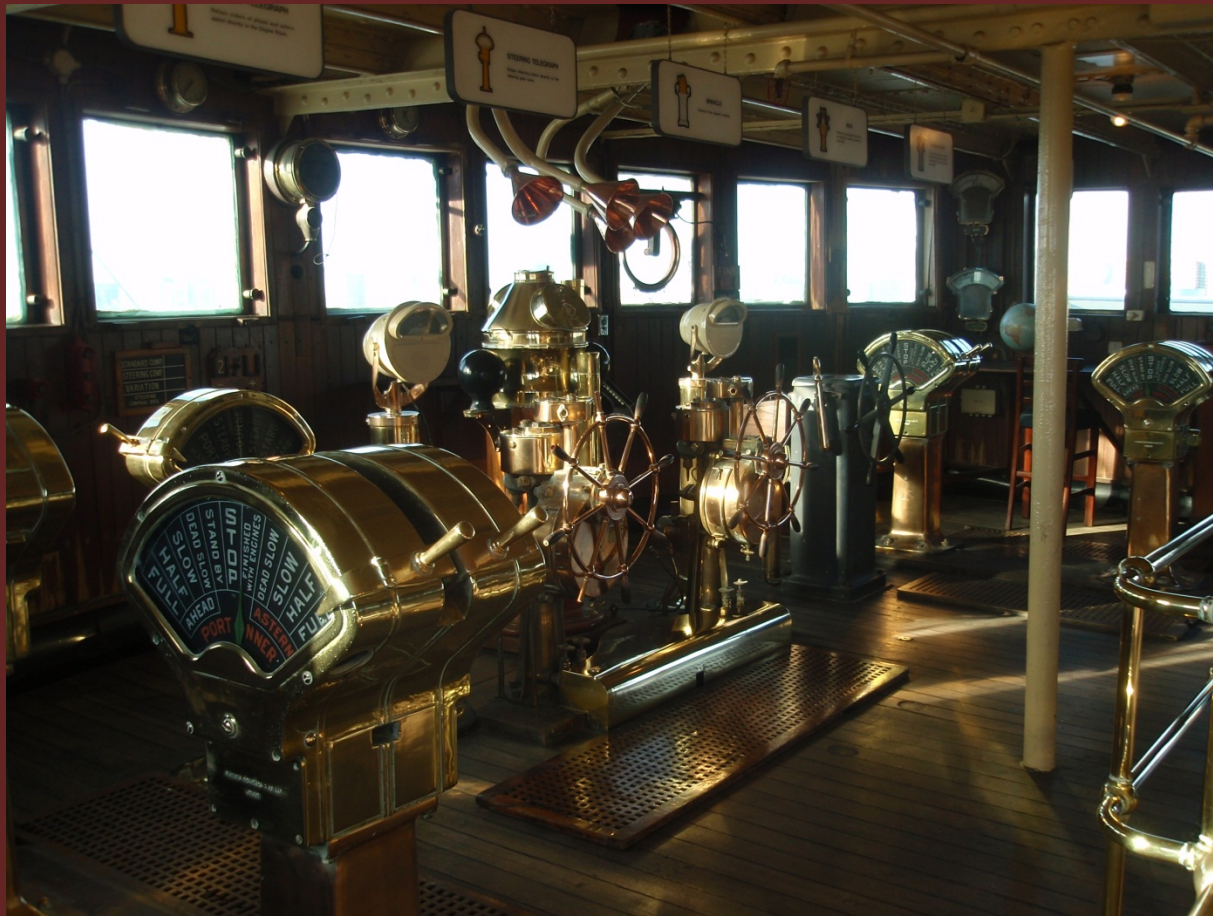


Bridge Resource Management – Situational Awareness – The Human Factor



THE BRIDGE

The Physical location where navigational control of the vessel is exerted.



... on your sail training vessel?

Room to lay out the whole chart?

Electronic chart running in the background of several other programs on the laptop?

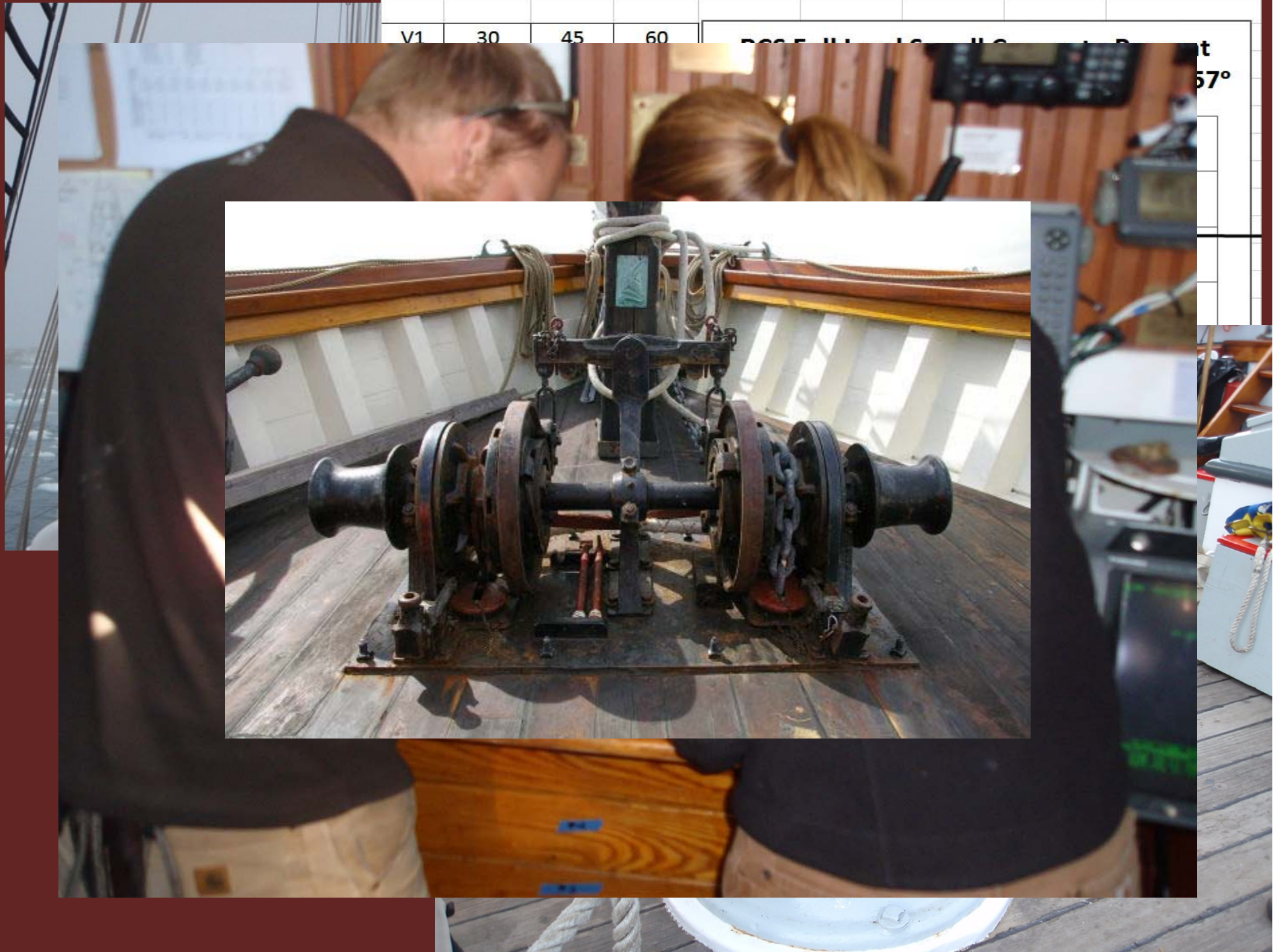
Sounder in view from the conn?

Conn on the open deck?

Who makes up the Bridge Team?

V1 30 45 60

2005 11 10 11:00 t 57°



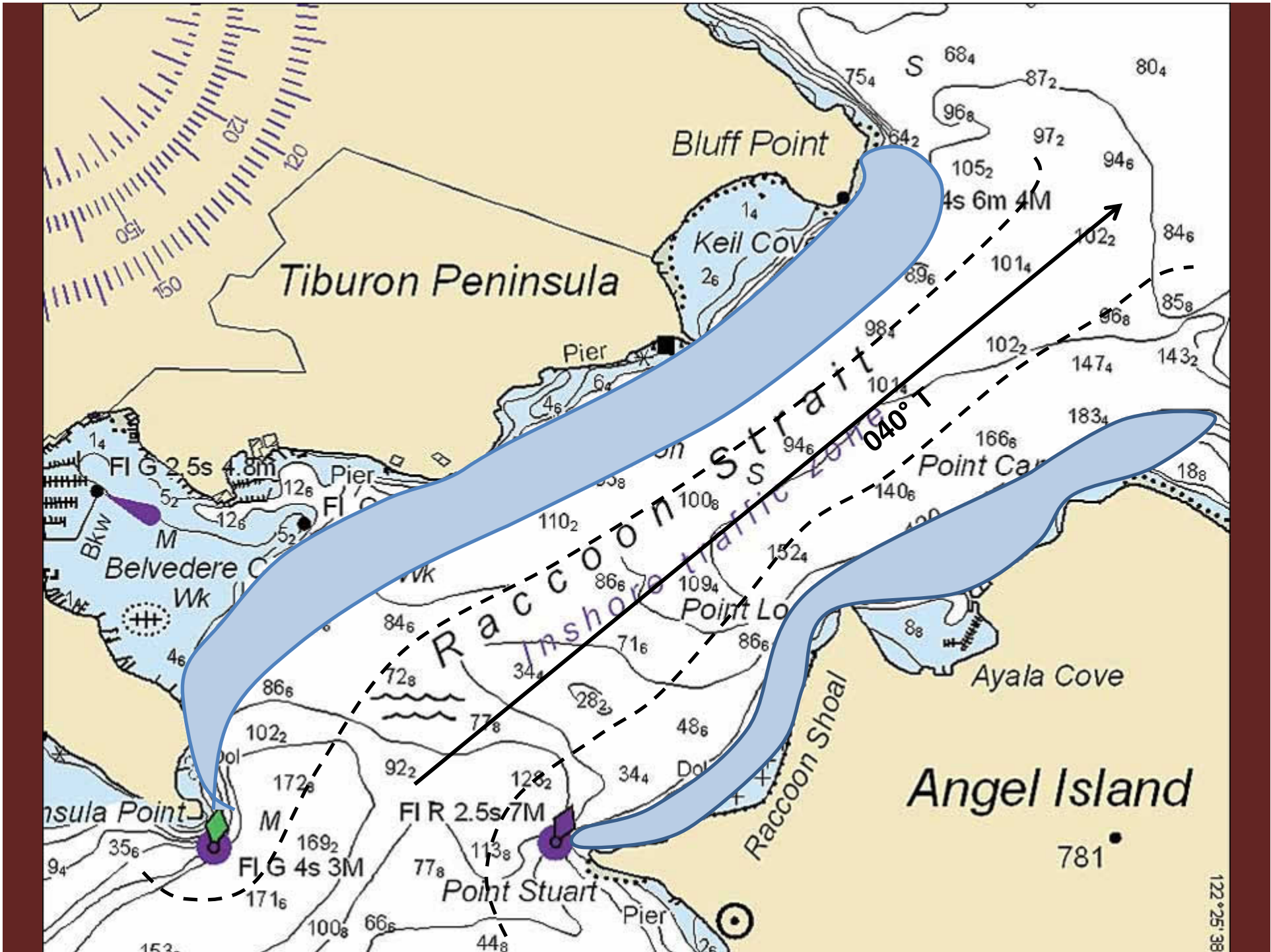
MANAGEMENT

***GETTING THE BEST RESULTS FROM
PEOPLE, EQUIPMENT, AND
INFORMATION!***

PLANNING

“Plan your work and work your plan.”

- A type of risk assessment and management
- A structured approach to thinking ahead
- Enhances situational awareness (compares what is supposed to happen with what is happening)
- Anticipates with contingency plans



Create a Shared Mental Model

Single Point Error – success hinges on one resource and (you guessed it) it fails.

IMO Framework: Appraisal, Planning, Execution, & Monitoring.

- Is the voyage legally & physically feasible?
- What are the considerations and potential risks?

Conferring: Open discussion and sharing the planning process. (Planning conference)

Challenges to conferring?

- Lack of time*
- Some are opposed to this practice*

Monitoring: Continued evaluation of the plan.

- Being able to take a detailed look at a concern, then get back to the “big picture”.***
- Us all resources as called for – information, equipment, & people. Delegate when possible (is this possible on your vessel?) Material Condition.***
- Monitoring is checking: Is the radio monitoring the correct channel? Volume turned down? Radar adjusted properly? Rig Inspection (myopia)***

Regulations and Procedures

Legally regulated procedures: Standards developed by national and international organizations. USCG, STCW, COLREGS, ISM Code

Standard Operating Procedures (SOPs):

•Create a routine of expected performance

Internal SOPs: Station Bill, Standing Orders, Night Orders

Check lists: Pre-departure/Pre-arrival, weekly, maintenance and inspection

Planning Brief

- **Weather Data – Tides and Currents**
- **Contact Information: Emergency Action Plan (EAP)**
- **Communication Schedule:
Exterior/Interior**



SITUATIONAL AWARENESS

Human Factors that Effect Situational Awareness

- Overreliance
- Distraction
- Fatigue
- Complacency
- Transition

**Over reliance
on electronic navigation aids can lead
to trouble.**



DISTRACTIONS

Multi-tasking: Our brains aren't really that good at this, they are more likely switching back and forth between tasks. * **Transition – dropping one task and picking up another.**

Fixation: On the Plan? (Maria Asumpta)

Personal concerns?

Professional 'business' (call from office during docking)

Avoiding Distraction – Precautions

Planning

Standard Operating Procedures

Bridge Teams

Alarms/Indicators

Time Management

FATIGUE

An acknowledged

More than lack of

- Duration of
- Quality of re
- Our natural
- The effect of
- Energy input
- Stress



a day/week

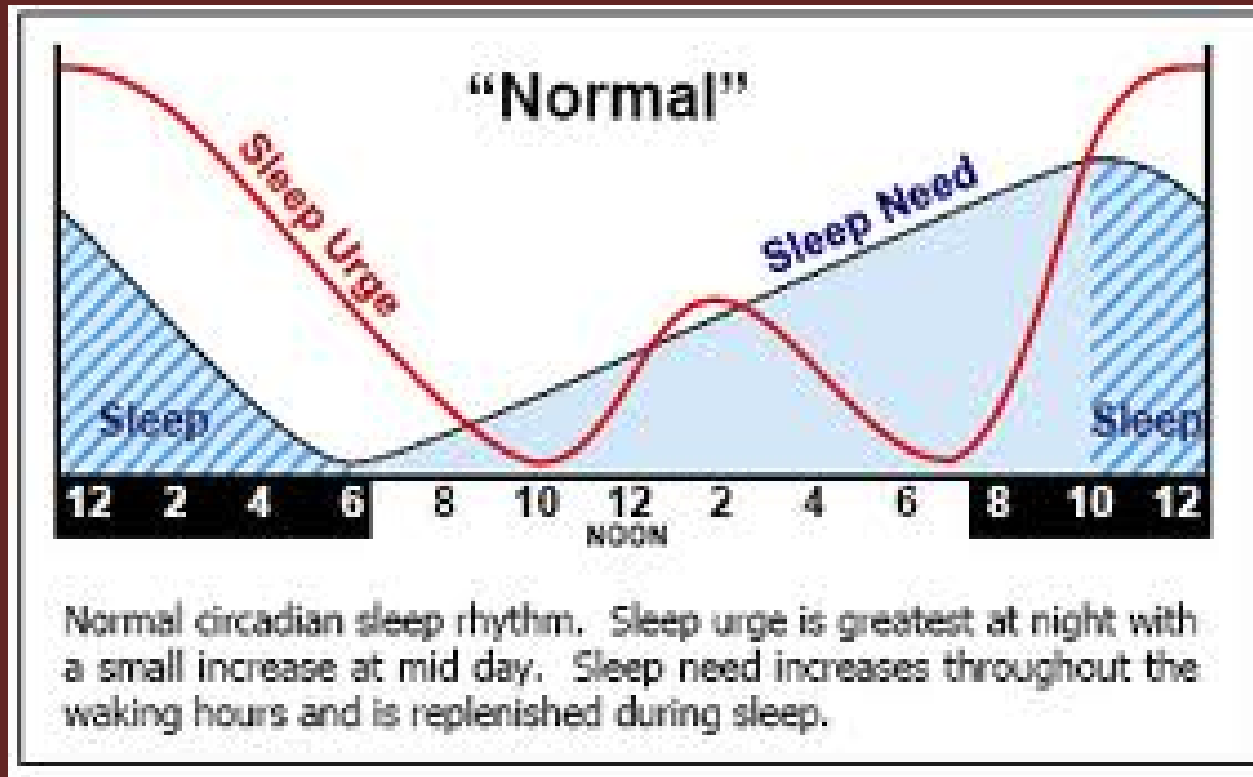
Consider our Environment

Heavy weather, noise, vibration, temperature extremes, constant motion

The Crew: No substitutions, you can't really just pull over and rest

The Ship's schedule & watch rotation (classes, paperwork, maintenance, drills)

Signs and Symptoms



Sleep is necessary for the body to produce ATP. It takes 8 hrs. of continuous sleep to produce enough ATP for the day. (4 hr. + 4 hr. \neq 8 cont. hr.)

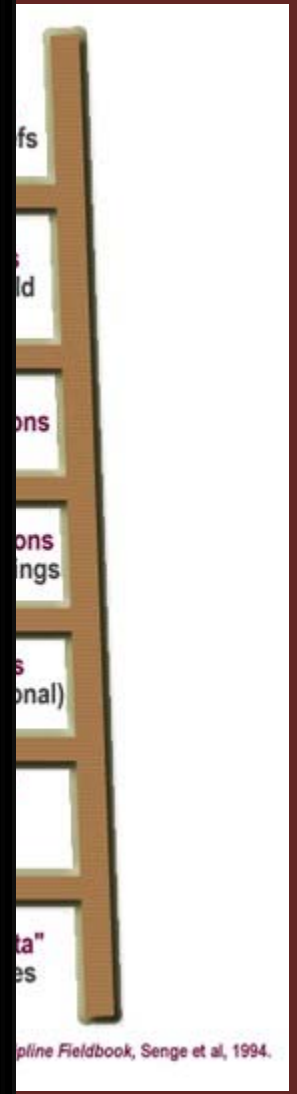
Lack of ATP = Fatigue

A
L
A
D
•
•
C
•
•



COMPLACENCY

APATHY COMES BEFORE CALAMITY. LOOK IT UP.



The Double Edged Swords

Experience:

&

Routine:

TRANSITION

**The change of the watch (the classic transition) –
Transfer of Situational Awareness**

Crew and Leadership Changes

Change in the Plan

Operational Transitions:

- Twilight**
- Visibility**
- Getting Underway (Shore to Sea)**
- Changing Charts**
- Changing in equipment settings**
- Change of Equipment**

HUMAN INTERACTION

BRM is about people. *“The only process that happens on a boat without people is rust” (Parrott).*

Communication: Complex! Face to face, spoken/ not face to face, written, non-verbal.

Hallmarks of effective communication

Maritime language and terminology

BRIDGE TEAMS AND TEAMWORK