Periodic + Additional	-	-	✓

* According to the professional judgement

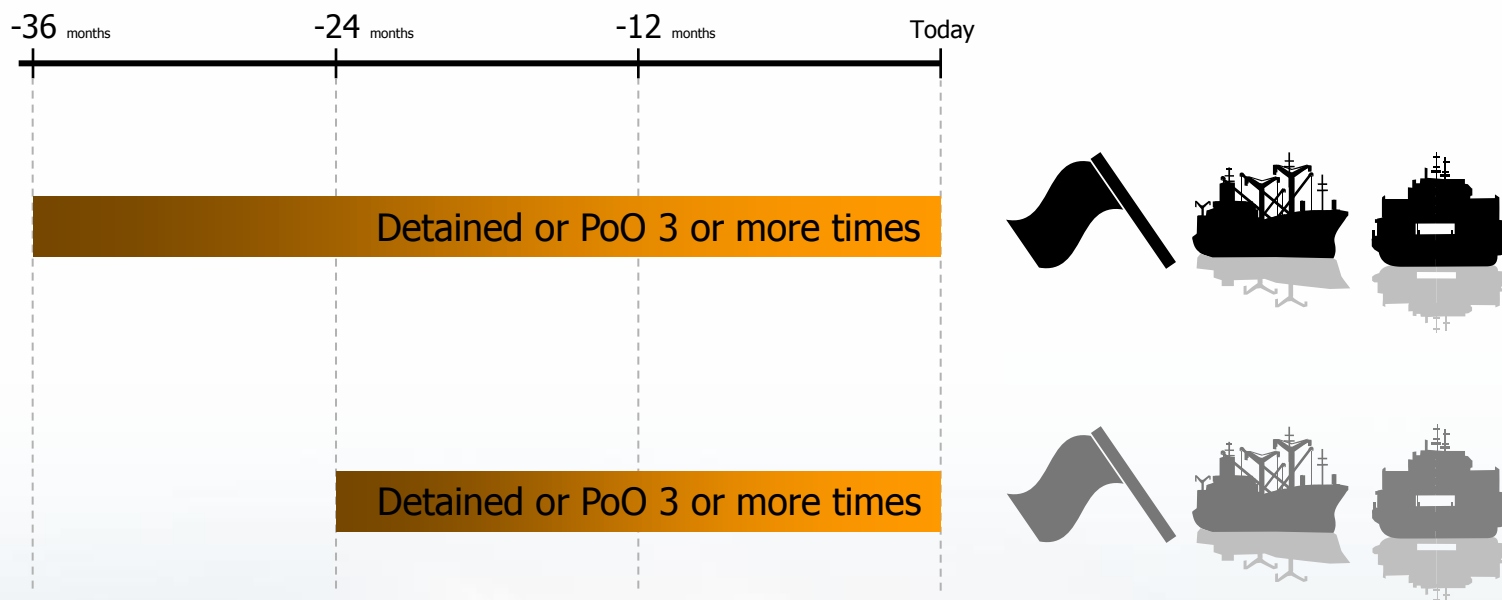
LRS/SRS not (of a Risk Type and >12 yrs)

	Initial	MD	EI
Periodic	✓	✓	-
Additional	-	✓	-
Periodic + Additional	-	✓	-

NIR: Postponement Possibilities for PI Ships



NIR: Refusal of Access (Banning)

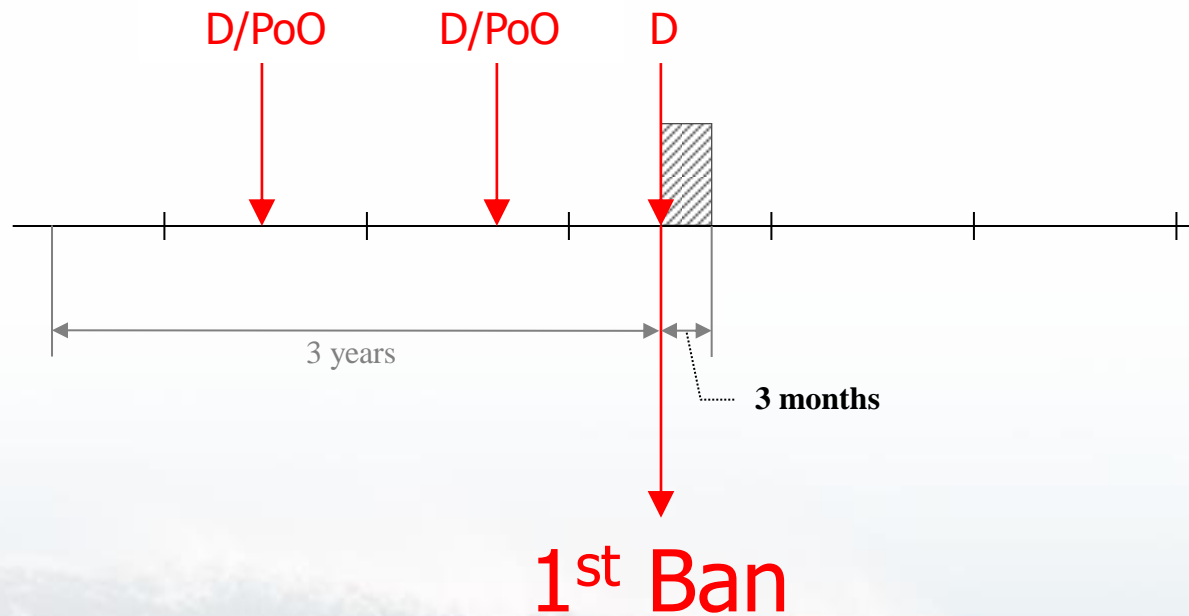
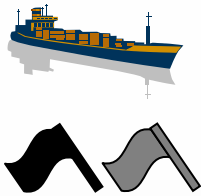


OR...

- Jump detentions
- Fail to call to agreed repair yard

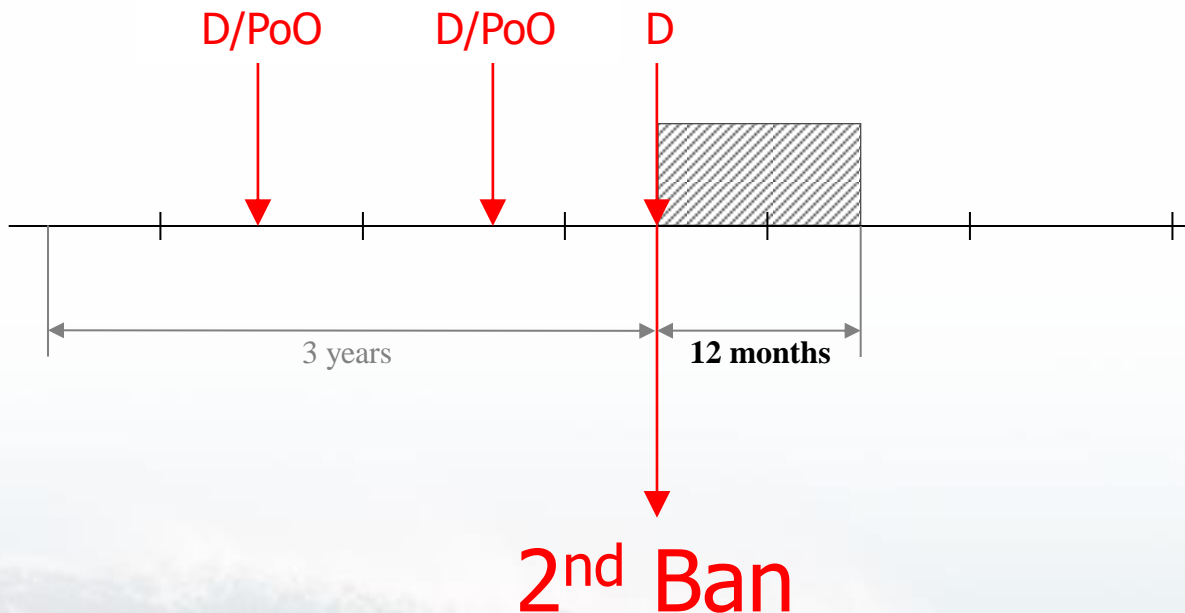
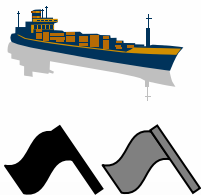
Multiple Banning – 1st Ban (Example for Black Flag. Grey Flag is 2 yrs)

Ship was
never banned



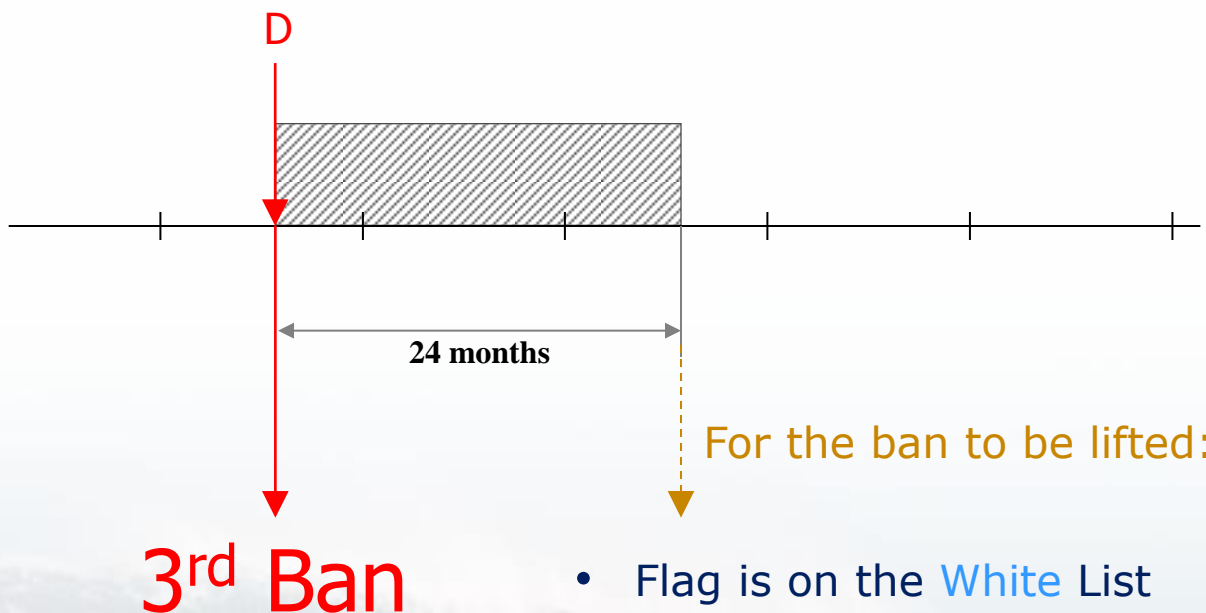
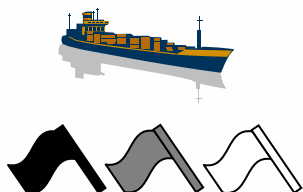
Multiple Banning – 2nd Ban (Example for Black Flag. Grey Flag is 2 yrs)

Ship was
banned once
(since 17/06/2009)



Multiple Banning – 3rd Ban

Ship was
banned twice
(since 17/06/2009)

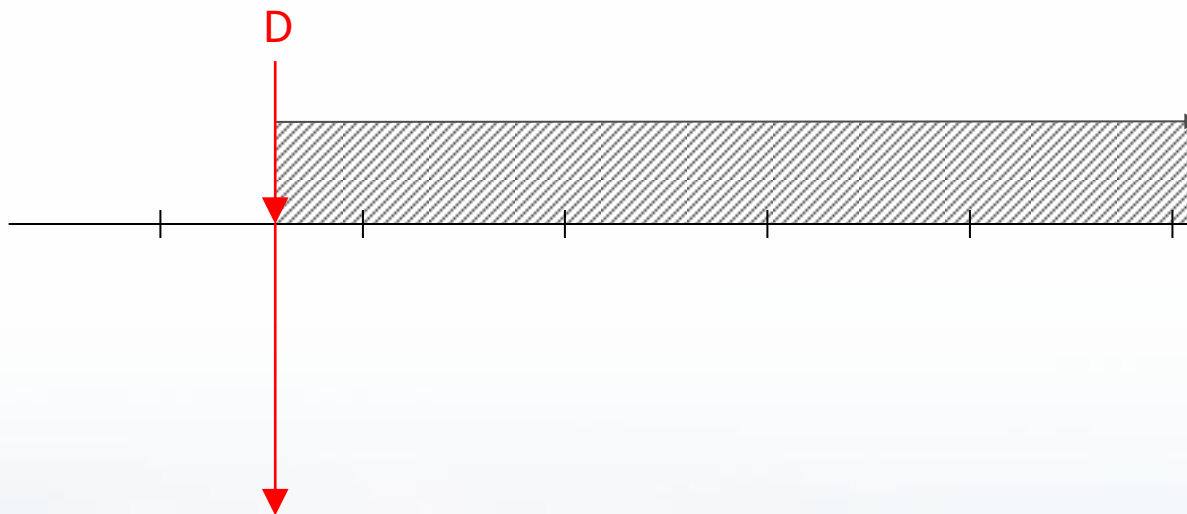
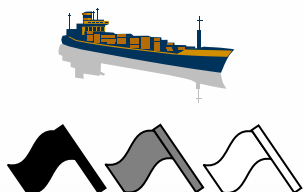


- Flag is on the [White List](#)
- RO is [Recognized](#) by one PMoU MS
- Company is [High Performance](#)

Multiple Banning – 4th Ban – Permanent

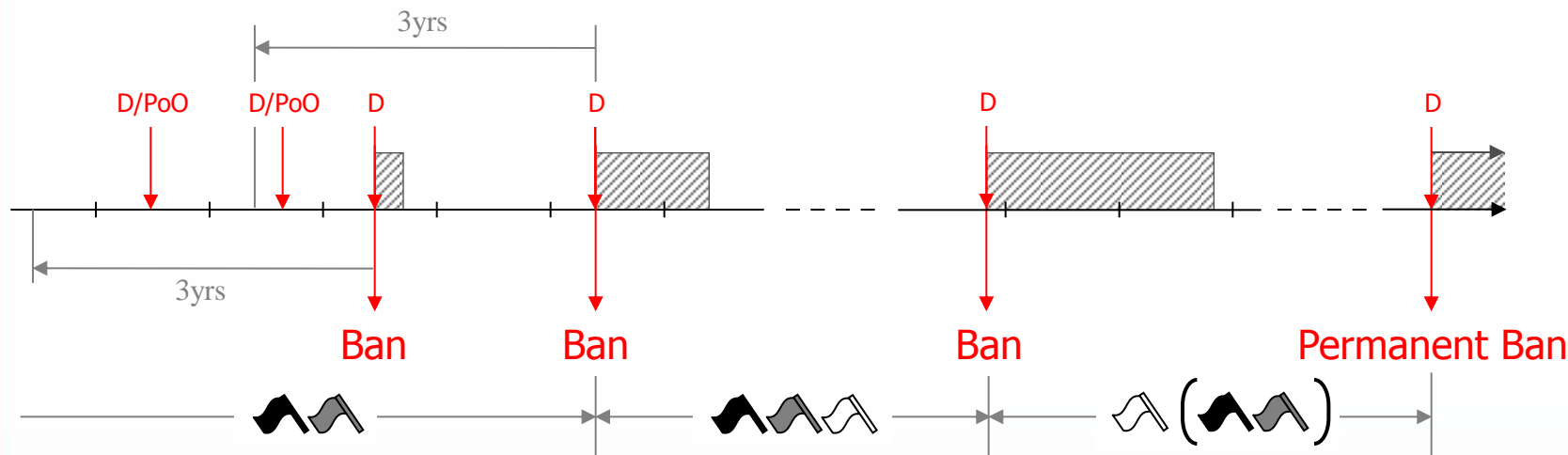
Ship was banned
tree times

(since 17/06/2009)



4th Ban
Permanent Ban

Multiple Banning (Example for Black Flag. Grey Flag is 2 yrs)



Ship Banned 1st time
when detained after 2
detentions/PoO
in 3 years

Ban can be lifted
after **3** months

Ship Banned 2nd time
when detained after 2
detentions/PoO
in 3 years

Ban can be lifted
after **12** months

Ship Banned 3rd time
if detained

Ban can be lifted
after **24** months if:

- **White Flag +**
- **RO PMoU Recog. +**
- **HP Company**

Or Permanent Ban

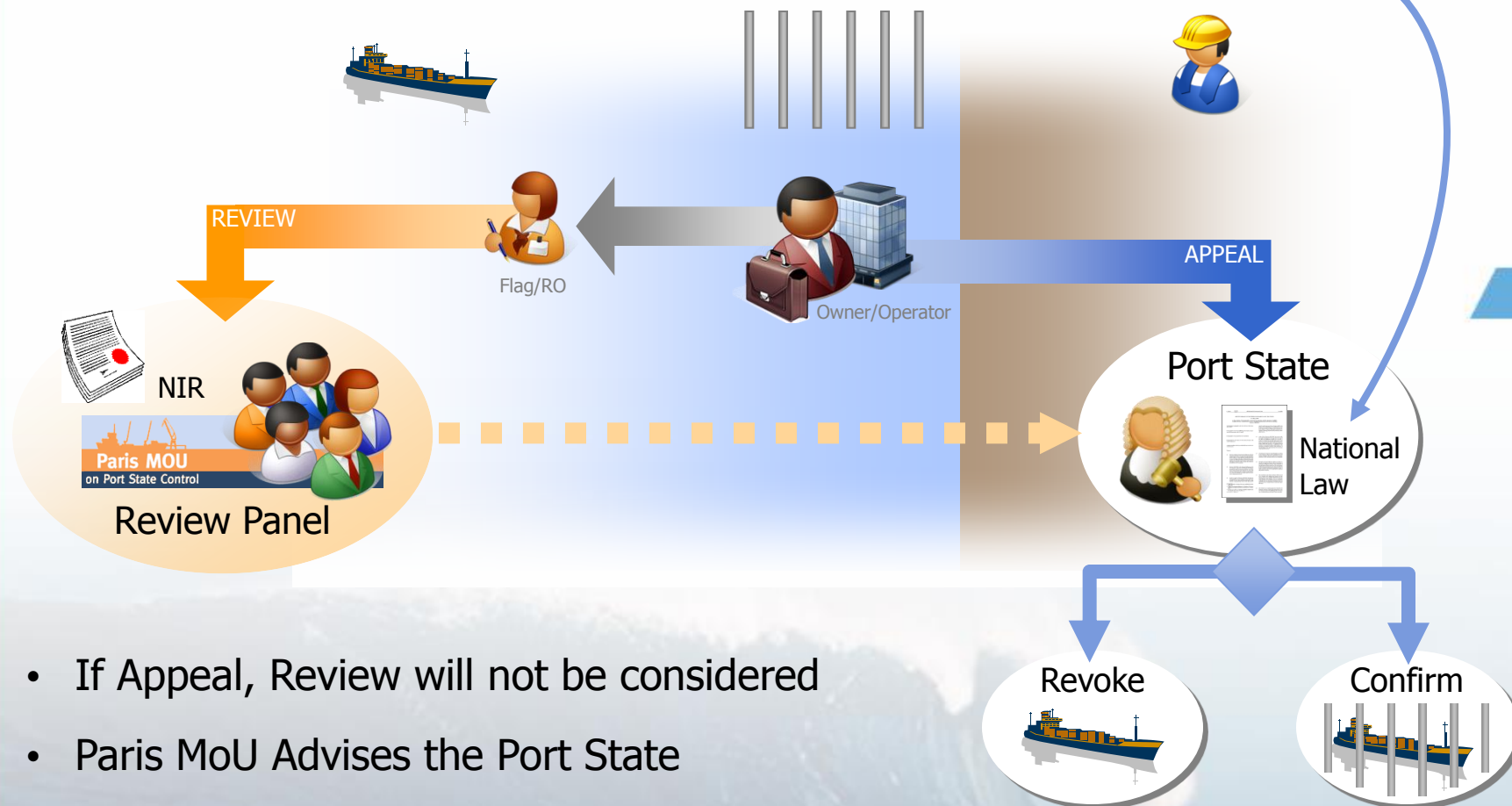
Permanent Banned
if detained

Do not forget:

- Banning because of jump detention
Section 4.2.1 of the Memorandum and the guideline on banning procedures / PSC Directive (2009/16/EC) – Article 21
- Banning because not reaching the agreed repair yard
Section 4.2.2 of the Memorandum and the guideline on banning procedures / PSC Directive (2009/16/EC) – Article 21

Appeal against Detention or Ban

2009/16/EC
Article 20



- If Appeal, Review will not be considered
- Paris MoU Advises the Port State

Training of PSC Officers

Mandatory training
for New Entrant and
Authorised PSCOs



Scheme
to
harmonise the
level of Professional
Competency in Paris MoU

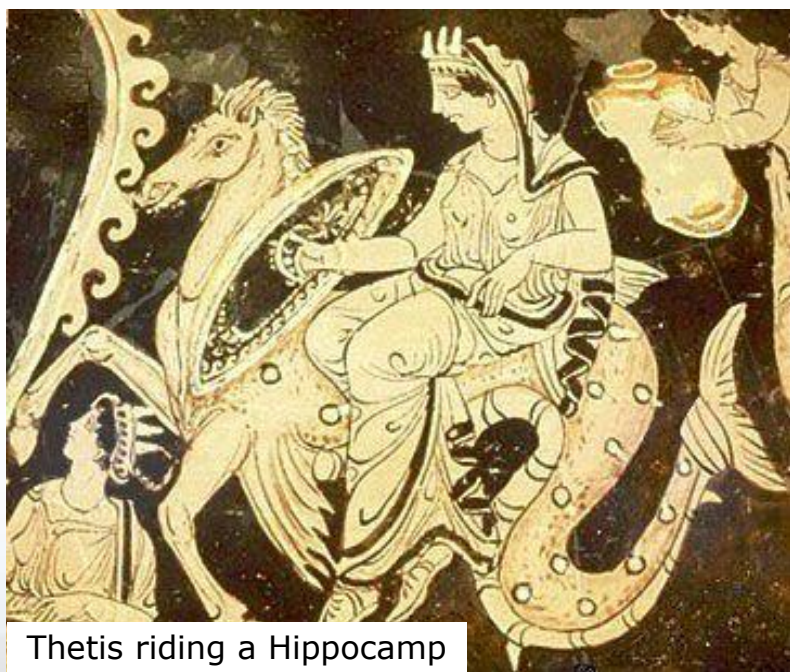
Training tools
PSCO tools

MS
EMSA
Paris MoU

The THETIS Project



From the Greek Mythology



Thetis riding a Hippocamp

The Nereides were the goddesses of the sea.

They were the patrons of sailors and fishermen, who came to the aid of men in distress, and goddesses who had in their care the sea's rich bounty.

The Nereid **Thetis** was their unofficial leader.

In www.theoi.com

What is THETIS?

- A new information system for port State control and Ferry surveys
- A tool for inspectors to target ships and report inspection results
- Ship call management for operational and monitoring purposes
- A reference repository of information on ships connected to several other databases

Support Legislation

- Directive on port State control
- Directive on Ro-Ro ferry and high-speed passenger craft (Ropax) surveys
- Procedures of the Paris MoU
- Proposed Regulation on Recognised Organisations
- It is designed to cater for any kind of ship centred legislation in future versions

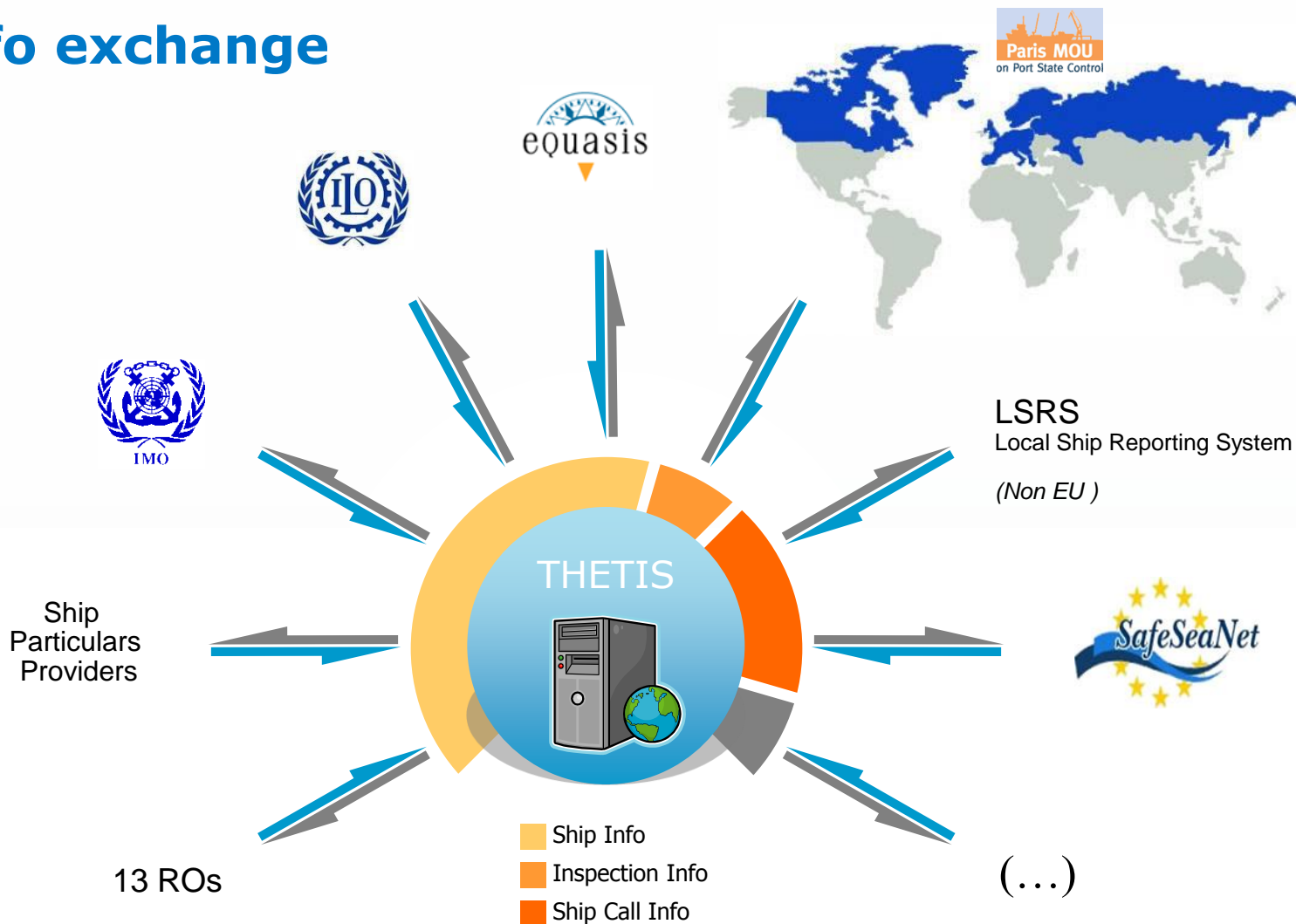
Stakeholders

- EMSA
- European Commission
- Paris MoU
- Member States (EU + Paris MoU)
- Classification Societies
- Shipping Operators
- Shipping Industry

A diagram illustrating the stakeholders of EMSA. A large, light blue arrow points from the left towards a blue circle on the right. The circle contains the text 'EMSA Parties'. The arrow is composed of several stacked, semi-transparent layers, each containing one of the stakeholder names from the list on the left. The background of the slide features a faint image of a large ocean wave.

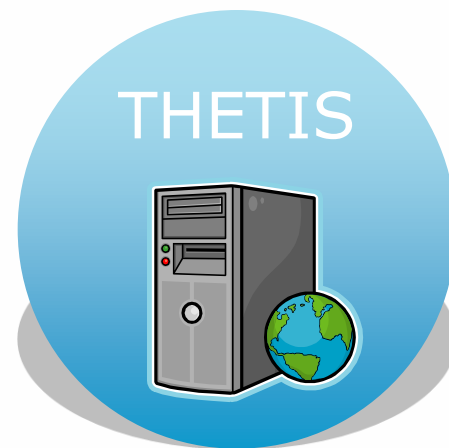
EMSA
Parties

Info exchange



Interface to the public

- Inspection search engine
- Ship Risk Profile **simulator**
- Flag, companies and RO performances
- Statistics on inspections
- Ships currently under detention
- Banned ships
- Ships prevented from operating



Questions ?