



# **Fleet Management Limited**

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**How Information Technology  
can best add value to a Ship  
Management operation**

# What do ship-owners want on the web?

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- Transparency
- KPIs
- Regular Financial Reports

# What do others want on the web?

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- Inspection information
- Audit Information
- Vessel & Crew Data

# What do WE want from the web?



All the above and more.

- But the bottom line is that we want information we can USE to IMPROVE Operational Efficiency onboard our vessels



# Drowning in Information

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- Businesses accumulate huge amounts of information
- How can we use this?

# First what kind of data do we have?



- 300,000 technical reports
- 150,000 individual components
- 75,000 crew appraisals
- 8,000 inspections and more.



# The solution

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To implement Business Intelligence (BI) Systems that allow us to use the accumulated data from 180 ships to improve the operation of each individual ship



# What is “Business Intelligence”?

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From “Wikipedia”

“Business Intelligence refers to applications and technologies that are used to gather, provide access to, and analyze data and information about company operations”



# KPIs

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- KPIs are the first Stage of BI
- Key Performance Indicators (KPIs) can tell you how the fleet is performing according to certain parameters



# Typical KPIs

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- Lost Time Injuries
- Loss of Life
- PSC Detentions
- Pollution Incidents
- Machinery Break downs
- Overdue PMS Items
- Cargo claims



# Moving “Beyond KPIs”

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- The real potential of using our data lies far beyond KPIs and basic reports
- KPIs are a good indication of our overall performance but may not be relevant to problems that arise or may be too general

# Key Factors in the implementation



- Dedicated team in building the application
- Single Integrated Data source
- Timely and Accurate Data collection
- Be able to adjust the reporting parameters
- Analyses Software
- Distribution of information
- Feedback and Monitoring

# Dedicated team in building the application



- Many BI initiatives have failed because the tools weren't accessible enough to end users, so we set up a BI Team of a QMS superintendent, a technical superintendent and an IT developer who work together to spread best practice on using the software.

# Single Integrated Data source



- Having a fully integrated system covering all aspects of shipboard management from technical reporting to crew training to inspections is the way to go
- Having a wide spread of applications, or even worse, excel is to be avoided

# Timely and Accurate Data collection



- Procedures must be in place to accurately capture some fairly complex information from the ships.
- This is essential. “Garbage in, garbage out”

# Be able to adjust the reporting parameters



- Being able to dynamically modify all reporting requirements is essential
- Flexibility is paramount. The system needs to continually evolve over time to meet ever changing requirements. BI initiatives never end

# Analyses Software



- “Can my mother use this?”
- The Analysis Software needs to be very user friendly

# Feedback and Monitoring



All useful information must be able to be disseminated to all concerned

- The Ships
- The Technical Staff
- Owners and Charterers



# A Case Study – Incidents

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- Incidents are reported on the ship
- Data is exported to the office
- Analysis is performed by the QMS Department
- Immediate feedback is sent to the ship
- Data is analyzed in conjunction with other data and useful information is communicated with other ships
- New joining staff are briefed on results



# Incident Capture

Fleetship - Windows Internet Explorer

http://www.fleetship.com/owners/index.html

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FIND INVOICE

1200 - 1559 1600 - 1959 2000 - 2359  
 NO OPTION SELECTED

(C) Ship's Status

(D) Make-up of Complement

(E) Related Department

(F) Location of the act causing the Incident / Near Miss (Tick any one box)

<input type="radio"/> Bridge	<input type="radio"/> Galley	<input type="radio"/> Cargo Hold / Tank
<input type="radio"/> Accommodation	<input type="radio"/> On Deck	<input type="radio"/> Mooring Area
<input type="radio"/> Cargo Control Room	<input type="radio"/> Engine Control Room	<input type="radio"/> Engine Room
<input type="radio"/> Work Shop	<input type="radio"/> Pump Room	<input type="radio"/> Others
<input checked="" type="radio"/> NO OPTION SELECTED		

(G) Incident / Possible Consequences in case of Near Miss (Tick as appropriate)

<input type="checkbox"/> Machinery/ Equipment Failure	<input type="checkbox"/> Collision	<input type="checkbox"/> Grounding
<input type="checkbox"/> Contact damage (Docks, locks, buoys etc)	<input type="checkbox"/> Minor Fire (Put out by an extinguisher)	<input type="checkbox"/> Fire
<input type="checkbox"/> Holds/Tanks Failed for Loading	<input type="checkbox"/> Off Hire / Loss to Process	<input type="checkbox"/> PSC Detention
<input type="checkbox"/> Oil / Cargo Spill (No pollution)	<input type="checkbox"/> Oil Pollution < 10 barrels	<input type="checkbox"/> Oil Pollution > 10 barrels
<input type="checkbox"/> Minor Injury to Persons - No Lost Time	<input type="checkbox"/> Injury to Persons - Lost Time but No Disability	<input type="checkbox"/> Severe Injury - Permanent Disability
<input type="checkbox"/> Fatality	<input type="checkbox"/> Stowaways	<input type="checkbox"/> Cargo Damage / Loss < \$100K
<input type="checkbox"/> Cargo Damage / Loss > \$100K	<input type="checkbox"/> Hull/ Watertight Integrity failure	<input type="checkbox"/> Loss of Stability
<input type="checkbox"/> Others		

(L) Related Personnel (Tick as appropriate)

<input type="checkbox"/> Shipboard Officer and / or Crew	<input type="checkbox"/> Third Party Personnel	<input type="checkbox"/> Company Shore Staff
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Done Internet 100%



# Incident Analysis

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http://www.fleetship.com/owners/index.html

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of breast line.

Corrective Action  
Suggested by  
Master

**1. BHC test of all winches to be carried out and marking on the spindle of brake to be highly visible. 2. All officers and crew to be demonstrated the correct procedure for tending of moorings and importance of BHC. 3. Above incident to be discussed in safety meeting. 4. Condition of all wires to be checked and requisition to be raised for replacement of suspect wires. 5. Brake lining rests on winches to be steel coated in the next drydock. Presently rests are mild steel and possibility of rust formation**

**(G) Incident / Possible Consequences in case of Near Miss**

1. <b><u>Machinery/ Equipment Failure</u></b>	2. Collision	3. Grounding	4. Contact damage (Docks, locks, buoys etc)
5. Minor Fire (Put out by an extinguisher)	6. Fire	7. Holds/Tanks Failed for Loading	8. Off Hire / Loss to Process
9. PSC Detention	10. Oil / Cargo Spill (No pollution)	11. Oil Pollution < 10 barrels	12. Oil Pollution > 10 barrels
13. Minor Injury to Persons - No Lost Time	14. Injury to Persons - Lost Time but No Disability	15. Severe Injury - Permanent Disability	16. Fatality
17. Stowaways	18. Cargo Damage / Loss < \$100K	19. Cargo Damage / Loss > \$100K	20. Hull/ Watertight Integrity failure
21. Loss of Stability	22. Others		

**(L) Related Personnel**

1. <b><u>Shipboard Officer and</u></b>	2. Third Party Personnel	3. Company Shore Staff
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Done 1 of 2 8.26 x 11.69 in Internet 100%

# Incident Feedback and dissemination



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▶ PORTAGE BILL  
▶ PMS  
▶ SUPPLY CHAIN  
▶ ADMIN  
▶ INTERNAL  
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SEARCH

FIND HKID

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Content

- 1) Master & Head of Department should ensure that all Staff must wear the PPE when they are carrying out a task for which it is provided , and a follow appropriate instructions for use.
- 2) Proper & effective use of PPE must be explained & demonstrated routinely as part of vessels training regime.
- 3) The practice of Risk assessment prior carrying out jobs must be inculcated amongst the ship staff.
- 4) Master shall discuss this incident during the next safety committee meeting and brief the ship's staff

INCIDENT

Screen on GMDSS "INMARSAT-C" out of order

CORRECTIVE ACTION SUGGESTED BY MASTER

indetnt AMF/D/016/07 and AMF/D/001/07-pending  
Please arrange technician at first port

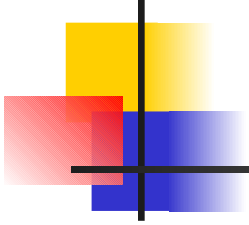
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## Other examples

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- Training courses on the shipboard online training system TOLAS can be recommended as the result of an appraisal or because of an incident on another ship
- PMS Maintenance time periods can be adjusted throughout the fleet as a result of machinery failures on some ships



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**Thank You**