

# “TMSA & Risk Assessment”

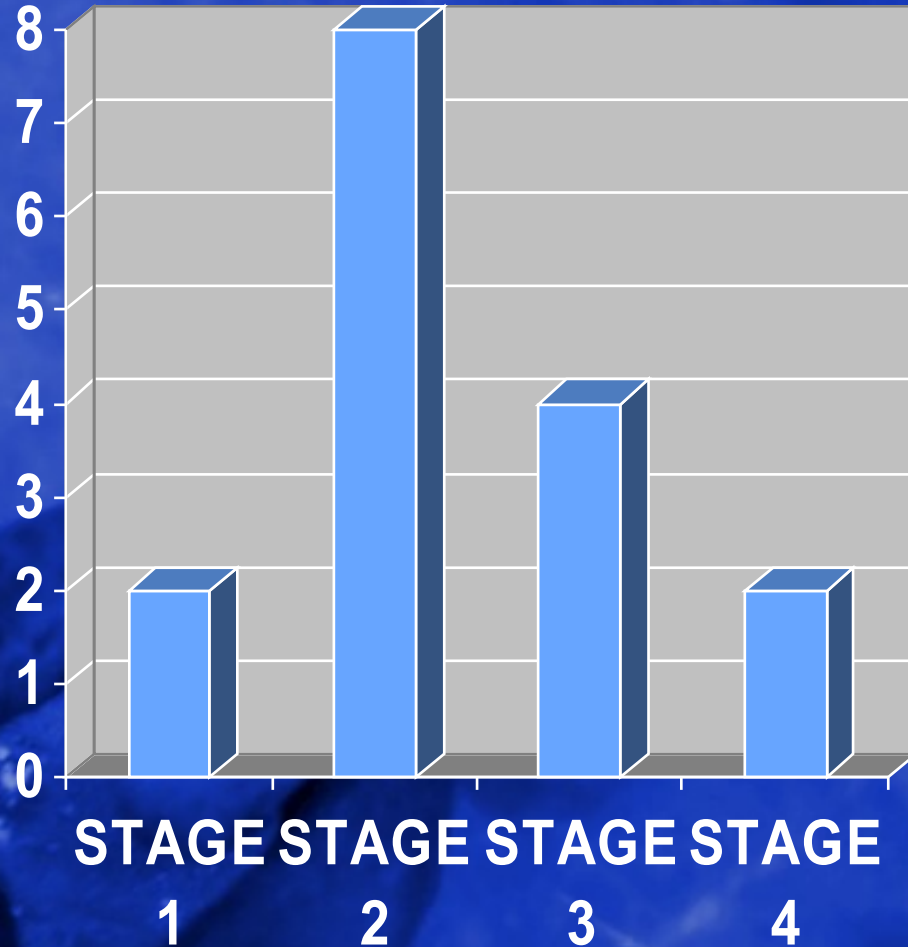


**Presented:  
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# TMSA: THE REQUIREMENTS

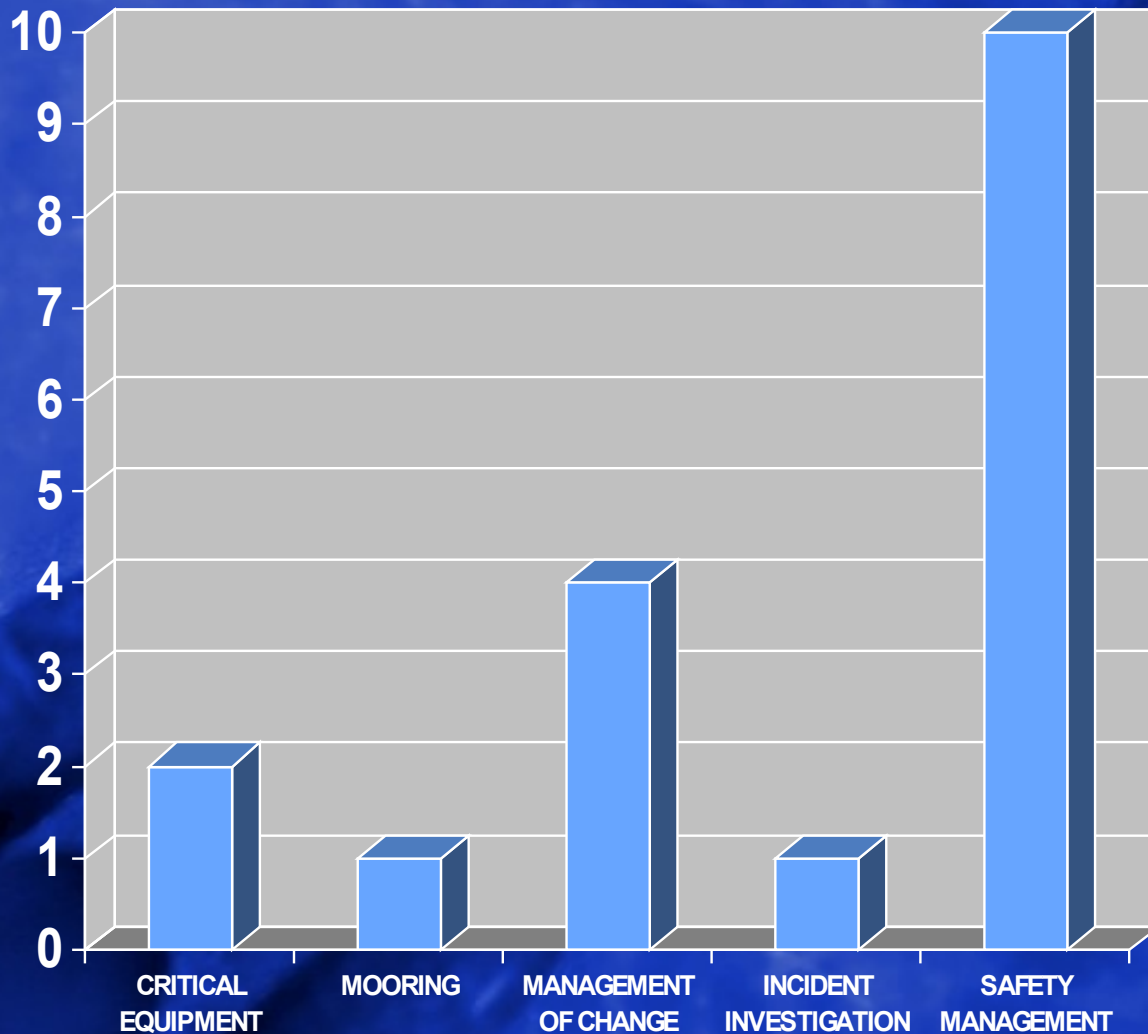
- ❑ TMSA REQUIREMENTS EXCEED USUAL ISM / ISO / INDUSTRY STANDARDS
- ❑ THE CONCEPT OF RISK ASSESSMENT BECOMES AN INTEGRAL PART OF THE MANAGEMENT SYSTEM
- ❑ CHANGE OF PHILOSOPHY TOWARDS A PROACTIVE, CONTINUOUSLY IMPROVING SYSTEM

# Risk Assessment Requirement Under TMSA



■ NUMBER OF KPI's  
RELATED TO  
RISK  
ASSESSMENT

# Risk Assessment Requirement Under TMSA



■ RISK ASSESSMENT KPIs RELATED TO KEY ELEMENTS

# RISK ASSESSMENT DEFINITION

- **RISK = PROBABILITY X CONSEQUENCE**

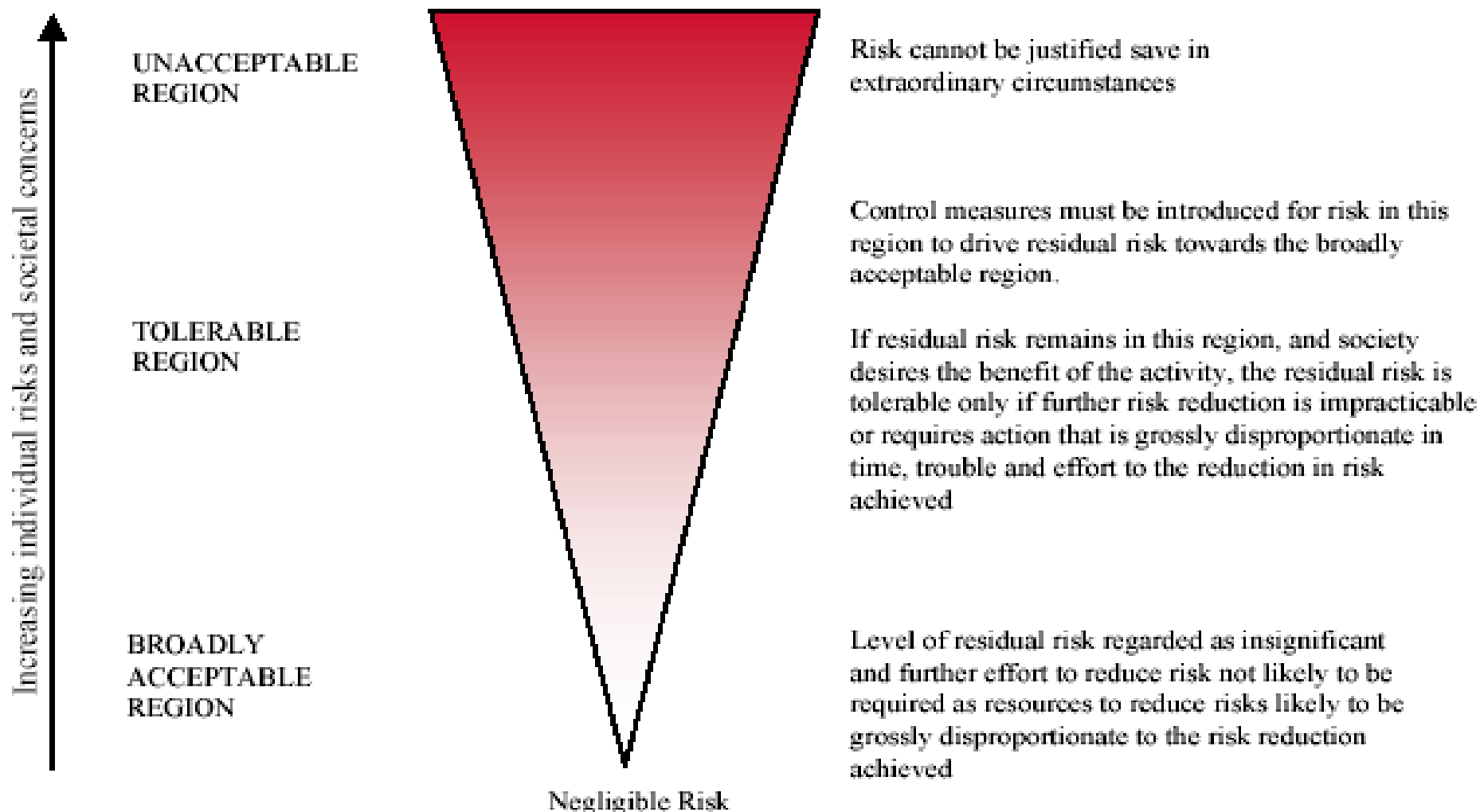


# Risk Management Process:

- AWARENESS (Training of key personnel).
- HAZARD IDENTIFICATION (Group systems and subsystems and identify hazards)
- ASSESSMENT / EVALUATION OF RISK
- IMPROVEMENT (Risk control options and Cost benefit analysis)
- MONITORING & REPORTING OF RESULTS

# Risk Criteria Framework

## USE OF ALARP CONCEPT



# Company's Risk Management program

- Evaluate existing systems / subsystems and identify operations/hazards outside acceptable levels based on the company's documented management system
- Establish on going office risk assessment process/procedure
- Establish Vessel On Going Risk Assessment Process/Procedure

# TYPES OF RISK ASSESSMENT

- Qualitative Risk Assessment approach is easier to apply , requires less resources and expertise but provide the least degree of insight
- Quantitative (QRA) approach is more demanding on resources and expertise but eventually provides the best understanding and evaluation of risk

Risk assessments need only be as complex as the problem they are trying to address.

Risk Assessment tries to answer five simple questions:

• **What can go wrong?** (Hazard Identification)

**How bad?** (Consequence Modeling)

**How often?** (Frequency Estimation)

**So what?** (Risk Assessment)

**What do I do?** (Risk Management)

# Our Course of Actions



# Followed Strategy



# Steps for Compliance

- RISK ASSESSMENT CBT CD for Sea Going Staff
- Risk assessment in house training seminars for shore based staff
- Risk assessment in house training seminars for Sea Going Staff
- Introduction and on board training for the new management system
- Tailor made management system familiarization CBT CD for Sea Going Staff
- On board audit against the revised management system

# Introducing Risk Assessment

## RISK MANAGEMENT TEAM

This team should be composed of senior staff of the Technical operation of all Company's managing offices having as prime responsibility to make certain that:

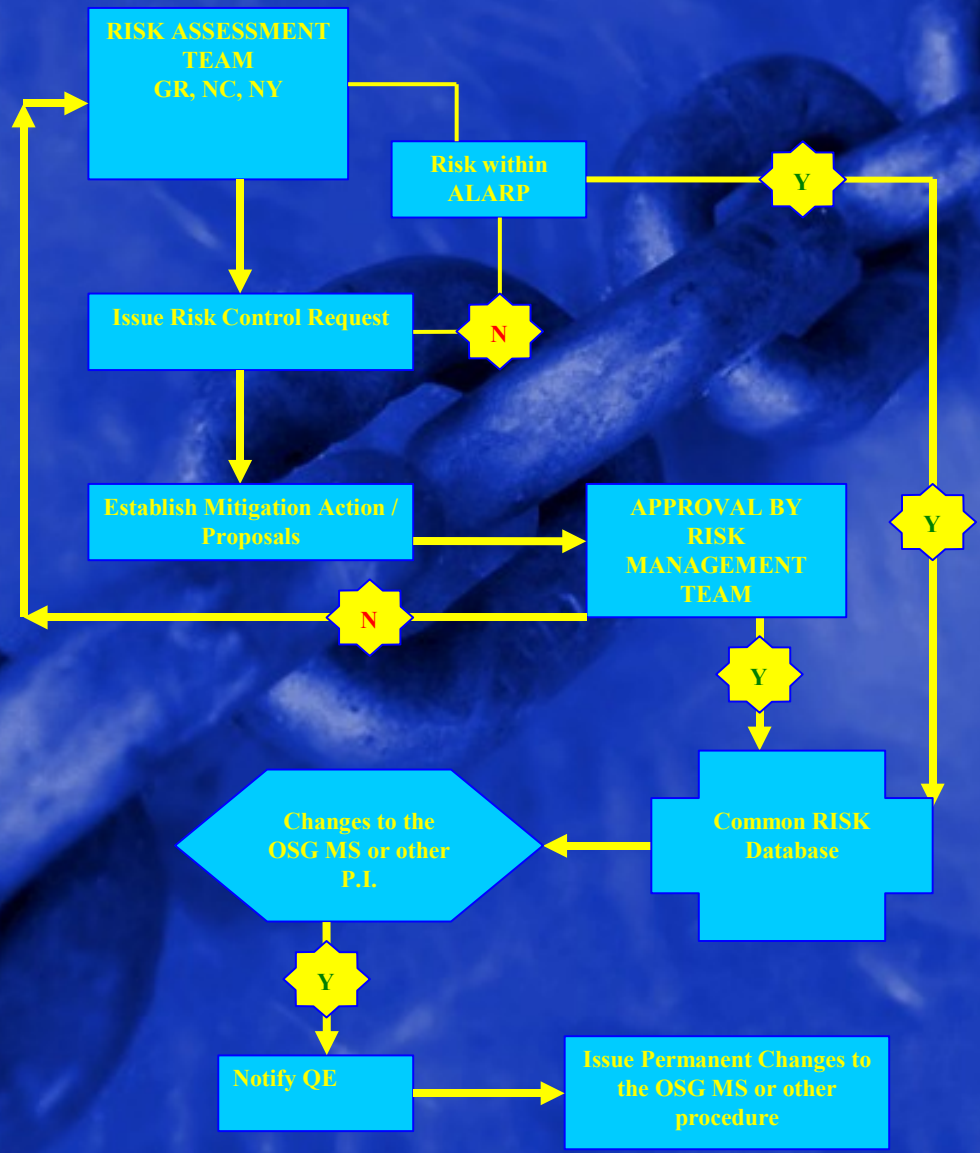
- The documented OSG Safety Management System ensures that all risks associated with shipboard operations remain within the As Low As Practical Reasonable (ALARP) range.
- Introduction of a condition that exceeds surpass or revokes a previous one involving new type of vessels, shipboard operations, new procedures or other potential changes that will affect the Safety & Environmental Protection of company's vessels are within ALARP.
- Addresses changes originated from installation of new equipment or components, use of different materials, new settings etc.
- Addresses Organizational Changes within the company.
- Addresses Changes originated from introduction of new activities in the shipboard operations.
- To ensure that the Risk Management Team will provide an adequate amount of Risk Information decision makers will require, the RMT shall meet at intervals set in accordance to the periodical need.
- Providing the necessary mitigating actions at a strategic level for the whole OSG fleet in a uniform and standardize way shall be the guiding principle of those meetings.

# Introducing Risk Assessment

- **RISK ASSESMENT TEAM**
- These teams shall be able to operate independently in GR, NC and NY, so that the flexibility of operations is maintained in all three offices.
- However a) the result of the RISK ASSESSMENT shall be stored/saved in common data base and shared among the OSG offices.
- b) There shall be a specific workflow with specific risk mitigation authority depending on the risk level involved (head of SQE).
- c) When a risk mitigation action requires a change in the documented MS or the issuance of a permanent introduction then the mitigation process should require the involvement of the RMT (or alternative the necessary director /manager)

The concept behind the above system is that we develop and implement a RISK MANAGEMENT SYSTEM that is effective from the top level of management (RMT) to the front level of operations and on board. The concept of minimizing operational risks is a main tool in involving the safety method of the complying and in meeting safety and environmental excellence.

# Function of Teams



# Team Members

Having defined the flow of information as derived from RA conducted by both teams to the decision makers, the next step should consequently be the interrelation between the two teams.

Having heavily borrowed ABS definitions, we have introduced the following five types of individuals or groups to participate in the OSG RA process:

- **Sponsor** – In our case the RMT who basis on information or trends will determine the need for a particular RA. The ultimate responsibility for obtaining and having a specific use of the results lies solemnly with the RMT (sponsor).
- **Analyst** – This individual will be responsible for supervising the RA as the Risk Specialist. In each and every RAT an analyst shall be participate.
- **Subject Mater Experts** – These individuals participate in the RAT providing expert knowledge and experience about relevant operations, configurations, and potential problems. If there is a need the expertise of individuals outside the company might be required. They shall be assigned by each office Managing Director after consultation with each managing office's Analyst.
- **Decision Maker** – The individual or group that is going to use the RA process results to make risk based decisions. A lot of times will be the sponsor.
- **Others affected by the decision** – This group or individuals can include internal or external organizations as well as individuals who will likely be affected by the risk based decision. This group should be represented throughout the RA process as appropriate.

# Guidelines to a team for defying the scope of a Risk Assessment.

## 1. Define the objectives of the Risk Assessment.

- The need for performing the specific Risk Assessment (Motivation) should be clearly understood and determined by the team. This may include Senior Management Concern, Regulatory Compliance, Unit Concern, Departmental Concern, or Individual Concern.
- Team has to decide the Operating Modes to be considered.
- The Team has to develop a wish list of information desired from the risk assessment.

# Guidelines to a team for defying the scope of a Risk Assessment.

## 2. Define the consequences of concern.

- Personnel Injury
- Machinery Damage
- Cargo Damage
- Damage in Reputation
- Loss of Revenue

# Guidelines to a team for defying the scope of a Risk Assessment.

## 4. Define the physical limits of the Risk Assessment.

Breadth of Risk Assessment. The team should define what is to be analyzed. If overall risk-related information for an activity or system is needed, then the team shall ensure that all associated operations or subsystems are included. The breadth of risk assessment should be as narrow as possible with out overlooking potentially important contributors to activity or system performance.

Depth of Risk Assessment. The team should define the level of resolution within the RA. Since RA are generally performed in stages, progressing one level at a time, the stage that contributes most of the potential problems can then be addressed in more detail if more detail information are judged by the team to be beneficial.

Uncertainty of Results. The team should define the level of accuracy that decision makers require from the RA results. The need for greater certainty is generally associated with the following:

Severe Consequences

Lack of Familiarity or experience with new systems

Requirements for demonstrating compliance with numerical goals

Availability of resources. The team should define on what type of RA is feasible taking into account limitations in elements as time, budget and personnel resources.

# Guidelines to a team for defying the scope of a Risk Assessment.

## 3. Define the assumptions.

- Clearly defined assumptions help guarantee a reliable RA. Following are some typical assumptions:
- Equipment is fit for its intended use
- Trained personnel will be used
- Written procedures are accurate
- Policies are enforced