

A wide-angle photograph of a sunset over the ocean. The sun is low on the horizon, creating a warm orange and yellow glow across the sky and reflecting on the water's surface. The text 'Wilhelmsen Maritime Services' is overlaid in white on the center of the image.

Wilhelmsen Maritime Services

Kari-Anne Larmerud
Business Architect

Barber Ship Management (BSM)

“New safety/quality and document management system in BSM”

Project objectives



Implement a global tool to help us to

- comply with rules and regulations
- improve communication with internal and external stakeholders
- spread best practices to avoid incidents / accidents
- improve efficiency
 - ashore;** revision control, handle QA-documents and statistics
 - onboard;** using and maintaining documents
 - both;** improve administration and archiving of forms / forms data
- improve collaboration to enable efficient and quality decision making
- improve crew recruiting and attention by providing helpful tools
- be proactive to avoid unexpected incidents and accidents

Main processes to be supported

- document management ship / shore
- incident / accident reporting ship / shore
- safety / quality management - including statistics / reports

The evaluation process



| |
|----------------------------------------------|
| Business idea |
| Screening phase |
| Concept |
| Set up project team |
| Define plan of progress |
| ToR finished and approved |
| Design |
| RFI finished and distributed |
| RFI returned |
| Evaluation - selection of 8 suppliers |
| RFP finished and distributed |
| RFP returned |
| Evaluation - presentation from 3-4 suppliers |
| Supplier selected |
| Final ToR finished and approved |
| Contract negotiation |

ToR – Terms of Reference

- project definition

RFI – Request for Information

- process support overview
- overall requirements

RFP – Request for Proposal

- describing our processes
- detailed requirements specification

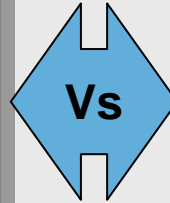
Presentations

- as “live” as possible
- customer lead

How to make the right choice?



- Finished product – low startup cost
- Suite solution – fully integrated
- Big, global vendor – security
- Shipping tailor made software
- Ship owner – challenges?



- Easy to adjust – flexibility
- Open system – based on standards
- Small, local vendor – influence
- Well proven standard software
- Ship manager – challenges?

Advantages and disadvantages with the different aspects



How to express what we want?

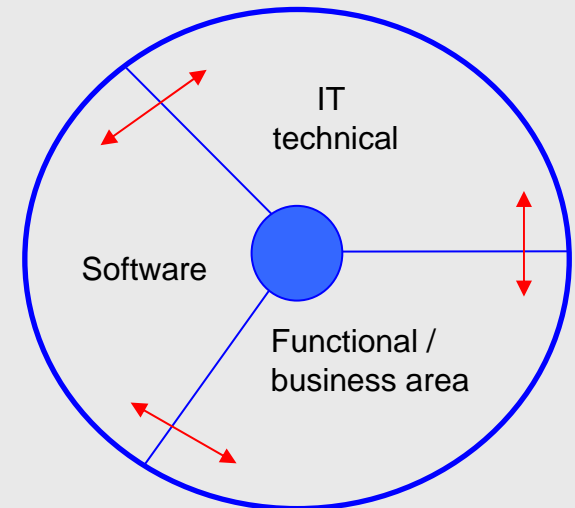


Functional requirements

- Well documented processes – Global Integrated Management System (GIMS)
- Involve important system users early – challenging for a global company
 - Cultural differences
 - Physical distance
 - Competence differences
 - How to involve most of the user groups?
 - How much attention should each group get?
 - How to train / inform the end users sufficiently?

Technical requirements

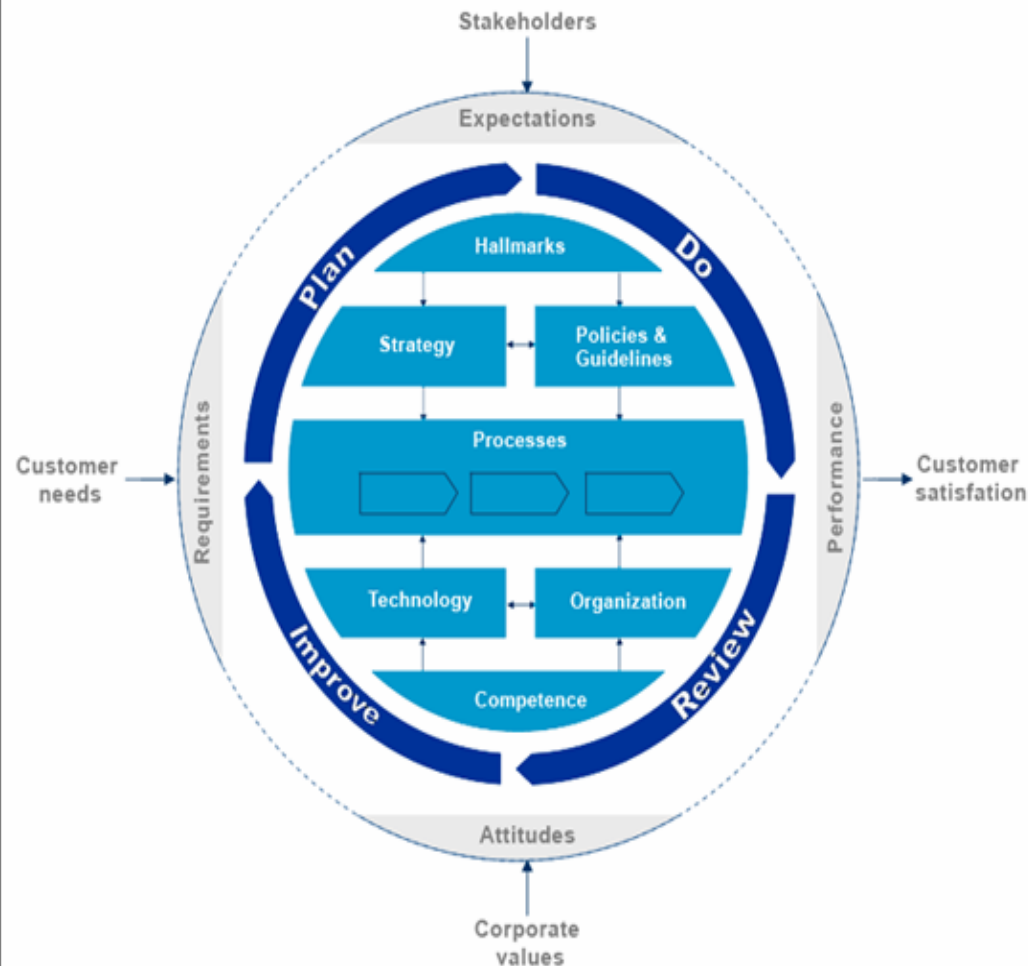
- Involve the IT department early
- IT infrastructure and architecture strategy



Global Integrated Management System (GIMS)



.. / Home



Introduction

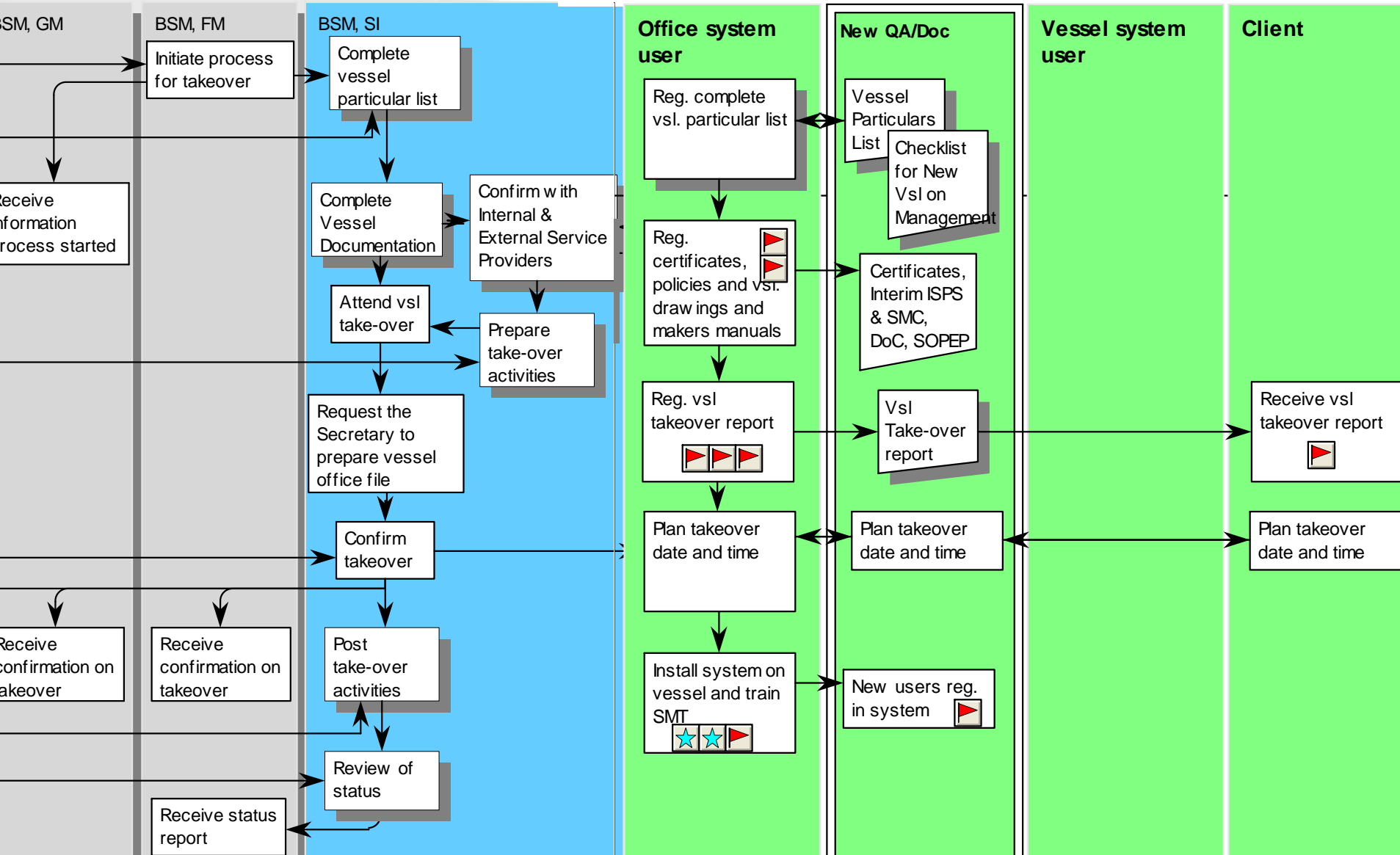
Welcome to our test / development environment for our new **Global Integrated Management System (GIMS)**. The intention with this site is to facilitate communication of governing documentation for WMS as it is developed.

Please be patient with incomplete pages and missing functionality as the site is under construction and will be subject to frequent updates!

- [Introduction and Authorization](#)
- [Revision history](#)
- [Terms and Definitions](#)
- [GIMS how to....](#)

Non Conformances

Mapping needs for system support

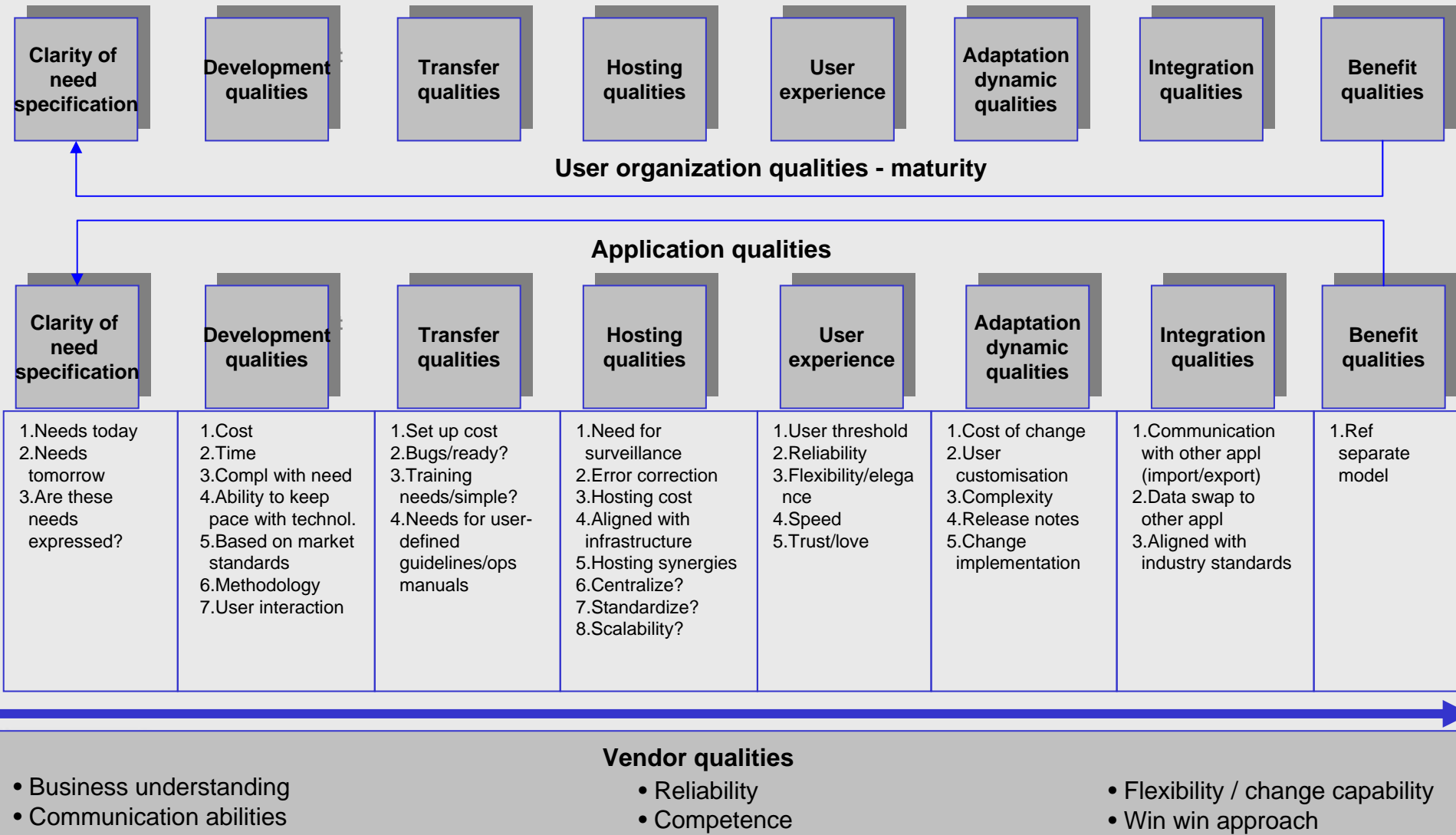


Generic application evaluation model



Assumption: Any application can be evaluated by its qualities through certain lifecycle steps

Each of the ca 30 variables can be mapped according to importance and quality measure



Evaluation matrix



| Reference to RFI / evaluation methodology | | | Vendor 1 | | Vendor 2 | | | |
|-------------------------------------------|-----------------------------------------------------------------------------------|--|---------------------------------|---------|----------|------------------------------------------|---------|-----|
| | | | Comment | 1, 2, 3 | Sum | Comment | 1, 2, 3 | Sum |
| SUM | | | | | 115 | | | 150 |
| 1 | Process support | | | | | | | |
| 1.1 | Document management | | | 2 | | Not enough information | 2 | |
| 1.2 | Incident management | | | 2 | | Not enough information | 2 | |
| 1.3 | Reporting | | | 2 | | | 3 | |
| 2 | Company information | | | | | | | |
| 2.1 | Globality / size / capacity | | | 1 | | Fully owned by DNV | 3 | |
| 2.2 | International Presence and Capabilities | | | 1 | | | 3 | |
| 2.3 | Locations according to W/W-Group | | | 1 | | | 3 | |
| 2.4 | Reliability | | | 3 | | | 3 | |
| 3 | Support organisation | | | | | | | |
| 3.1 | Product lifecycle | | More information | | | No description | | |
| 3.2 | Customer Support | | | 3 | | No description of support organisation | | |
| 3.3 | Trouble Reporting and Problem Resolution | | | 3 | | | | |
| 3.4 | International Presence and Capabilities | | | | | | 3 | |
| 4 | System description | | | | | | | |
| 4.1 | Solution overview / overall design | | Looks good - based on standards | 3 | | MAS server | 3 | |
| 4.4 | System lifetime - well established / proven | | Not for our use | 2 | | Office version not yet released | 1 | |
| 4.5 | Easy administration? | | No standard | 1 | | Lotus Notes | 2 | |
| 5 | Specific requirements response | | | | | | | |
| 5.1 | Support efficient workflow and process | | | 3 | | Looks OK, but how flexible is it really? | 2 | |
| 5.2 | Generate and communicate reports and statistics to customers and external parties | | | 3 | | MAS generator | 3 | |

The most important requirements



- **Accessibility** – offline solution and web access
- Robust, secure and cost efficient ship / shore **replication**
- Limited need for **training**
- Custom designed workflows to support the **internal processes** – based on GIMS
- Based on a solid, well proven **technological platform**
- **Traceability** of incidents / accidents / events through a TQM perspective (TMSA)
- Easy to **follow up** on corrective actions and other activities connected to different events / incidents

Docmap – a business independent system



- Exchange of information
- Directed information
- Always in compliance
- Knowledge sharing
- TCA
(Traceability / Consistency / Availability)

Exchange information ship / shore



- Bi-directional – both directions
- Mail or IP
- Direct data exchange
- XML data (import / export)
- Cost effective - compressed

The screenshot displays the Docmap application interface. The top menu bar includes File, Edit, View, Tools, and Help. Below the menu, there are tabs for Organisation unit, Function, Person, Account, Additional criteria, Base tables, User defined fields, and Synchronizations. The left sidebar shows a tree view with folders for Installations, Synchronization schedule, and Synchronization history, and sub-items like With errors, Rejected, Completed, All incoming, and All outgoing. The main content area shows a table of synchronization records. The table has columns for From installation, To installation, Direction, Image date, Image type, Status, and Image size. The status is 'Applied' for all records. The image size ranges from 0.8 kB to 380919.7 kB. The bottom status bar shows the user is logged in as 'docmapadm (Administrator DocMap)' and there is a 'System tools' button.

Synchronizations found: 19
Synchronizations per page: All

| <input type="checkbox"/> | From installation | To installation | Direction | Image date | Image type | Status | Image size |
|--------------------------|-------------------|------------------|-----------|------------|------------|---------|-------------|
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 19/02/2006 | | Applied | 0.8 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 11/02/2006 | | Applied | 1.8 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 25/02/2006 | | Applied | 12.5 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 15/02/2006 | | Applied | 14.9 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 09/02/2006 | | Applied | 16.6 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 14/02/2006 | | Applied | 20.4 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 07/02/2006 | | Applied | 20.5 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 08/02/2006 | | Applied | 36.3 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 18/02/2006 | | Applied | 54.8 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 13/02/2006 | | Applied | 59.5 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 22/02/2006 | | Applied | 96.6 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 10/02/2006 | | Applied | 112.1 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 01/03/2006 | | Applied | 331.1 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 16/02/2006 | | Applied | 345.8 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 24/02/2006 | | Applied | 355.9 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 18/02/2006 | | Applied | 397.7 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 28/02/2006 | | Applied | 432.9 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 07/02/2006 | | Applied | 651.7 kB |
| <input type="checkbox"/> | MASTER | Morning Meridian | Outgoing | 25/01/2006 | | Applied | 380919.7 kB |

Get the information



- Subscriptions
- Role / situation based
- Process oriented
- Do you know how to Google?

| Doc. No. | Version: | Approver: | Owner: | Latest revision / validity date |
|----------------------------------------------------|----------|-----------|--------|---------------------------------|
| 0. TABLE OF CONTENTS | | | | |
| 0.0 List of Contents QVM | | | | 19/01/2006 |
| 0.1 QVM Revision log | | | | 19/01/2006 |
| 1. LEGALISATION | | | | |
| 1.0 Legalisation QVM | | | | 01/05/2004 |
| 2. COMPANY POLICY | | | | |
| 2.1. HFS MANDATE VISION AND POLICY | | | | |
| 2.1 HFS POLICY | | | | 16/01/2006 |
| 2.4. Not in use | | | | |
| 2.2 Environmental aspects and its objectives | | | | 18/01/2006 |
| 3. ADMINISTRATIVE | | | | |
| 3.1. Administration of the Manuals | | | | |
| 3.1 Administration of the Manuals | | | | 26/10/2005 |
| 4. ORGANIZATION | | | | |
| 4.1. Vessels | | | | |
| 4.2. Distribution of Vessels among Shore Personnel | | | | |
| 4.3. Ship Communication Directory | | | | |
| 4.3 Ship Communication Directory | | | | 17/02/2006 |
| 4.4. Designated Person | | | | |
| 4.4 Designated Person | | | | 15/06/2005 |
| 4.5. Compliance Manager | | | | |
| 4.5 Compliance Manager | | | | 13/10/2005 |
| 4.7.2 Maintenance | | | | 14/11/2005 |
| 5. REPORTING AND COMMUNICATION | | | | |
| 5.1. Communication | | | | |
| 5.1.1 Changing of Master, Officers, Crew | | | | 27/02/2006 |
| 5.1.2 Communications between vessel and HFS | | | | 15/06/2005 |
| 5.1.3 Ship to shore communication | | | | 29/08/2005 |

Always in compliance



- Information connected to standards (ISM, ISO, STCW, TMSA etc)
- All parties can be involved in updating information

Title: ISO 9001 - 2000 Archive: Status: Published
 Doc. No: DS-016 Version: 1 Approver: Owner: Administrator DocMap

The matrix below shows how documents relate to the specified standard.
 ISO 9001 - 2000 Compliance Matrix

[Export to Excel](#)

| | Foreword | Endorsement notice | Introduction | 1 Scope | 2 Normative reference | 3 Terms and definitions | 4 Quality management system | 5 Management responsibility | 6 Resource management | 7 Product realization | 8 Measurement, analysis and improvement | Annex A (informative) Correspondence between ISO 9001:2000 and ISO 14001:1996 | Annex B (informative) Correspondence between ISO 9001:2000 and ISO 9001:1994 |
|----------------------------------------|----------|--------------------|--------------|---------|-----------------------|-------------------------|-----------------------------|-----------------------------|-----------------------|-----------------------|-----------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Accounting Reporting Checklist | | | | | | | | x | | | | | |
| After loading process | | | | | | | | | | x | x | | |
| Appointment and renewal of port agents | | | | | | | | | x | x | | | |

(USTCT1), c) Rules and regulation etc.(CG515)

16/09/2005 - prh (Petter Henriksen) [Handle comment](#)

Ref phone today. Please include "SIGGTO" Ship vetting and its application to LNG on subscription list to following vessels: Høegh Gandria, Matthew and Norman Lady. When we resume the delivered to Høegh Galleon this publication shall be included also.

14/02/2006 - kom (Kolbjørn Meek) [Handle comment](#)

Though it is not really a common practice for all officers to study onboard, still there are those of us who are quiet fond of reading and refreshing previous knowledge acquired during our studies in college. I therefore suggest that ships be supplied with basic Navigational knowledge such as Nicholl's Concise Navigation, that from Bowditch, and other books with basic knowledge (from trigonometry to Celestial Navigation). Not only will it help us refresh our knowledge but can also be a helpful aid for the cadets boarding the vessel. It can also be used as a teaching aid for the officer in-charge of the cadet's training. Although there are lessons from the CBT cds, still they do not really go into basic details especially those related to formulas and actual celestial application. Reported by 4. Officer Jacob L. Calva

[New comment](#)

Knowledge sharing



- Easy to summarize and distribute key knowledge
- Easy to gather knowledge through experience / improvement reports

5. Experience sharing:

502543: Vessel made contact to the lock

Date: 13 January 2006

Reported by: Captain G. Sanchez

Reported situation:

The Pilot and Master with Chief Mate were station on the port wing, since it was docking port side in the lock. The Second Pilot was station on starboard wing. Junior Third Mate was station on the bridge port wing door as a repeater to the Masters Command. While the vessel was approaching parallel to the lock, clearance from starboard side as see from starboard quarter by Third mate was 10 meters. Wind was ESE 10 to 15 knots bearing about 20 degrees from port bow. Visibility good. The third Tug "Steinbuck" on standby starboard side. I notice the vessel was swinging to port with engine at dead slow ahead, Pilot ordered starboard 20 on rudder. The Pilot was talking to the Tugs with their own language. The ship heading was not parallel to the lock, about 10 degrees to port, Pilot ordered Hard starboard 60 degrees in order to used the becker rudder stern thruster effect, in order for the vessel be parallel to the lock and ordered slow ahead in order to have immediate effect on the rudder, Third Mate Reported that starboard bow was closing about 3 meters. After as few seconds the vessel made contact to the lock.

Ask the Pilot what happen, why did the vessel not react to the command, he said he does not know.

Extensive damage to starboard shell plates and web frames and stringers about 5 meters to starboard bow.

HÖEGH FLEET SERVICES

HIC

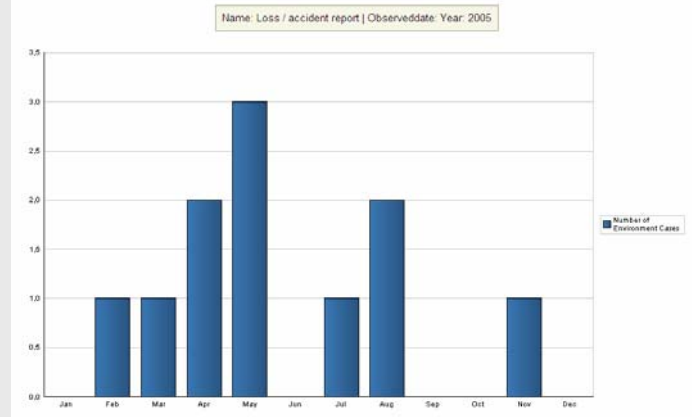
Höegh Improvement Committee

Report no. 12 2005

Meeting on 22 November 2005

| | |
|---------------------------------------------------------------------|----|
| 1. Concluded HIC cases: | 2 |
| 500558: Contact damage of car – Port of Damman | 2 |
| 501849: Tug master almost hit crew member | 3 |
| 501814: Install filters on air vent fans on car decks | 4 |
| 501841: Handling of cargo hold bilges-washing | 5 |
| 501927: Provide separate walkie talkies for fire squad leaders | 7 |
| 501942: Supply over board bilge valves breakable seals for Security | 8 |
| 2. HIC cases currently under review | 9 |
| 3. New HIC cases since previous report | 10 |
| 4. Port State Control inspections since previous report | 11 |
| Port State Control in Corouan | 11 |
| No deficiencies | 11 |
| Port State Control in Newark | 11 |
| No deficiencies | 11 |
| Port State Control in Jeddah | 11 |
| No deficiencies | 11 |

Reported consequences to Höegh Improvement System



Traceability / Consistency / Availability



- Easy to track changes and improvements (TMSA)
- No dead ends, relationships incorporated in all parts of system
- Always available, globally 24/7 offline/online

| | | | | |
|-------------|------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| QDPC 0.0 | 13 | 23/03/2006 | Revision 2006-03-23 | Published |
| QDPC 3.2.1 | 5 | 02/01/2006 | Under D. Controls: Added check of engine room. | Published |
| QDPC 3.2.2 | 5 | 30/11/2005 | - Oxygen level set to 20.9 to correspond to QSM 2.6.2 - LFL (lower flammable limit) to be measured for LNG vessels - Toxic gas to be measured if ... | Published |
| QDPC 3.2.3 | 3 | 26/10/2005 | fining time changed from 3 to 6 months | Published |
| QDPC 3.2.4 | 2 | 15/06/2005 | total revision | Published |
| QDPC 3.2.5 | 3 | 15/11/2005 | 1. Safety belt is changed to safety harness 2. Name and sign of crew performing the work added. 3. Validity of check list amended from 9 hrs to 12 hrs ... | Published |
| QDPC 3.2.7 | 1 | 01/12/2002 | | Published |
| QDPC 3.2.08 | 1.02 | 14/11/2005 | checklist to be completed prior to sailing. Environmental issues included. | Published |
| QDPC 3.2.09 | 1.02 | 14/11/2005 | Included environmental issues | Published |
| QDPC 3.2.10 | 1 | 01/07/2002 | | Published |
| QDPC 3.2.30 | 2.01 | 17/01/2006 | Change in title from Bunkering in general to Pre-bunkering checking. Changes in various checkpoints | Published |
| QDPC 3.3.01 | 1 | 01/12/2002 | | Published |
| QDPC 3.3.03 | 1 | 01/12/2002 | | Published |
| QDPC 3.3.04 | 3 | 15/10/2005 | AA) Bridge checklist No. 4 - Departure Procedure. Item No. 25 should be transferred before item No. 8. Proper sequence - the gangway, external ramps ... | Published |
| QDPC 3.3.05 | 2 | 15/06/2005 | Added: Prepare AMVER / POSMES for arrival message. | Published |

Title: Emergency Operation Room (EOR) **Archive:** QEOP 3.3 **Status:** Published

Doc. No.: OR-200 **Version:** 3 **Approver:** Yngvill Eriksson Ásheim **Owner:** Jan Asle Hegmo

HFS Process area only: Global Process:Emergency
Manuals:Emergency Organisation Plan
Manuals:EMERGENCY RESPONSE TEAM (ERT)
Manuals:Emergency Operation Room Organisation

URL:

| Version independent URL: | Emergency Operation Room (EOR) | Valid since: | Valid to date: |
|--------------------------|---------------------------------------|--------------|----------------|
| Version specific URL: | Emergency Operation Room (EOR) Ver. 3 | 15/06/2005 | |
| | Emergency Operation Room (EOR) Ver. 2 | 01/03/2004 | 14/06/2005 |
| | Emergency Operation Room (EOR) Ver. 1 | 01/05/2001 | 29/02/2004 |

References: Reference Matrix

Outgoing superior references: None
 Outgoing horizontal references: Form in case of Emergency - Telephone message in/out
 Incoming inferior references: None
 Incoming horizontal references: [List of Contents QEOP](#)
 Revision log QEOP
 Other references: None

Plan of progress – pilot and rollout

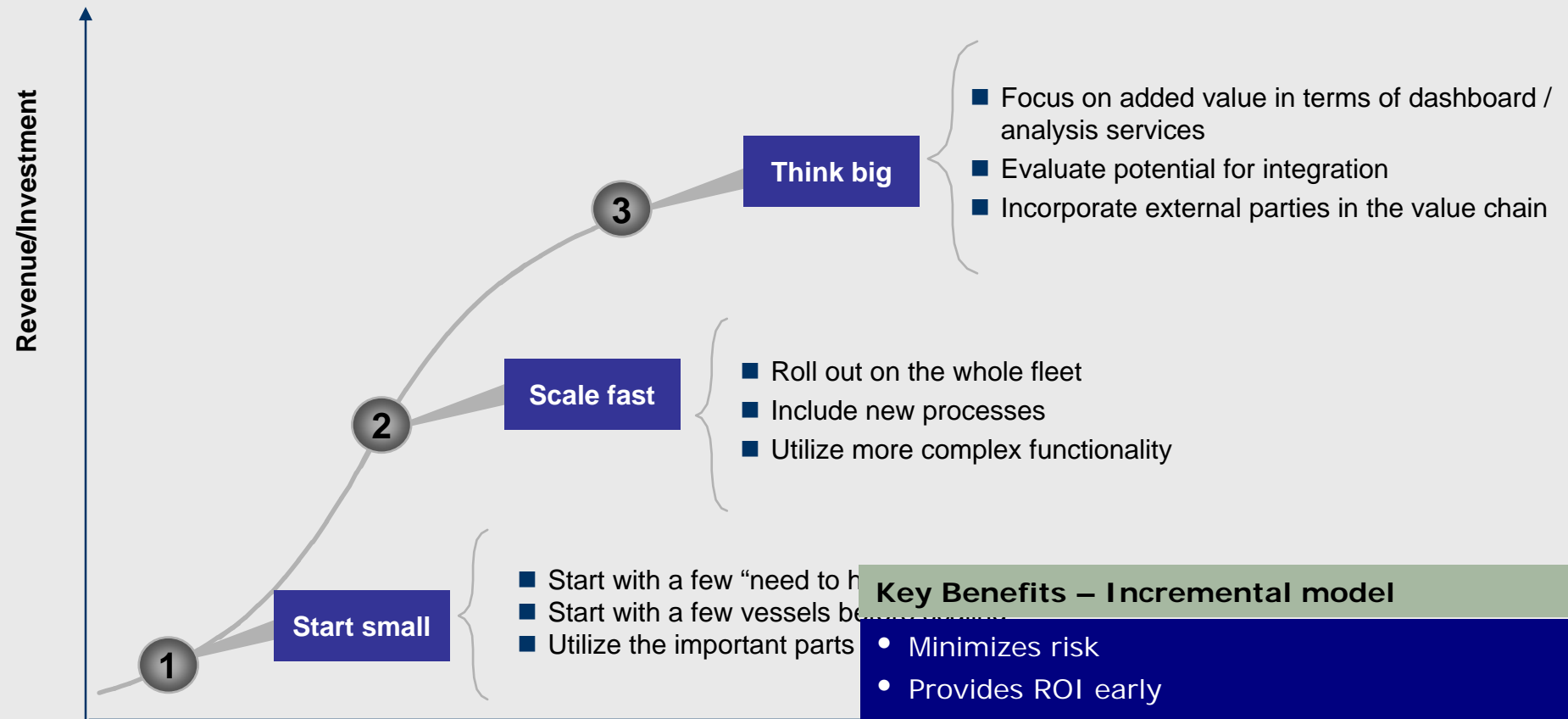


| | | |
|-------------------------------------------------------------------------------------------|---------------------|---------------------|
| PHASE 1 - Evaluation Project finished, and DocMap is selected | Fri 31.03.06 | Fri 31.03.06 |
| [-] Pilot Project BSM Governing Documents | Fri 31.03.06 | Fri 15.12.06 |
| Main project plan are developed and approved | Fri 31.03.06 | Fri 31.03.06 |
| [+] BSM development environment is established in DocMap AS locations in Stavanger | Fri 31.03.06 | Fri 07.04.06 |
| [+] Test documentation is implemented in DocMap | Fri 31.03.06 | Fri 28.04.06 |
| [+] BSM Graphical layout is decided | Fri 31.03.06 | Fri 21.04.06 |
| [+] Test image is created and implemented on a dummy vessel | Tue 18.04.06 | Fri 28.04.06 |
| [+] Evaluation | Mon 01.05.06 | Mon 19.06.06 |
| [+] Implementation on the WW vessels | Mon 19.06.06 | Fri 15.12.06 |
| PHASE 2 | Mon 01.01.07 | Tue 01.01.08 |
| Rollout of the rest of the fleet based on rollout plan defined in Phase 1 | Mon 01.01.07 | Tue 01.01.08 |

Outlined Roll Out Strategy



Goal:
Improve efficiency and quality



Key Benefits – Incremental model

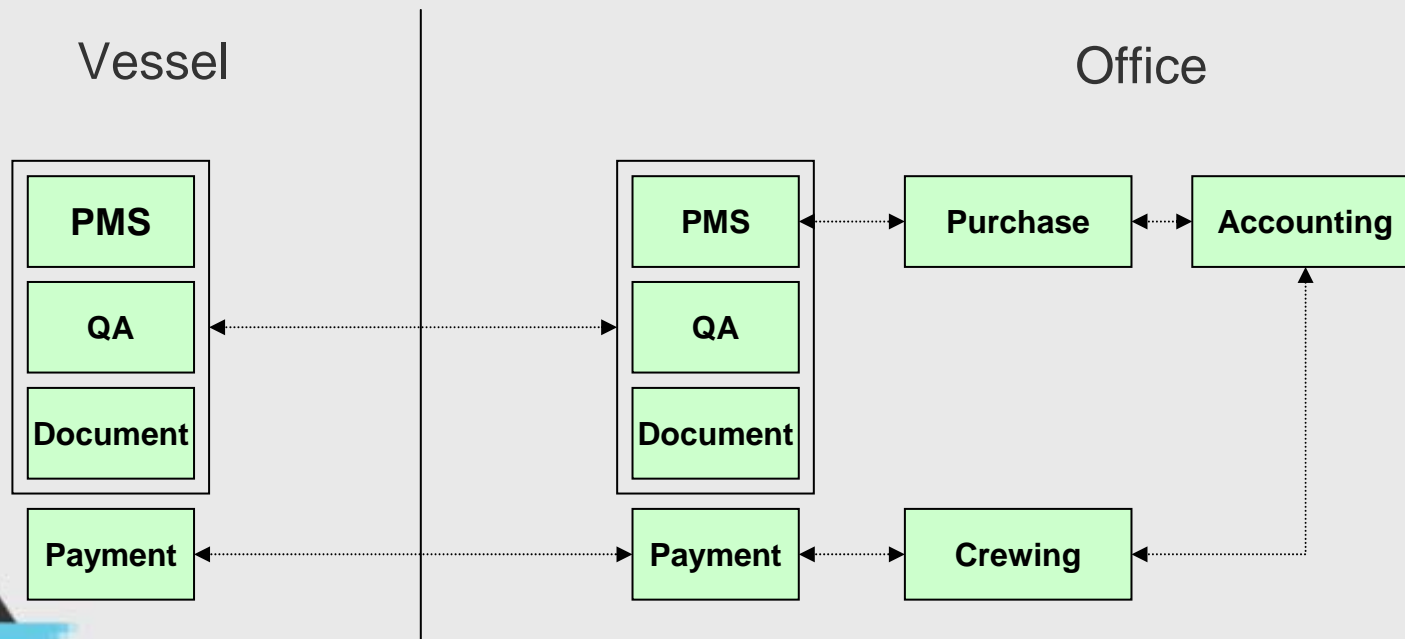
- Minimizes risk
- Provides ROI early
- Deliverables from each iteration
- Effective handling of requirement changes
- Difficult to visualize all requirements upfront
- Maintains user interest

Integration towards other BSM applications

- the ship manager vs the ship owner



- The best solution would unquestionably be
 - one common PMS system on the whole fleet
 - one common QA / document handling system
 - one common crewing / payment system
 - ... etc
 - a tight integration between them; preferably using the same vendor

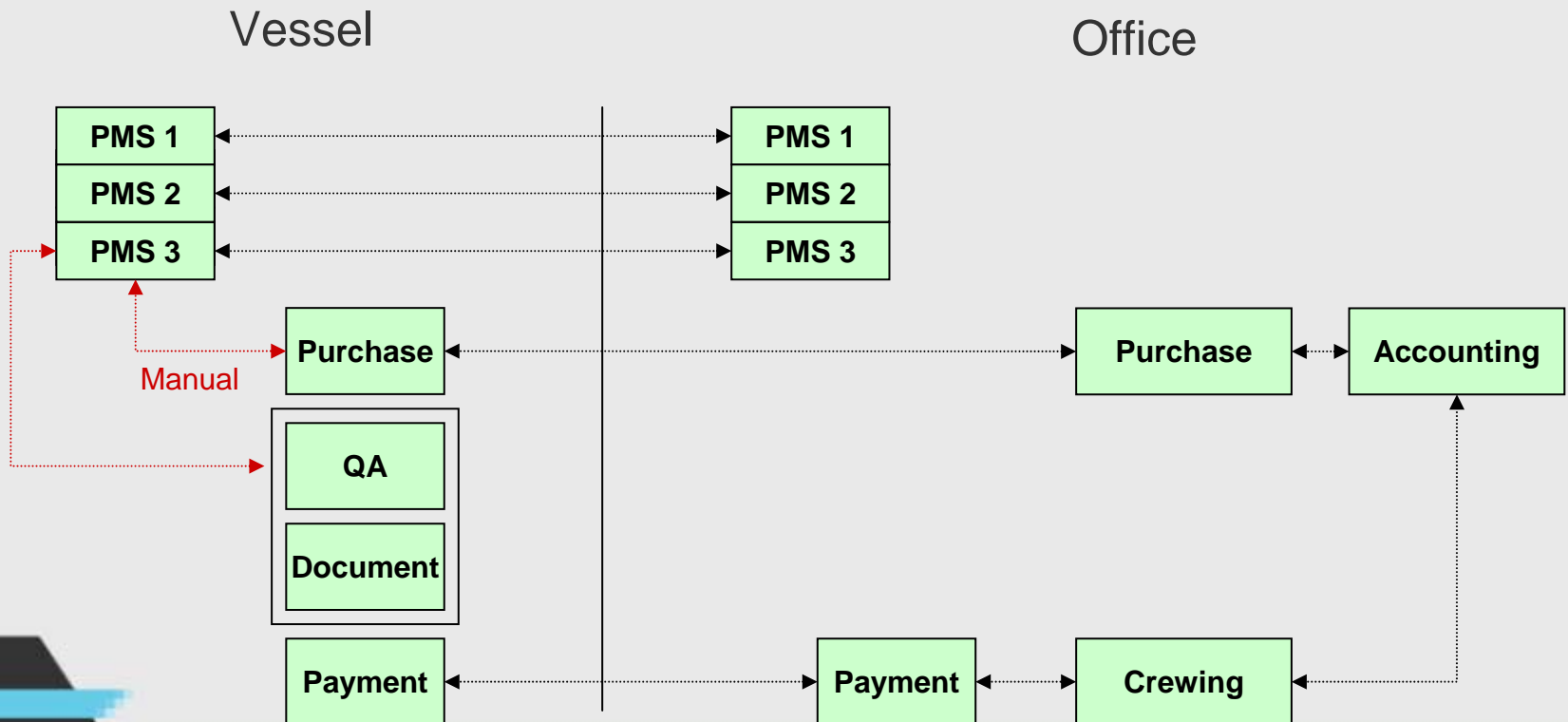


Integration towards other BSM applications

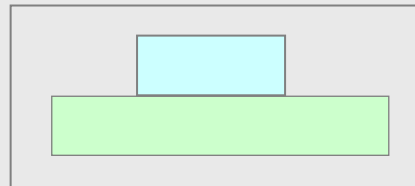
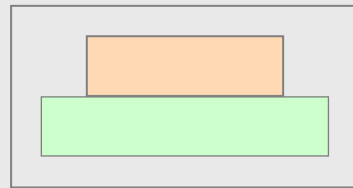
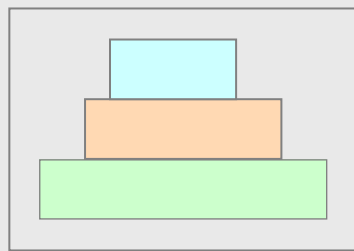
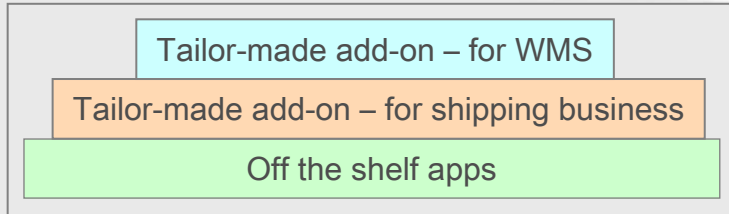
- the ship manager vs the ship owner



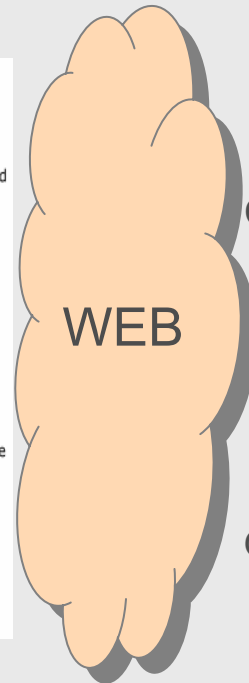
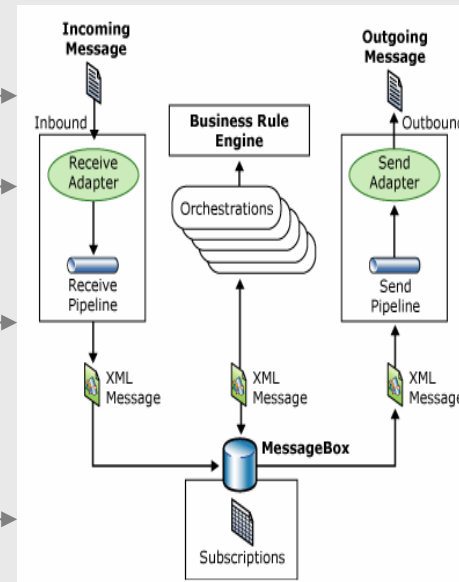
- A ship manager can only control the systems supporting our services
 - QA / document handling system
 - crewing / payment system
 - purchase / accounting system
- The PMS system comes with the vessel and is the owners property



IT application strategy in BSM



Middleware



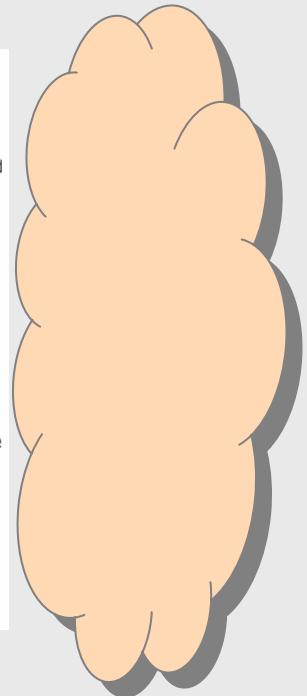
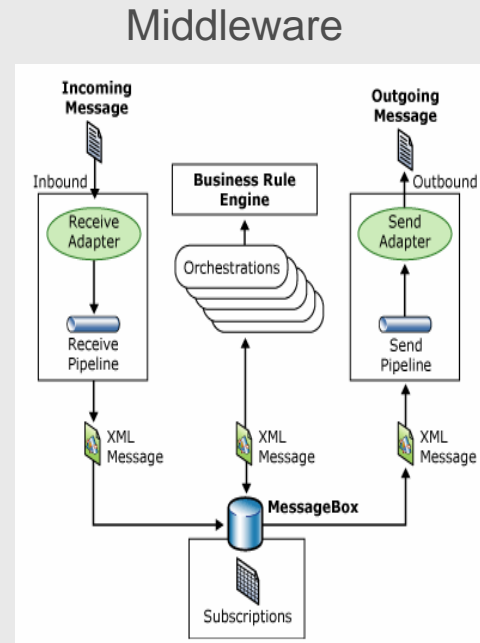
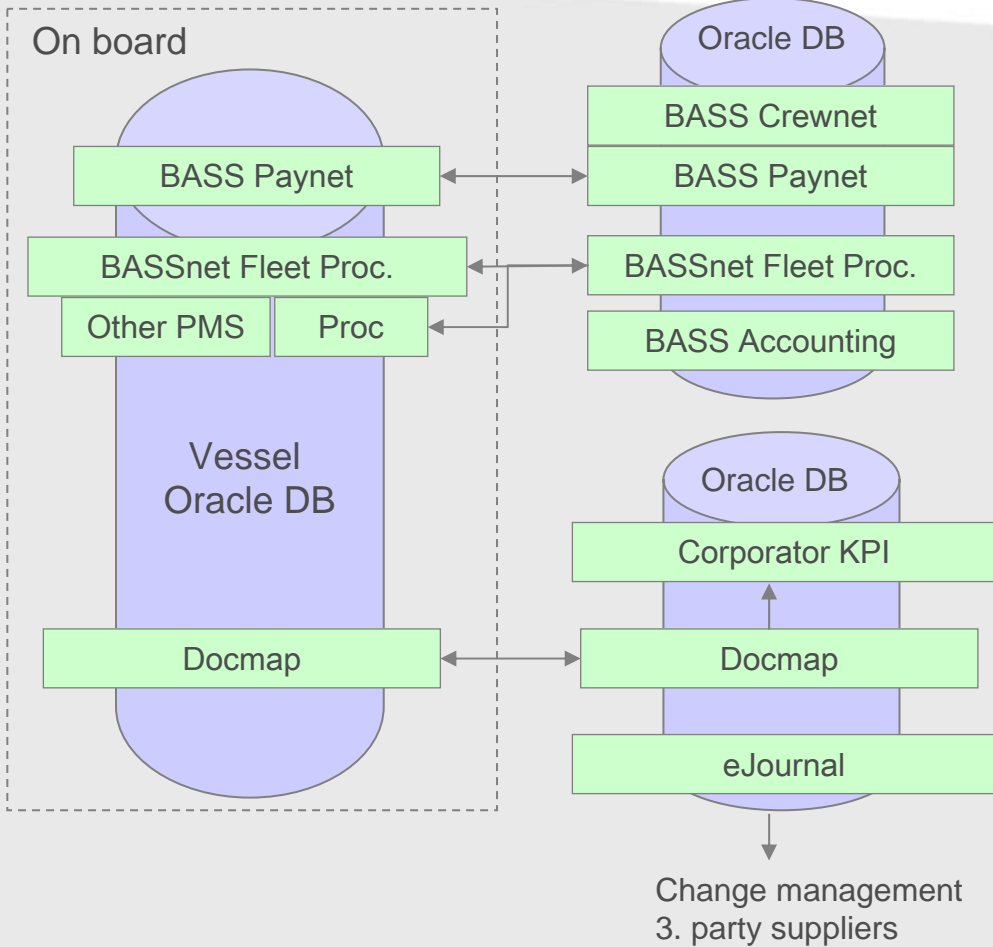
Customers

Suppliers

Others

WMS employees

Current situation



Business need – streamlining maritime operations

