

MCA Structure & Monitoring of Recognized Organizations

Ian Lardner

**UK Maritime & Coastguard Agency
Head of Business Improvement and Assurance**



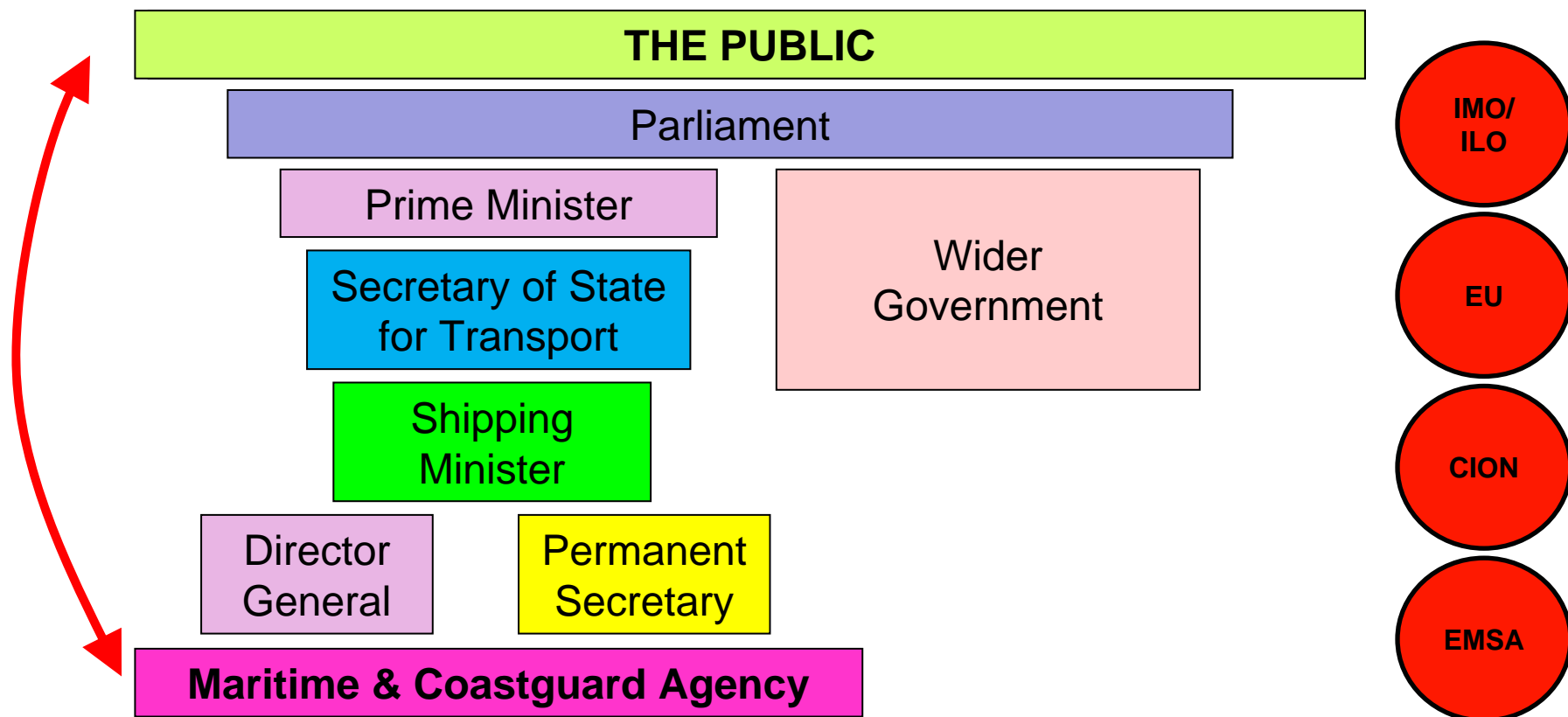
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Who am I ???

- Small Craft Naval Architect
 - Yacht Survey & Policy Background
 - ISO 9001 Lead Auditor
 - ISM Auditor
 - UK Lead at IMO on RO Code and IIIC
 - Head of Dept. for Internal & External Quality

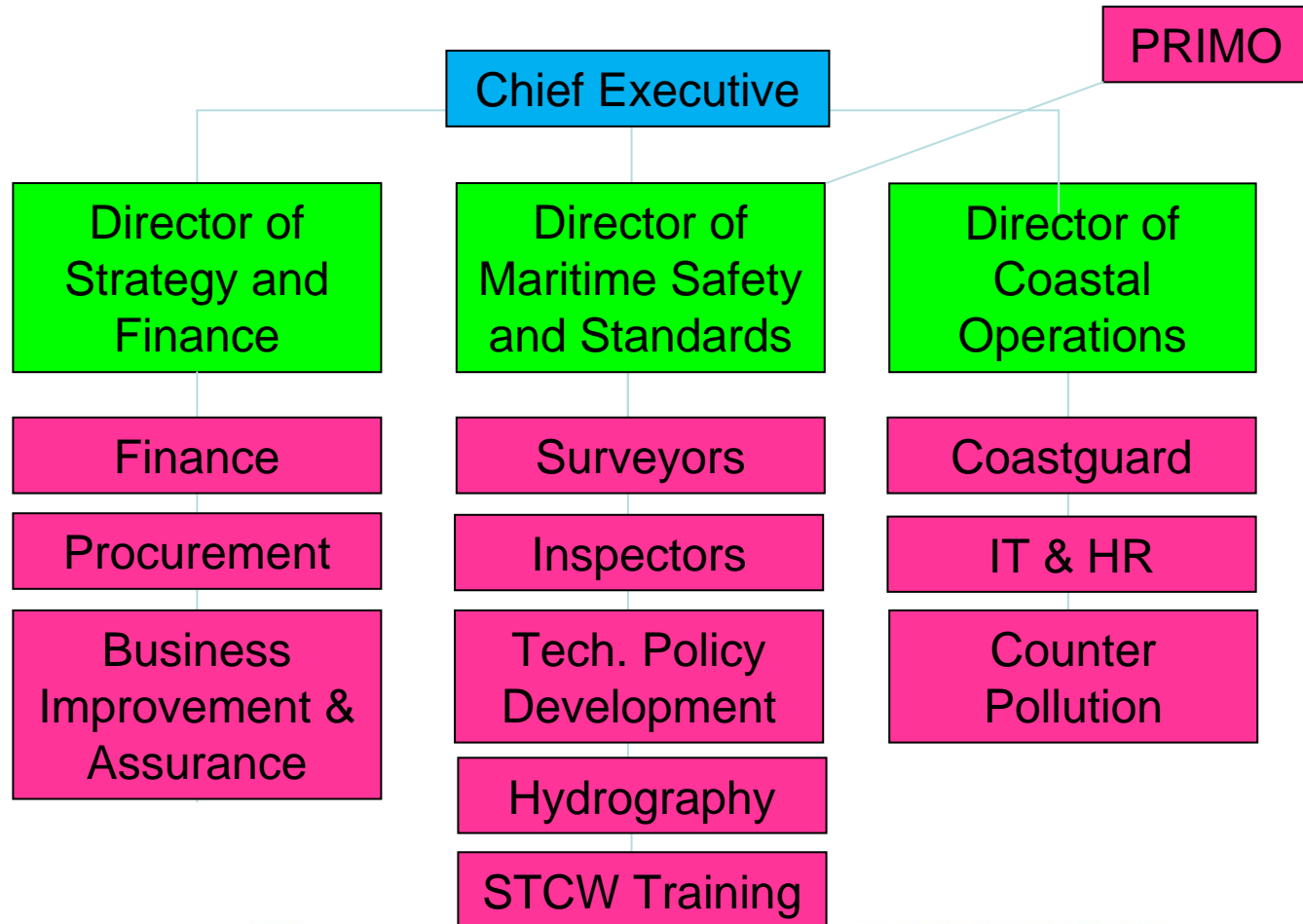


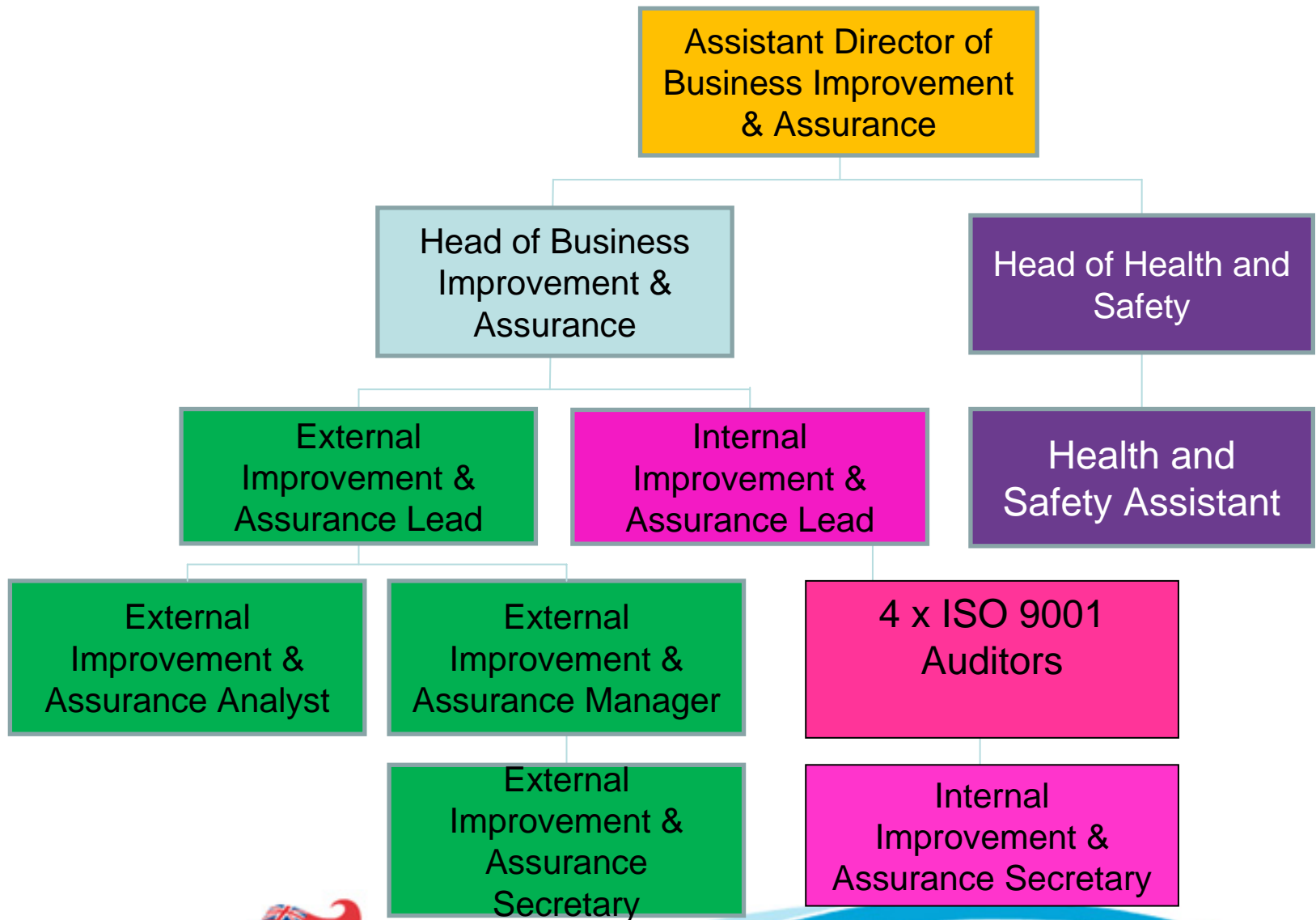
Where Does the MCA Fit?



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MCA Structure





What Is Business Improvement & Assurance ?



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Business Improvement & Assurance

- Business Improvement

(Improve the Way We Work)

- Monitoring & Analysis of Risks
- Use of Consultancy to Problem Solve
- Identification of Best Practice
- Troubleshooting
- Preparation for RO Code & IIIC
- TOTAL QUALITY MANAGEMENT



Business Improvement & Assurance

- Business Assurance

(Assure the Secretary of State that all is OK)

- Monitoring the ROs
- Maintain Risk Registers
- Internal Audits Against ISO9001 (and others)
- Annual Report to Government (ICAF)
- Monitoring of the Red Ensign Group (REG)



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Red Ensign Group

The combined fleets of the UK+REG Administrations makes the British fleet roughly the 4th largest in the world.....

~47 million GT

(...but that also brings with it additional responsibilities!)



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United Kingdom Recognized Organizations



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UK Recognised Organisations

- Seven UK Recognised Organisations:
 - American Bureau of Shipping (ABS)
 - Bureau Veritas (BV)
 - Det Norske Veritas (DNV)
 - Germanischer Lloyd (GL)
 - Lloyds Register (LR)
 - ClassNK
 - RINA S.p.A)



UK Recognised Organisations

- Varying levels of delegation
 - Level F: Full Delegation
 - Level P: Partial Delegation
 - Level L: Limited Delegation



UK Recognised Organisations

- Varying levels of delegation
 - Level F
Full authorisation to perform plan review, carry out surveys, and issue necessary interim and full term certificates.



UK Recognised Organisations

- Varying levels of delegation
 - Level P
Partial authorisation to perform plan review, carry out surveys and possible issue of interim certificates or full term certificates. (Specific guidance to be provided by the MCA and full term Certificate may be issued by the MCA).



UK Recognised Organisations

- Varying levels of delegation
 - Level L
Limited authorisation to account for other special categories not covered by the above, such as case-by-case authorisation or geographical limitations.



MCA RO Monitoring

- ~85% of ship construction, machinery, and equipment survey work delegated to the seven UK Recognised Organisations
- Important for flag to maintain control:-
 - Own Assurance
 - Assurance to Commission/EMSA
 - IMO Res. A.739(18)
 - IMO Res. A.789(19)
 - Directive 2009/15/EC



MCA RO Monitoring

- Own Assurance
 - Assurance to MCA Senior Management, Secretary of State for Transport and Shipping Minister that the **authorised & delegated** work meets expected standards for UK shipping



MCA RO Monitoring

- IMO Res. A.739(18)
 - The Administration should establish a system to **ensure the adequacy of work** performed by the organisations authorised to act on its behalf. Such a system should, inter alia, include the following items:



MCA RO Monitoring

- IMO Res. A.739(18)
 - Procedures for communication (flag to RO)
 - Procedures for reporting from the (RO to flag)
 - Procedures for processing reports from flag
 - Additional ship's inspections



MCA RO Monitoring

- IMO Res. A.739(18)
 - The Administration's **evaluation/acceptance** of the certification of the organisation's quality system by an **independent** body of auditors recognised by the Administration
 - **Monitoring and verification of class related matters, as applicable**



MCA RO Monitoring

- IMO Res. A.789(19)

Administrations are responsible for taking the necessary measures to ensure that ships flying their States' flag comply with the provisions of such conventions, including surveys and certification



MCA RO Monitoring

- Directive 2009/15/EC
 - ... each Member State shall, at least on a biennial basis, **monitor every Recognized Organization acting on its behalf** and shall provide the other Member States and the Commission with a report on the results...



UK Survey Agreements

- Individual agreements signed between the MCA and each RO
- Legalistic contractual format
- Partly transposes the EC Directive (2009/15)
- Reflect current UK survey policy
- Dynamic - Regularly reviewed and amended
- Country File – More detail



UK Legislative Control of ROs

- No longer a criminal offense in UK for RO to not:-
 - Co-operate with PSCOs
 - Liaise with other UK recognised ROs
 - Apply appropriate class rules to UK ships
 - Communicate with MCA
- From 2011 - no criminal offense. Managed by contractual agreement & Construction Regs.



Risk-Based Recognised Organisation Monitoring



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Risk Based Approach to Monitoring

- Research and fundamental shift in approach taken in 2004
- Questionnaire sent to significant number of senior survey and technical staff
- Hierarchical Analysis to identify high-risk ships
- Focus monitoring resources on poor performing ROs and their poorest performing ships



Risk Based Approach to Monitoring

- Spreadsheet Analysis of each RO Fleet
 - 4 Risk types
 - People
 - Environment
 - Equipment
 - Reputation



Risk Based Approach to Monitoring

How would you rate the relative importance of the following two criteria, Equipment (Eq) and Environment (En)?

		Number	Score
1	Eq Extremely more important than En	1	9
2	Eq Very strongly more important than En	2	14
3	Eq Strongly more important than En	2	10
4	Eq Moderately more important than En	1	3
5	Eq and En equally important	3	0
6	En Moderately more important than Eq	5	-15
7	En Strongly more important than Eq	10	-50
8	En Very Strongly more important than Eq	14	-98
9	En Extremely more important than Eq	21	-189
Total:		59	-316

Mean: -5.36 9
 Positive: 5.36 7
 5
 3
 0
 -3
 -5
 -7
 -9



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Risk Based Approach to Monitoring

- Spreadsheet Analysis of each RO Fleet
 - 7 Ship types
 - Ro-Ro
 - Cruise
 - Tanker (Oil)
 - Tanker (Chemical)
 - Tanker (Gas)
 - Bulk Carrier
 - Other Cargo



Risk Based Approach to Monitoring



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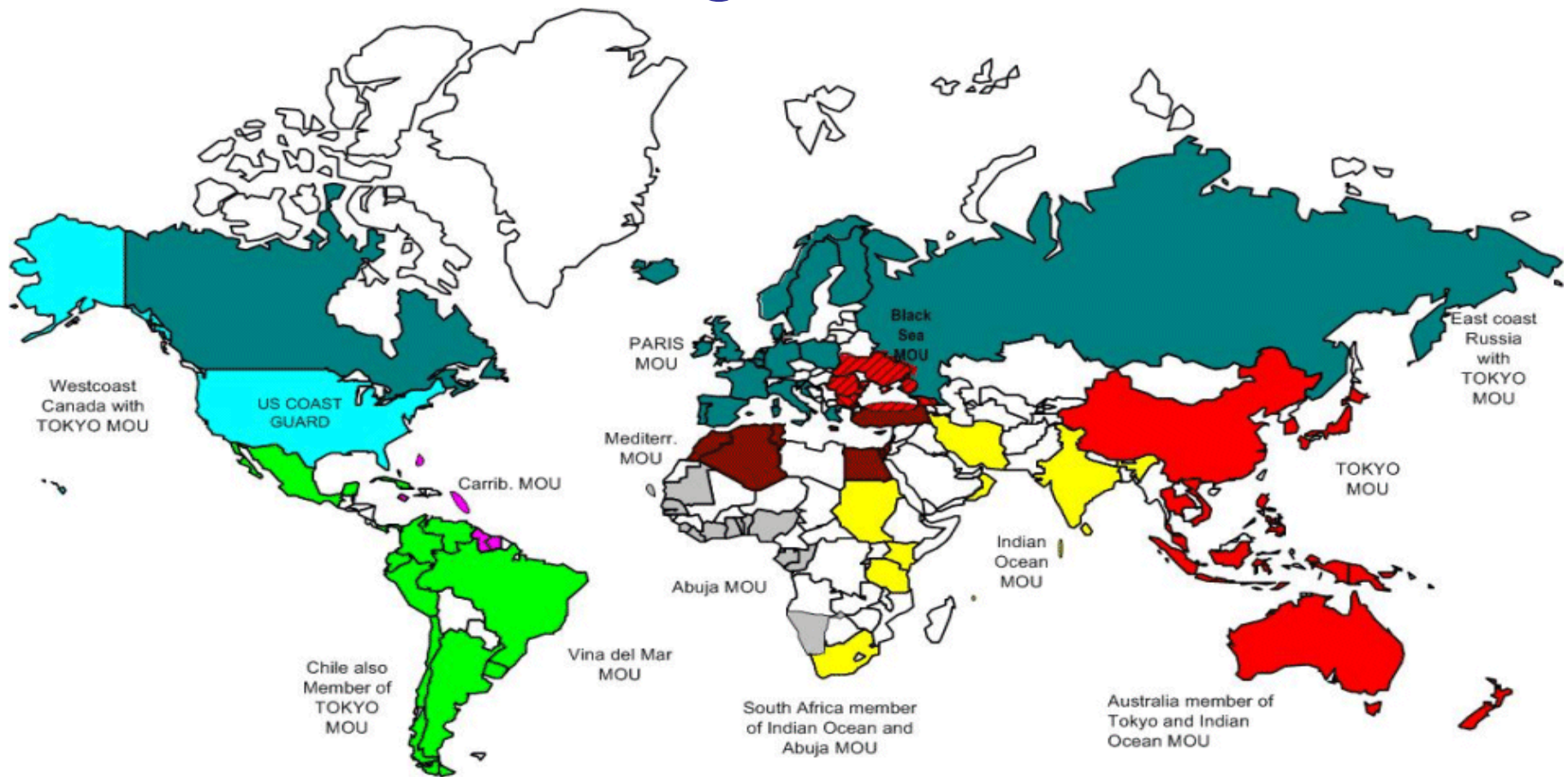
Risk Based Approach to Monitoring

	People	Equipment	Environment	Reputation	total risk score for vessel type
Weight > >	0.6143	0.0636	0.2528	0.0692	
Ro-Ro	5.71	0.49	1.53	0.64	8.38
Cruise	5.80	0.50	1.50	0.64	8.43
Tanker oil	4.78	0.52	2.38	0.59	8.27
Tanker chemical	4.97	0.51	2.38	0.59	8.45
Tanker gas	4.99	0.52	2.16	0.58	8.24
Bulk carrier	4.32	0.43	1.59	0.51	6.85
Other cargo	4.15	0.41	1.51	0.48	6.55



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Risk Based Approach to Monitoring – PSC Data



Distribution of PSC MOUs worldwide

Risk Based Approach to Monitoring

UK Ship Deficiencies

10 deficiencies = 1 detention

Ship type	RO A			RO B		
	No of Inspections	Def.	Average Def/Insp	No of Inspections	Def.	Average Def/Insp
Ro-ro	92	179	0.19	0	0	0.00
Cruise	32	38	0.12	0	0	0.00
Tanker oil	56	106	0.19	5	4	0.08
Tanker chemical	23	32	0.14	5	9	0.18
Tanker gas	11	16	0.15	0	0	0.00
Bulk carrier	19	14	0.07	1	0	0.00
Other cargo	322	476	0.15	44	68	0.15
Total	555	861	1.01	55	81	0.41



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Risk Based Approach to Monitoring

- Spreadsheet Analysis of each RO Fleet
 - PSC Deficiencies and Detentions (Paris and Tokyo MoU) divided by number of Inspections then multiplied by ship-type weighting
 - Risk is multiplied by the sum of vessel types for the RO and vessels over 15 years with RO.



Risk Based Approach to Monitoring

	Weight	Det. Freq.	Def. Freq.	Risk	Vessel No.	Vessel No. over 15yrs	Risk Exposure	Ratio to Risk	Ship type relative risk
Ro-ro	8.38	0.011	0.195	1.721	74	28	175.58	21.67%	1.30
Cruise	8.43	0.000	0.119	1.001	7	5	12.02	1.48%	0.75
Tanker (oil)	8.27	0.036	0.189	1.861	32	13	83.72	10.33%	1.40
Tanker (chem)	8.45	0.000	0.139	1.176	18	2	23.51	2.90%	0.89
Tanker (gas)	8.24	0.000	0.145	1.199	10	6	19.19	2.37%	0.90
Bulk carrier	6.85	0.000	0.074	0.505	9	2	5.55	0.69%	0.38
Other cargo	6.55	0.037	0.148	1.212	297	108	490.83	60.57%	0.91
Totals for UK				8.67	447	164	810.40	1.00	
							1.33	Average Risk Exposure/ship	



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Risk Based Approach to Monitoring

- Results of Spreadsheet Analysis
 - “Risk Exposure” = Theoretical likelihood of incident occurring
 - “Ratio to Risk” = Percentage risk compared to other vessel types
 - “Ship-type Relative Risk” = Comparison of ship types relative to number of vessels
 - “Average Risk Exposure” = Comparison of UK RO performance



Risk Based Approach to Monitoring

- Process is repeated for each RO and added to results from Red Ensign Group then compared

RO	Risk	Rank	Average risk per ship	Rank	Risk Exposure	Rank	Sum of Ranks	Average Rank
A	69.20	2	11.37	2	4,305	7	11.00	3.67
B	75.19	3	13.57	4	1,266	4	11.00	3.67
C	83.44	5	13.26	5	1,808	5	15.00	5.00
D	101.98	7	13.05	3	2,804	6	16.00	5.33
E	8.49	1	2.18	1	397	2	4.00	1.33
F	77.74	4	19.52	6	702	3	13.00	4.33
G	100.70	6	27.42	7	303	1	14.00	4.67

28.00



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Risk Based Approach to Monitoring

- Risk based approach adopted from April 2003, based on tiered system:
 - Vertical Contract Audits (VCAs) focusing on high risk ship types (undertaken by a selected pool of surveyors)
 - Monitoring of files and records at the British Committee meetings
 - British Certification Committee meetings with all Class Societies



Vertical Contract Audits

- Use risk spreadsheet analysis to establish which survey type to audit for each RO.
- Senior surveyor from MCA field offices attends RO survey to audit the actions of RO surveyor against:-
 - Convention requirements
 - UK Instructions / guidance
 - Specific procedures of the RO



British Committee (BC) Meetings

- 2 per RO per year attended by senior RO reps
- Standing Agenda
 - Outstanding actions
 - Procedures
 - Technical File Review - **Prevention**
 - Detentions of UK Ships - **Cure**
 - Detentions of foreign ships in UK Ports
 - Certification Arrangements
 - Levels of Delegation
 - AOB



British Committee (BC) Meetings

- Technical File Review – **Prevention**
 - Select ~5 ships with poor PSC history in past 6 months
 - Attracting high deficiencies NOT detentions
 - Is there a pattern of poor performance occurring?



British Committee (BC) Meetings

- Technical File Review – **Prevention**
 - Outstanding CoCs or Recs?
 - Is there a need to meet owner/operator?
 - Is there a need to alert others?



British Committee (BC meetings)

- Detentions of UK Ships - **Cure**
 - Look for patterns and answers as to why....
 - What was RO involvement before and after?
 - Ship management breakdown - ISM?
 - What can be done to stop this occurring?
 - Need to meet with vessel owner?
 - Does it concern other UK ROs?



British Committee (BC meetings)

- Analysis of MoU Reports – looking for vessels with poor PSC history (deficiencies)
 - Paris MoU
 - Tokyo MoU
 - USCG Ranking (QUALSHIP 21)
 - Indian Ocean MoU
 - Mediterranean MoU



British Committee (BC meetings)

- Incidental reports received from flag State Surveyors or CSMs
- ISM auditor RO Reporting system (reverse of PR17)



British Certification Committee

- All UK ROs and Senior UK technical staff
- 2 per year with all ROs present
- MCA discuss common concerns from VCAs and BC meetings
- MCA listen to RO feedback
- MCA to inform ROs of UK interpretations of Convention requirements

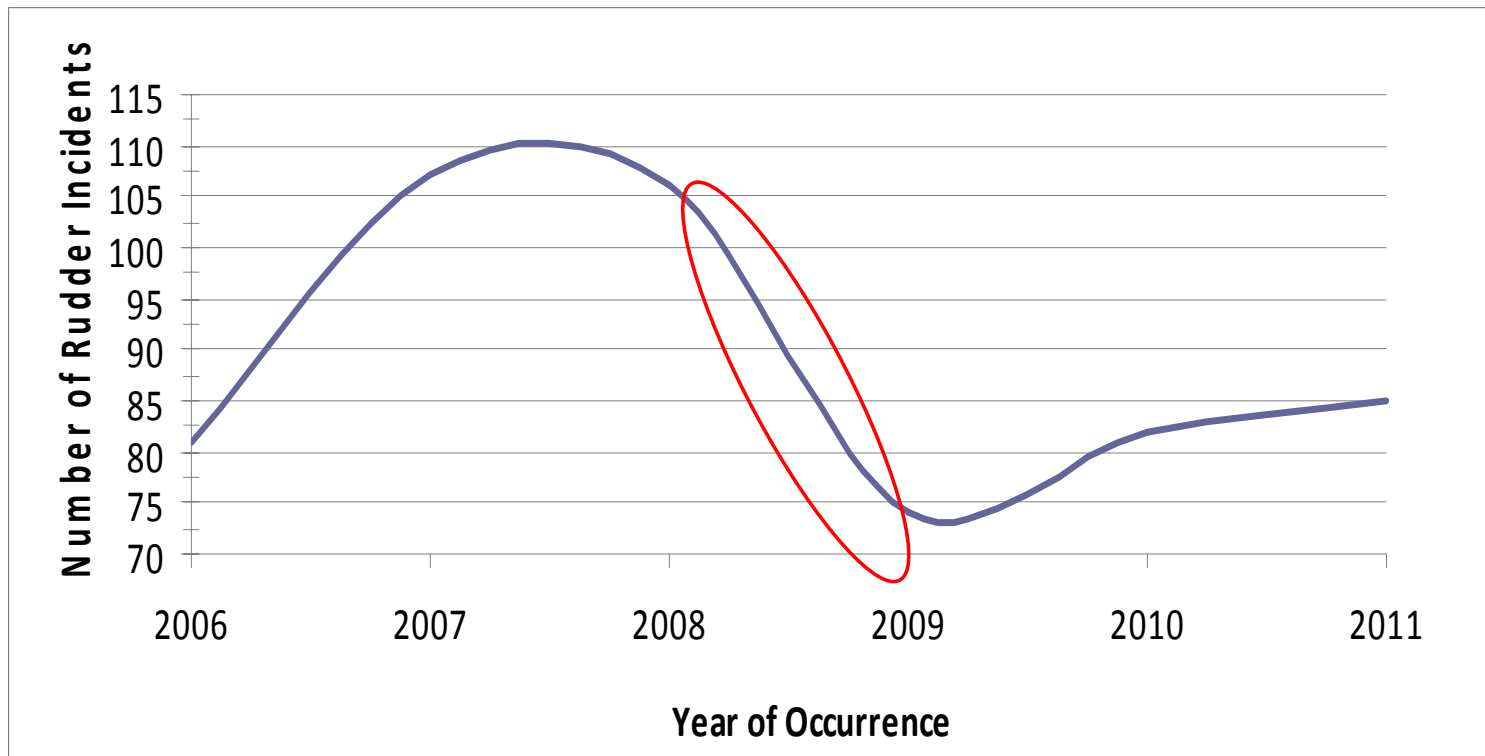


Attend EMSA Assessments

- UK recognises LR and ABS in EC
 - Attend world-wide head offices and regional offices as decided by EMSA
 - Participate as part of the team and to provide self assurance that UK can still “sponsor” their use by EC Member States

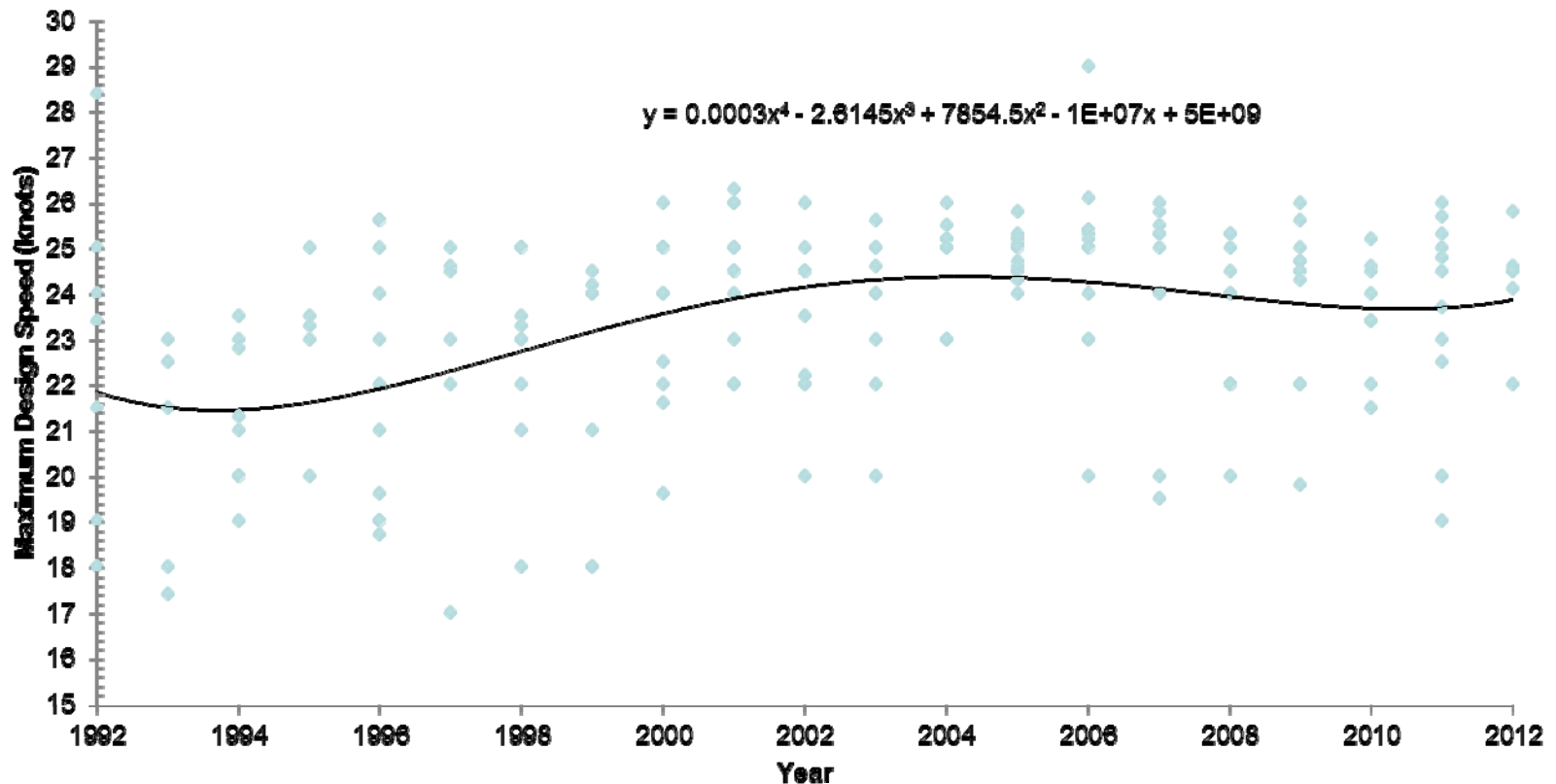


Example Case - Rudder Erosion



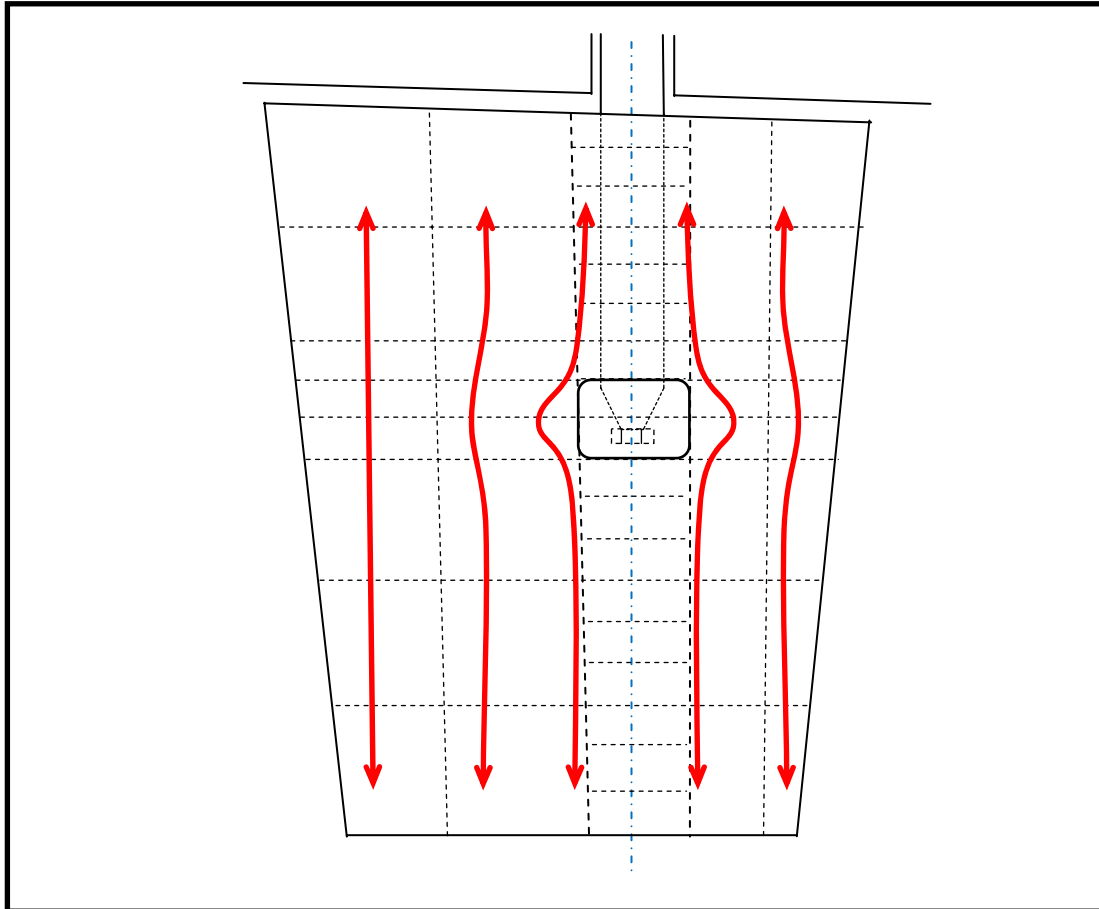
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Example Case - Rudder Erosion



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Example Case - Rudder Cracks



Thank You

Any Questions?

Further Contact

ian.lardner@mcga.gov.uk

+44 (0) 23 80 329 186



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