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Metropolitan Hotel Athens -
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29 October 2015

Where does one find important decision making information?

The most important decision making information or content does not necessarily exist in traditional ERP systems but in everyday unstructured or partially structured documents. Indexing the information crucial to our decisions in a way the whole organization understands, from the Fleet Manager ashore to the Engineers and Officers on board, is essential. What helps us store and retrieve content that informs our decisions without searching everywhere for it? Designing our Document Management around our resources' task profiles and around the business concerns particular to the Shipping Industry helps; so does understanding activities and how they are grouped in the organization's different areas of enterprise.
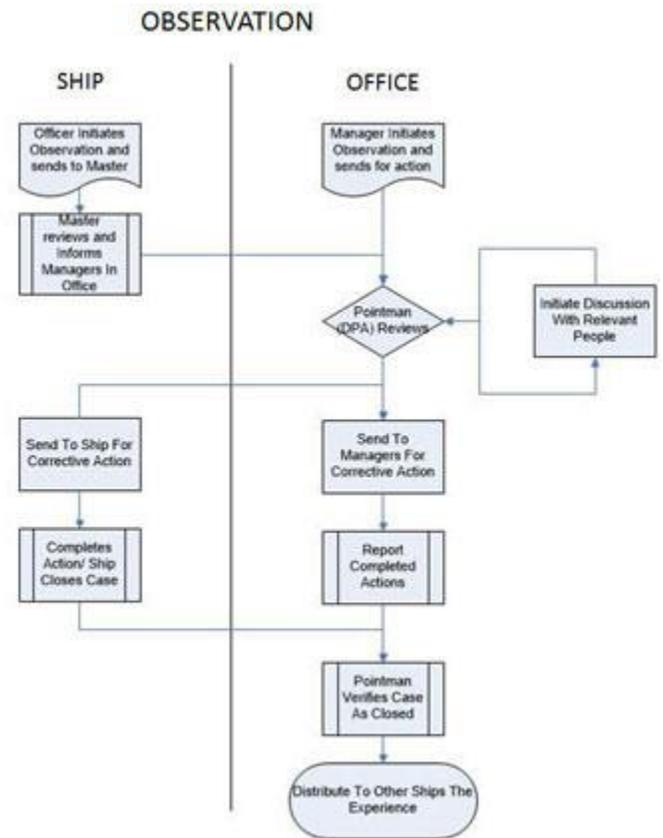
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New processes will always come up in a mature industry such as shipping, which is in a constant flux of refinement, for example, process improvement, retrofitting existing fleets, new engine and propeller design in new builds, new standards for reducing the carbon emissions factor. This means that new forms-based processes reflecting improvements in operations must be persisted across departments, i.e. on board the ships and in the corresponding office departments. Whereas this is true across verticals, in most industries the processes are fewer and less varied with plenty of clerical staff to administrate procedures. Not so in shipping where there are no clerks on board ships and senior managers are stakeholders in emulated processes involving high costs and financial risk.

Can you take workflow abstraction and use it without any adjustment? A workflow abstraction attempts to define a specific process common to many industries, e.g. Procurement. To make them articulate in the way a specific ship management company operates, workflow abstractions need to be modified according to the company's information flow. In shipping, over 30 forms /per vessel require workflow to and from the office to the ship, and companies have to juggle process change incurred by increasing amounts of regulations, measures and self-assessment standards.

 Shipping therefore needs sophisticated workflow designing tools and although workflow is the software industry's answer for quick coding, workflow platforms are not easy to use and do not support the refinements and process extension the marine industry needs.
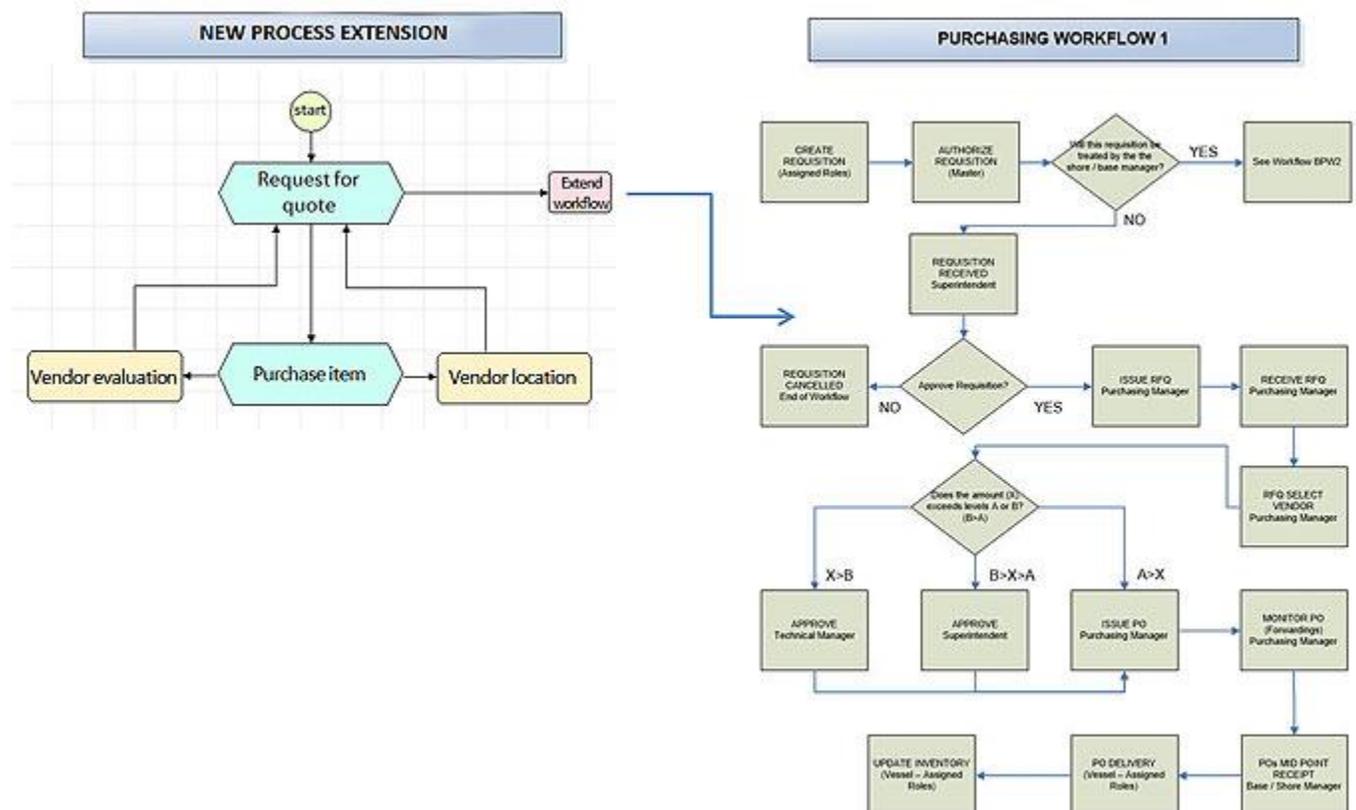
The Replication Challenge Replication is not available as a feature in land based systems but in shipping, replication is bread and butter. In its simplest form, e.g. replicating ship to shore communications, it is already a challenge, but replication for workflow resolution with discontinued communications is much more of a conundrum. Imagine resolving a complex workflow after an interruption due to connections failure. With users working on more and more devices and needing to work offline, replication requires well-thought out solutions.

OBSERVATION

SHIP	OFFICE

Officer Initiates Observation and sends to Master

Master reviews and Informs Managers in Office

Manager Initiates Observation and sends for action

Pointman (DPA) Reviews

Initiate Discussion With Relevant People

Send To Ship For Corrective Action

Send To Managers For Corrective Action

Completes Action/ Ship Closes Case

Report Completed Actions

Pointman Verifies Case As Closed

Distribute To Other Ships The Experience

Expensive satellite communications Part of the problem of replication is cost; replicating whole documents incurs communication costs. When the time comes to evaluate if a document management system is suitable for marine use, one of the foremost concerns is: can the system pick out document changes only? Forms are constantly exchanged and often contain elaborate drawings; can the system pick out the actionable data and send that only? Can it extract only the form data that requires analysis? A system suitable for marine use must be able to compare content and pick out what needs to be exchanged.

Binary comparators for replication of documents A binary comparator does just that; scans through documents to find the right data fields, and compares the data therein in order to insert new and relevant data only.
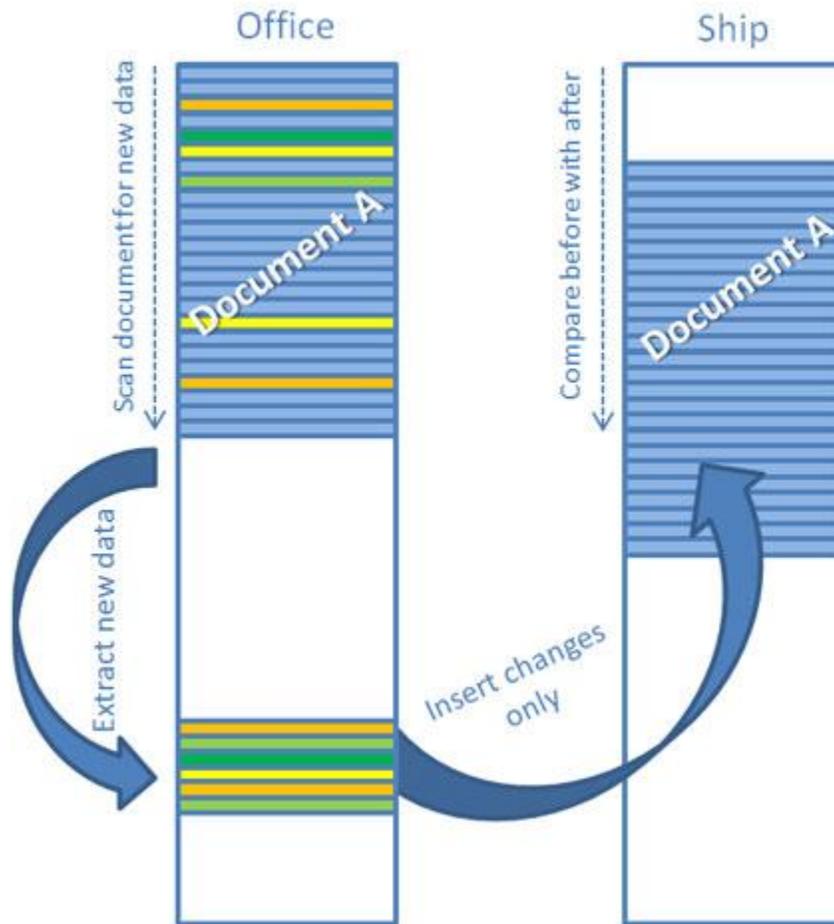
The challenge of finding the information to support our decision making Unsurprisingly a document does not tell you what's in it and when it needs to be attended to. To be timely and easy to find, documents need to be clearly indexed by the identified problems and opportunities they help to solve. Can the user on a workflow understand why he has received a form he needs to complete? Is, knowing the workflow enough? With hundreds or thousands of documents do workflows and alerts help?
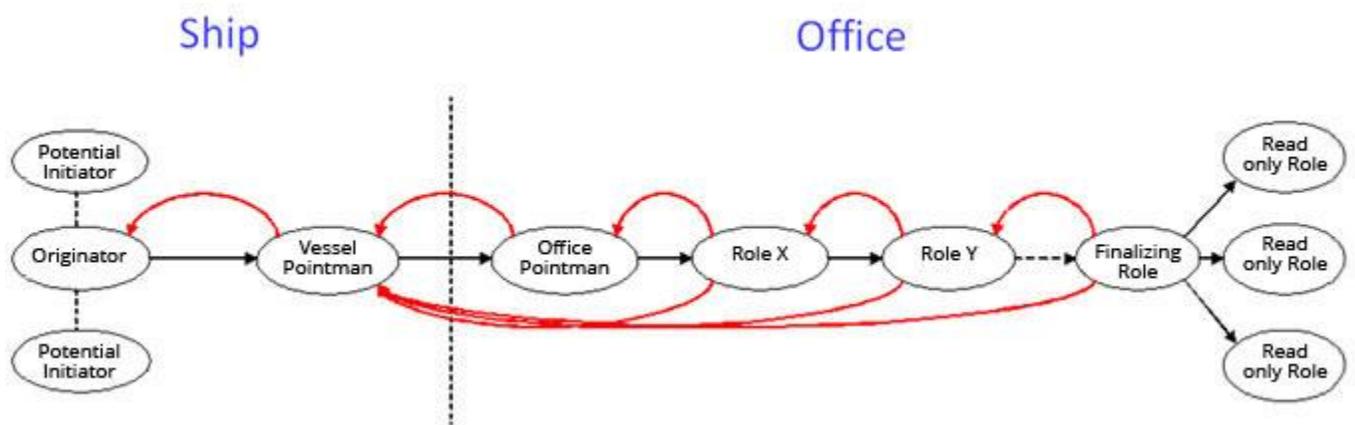
To actually be helpful, alerts have to be in context with the information that needs to be collected and the DM system has to be set up in the way that makes life easy for the user.

So what is the context for collecting information? It is when for example the crew is busy preparing for an important operation and the OOW needs to find the forms that need to be completed. Finding the right content at the right time is crucial. Rather than the user finding the report, the report should find the user. Especially when a ship could have over 200 forms and instructions spread out in several manuals and circulars.

## Form Templates (Released)(205 items)

Code /	Name
SF12.8E	Summary of Regulations for The Prevention of Garbage Disposal at Sea
SF12.8F	Summary of Regulations for the Prevention of Garbage Disposal at the Navigable Waters of US
SF12.9A	Shipboard Failure Action List
SF12.9B	Steering Drill Checklist
SF13.1	Appraisals of Shipboard Personnel
SF13.4A	Safety Officer Report
SF13.4B	Safety Meeting
SF14.1A	Officers and Crew Familiarization Checklist
SF14.1B	Officers and Crew Familiarization Record
SF14.2	Change in Command Checklist
SF14.3A	Shipboard Experience/Training for Emergency Preparedness
SF14.3B	Shipboard Experience/Training Record
SF14.6	Masters' Non-Conformities Review Report
SF14.6A	Index of External Plans and Publications- Deck Dept
SF2.1	Departure Checklist (Chief Officer's)
SF2.3	Sailing Information
SF3.1B	Familiarity With Bridge Equipment Record
SF3.3	Sea Operation - Engine Room Watch Checklist
SF3.4	Cargo Monitoring At Sea
SF4.1A	Tankers Entering USA ports - Communications
SF4.1B	Communications With EU Port Authorities
SF4.2A	Pre-Arrival Navigation Checklist
SF4.3	Pre-Arrival (Tankers/Bulk Carriers) Checklist
SF4.4	Pre-Arrival Engine Room Checklist
SF4.5	Departure/Arrival Bridge Resource Management Plan/Record
SF4.6	Anchoring Checklist
SF4.7	Mooring Checklist
SF4.8	Arrival Information
SF7.1	Pre-Bunker Checklist
SF7.1	Pre Bunkering Checklist
SF7.2A	Bunkering Operation Record

Authoring tools for manuals and forms The industry requires sophisticated authoring tools, good document control and low communications costs.

With MS Office documents can be made as elaborate as needed. In fact, many quality managers find a document management system without facilities such as the track changes feature unacceptable. Moreover, companies spend money training their personnel to design manuals and transform their paper forms into smart versions expecting to get their investment back through better document control and reduced communication cost.

This however is not without its problems. Apart from the difficulty of replacing an older form with a newer version without losing historical data, smart forms, that expand and repeat fields as you fill them, do not look like the forms the crew was used to. To use these smart forms, crews need retraining. Wouldn't it be better if companies could optimize communications costs and benefit from the advantage of documents remaining exactly as designed?

When considering authoring tool facilities and forms, cost and simplicity of use are not the only concerns. There are other expectations too; it must be possible to attach a form to Planned Maintenance activities, Purchasing and Crewing activities and forms must be printable. Database forms however, do not print out well, a problem if auditors and third parties need to take away printed and signed information.
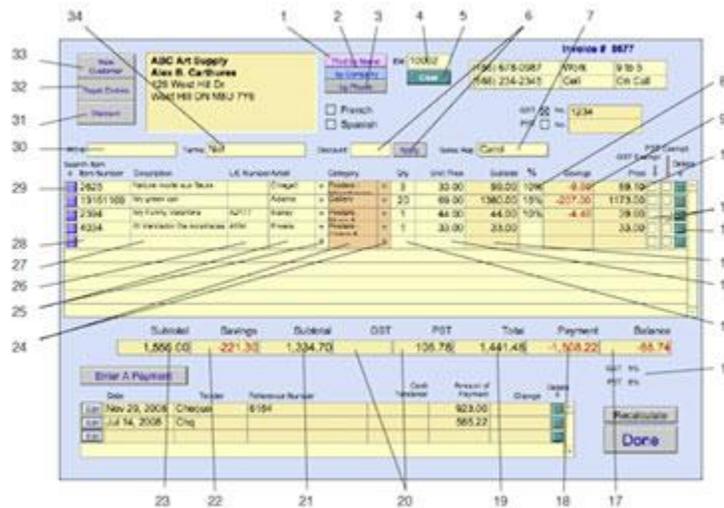
Conclusion Most of the important decision making information does not necessarily exist in traditional ERP systems but in the everyday unstructured or partially structured documents which stakeholders exchange. Shipping needs document management systems that address this reality and the industry's particularities. So why have Document Management systems for the industry stopped being developed? Microsoft is the reason why they have stopped; no one wants to compete with Microsoft. However a document management system for all verticals and purposes has problems and gaps that do not look like they are going to disappear. Very few organizations and companies have resource/time to fill the gaps and shape a one-fits-all system to their specific needs. Let alone the unscalable cost of customizations in developer man/hours. The shipping industry needs domain specific solutions; otherwise it faces the 'no choice', 'no flexibility' problems that come from buying a generic solution from one provider.

Designed by
Seafarers for Seafarers **TASK ASSISTANT**
Software that works

Seatrade AWARDS 2000   Digital Ship   Lloyd's List   Lloyd's List AWARDS 2002   CITIS

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