



# QMS a Management Tool





# Quality

What is Quality?





## What is Quality

- Performance of all attributes of a product, system or process
- Combination of people power and process power
- Conformance with requirements
- Degree to which a set of inherent characteristics fulfills requirements





## What is Quality?

Quality is the Performance of Services



This is a Management Responsibility



Tools for Management are required





## Measures directed to Quality

### ➤ Quality Control

- Testing of the product

### ➤ Quality Assurance

- Measures implemented along the process striving to achieve the desired quality

### ➤ Quality Management

- Management activities focusing on key elements related to quality





# Quality Management Systems

- ISO 9001:2008
- Total Quality Management
- Six Sigma
- Kaizen
- ...





# A Quality Management System

- Is a system...
  - to enhance an organization's effectiveness and
  - efficiency in achieving its defined objectives.
- Methodology
  - Make processes transparent
  - Reproducible
  - Corporate memory
  - Define responsibilities
  - Check your processes in order to prevent and correct them
  - Check your processes to improve them





## 8 Principles of a Quality Management System within the ISO 9000 Family

1. Customer Focused Organisation
2. Leadership
3. Involvement of People
4. Process Approach
5. System Approach to Management
6. Continual Improvement
7. Factual Approach to decision Making
8. Mutually Beneficial Supplier Relationship







# 8 Principles of Quality Management

1. **Customer Focused Organisation**
2. Leadership
3. Involvement of People
4. Process Approach
5. System Approach to Management
6. Continual Improvement
7. Factual Approach to decision Making
8. Mutually Beneficial Supplier Relationship





## Customer-Focused Organisation

Organisations depend on their customers and therefore should understand current and future customer needs, meet customer requirements and strive to exceed customer expectations“





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## Leadership

Leaders establish unity of purpose and direction of the organisation. They should create and maintain the internal environment in which people can become fully involved in achieving the organisation's objectives.





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## Involvement of People

People at all levels are the essence of an organisation and their full involvement enables their abilities to be used for the organisation's benefit.





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## Process Approach

A desired result is achieved more efficiently when related resources and activities are managed as a process.







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## System Approach to Management

Identifying, understanding and managing a system of interrelated processes for a given objective improves the organisation's effectiveness and efficiency.





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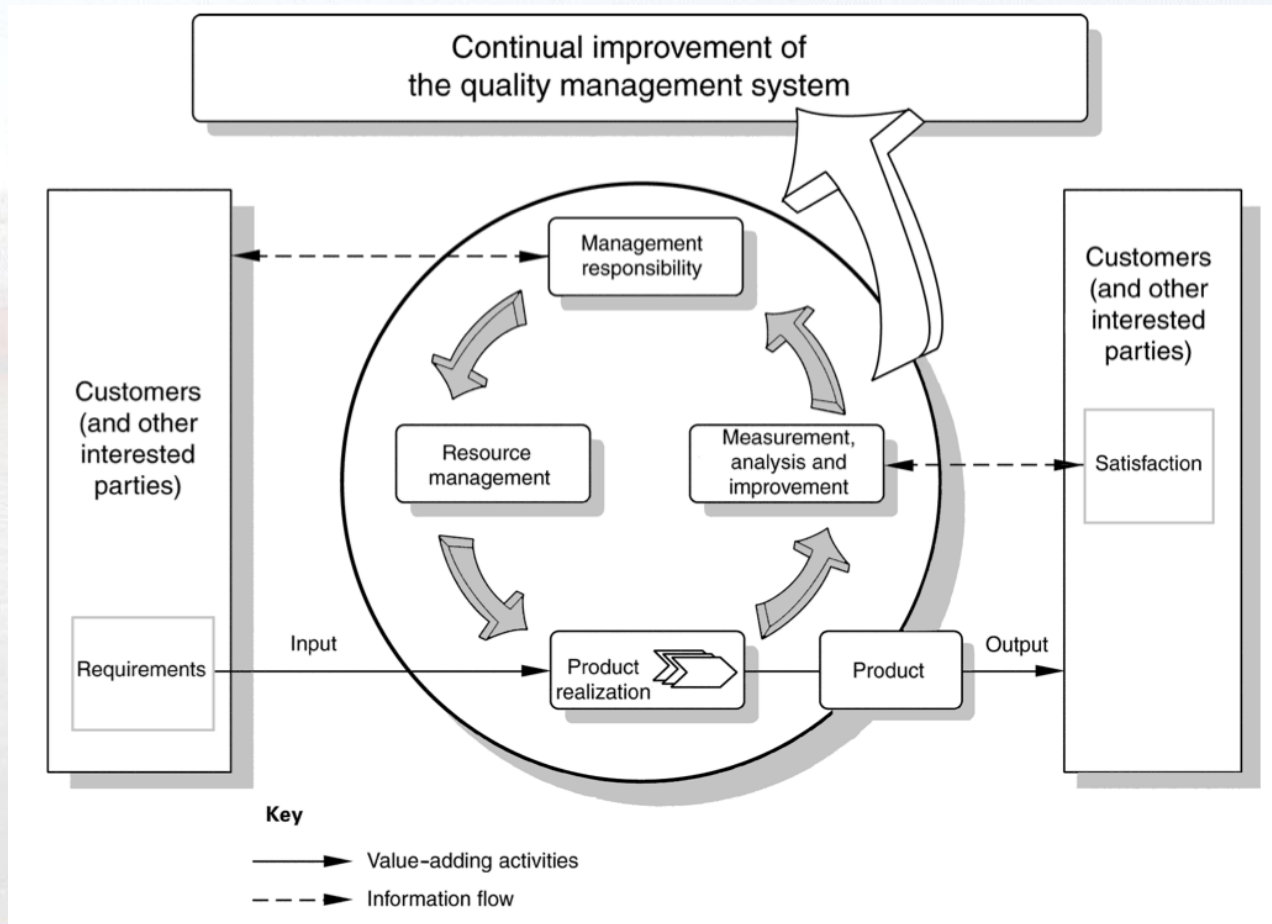


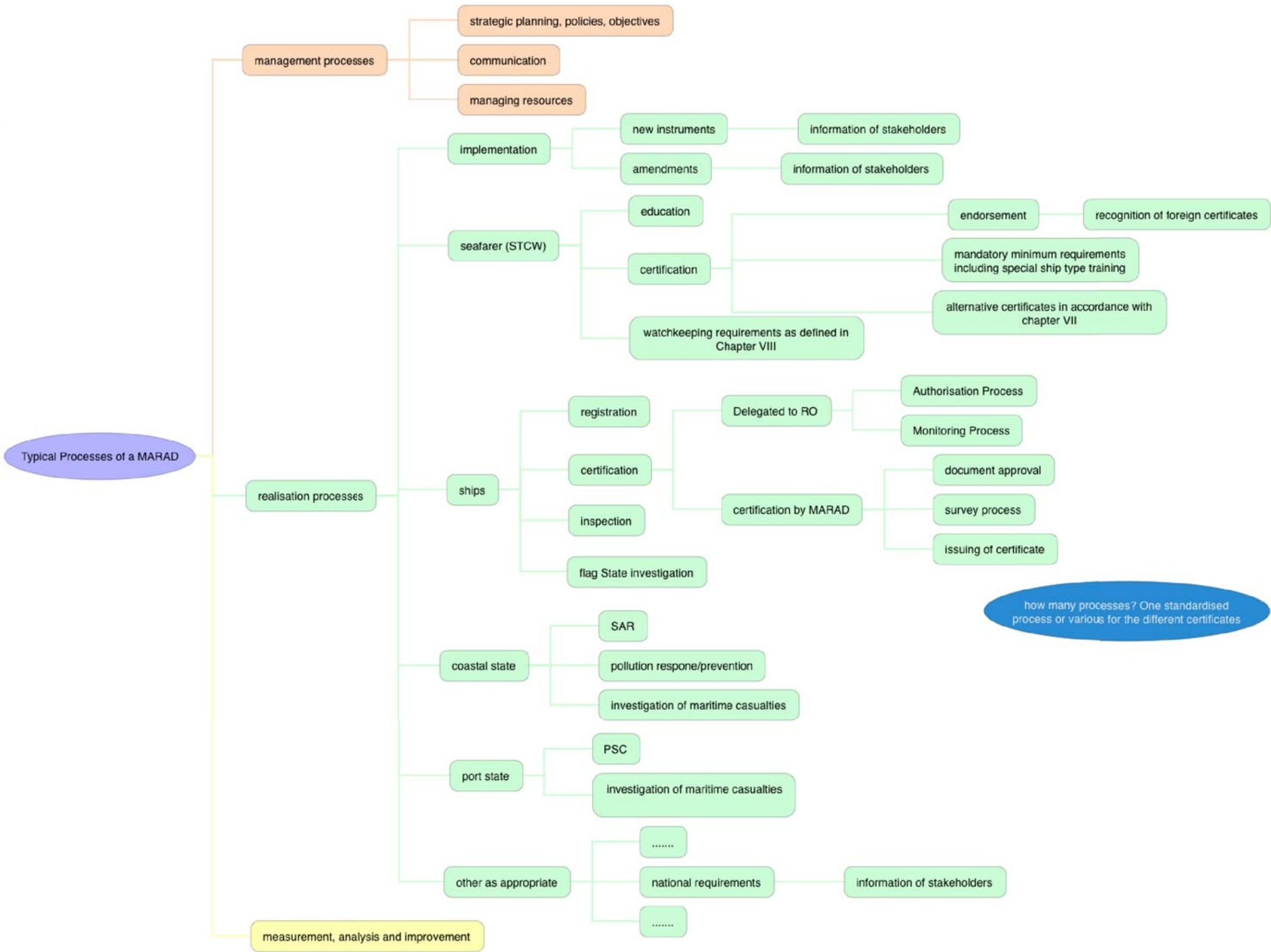
# Advantages of a QMS





# The Process Approach





how many processes? One standardised process or various for the different certificates





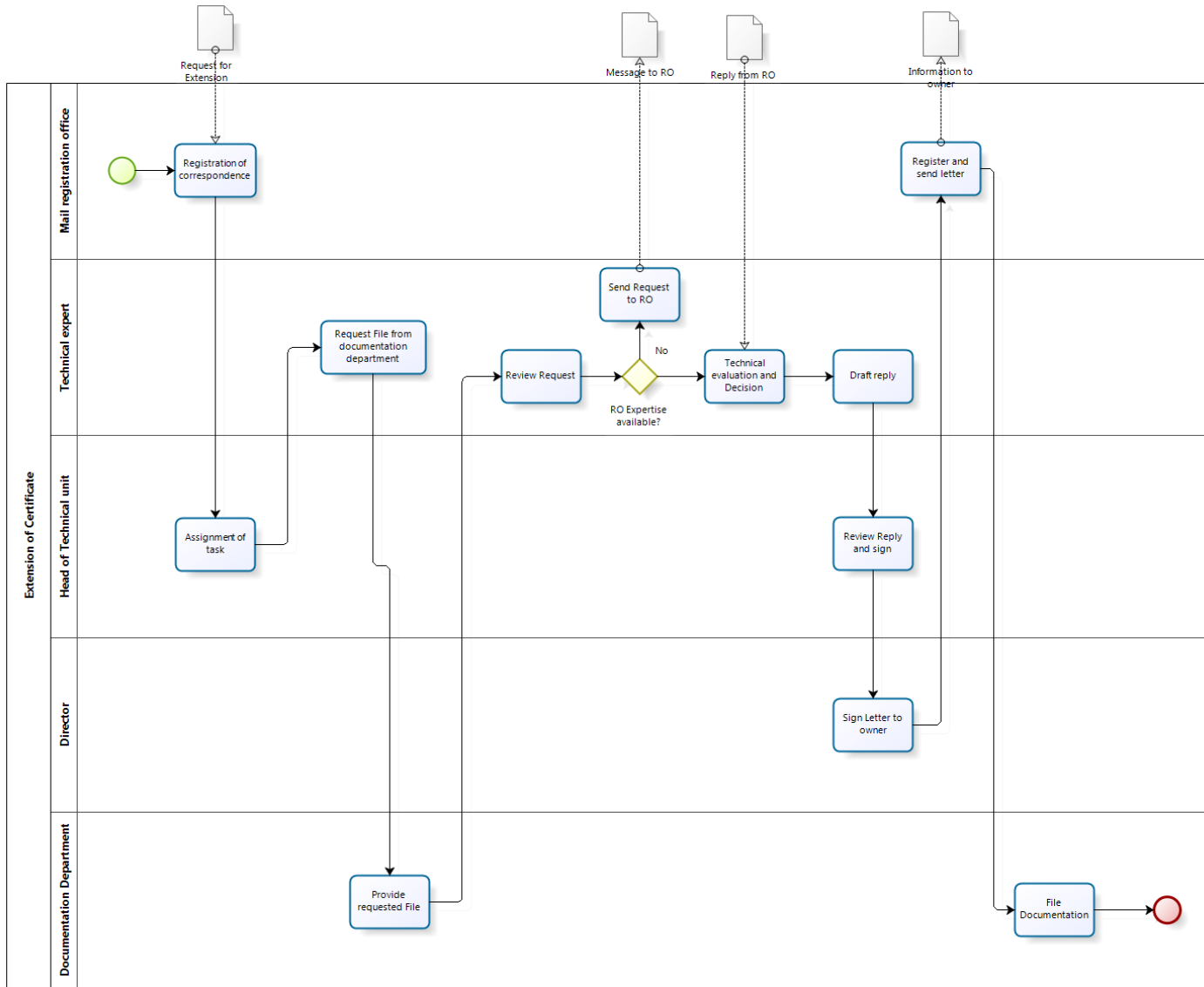
## Evaluating processes within the quality management system

- When evaluating quality management systems, there are four basic questions that should be asked in relation to every process being evaluated.
  - a) Is the process identified and appropriately defined?
  - b) Are responsibilities assigned?
  - c) Are the procedures implemented and maintained?
  - d) Is the process effective in achieving the required results?



# TRACECA Maritime Safety & Security II

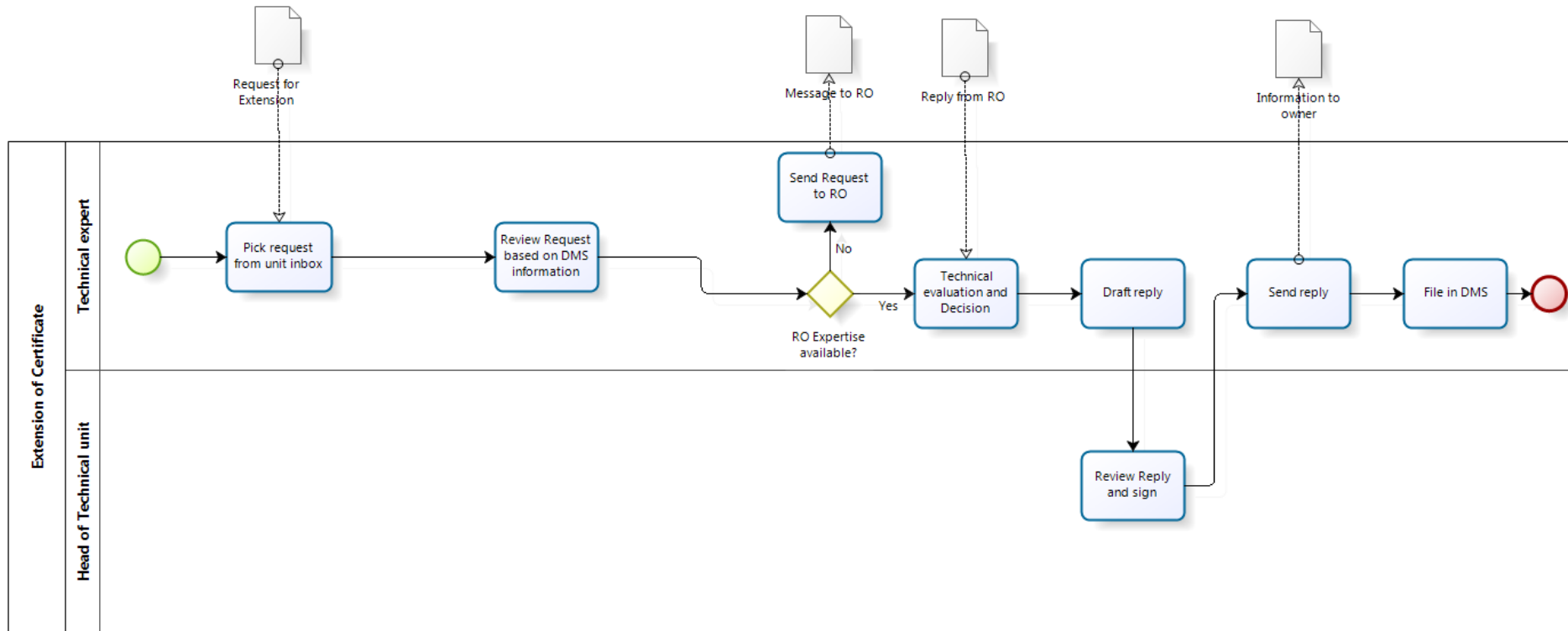
## Contract No. 2012/308-311





# TRACECA Maritime Safety & Security II

## Contract No. 2012/308-311



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## Management Tool

- One role of top management is to carry out regular systematic evaluations of the suitability, adequacy, effectiveness and efficiency of the quality management system with respect to the quality policy and quality objectives
- Top management shall ensure that responsibilities and authorities are defined and communicated





## Management Tool (2)

- Top management shall ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction
- A management review is required containing i.a.
  - customer feedback,
  - process performance and product conformity,
  - status of preventive and corrective actions,
  - follow-up actions from previous management reviews,
  - changes that could affect the quality management system,
  - recommendations for improvement.





# Importance of Management Commitment

## No Management Commitment



## No Working QMS



## No Benefit, Only Costs





Thank you for your attention

Diskussion





# Why a Quality Management System ?







## Art 8

### Directive 2009/21/EC

#### ➤ Quality management system and internal evaluation

- 1. By 17 June 2012 each Member State shall develop, implement and maintain a quality management system for the operational parts of the flag State-related activities of its administration. Such quality management system shall be certified in accordance with the applicable international quality standards.
- 2. Member States which appear on the black list or which appear, for two consecutive years, on the grey list as published in the most recent annual report of the Paris Memorandum of Understanding on Port State Control (hereinafter the Paris MOU) shall provide the Commission with a report on their flag State performance no later than four months after the publication of the Paris MOU report.
- The report shall identify and analyse the main reasons for the lack of compliance that led to the detentions and the deficiencies resulting in black or grey status.





## SAF, VIMSAS, III and QMS

- The IMO Conventions and UNCLOS have a large number of requirements placed on flag states, coastal states and port states.
- The Self Assessment Form (SAF) which was a tool which flag states were invited to complete and use as a measure of their own performance was the first IMO approach towards pushing flag states towards better compliance.





## SAF, VIMSAS, III and QMS

- The Self Assessment Form didn't really improve flag state performance so the IMO introduced the Voluntary Flag State Audit Scheme. (VIMSAS) and invited flag states to volunteer for audit.
- As at September 2013 61 member states have been audited (including 5 dependent territories and 2 Associate members). This total represents 41% of the IMO membership.





## SAF, VIMSAS, III and QMS

- The VIMSAS scheme remains voluntary and the IMO remain committed to seeing improved flag state performance.
- In December 2013 the 28th Assembly adopted the “III Code”. (IMO Instruments Implementation Code).





## SAF, VIMSAS, III and QMS

- The III Code will be mandatory - the Assembly also adopted amendments to all the affected IMO Conventions to make use of the III Code mandatory for all member states.
- The III Code is not appreciably different from the previous Guidelines on the Implementation of Mandatory Instruments





## Mandatory Audit Procedures

- The 28<sup>th</sup> Assembly also adopted the procedures on mandatory audits.;
- First states to be audited will be those which have not done VIMSAS – on a random draw.
- Then the states that have done VIMSAS in order of their VIMSAS audits
- Mandatory audits will be on a 7 year cycle.
- The audit standard will be III from now but will be applied pragmatically for those states that have prepared pre III.





## III Code

- The III Code does not say that a Quality Management System is a requirement.





## Results from VIMSAS Audits

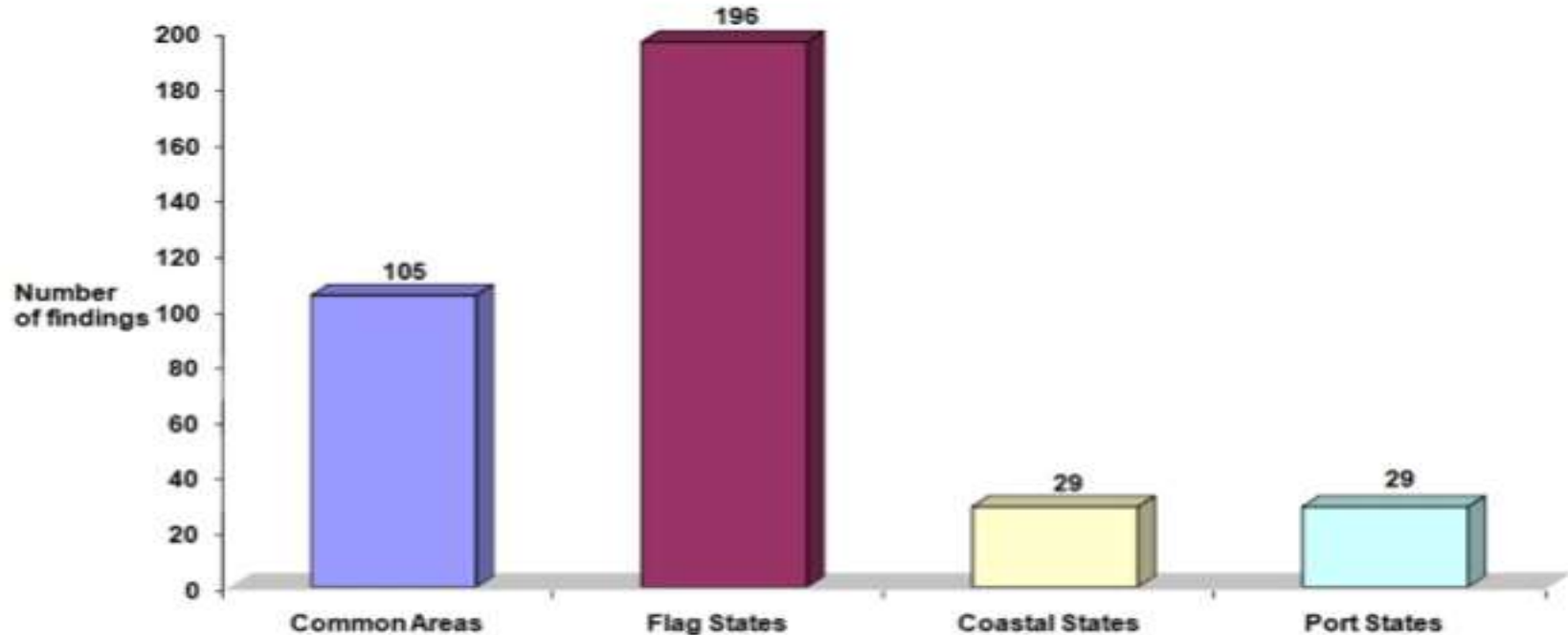
- The IMO has analysed the findings from all the audit reports to date. (See FSI.20/Inf 16).
- Findings are grouped between “Common areas” (applicable to flag state roles, coastal state roles and Port state roles), and
- Separate flag, port and coastal state findings.







### 45 Audits - 26% of Member States

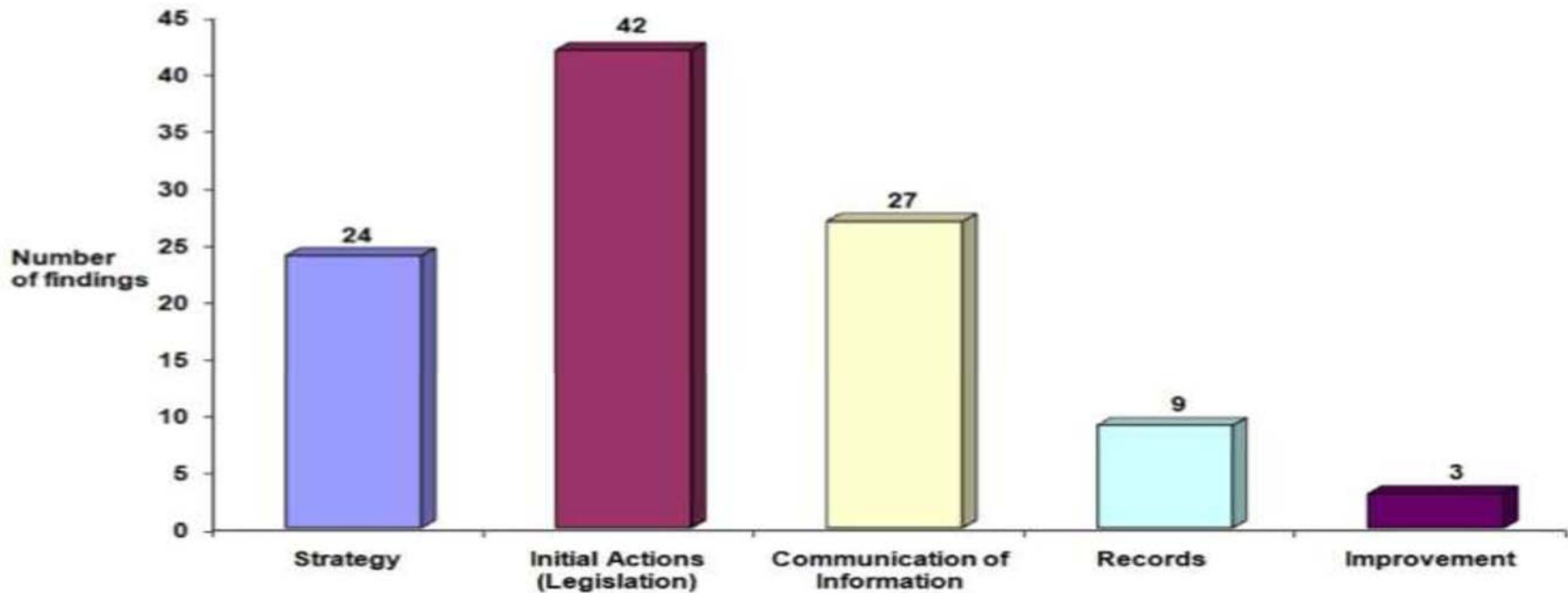


The Consolidated audit summary shows the degree to which “findings” are concentrated on common areas and on flag state activities.





PART 1 - COMMON AREAS



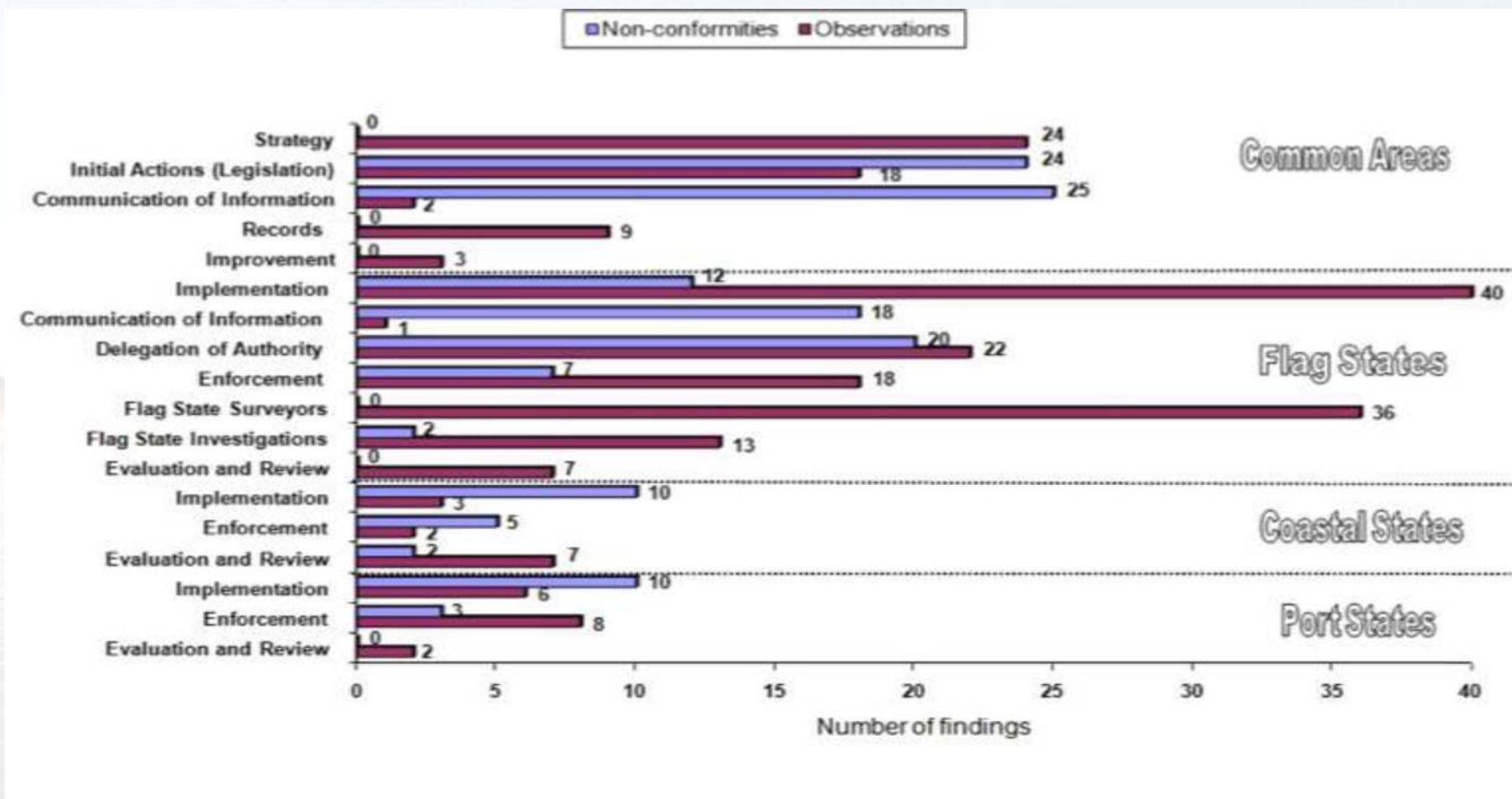
Spread of “Findings” in the common areas (From 45 audits)





# TRACECA Maritime Safety & Security II

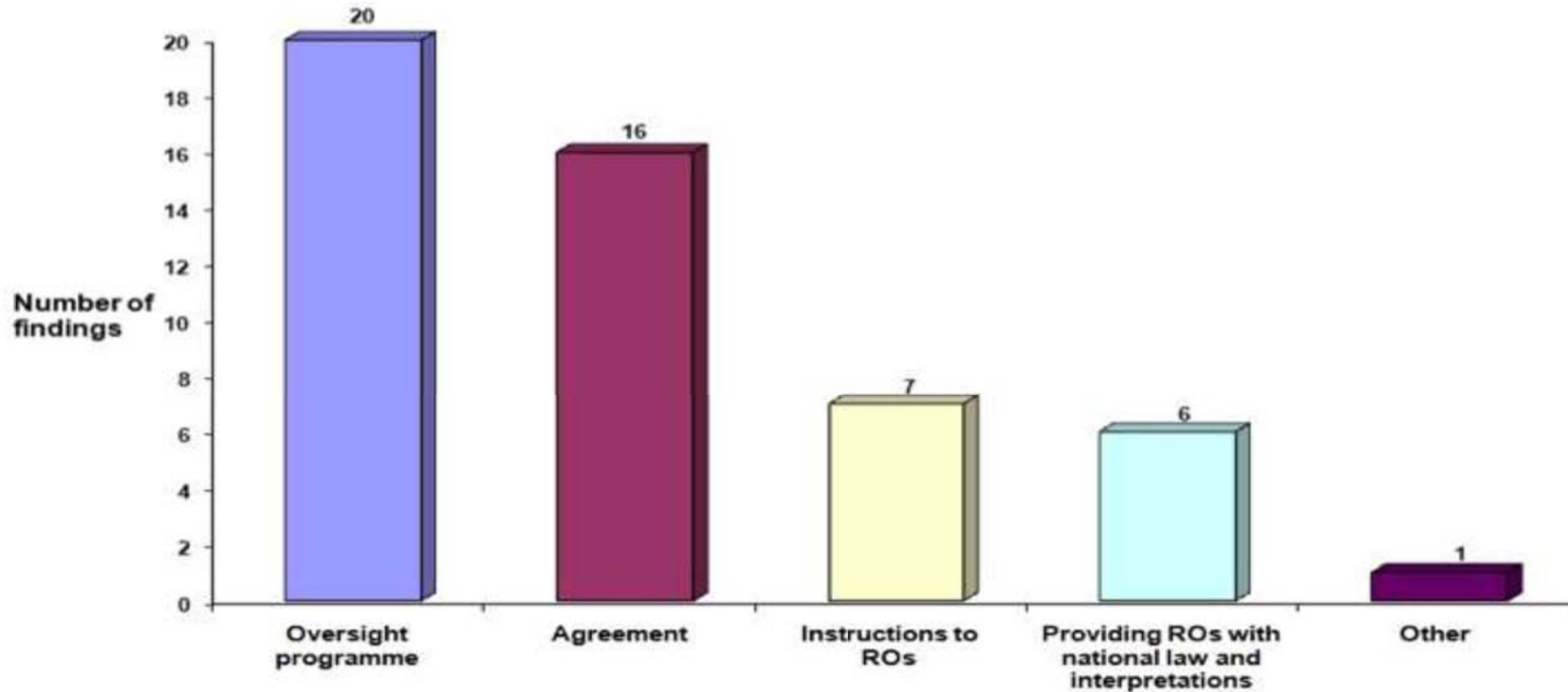
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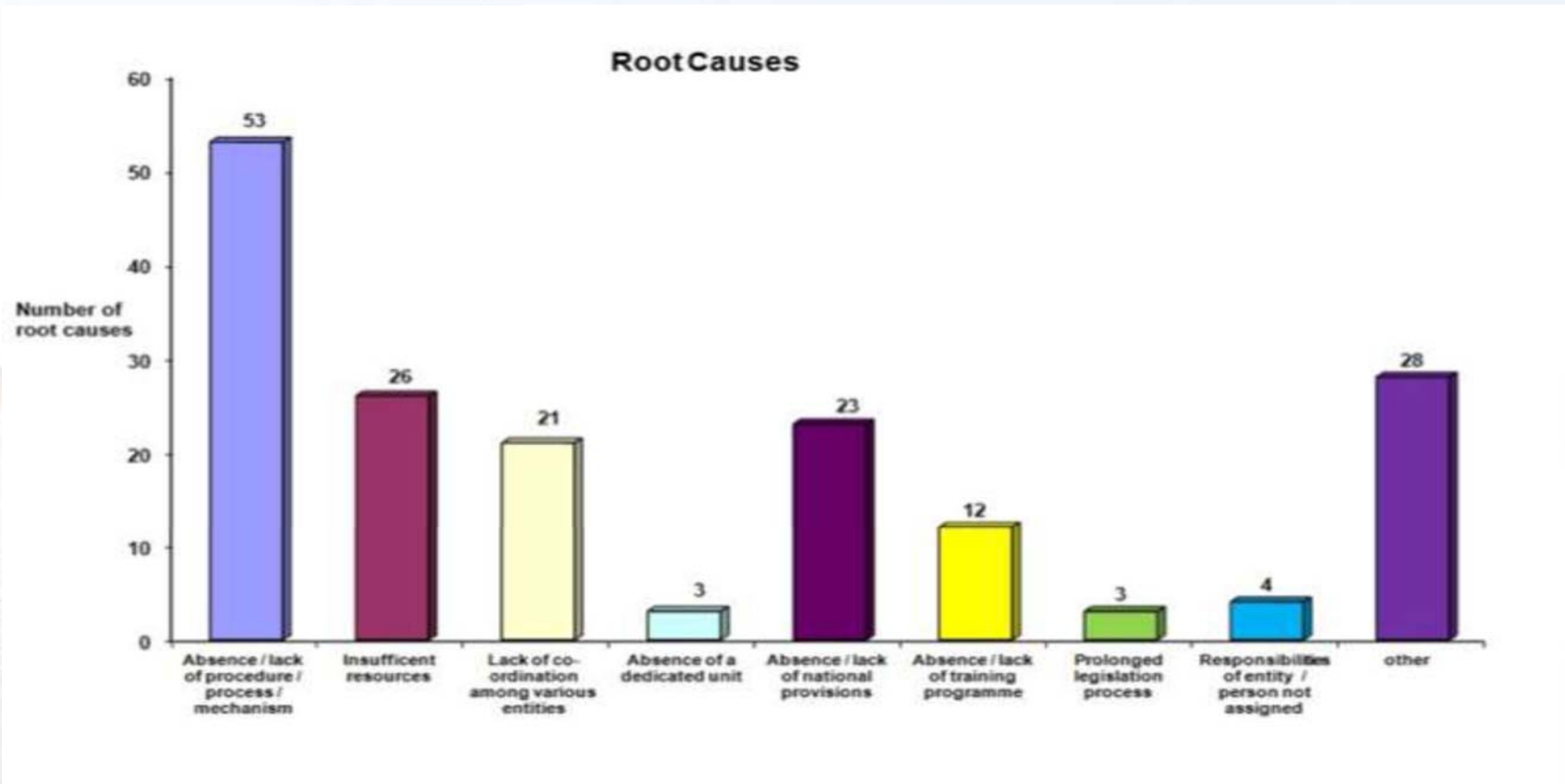
“Findings” by area of the Code.



### Delegation of Authority



Analysis of “findings” related to delegation of authority to recognised organisations.



Analysis of “Root Causes” 45 audits





The largest number of findings have their “root causes” in:

- absence or lack of a procedure,
- insufficient resources,
- lack of co-ordination amongst various entities,
- absence of national provisions,
- absence or lack of training programmes.

The ISO 9001 standard addresses at least four of these points.





# ISO 9001/2008 General Requirements

- The Organization shall;
  - determine the processes needed for the quality management system and their application throughout the organization (see 1.2),
  - determine the sequence and interaction of these processes,
  - c) determine criteria and methods needed to ensure that both the operation and control of these processes are effective,
  - d) ensure the availability of resources and information necessary to support the operation and monitoring of these processes,
  - e) monitor, measure where applicable, and analyse these processes, and
  - f) implement actions necessary to achieve planned results and continual improvement of these processes.
  - These processes shall be managed by the organization in accordance with the requirements of this International Standard.

53 Findings from 45 audits highlighted a lack of procedures as the root cause.





## Section 6.1 - Provision of Resources ISO 9001/2008

### ➤ Provision of resources

#### ➤ The organization shall determine and provide the resources needed

- a) to implement and maintain the quality management system and continually improve its effectiveness, and
- b) to enhance customer satisfaction by meeting customer requirements.

26 Findings from 45 audits highlighted lack of resources as the root cause.







## ISO 9001 - Management Commitment

➤ Top management shall provide evidence of its commitment to the development and implementation of the quality management system and continually improve its effectiveness by

- a) communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements,
- b) establishing the quality policy,

21 findings from 45 audits highlighted lack of coordination amongst various entities as the root cause.





23 findings from 45 audits highlighted “Lack of National Provisions” as a root cause. ISO 9001 does not mandate a national strategy but it does say:

- The quality management system documentation shall include
  - a) documented statements of a quality policy and quality objectives, and
  
- Top management shall ensure that the quality policy
  - a) is appropriate to the purpose of the organization,





# ISO 9001

## Section 6.2.2 – Competence, training and awareness

### ➤ The organization shall

- a) determine the necessary competence for personnel performing work affecting conformity to product requirements,
- b) where applicable, provide training or take other actions to achieve the necessary competence,
- c) evaluate the effectiveness of the actions taken,
- d) ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives, and
- e) maintain appropriate records of education, training, skills and experience (see 4.2.4)

12 findings from 45 audits highlighted lack of training programmes as a root cause.





## Summary

- *Directive 2009/21/EC requires member states marine administrations to have a QMS – for flag state activities.*
- *The IMO's III Code contains mandatory requirements that can only be effectively met with a QMS for Flag, port and coastal state activities.*
- *The ISO 9001-2008 standard is the “best fit” for both requirements.*





The ISO 9000 standard, ISO 17020, ISO 14000 outline  
EC Directive 2009/21/EC,





## The ISO 9000 Series

- ISO 9000:2005 Quality management systems — Fundamentals and vocabulary
- ISO 9001:2008 Quality management systems — Requirements
- ISO 9004:2009 Managing for the sustained success of an organization — A quality management approach





# ISO 9000:2005

## The Fundamentals

- The ISO 9000 family distinguishes between requirements for quality management systems and requirements for products.
- Quality policy and quality objectives are established to provide a focus to direct the organization.
- The quality management principles can be used by top management as the basis of its role
- Documentation enables communication of intent and consistency of action.
- The aim of continual improvement of a quality management system is to increase the probability of enhancing the satisfaction of customers and other interested parties.





# ISO 9001:2008 The Certification Standard

- Basic Requirements for the Certification
- Organisational Requirements
- Requirements addressing Management
- Requirements addressing the Service (Customer Focus)







# ISO 9001:2008 Content

<b>1</b>	<b>Scope .....</b>
<b>1.1</b>	<b>General .....</b>
<b>1.2</b>	<b>Application .....</b>
<b>2</b>	<b>Normative references .....</b>
<b>3</b>	<b>Terms and definitions .....</b>
<b>4</b>	<b>Quality management system.....</b>
<b>4.1</b>	<b>General requirements .....</b>
<b>4.2</b>	<b>Documentation requirements.....</b>





# ISO 9001:2008 Content

<b>5</b>	<b>Management responsibility .....</b>
<b>5.1</b>	<b>Management commitment .....</b>
<b>5.2</b>	<b>Customer focus .....</b>
<b>5.3</b>	<b>Quality policy .....</b>
<b>5.4</b>	<b>Planning.....</b>
<b>5.5</b>	<b>Responsibility, authority and communication .....</b>
<b>5.6</b>	<b>Management review .....</b>





# ISO 9001:2008 Content

<b>6</b>	<b>Resource management .....</b>
<b>6.1</b>	<b>Provision of resources .....</b>
<b>6.2</b>	<b>Human resources .....</b>
<b>6.3</b>	<b>Infrastructure .....</b>
<b>6.4</b>	<b>Work environment .....</b>





# ISO 9001:2008 Content

<b>7</b>	<b>Product realization .....</b>
<b>7.1</b>	<b>Planning of product realization.....</b>
<b>7.2</b>	<b>Customer-related processes .....</b>
<b>7.3</b>	<b>Design and development .....</b>
<b>7.4</b>	<b>Purchasing .....</b>
<b>7.5</b>	<b>Production and service provision .....</b>
<b>7.6</b>	<b>Control of monitoring and measuring equipment ..</b>





# ISO 9001:2008 Content

<b>8</b>	<b>Measurement, analysis and improvement..</b>
<b>8.1</b>	<b>General .....</b>
<b>8.2</b>	<b>Monitoring and measurement .....</b>
<b>8.3</b>	<b>Control of nonconforming product .....</b>
<b>8.4</b>	<b>Analysis of data .....</b>
<b>8.5</b>	<b>Improvement .....</b>





## ISO 9004:2009 Managing for the Sustained Success

- Following the same Principles as ISO 9001
- Management Functions are more focused
- Easier to understand for non Expert
  - ⇒ Recommended as Guidance Document



## EC Directive 2009/21/EC on Flag State Requirements

- Each Member State shall develop, implement and maintain a quality management system for the operational parts of the flag State-related activities of its administration. Such quality management system shall be certified in accordance with the applicable international quality standards.





## The ISO 17000 Series

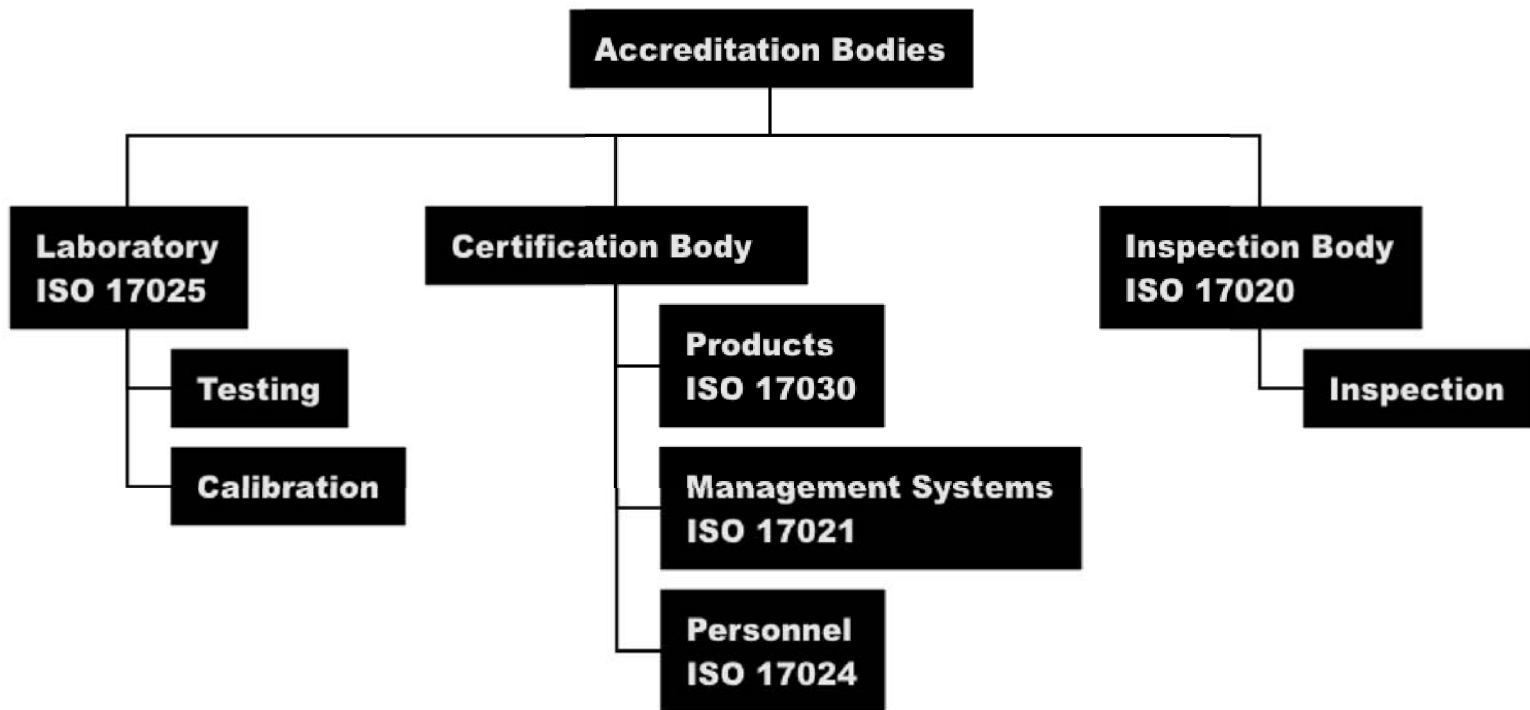
- ISO 17000:2004 Conformity assessment – Vocabulary and general principles
- ISO 17020:2012 Conformity assessment — Requirements for the operation of various types of bodies performing inspection
- ISO 17024:2012 Conformity assessment — General requirements for bodies operating certification of persons







# ISO 17020 + ISO 17024





# ISO 1720:2012

## The MARAD as Inspection Body

- Survey in accordance with int. Instruments
- Flag State Inspection
- Port State Inspection





## Requirements Specific to ISO 17020:2012

- Impartiality and Independence
- Subcontracting
- Inspection Methods and procedures





# ISO 17024:2012

## The MARAD as Body Certifying Persons

- Certification of Seafarers
- ... any other in your Administration?





## Requirements Specific to ISO 17024:2012

- Structure of the Certification Body in Relation to Training
- Requirements for Examiners
- Certification Process
  - Assessment Process
  - Examination Process
  - Recertification Process





# ISO 14000 Series Environmental Management Systems

- ISO 14015 Environmental Assessment of Sites and Organisations
  - Ports, Yards
- ISO 14040ff Life Cycle Assessment
  - own facilities
  - own vessels
  - benefit for clients???
- ISO 14063 Environmental Communication; Guidelines and Examples
  - Presentation to the outside world





**ISO 9001 / ISO 28000**  
**ISM**  
**Certification and audits**





# ISO 9001 Fundamentals

## ➤ The process approach.

### ➤ Emphasises the importance of:

- Understanding and meeting requirements
- Considering processes in terms of added value,
- Obtaining the results of process performance and effectiveness
- Continual improvement of processes based on objective measurement.







## Plan – Do – Check – Act

- Plan-Do-Check-Act” (PDCA) can be applied to all processes. PDCA can be briefly described as follows.
- **Plan:** establish the objectives and processes necessary to deliver results in accordance with customer requirements and the organisation's policies.
- **Do:** implement the processes.
- **Check:** monitor and measure processes and product against policies, objectives and requirements for the product and report the results.
- **Act:** take actions to continually improve process performance.





# Intent

- This International Standard specifies requirements for a quality management system where an organization;
- a) needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and
- b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.





# ISM Fundamentals by Comparison

## ➤ Objectives

- 1.2.1 The objectives of the Code are to ensure safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular, to the marine environment, and to property.
- 1.2.2 Safety management objectives of the Company should, inter alia:
  - .1 provide for safe practices in ship operation and a safe working environment;
  - .2 assess all identified risks to its ships, personnel and the environment and establish appropriate safeguards; and
  - .3 continuously improve safety management skills of personnel ashore and aboard ships, including preparing for emergencies related both to safety and environmental protection.
- 1.2.3 The safety and management system should ensure:
  - .1 compliance with mandatory rules and regulations; and
  - .2 that applicable codes, guidelines and standards recommended by the Organization, Administrations, classification societies and maritime industry organizations are taken into account





# ISM

## FUNCTIONAL REQUIREMENTS

- 1.4 Functional requirements for a Safety Management System (SMS)
  - Every Company should develop, implement and maintain a Safety Management System (SMS) which includes the following functional requirements:
    - a safety and environmental protection policy;
    - instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with relevant international and flag State legislation;
    - defined levels of authority and lines of communication between, and amongst, shore and shipboard personnel;
    - procedures for reporting accidents and non-conformities with the provisions of this Code;
    - procedures to prepare for and respond to emergency situations; and
    - procedures for internal audits and management reviews.





# ISO 9001-2008

## ➤ STRUCTURE;

- A Policy Statement and Quality Objectives.
- A Quality manual.
- Documented procedures and Records,
- Documents including records determined by the organisation to be necessary to ensure effective planning, operation, and control of processes.





# Essential procedures

## Document Control

### ➤ Document Control;

- A documented procedure shall be established to define the controls needed
  - a) to approve documents for adequacy prior to issue,
  - b) to review and update as necessary and re-approve documents,
  - c) to ensure that changes and the current revision status of documents are identified,
  - d) to ensure that relevant versions of applicable documents are available at points of use,
  - e) to ensure that documents remain legible and readily identifiable,
  - f) to ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the quality management system are identified and their distribution controlled, and
  - g) to prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.



## Essential procedures Records Control

- 4.2.4 Control of records
- Records established to provide evidence of conformity to requirements and of the effective operation of the quality management system shall be controlled.
- The organization shall establish a documented procedure to define the controls needed for the identification, storage, protection, retrieval, retention and disposition of records.
- Records shall remain legible, readily identifiable and retrievable.





## Control of Monitoring and Measuring Equipment

- The organization shall determine the monitoring and measurement to be undertaken and the monitoring and measuring equipment needed to provide evidence of conformity of product to determined requirements. The organization shall establish processes to ensure that monitoring and measurement can be carried out and are carried out in a manner that is consistent with the monitoring and measurement requirements.







# Rectifying Non Conformities

- The organization shall take action to eliminate the causes of nonconformities in order to prevent recurrence. Corrective actions shall be appropriate to the effects of the nonconformities encountered.
- A documented procedure shall be established to define requirements for
  - a) reviewing nonconformities (including customer complaints),
  - b) determining the causes of nonconformities,
  - c) evaluating the need for action to ensure that nonconformities do not recur,
  - d) determining and implementing action needed,
  - e) records of the results of action taken (see 4.2.4), and
  - f) reviewing the effectiveness of the corrective action taken.





# Preventative actions

- The organization shall determine action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions shall be appropriate to the effects of the potential problems.
- A documented procedure shall be established to define requirements for
  - a) determining potential non- conformities and their causes,
  - b) evaluating the need for action to prevent occurrence of nonconformities,
  - c) determining and implementing action needed,
  - d) records of results of action taken (see 4.2.4), and
  - e) reviewing the effectiveness of the preventive action taken.





# The Audit Process

- Internal audits,
  - How often,?
  - By who?





# Audit Fundamentals

- Objective evidence.
- When does a deficiency become a non-conformity?





# ISO in a Marine Administration





## What a Marine Administration does.

- Two separate but related functions.
- Registry of ships – the Customer service.
  - UNCLOS Art 91 “Every State shall fix the conditions for the grant of its nationality to ships”
- Supervision of ships – the regulator.
  - UNCLOS Art 94. “Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.”





## The Regulator

- The role that is the focus of the EU. Directive 2009/21/EC says the “operational parts” of the flag state related activities. It then refers to the results of PSC in the Paris MOU and places a responsibility on flag states to “explain” if they end up on the grey or black lists.
- This role is related purely to the enforcement role – not the business role.





## ISO and the enforcement role

- The ISO 9001 standard does not directly address the sort of things that an administration has to do as an enforcement organisation.
- But there are key elements of the standard that do go towards providing the data for effective enforcement, ensuring consistent and correct standards, providing training for staff, dealing with external organisations like ROs.







## The Customer related side.

### ➤ Two approaches.

- The international registry approach – looking for business – making money.
- The national flag approach – providing a service to national organisations.





## Links between the two approaches.

- Both approaches need:
  - Customers.
    - In the first case there is no point if the potential customers find it so hard they go to one of the international registries.
    - In the second case the operation is competing with a competitive international world.
- Therefore – in both cases the customers have to be retained and attracted.





## Competition between Marine Administrations

- Three business options for competing with competitors;
  - standards - avoid rules and costs.
  - pricing - cheapest gets the business.
  - quality of service.





## Competing on Standards

- Once popular, now almost impossible due to;
  - Port State Control,
  - IMO oversight - VIMSAS, III, STCW audits, international pressure, MLC.
  - International Scrutiny.





## Competing on Price

- Almost impossible. Most of the major ship registries charge very similar prices. Undercutting merely reduces income to an unsustainable level





## Cost Comparison – Approx.

➤ 10,000 NT ship. initial registry/ annual charge/  
per year over 5 years.

➤ Liberia	\$7450 / \$7450	\$7450/year
➤ Bahamas	\$5755 / \$4655	\$4875/year
➤ Marshall Is.	\$10935/ \$6380	\$7291/year
➤ Vanuatu.	\$9505 / \$4350	\$5381/year
➤ Malta.	\$2887 / \$4831	\$4422/year
➤ Panama	\$8500 / \$4800	\$5540 /year
➤ Antigua	\$14754 / \$5824	\$6226/year



## Competing in the real world.

- If an owner wants to avoid low standards, pay a reasonable price, then the only differentiator between flags is service.
- Delivering a good quality service is a business decision





## Keys to Good Customer Service in a marine administration.

- Consistency.
- Technical expertise and understanding of changes and their importance.
- Being able to adapt to changes.
- Being available to provide answers.







# Consistency

## ➤ ISO 9001-2008 Scope - General

### ➤ 1.1 General

- This International Standard specifies requirements for a quality management system where an organization
  - a) needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and
  - b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.





## Technical Expertise

### ➤ ISO 9001 – 2008 Section 6 – Human resources.

#### ➤ The organization shall

- a) determine the necessary competence for personnel performing work affecting conformity to product requirements,
- b) where applicable, provide training or take other actions to achieve the necessary competence,
- c) evaluate the effectiveness of the actions taken,
- d) ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives, and
- e) maintain appropriate records of education, training, skills and experience (see 4.2.4).





## Adapting to change

### ➤ ISO 9001 – 2008 Section 5

#### ➤ 5.6.1 General

- Top management shall review the organization's quality management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. This review shall include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.





## Providing answers.

### ➤ ISO – 9001 – 2008 Section 7

### ➤ 7.2.3 Customer communication

- The organization shall determine and implement effective arrangements for communicating with customers in relation to;
  - Product information,
  - Enquiries, contracts or order handling, including amendments, and
  - Customer feedback, including customer complaints.





## ISO / IEC 27001

### ➤ Information Security Management Systems (ISMS)

- To establish the policy objectives used to direct and control an organisation with regard to information security.





## 27000 & 9001

- Both aligned.
- ISO 9001 includes the base elements of 27000 (and 14000)





27000

- Risk management,
- Data used and stored by a marine administration.
- Interaction with Computer and data suppliers.





## Summary

- Appreciating what is the product - Safe ships and Seafarers.
- Key business strategies to succeed as a maritime administration.
- ISO 9001 matches and certifies those strategies.







# Creating an ISO 9000 system in a marine administration. Challenges and tips.





## Problems

- Staff resistance.
- Time.
- Lack of understanding.
- Cost.





## The Value

- Firm management control – senior management knows what is going on in a consistent and repeatable manner.
- Consistency for customers, - they know what they are getting and it is a consistent result.
- International recognition – customers respect that and some may only deal with ISO organisations.





## Dealing with Staff resistance

- I don't need a piece of paper to tell me how to do my job.
- I don't have time for all this extra paperwork.
- There are too many meetings.
- I am not going to allow him to check my work.





## Answers to staff resistance

### ➤ Involvement.

- Right from the beginning.
- Ownership
- Continuing involvement.
- Leadership and management commitment.





## Other advantages to a Marine Administration

- Streamlining the work,
- Getting rid of old processes and ways of working.
- Enhanced productivity.





# Challenges

- Other departments – lack of understanding
- Factors outside the control of the Administration
- Turning it to advantage.





## Creating the System

- As simple as possible.
- Must have the mandatory procedures.
- Avoid the technical language of the Standard.
- Involve staff in creating the system – it belongs to everyone.







## Writing procedures

- Procedures describe what staff members do – allow them to try first to;
  - Describe what they do
  - Describe the outputs of what they do.
- Then –
  - Review and ask – is this still necessary?, is this still the best process? Is this still the best way to do this?. Is there a better way? Encourage staff members to look at what they do and ask these questions.





# Managing an ISO 9001 QMS in a marine administration,





## Management Commitment

- Commitment from Top Management is essential.
- Management must be seen to be involved in the system and using the system.
- Management must be seen to be prepared to pay for it.





## The Cost

- Achieving certification to ISO 9001 does involve a cost.
  - External audits are expensive,
  - Internal audits take up time.
  - A Quality Representative probably amounts to one half post in a small organisation. In an organisation of about 20 people, ISO probably requires one full time post – possibly divided between two people to ensure it runs correctly, is maintained up to date and managed.





# Management Commitment

- The Management review.
  - Fundamental to the system.
  - Opportunity to look at everything – and to ask “is this system still delivering what we need or do we need to make changes?”
  - Needs to involve staff and be communicated to staff.
  - The review output needs to make it very clear to all staff that top management is interested and committed.





## Training

- Trained staff is a basic ISO 9001 requirement.
  - Training for staff is vital to the proper operation of the system but is also a cost element.
  - As many staff as possible should undertake training and be in a position to undertake audits.





## Selling ISO to staff.

- Easiest if top management are seen to be embracing the system.
- Must not be a system imposed from the top.
- Getting rid of unnecessary administrative tasks.
- Opportunity to learn new skills – auditing, better understanding of the operation, possible opportunities to advance, better understanding of their role in the organisation.
- Seeing NCNs as valued input, not as criticism.





## Developing procedures

- A key role in selling the process to staff and ensuring it works properly is to:
  - Encourage staff to review procedures on a regular basis – “Is this procedure still how we want to do things?” “Does it still work?” “Has anything changed in my area that makes a change necessary?”







# Auditing

- Internal audits are required during each annual cycle.
- Number and frequency is to be set by the system,
- Deciding on frequency and scope and personnel is an important element in making the system work smoothly.





## Internal Audits

- Planning for them.
- Best to tackle small areas on a rolling basis.
- Requires time and control.
- Good practice to involve as many staff as possible in doing them;
  - Gives ownership,
  - Allows staff to gain experience, and knowledge.
  - Helps to break down barriers.





## Communication

- Critical to success is keeping staff involved and informed.
  - New and amended procedures communicated to everyone,
  - Results of management reviews communicated.
  - System and its elements written in the simplest possible terms, too many systems use the terminology of the standard and become too legalistic and therefore impenetrable to lower level staff.





# ISO Standards in a Coastal and Port State.

## The VIMSAS audit





## Problems

- Separate Departments.
- Less international awareness,
- No real requirement to involve standards.
- Less openness to processes and procedures.
- Costs





## ISO 14000

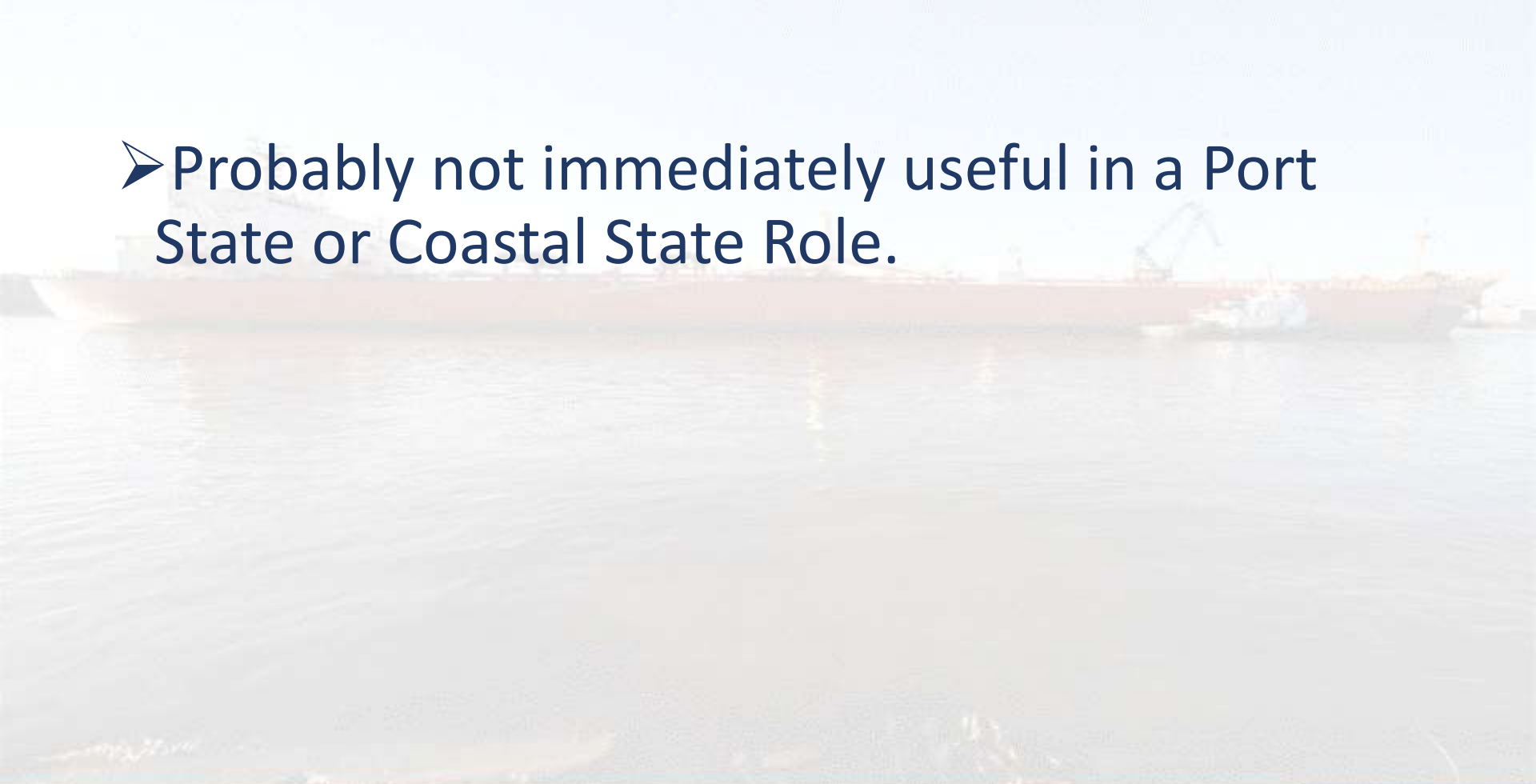
- Environmental standard.
- Requires environmental policies.
- Procedures to protect the environment and improve it.
- Of value to the state in its Port State and Coastal State role.





## ISO 28000

- Probably not immediately useful in a Port State or Coastal State Role.





# VIMSAS

- Experiences,
- Processes,
- Auditors,
- Approaches.







# Value of the ISO 14000 series and the ISO 28000 Series for a Maritime Administration





## ISO 14000 Series

**ISO 14000** is a series of standards on environmental management aiming to

- (a) minimize how organisations operations (processes etc.) negatively affect the environment (i.e. cause adverse changes to air, water, or land);
- (b) comply with applicable laws, regulations, and other environmentally oriented requirements, and
- (c) continually improve in the above.





# ISO 14001

- Basic approach is similar to the 9001 approach
- Process oriented
- PDCA approach
- Continuous improvement approach





## ISO 14001

- The requirements of ISO 14001 are integral part of the EU's Eco-Management and Audit Scheme (EMAS).
- EMAS's structure and material requirements are more demanding, foremost concerning performance improvement, legal compliance and reporting duties.





# Samples of other 14000 Standards

- **ISO 14004** Environmental management systems—General guidelines on principles, systems and support techniques
- **ISO 14015** Environmental assessment of sites and organizations
- **ISO 14020** series (14020 to 14025) Environmental labels and declarations
- **ISO 14030** discusses post production environmental assessment
- **ISO 14031** Environmental performance evaluation—Guidelines
- **ISO 14040** ff. Life Cycle Assessment, LCA
- **ISO 14050** terms and definitions.
- **ISO 14062** discusses making improvements to environmental impact goals.
- **ISO 14063** Environmental communication—Guidelines and examples





## Possible application and benefits for MARADs

- Ports and Shipyards, in particular branches dealing with environmentally challenging materials, e.g. port reception facilities
- Ships managed by a MARAD
- Strengthening of the national reputation as acting environmental responsible
- Improvement of the international reputation
  - ⇒ Requires a sound communication approach



# ISO 28000 series Supply Chain Security

- ISO 28000 has been developed by the ISO Technical Committee TC8 “Ships and Maritime Technology”. It is based on the ISO format adopted by ISO 14001:2004 because of its risk based approach to management standards. The ISO 28000 series of standards consists of:
- ISO 28000:2007 – The Security Management Standard (SMS) requirements standard, a specification for an SMS against which organizations can certify compliant.
- ISO 28001:2007 –. Provides requirements and guidance for organizations in international supply chains.
- Assists in meeting the applicable authorized economic operator (AEO) criteria set forth in the World Customs Organization Framework of Standards and conforming national supply chain security programmes.





# ISO 28000 series Supply Chain Security

- ISO 28002:2010 PAS - Development of resilience in the supply chain - Requirements with guidance for use.
- ISO 28003:2007 - Requirements for bodies providing audit and certification of supply chain security management systems
- ISO 28004:2007 - provides generic advice on the application of ISO 28000:2007.
- ISO 28005 – 1:2013 Electronic port clearance (EPC) -- Part 1: Message structures.
- ISO 28005 – 2:2013 Electronic port clearance (EPC) -- Part 2: Core data elements







## ISO 28000 Supply Chain Security

During development ISO 28000 was predicted to be the standard that would break all records, regarding the number of organizations that would adopt it, and the speed with which it would spread. This did not happen. So far relatively few organizations have, in fact, implemented ISO 28000.





## 28000 and MARADs

- Port of Houston Port Authority was the worlds first Port Authority certified against 28000 in 2008
- 4 Objectives:
  - *Emergency response planning*
  - *Equipment management*
  - *Entry processing times of visitors and vendors*
  - *Training of PHA personnel with security duties*
- DP World in 2013 certified



# SUPPLY CHAIN SECURITY - ISO 28000

- ISO 28000 - the only published and certifiable International Standard that takes a **holistic, risk-based approach to managing risks associated with any disruptive incident in the supply chain -before, during and after the event. It suggests how to improve resilience and preparedness performance in a cost effective way based on a plan-do-check-act**
- Section 4.3.1 states, **“risk assessment shall consider the likelihood of an event and all of its consequences which shall include: *physical failure threats and risks; operational threats and risks; natural environmental events; factors outside of the organization’s control; & stakeholder threats and risks*”**
- Section 4.4.7 - **emergency preparedness, response and security recovery**
- **ISO Secretary General noted in Press Release on publication of ISO 28000:**
  - **Reducing Piracy, Fraud, and Terrorism**
  - **The standards address potential security issues at all stages of the supply process from point of manufacture, including sources of financing, to the final consumer thus targeting threats such as terrorism, fraud and piracy.**

# How 28000 is being used



**World  
Customs  
Organization  
(WCO)**  
**SAFE  
Framework**



**European  
Commission  
Authorized  
Economic  
Operator\***



**Customs Trade  
Partnership  
Against  
Terrorism  
(C-TPAT)\***



**Singapore  
Secure  
Trade  
Partnership  
(STP)\***



**Transported  
Assets  
Protection  
Association  
(TAPA)\***



**ISO 28000**