

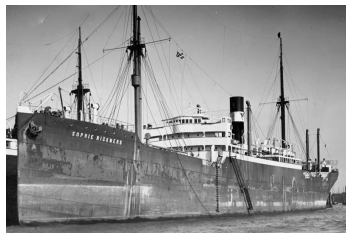


RICKMERS GROUP



Challenges of Vessels' IT – New Prospects and Systems?

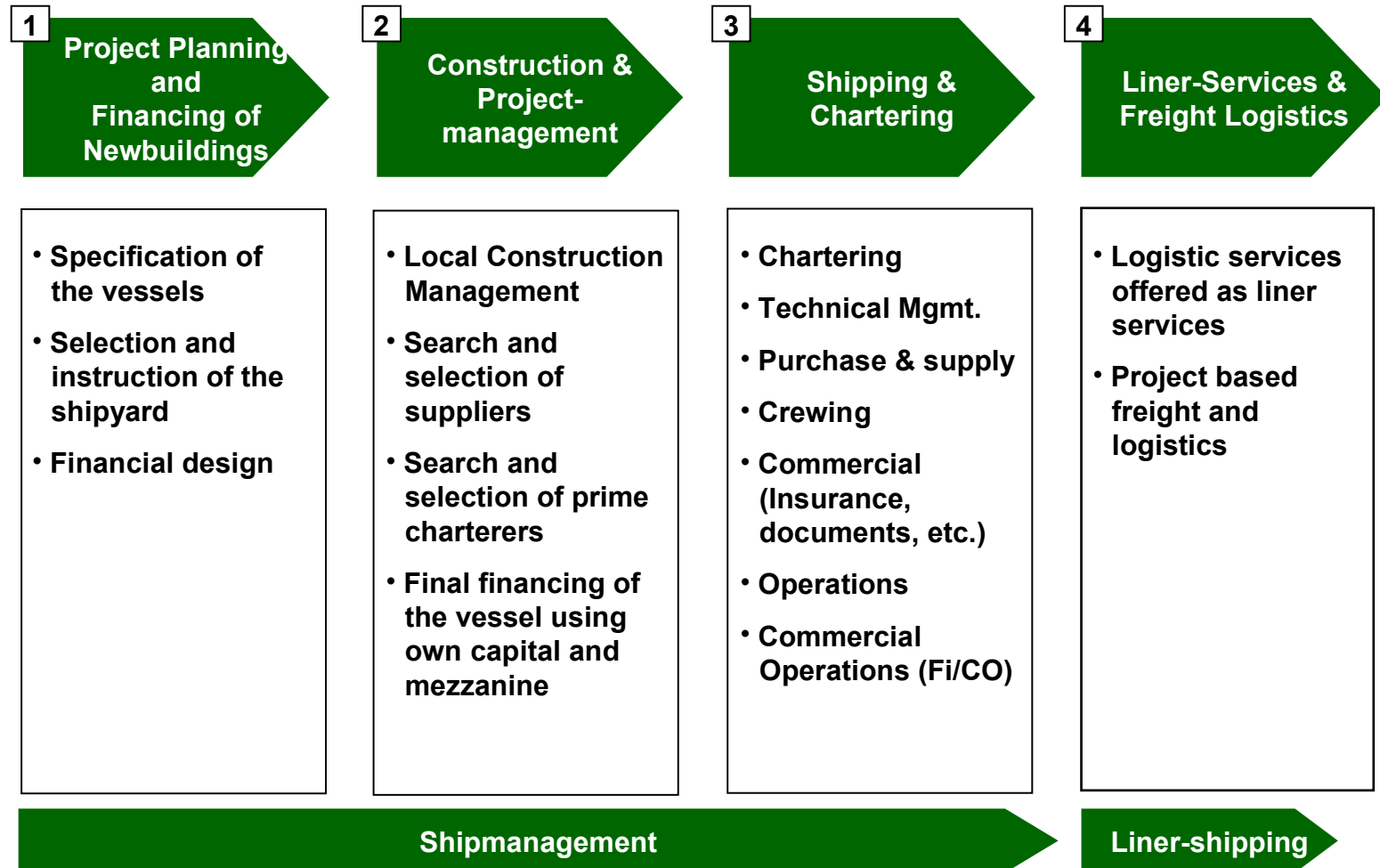
Lars Gerdes, CIO Rickmers Holding
Hamburg, 11th of March 2008



- In 1984 the foundation of the current Rickmers Reederei consolidated the shipping activities of the Rickmers family in the 5th generation – having roots in the year 1834.
- Globalisation and the tremendous economic growth in Asia lead to a high demand on shipping freight capacity
- The Rickmers Group reflects the demand with a high growth of the owned fleet.
- More than 85 vessels are sailing globally for Rickmers today.
- More than 2,000 seafarers care for smooth operations.
- An additional team of experienced experts cares for more than 50 newbuildings.

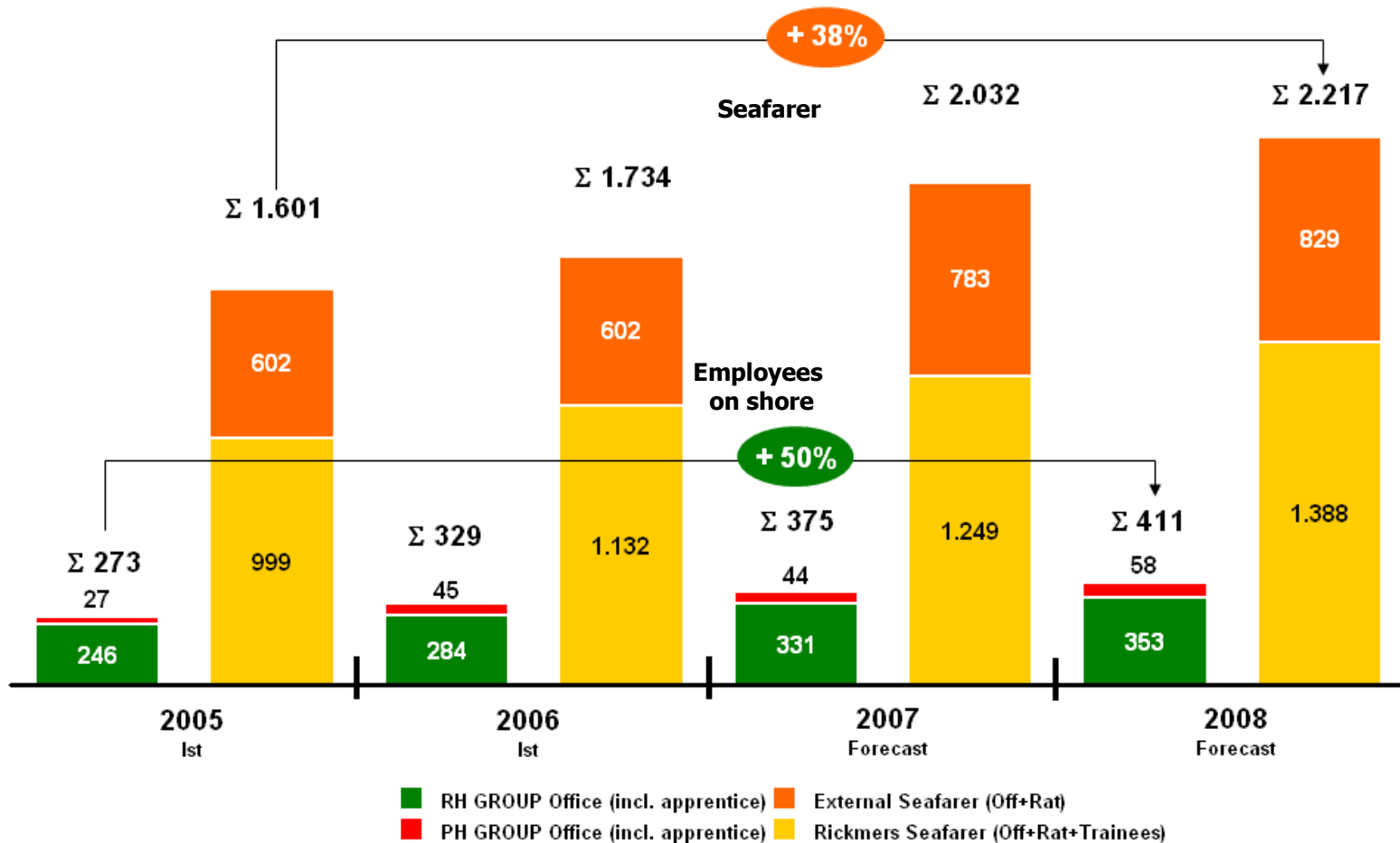
The value chain of the Rickmers Group's shipping activities comprises projects as well as liner services

Value Chain of the Rickmers Group (Shipping)



The positive group development has lead to a high increase of employees on shore as well as on sea ...

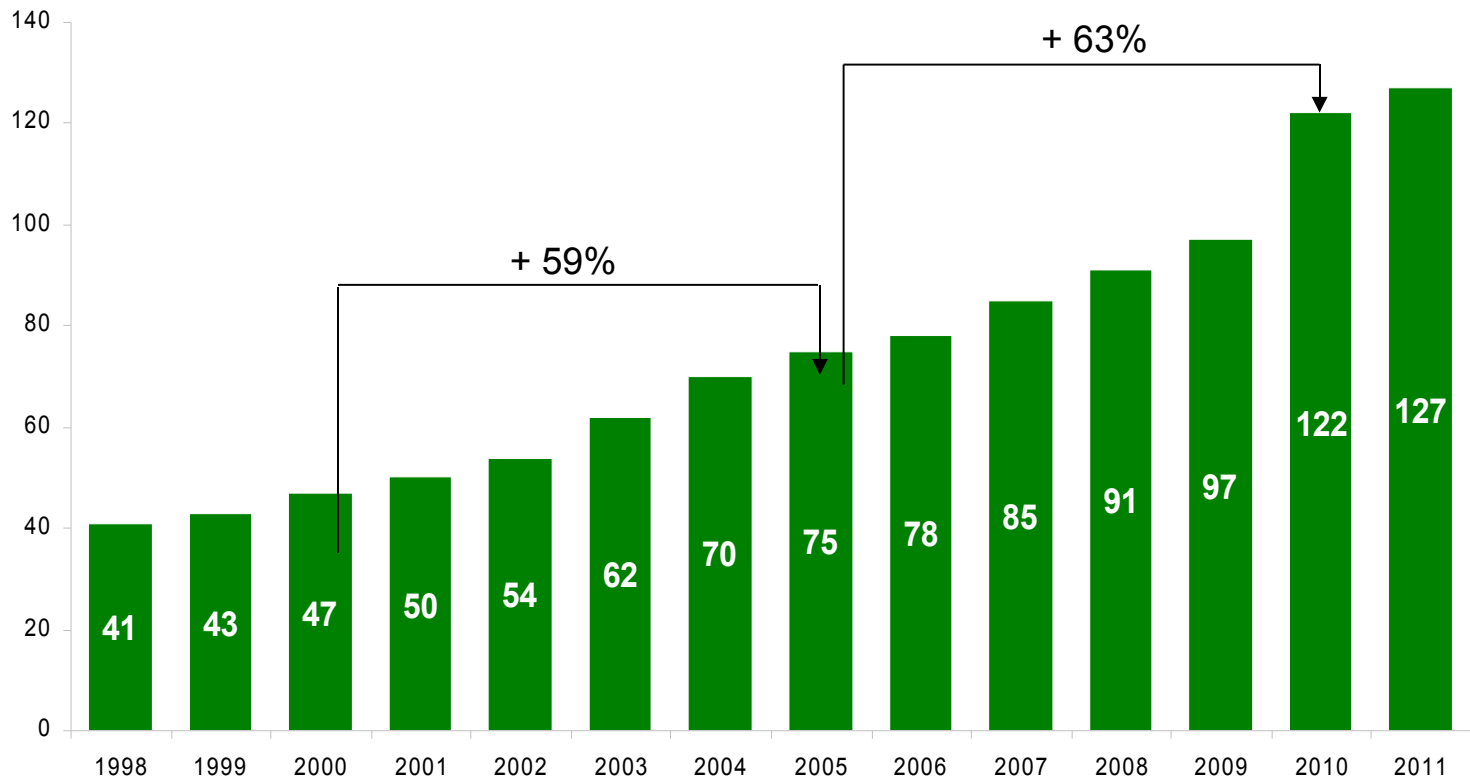
No. of Employees Rickmers GROUP 2005 – 2007



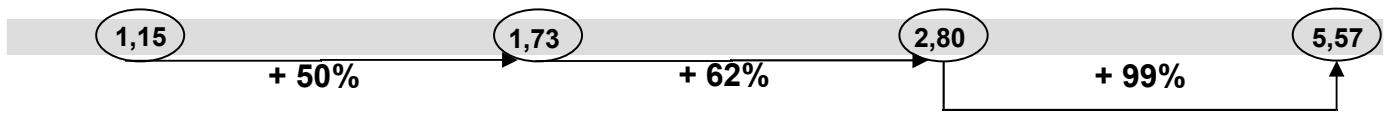


The Rickmers Group will continue the enormous growth of the fleet in the next years particularly in the class of > 3.500 TEU ...

RICKMERS GROUP – development of fleet



in Mio.
tdw





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Challenge Vessel IT

Current Situation

Requirements

Deployment

First Findings and Results





The Current Situation

What is the current situation of the vessel IT?

- Continuously growing requirements on board
- No monitoring capabilities
- Often no local area networks
- Software-Updates by distribution of CDs
- Local visits - high demand of staff and high travel cost
- High consumption of spare and wear parts
- Vessel and land-based storage of hardware and spare parts
- Logistic challenges in the case of distribution of spare parts and updates
- Little or no IT-Know-How on board
- Ship-to-shore–Communication: high cost and narrow bandwidth for data communication
- Increasing number of vessels



The Current Situation

What are the consequences for the IT?

- **Keeping the focus on the core competencies is difficult**
- **Reaction instead of action**
- **Hope & Pray instead of managing**
- **Long response time from end user view**
- **Userhelpdesk works according to "Blackbox-Principle"**
- **End Users and IT administrators are unsatisfied**
- **Integration of ship-to-shore-processes is highly inhibited**

The Current Situation

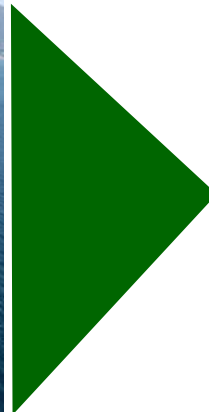
What is the situation on shore?

- **Global Active Directory based corporate network**
- **Centralised software-distribution**
- **Automated system-monitoring und alerting**
- **Secured and standardised clients**
- **Global User-Help Desk with Remote-Desktop**
- **Transfer of high data volumes is easy**
- **ERP-Systems with integrated processes**

The Current Situation

Findings:

IT-Governance onboard vessels is underdeveloped in comparison to the situation on shore!



Question:

Is there a way to fill this gap?



Requirements

Renewal of the ship communication

- **Broadband communication**
- **Always on, global and robust**
- **Cost efficient and flexible**
- **Not depending on proprietary systems**
- **Use of VoIP**

Optimisation of the hardware-situation

- **High Availability**
- **Outsourcing of Maintenance & Replacement possible**



Requirements

Integration of vessels in corporate network

- **Integration of users in Active Directory**
- **Remote-Control, -Access and –Desktop-Functions**
- **Software-Distribution**
- **Persistent and robust ship-to-shore-processes**
- **Definition of dedicated segments (Charterer, Privacy, etc.)**

One-Stop-Solution

- **One leading responsible system integrator as a partner**



Deployment

Selection of the appropriate partner

- **Problem understanding**
- **End-to-End solution**
- **Consulting competence**
- **Maritime & IT experience**
- **Solution offering**
- **Commitment**

**Becker Marine Systems
Communication
was the Partner
with the best
over all competence**



Conducting a partner project

- **Target definitions**
- **Definition of budget**
- **Installation of the systems on shore**
- **Regularly project-meetings**
- **Selection of two evaluation vessels**
- **Installation planning**
- **Installation and going-live**
 - Rickmers Jakarta: 23rd of January 2008 (3G und FB 500)
 - Seven Seas: March 2008 (3G, FB 250 und VSat)



The Evaluation

- **umc.connect communication server**
- **umc.connect portnet**
- **umc.connect 3GSM**
- **umc.connect skylink FleetBroadband+**
 - Thrane & Thrane S500 on the Jakarta
 - FB250 on the Seven Seas
- **umc.connect skylink VSAT**
 - KVH Tracphone V7 on Seven Seas
- **umc.connect thin office**



Deployment

The Evaluation: Communication



umc.connect thin office: Thin Client Infrastructure

Infrastruktur:

- Redundant vessel server
- Thin clients
- Virtualised desktops
- + 25 integrated applications

Benefits:

- Security
- Standardisation
- User can take desktop to other vessels
- Deployment, maintenance and service





Deployment

First findings on evaluation operations

- **Stable and robust operation of systems up to now**
- **Vessel was always reachable, mostly via Thrane & Thrane FB500**
- **Fast remote administration via Wifi (portnet)**
- **Sufficient speed via UMTS and GPRS**
- **Response times via FleetBroadband need to be improved in the future, slow due to high latency**
- **Availability of VoIP via FleetBroadband limited quality due to high latency**



Deployment

Open Questions

- **FleetBroadband and VSAT simultaneously (Seven Seas?)**
- **Global coverage of FleetBroadband (and VSAT?)**
- **Significant increase of Wifi and 3GSM possible?**
- **Development of communication cost mix FleetBroadband, VSAT, 3GSM and Wifi?**
- **Investment per vessel?**



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Questions?

Thank you very much!

