

User Convenience:
The key to effective information
management

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Talk about two key factors affecting how software can assist the Shipping Company.

⇒ Convenience Factor

⇒ “Walk Up And Use” Principle

Through two examples of everyday operations.

There are many seafarers that can tell you similar experiences



A vessel is approaching the **Mississippi River** and must prepare for arrival at a port in the New Orleans area. The Ch. Mate, in anticipation of arrival, will **spend significant time on standby** in the forecandle and on the bridge. Upon anchorage in a waiting area, the Ch. Mate must attend to clearance and inspection procedures before **relocating** the vessel to another anchorage, where he must oversee **bunkering operations, stores deliveries, crew transfers**, and familiarization training for new crew members. This must all be **completed before berthing** when he will prepare the vessel for loading or discharging operations (loading plan, cargo formalities...). In light of all these responsibilities, to comply with current statutory requirements, the Ch. Mate is expected to simultaneously **complete numerous checklists**, forms, reports, and messages, all while attending to his other duties.

What about a Master?

Apart from the non administrative duties a master is expected to perform such as remaining in the wheelhouse until the “all fast” is done and the tugs are let go, masters are inundated with countless additional administrative responsibilities which include:

- ✓ attending to immigration, customs and port authorities,
- ✓ sending off the arrival message to all parties concerned,
- ✓ signing off crews/signing on new crews,
- ✓ ensuring all new crewmembers undergo adequate familiarization training,
- ✓ troubleshooting cargo operation abnormalities while properly recording evidence of due diligence
- ✓ preparing the ship for the new voyage and sending off estimated time of departure (ETD) notes to all interested parties,
- ✓ supervising security measures,
- ✓ presenting crew records and relevant managerial records to inspectors,
- ✓ signing off on bunkering checklists and bunker delivery receipts,
- ✓ addressing crew medical requirements
- ✓ demonstrating risk management due diligence in the case of a recent occurrence which could affect seaworthiness.
- ✓ ensuring that work rest periods are adhered to

How can information technology assist?

- ✓ To make obscure information easy to find without preoccupying the user
- ✓ To make reporting easy to understand and complete even under duress
- ✓ To make written instructions clear and relevant to the task at hand
- ✓ To ensure the expediency and accuracy of data transactions in light of stressful situations

HOW?

Effective information management is dependent primarily on perceived convenience

CONVENIENCE FACTOR = PERCEIVED EFFORT – ACTUAL EFFORT

What do we get out of better convenience?

- **Better acceptance:** A good example; Email succeeded due to its user convenience
- **Higher Usability and encouraged usage:** A good example: The Internet Websites that due to their convenience encourage people to use them.
- **Lower familiarisation effort:** Seafarers already have a heavy workload without the burden of complicated software added to this daunting task. Not only will complicated software require **costly training**, but the **cost benefits** for which it was employed will not be felt since seafarers will not embrace.
- **More accurate data input:** With handling documents or data such as maintenance, purchasing or crewing data, we still need to improve how this data is handled. With the handling part optimised we can optimise the **routing** of documentation and finally **minimise** documentation itself.

Systems onboard must present important information to the user when it is relevant to the task at hand, at the time of need

- ✓ The **distribution of important** corporate information must be as close to automatic as possible.
- ✓ All relevant information is provided to the user at the **appropriate time**, with minimal requirements for circulation by the end user.
- ✓ Rather than simply alert a user when a message is received, operating systems must present the information to a user when it is **relevant to the task at hand**.

Wrong assumptions

- ➔ It is a mistake to assume that a user will know where to find the appropriate information, or even that he is aware of its existence in the first place.
- ➔ Our experience tells us that people are not likely to rummage through records without knowing if there is anything there of value to the current activity.
- ➔ In this regard, critical corporate information is often overlooked because it is difficult to find or unknown to the user.

The benefits to the user and the organisation

- ✓ **Quicker transfer of new instructions or training information**
- ✓ **Less time spent on administrative work combined with significantly greater control over critical processes**
- ✓ **A more accurate and comprehensive record of due diligence**

**TO TOP THAT WE NOW HAVE TO SHOW HOW WE
MANAGE RISK CONTROL**

Risk management **Makes all the above more important**

Risk management in shipping is, in fact, the process of the communication and resolution of goal conflict.

Example: Suppose that the charterers had arranged for a ship to carry 1000 tons of fuel oil, but the capacity of the vessel was 1150. If a container vessel arrives in port and stays about six hours, the time is not sufficient to safely replenish the vessel. So, an operations manager has to explain to the charterer, if they complain, that for safety reasons the maximum pumping rate is going to be less because at the end of the process overflow is a real concern. This all depends on the nature of the vessel, the nature of the fuel oil, the temperature, etc. It is different every time. Many charterers ask the captain how many tons you can lift in order to perform the voyage while they have the ship's specifications in front of them. If the master declares that it is 150 tons less they ask why the captain declared less than the maximum capacity. But, you can't take 100%. It depends upon many factors which we are aware of and they may not be aware of. It is a safety issue. The operations manager may not be aware of each specific issues so he contacts the engineer and the master. Together they make a decision but then there is the inevitable conflict with the charterer.

Explanation of goals conflict

1. **There are those responsible for the maintenance of the vessel.** Their goals are simple. No accidents. No spills. If it were up to their sole discretion, ships would never leave port except under perfect conditions.
2. **There are those who are solely responsible for business.** These may be charterers or ship owners. They want the vessel to be moving all the time as quickly and as cheaply as possible.
3. **There are those who have their hands in both categories.** These are ship owners who both want to make money but also want to have a happy and healthy ship. Such people often are in conflict with themselves.
4. **There are those who are caught in the middle responsible to each of the above three categories.** They want to make money and they want the owners to be happy and they want the agents and charterers to be happy. But they also want the engineer and captain to be happy. We will call him the negotiator. We need to help him.

The better the communication processes to and from the negotiator, the less risk.

- ➔ Risk management is about safety, and safety, in shipping, means juggling successfully the goal conflicts between the people who fit into the above categories.
- ➔ Therefore, the better the communication processes to and from the negotiator, the less risk.

What a system should offer?

- ✓ help people to better prepare themselves for the performance of critical operations where sub-optimal procedural variations are most costly.
- ✓ significantly reduce incidents related to organizational and informational deficiencies within the company.
- ✓ provide a more cost-efficient and comprehensive risk-management system.
- ✓ promote and accelerate the integration of new policies and procedures, ensuring greater internal compliance as well as an easier and more cost-effective transition.
- ✓ save costs by releasing employees from superfluous administrative duties and paperwork, in order to devote more time and energy to optimising spending and operational efficiency.

“Walk up and use” principle

The implementation of sophisticated software systems to handle the massive influx of information is not sufficient to guarantee success.

There are two critical components for sustained success that marine software systems must meet;

- ✓ **it must be cost effective in the long term, and**
- ✓ **it must maximize user convenience to encourage usage.**

We believe that software should be so simple to use that multi tasking users like masters, chief engineers, superintendents, fleet managers, and other senior staff can practically

“walk up and use the software the first time they see it”.

How Ulysses deals with it?

Task Orientation, a type of software architecture unique to Ulysses, **indexes business objects in accordance with how each user within the enterprise utilises them.** Task orientation actually **simulates all the processes and all the steps performed by each and every role in the company.**

- There is no need to learn where each document may reside in a filing system so as to initiate a report
- There is no need to open several non-process specific document files to carry out a process.
- There is no need to worry about whether people know that new reports exist.
- Relevant and timely information finds users at the time they are involved with their own part of the relevant process.

Task Orientation

is a mechanism of relating overlapping information and allowing co-ordination by relating all data and content to the end use by each user, in other words the time when each user needs the information.

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 THROUGHOUT THE SOFTWARE LIFE-CYCLE.**
- **MEASURE AND COMPARE THE EFFICIENCY OF YOUR SOFTWARE PERIODICALLY AND USE RESULTS TOWARDS CONTINUOUS IMPROVEMENT.**

“Taking a user centred approach to design can reduce development times and rework for new versions, improve the productivity of users, and reduce training, documentation and support costs (Bevan, 2001a).”

The Improvement of Human-Centred Processes - facing the challenge and reaping the benefit of ISO 13407, Jonathan Earthy, Brian Sherwood Jones, Nigel Bevan

Questions?