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## Software in Shipping

- ➔ To help people do their jobs  
(Productivity)
- ➔ To Prove they do their job to their  
Bosses
- ➔ To Prove to others they do their  
jobs properly

## What is their job?

Description	ISM Only	ISO 9000	ISO 14000	ISPS	TMSA	Total
Tasks	1200	+100	+100	+50	+20	1470
Roles	35	0	0	0	0	35
Manuals	2000	+500	+500	+ 150	+150	3300
Forms Types	170	+20	+10	+10	+20	230

- Tasks + 23%
- Form Types + 35%
- Manuals + 65%
- In the first 7 Years - What will happen in the next 10
- One thing is Sure Roles 0% (probably minus)

# Study of One Task

Machinery defects

Bunkering Management

Risks With Crew training variations

ISPS Checklists

TMSA

Security Checks

Security Code Manuals

Historic Data

Telex, Email and Faxes

Standing Instructions

Charterer Instructions

## PREPARE FOR VOYAGE

ISO 9000/1400 Checklists

Risk with respect to defects variance

ISM Checklists

External Manuals

ISM Procedures and Manuals

Voyage Planning  
Risk With Voyage Variation

Combination of all variables and their effect on Risk

ISO 9000/1400

### Manuals

[www.ulysses-](http://www.ulysses-)

1998

2000

2004

2005

2010

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# Software Requirements and TMSA

- The software is going to have to provide more and more features.
- More people will have to use software
- Software is going to become mission critical
- This will make software design harder
- People must now base their management strategies on the software they have.
- Now buying software is going to decide the success of a company.
- Making the decision of what to chose is important and people must learn how to do that.

# CONVENIENCE AND ITS IMPACT ON MAXIMIZING SOFTWARE RETURNS

CONVENIENCE FACTOR = PERCEIVED EFFORT – ACTUAL EFFORT

For encouraged usage, Convenience Factor > 0

WHY DO WE NEED THAT

BECAUSE HIGHER CONVENIENCE LEADS TO :

- Better Acceptance
- Higher Usability And Encouraged Usage
- Lower Familiarization Effort
- More Accurate Data Input
- Representative Results that Deliver Accurate KPIs

# CONVENIENCE, KPIs AND TMSA

❑ KPI = KEEPING PRIORITIES INTACT (Key Performance Indicators)

❑ WHAT IS THE DEFINITION OF A KPIs:

Representative “vital signs” that indicate the state of a Company’s operational health.

❑ TO GET THE KPIs WE NEED TO ALWAYS HAVE IN MIND THE FIRST RULE MANAGEMENT RULE FOR SOFTWARE:

GARBAGE IN = EVEN MORE GARBAGE OUT

❑ TMSA REQUIRES EXTENSIVE MEASUREMENT OF KPIs THROUGHOUT ITS 12 ELEMENTS

❑ WE MUST THEREFORE MAKE IT CONVENIENT TO HAVE ENCOURAGED REPRESENTATIVE AND TIMELY DATA INPUT IS ESSENTIAL FOR ACCURATE KPIs

# COMMERCIAL ADVANTAGE AND ITS IMPACT ON SOFTWARE RETURNS (RoI)

- WE NEED TO UNDERSTAND WHY WE USE THE SOFTWARE? WHAT IS THE ROI?
- Return On Investment Is Inversely Proportional To Software Lifecycle Cost

**SOFTWARE LIFECYCLE COST** =

**INITIAL PURCHASE COST**                    *plus*  
**ANNUAL MAINTENANCE COST**           *plus*  
**TRAINING COST**                            *plus*  
**CONFIGURATION COST**                   *plus*  
**DEPLOYMENT COST**                      *plus*  
**ANNUAL UTILIZATION COST**

# SOFTWARE LIFECYCLE COSTS IN MORE DETAIL

- Utilization cost is the highest, but mostly underestimated.
- Initial purchase cost is typically only a minor fraction of software life cycle cost but is grossly overrated.
- Returns on software investment can be dramatically increased by well-designed software that prioritizes reduction of major recurrent costs such as utilization costs, maintenance costs and re-training costs
- Well-designed software facilitates the reduction of these costs as a natural byproduct of software usage.

## Typical Example of KPIs

- TMSA 4c Requirement: The Company needs to maintain the amount of outstanding PM tasks across the fleet expressed as a % of the total monthly planned maintenance tasks, recorded monthly with a YTD figure also indicated. Rankings between 1-4 (4 having the lowest % value and thereby being most desirable) are awarded
- TMSA 3b Requirement: For Stage 3 Score: The Company needs to demonstrate evidence to prove an 80% retention rate for senior shipboard officers over a 2 year period. For Stage 3 Score: The Company needs to demonstrate evidence to prove at least 80% retention rate for ALL shipboard officers over a 2 year period.

# CONCLUDING REMARKS

To summarize, in order to get the most out of your chosen software, it is essential to: -

- Maximize user convenience to encourage usage and entry of accurate information.
- Minimize software life-cycle cost and maximize commercial advantage as a natural byproduct of software usage.
- Address the “what’s in it for me” factor for all major stakeholders as early as possible and continuously through out the software life-cycle.
- Measure and compare the efficiency of your software periodically and use results towards continuous improvement.

TIME TRIALS .....