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"Subchapter M: Bane or a Boon? Using the Process-based Management System approach, to make it a success"

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Slide 2

A Case for Sub Chapter M

- Even Without Pollution or Injuries Estimated Costs > than $3 million
- Cost of a closed waterway can amount to millions of dollars per day

	2010	2011	2013	2014
TOTAL, U.S.-flag Vessels	41,354	40,512	39,999	40,082
Barge/non-self-propelled vessels	33,152	31,412	31,081	31,043
Self-propelled vessels	8,202	9,078	8,918	9,039
Age of U.S.-flag vessels, percent				
< 6 years old	19.6	18.5	19.3	17.7
6 to 10 years old	9.2	11.5	12.1	14.1
11 to 15 years old	5.1	17.0	14.3	12.4
16 to 20 years old	19.6	8.7	13.6	15.1
21 to 25 years old	18.3	4.2	7.7	8.3
> 25 years old	27.7	39.3	32.6	31.9

Source: Transportation statistics annual report 2017

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Sinking of Herald of Free Enterprise

- British roll-on roll-off (RORO) car and passenger ferry sank on March 7, 1987, killing 193 passengers.
- Litigation determined civil negligence by the crew and company operating the ship.
- After a public inquiry into the sinking in July 1987, Britain's Lord Justice Sheen published a report that castigated the ship's owners as :

Identified a "disease of sloppiness" and negligence at every level of the corporation's hierarchy.

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Why Systems Fail: The cost of non-compliance

Lack of Procedures in AVIQ towing Kulluk-2012

The NTSB concluded the probable cause of the grounding of the MODU *Kulluk* was:
- Inadequate assessment of the risk for the planned tow of the *Kulluk.*
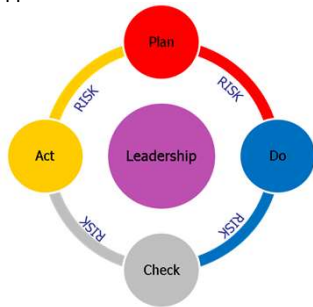- Implementation of a tow plan insufficient to mitigate that risk.

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PDCA Cycle: A Means to Manage Risk …

…. Using a Process-Based Management System (PBMS) Approach

Plan
RISK
Act
Leadership
Do
RISK
RISK
Check

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Sub Chapter M, A Road to: Conforming Products & Safer Operations

Input   Process   Output

Equipment Facilities
Skills Knowledge
Resources
Materials
Risk
Information
WORK
Products and By-Products
Procedures Methods
Controls
Care Coordination

Defects here…   *Result in defects here…*

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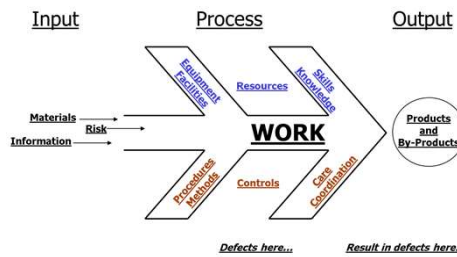
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Developing a TSMS – A Suggested Approach

1. Analyze the organization's core process
2. Identify the key processes and process owners
3. Capture the "as-is" key processes
4. Design the few new key processes
5. Process teams review the procedures/documents
6. Awareness, training and launch the TSMS
7. Use and improve the TSMS
8. Measure, audit and review the TSMS
9. Get certified

Document the system to the extent necessary to deliver confidence that the objectives are being met.
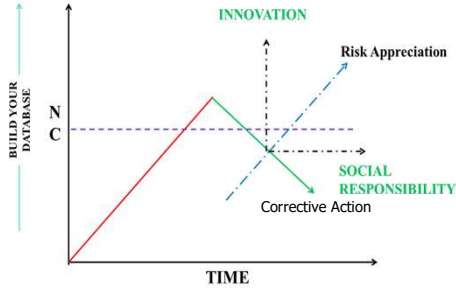
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Maturity of the System

"A bad system will defeat a good person every time" – W.E. Deming

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Creating an Environment for Safe Operations

Agreed requirements are not met because:

- Information does not get to the person doing the job

- Information is often incomplete, or out of date

- People may know what to do but fail to do it

- Process controls may be inadequate

- Tasks may not be assigned to individuals

- Increased expense would be incurred to complete the task

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Best Performing Management Systems

Attributes of the best performing systems include:

- Process-based (cutting across departments) to serve customers
- Documented to the extent necessary for control
- Process controls, resources and objectives address all requirements (including regulations)
- Eliminate root causes of problems

THEREFORE

- Leaders are prepared for the best systems to:
  - Go beyond traditional, TSMS requirements
  - Be dynamic, unique and tailored to the organization
  - Consider being computerized (networked around databases)
  - Require the auditor's innovative approaches to audits

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TPOs and Outsourced Process for USCG

- Statutory USCG requirements are created to provide:
  - The required oversight
  - Maintain stakeholder focus
  - Protect the interests of the customer when tow boats & services are certified

- USCG has outsourced this to TPOs who should:
  - Be well resourced
  - Have the infrastructure, create the environment
  - Maintain organizational knowledge levels
  - Maintain competent personnel
  - Take accountability for the effectiveness of the TSMS

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Leadership Principles

- Focus on Customers
- Leadership
- Engaging people
- Process Approach to systems

- Improvement
- More Evidence-based decisions
- Relationship management

THE SMOKING VOLCANO

LEADER'S POLICY AND OBJECTIVES

SUPPLIERS → THE CROSS-FUNCTIONAL PROCESSES ARE MISSING FROM THE MANAGEMENT SYSTEM → CUSTOMERS

SEPARATED DEPARTMENTS "HOW TO" INSTRUCTIONS (OFTEN CALLED SOPs)

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Which Option to Choose?

- **OPTION A** - The "Coast Guard Option" (46 CFR 136.130(a)(1)). ***Perhaps best for small towing companies who own just two or three vessels***. This option requires annual visitation by the CG for the inspections.
- **OPTION B** – The "TSMS" Option (137.130) ***More logical choice, for larger operators, for convenience and for the cost.*** Requires:
  - ✓ Either Internal (first-party) surveys to be overseen by a TPO
  - ✓ Or External (TPO) surveys, where the TPO conducts independent verifications to assess compliance at the appropriate times in the cycle.
  - ✓ The USCG Certificate of Inspection (COI) is:
    - Valid for five years
    - Requires a valid TSMS issued by a TPO.

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Bane or Boone?
Dependent on Correct Implementation

- TSMS means increased paperwork?
  - Refrain from over documenting your system or using a template that does not reflect how you operate.
- Increased operating & compliance costs?
  - Perhaps some initial costs to comply however, the cost of operating safely is much lower than the cost of an accident
- Interference in your business?
  - Increased safety on the inland waterways benefit all:
    - Boat owners and other leisure craft operators
    - Crew members
    - Environment
    - Economy (ensuring waterways not shut down)

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Reduce the Burden on the Workforce
..... And Human Error

- Subchapter M is not only about compliance. It is about building a safety culture.
- Streamline and reduce the paperwork:
  - That supports compliance / conformity
  - By greater use of technology
  - Identifying common areas and integrating documentation requirements
- Motivate the workforce to use and improve the system:
  - To use the reporting and monitoring systems
  - To build a culture of risk assessment / risk-based thinking
- Explore measures to reduce the cost of compliance
- Improve monitoring and develop performance indicators

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Questions?

Questions and Discussion.

Continue the discussion:
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QMII Engagement Options

➤ TSMS Implementation consulting & internal audits.
➤ Training of TPO audit teams.
➤ Document control software.
➤ Implementation of Maritime Requirements.
➤ Maritime Training
➤ ISO 9001 and all other ISO standards Implementation consulting & audits

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