„FUNCTION BASED BRIDGE ORGANISATION“

MARITIME SIMULATOR TRAINING AT AIDA ACADEMY

Bremen, 18. März 2015

AIDA

Overview

1. Introduction – Just Culture
2. Function based Bridge Organisation – Bridge Ressource Management Training and Implementation
3. Operating Experience – Lessons Learned
4. Participant Feedback for integrated Simulation Training
5. Conclusion

Introduction – Just Culture

AIDA Cruises has implemented comprehensive training programs to maintain highest safety standards of ship operation.

Introduction – Just Culture

The program is delivered at the company own simulator training centre (CSMART Rostock) as important part of the AIDA Academy.

Introduction – Just Culture

Essential cornerstones of the training modules are:

- Deliver tailor made ready to use knowledge to nautical and engineering officers
- Introduce a “Just Culture” approach to ship operation
- Contribute to maintain the safety culture of the company
- Build up trust and reputation amongst the fleet personnell

Introduction – Just Culture

The training courses delivered are:

- BRM I (Bridge Resource Management – Standard Operating Procedures)
- BRM II (Bridge Resource Management – Emergency Procedures)
- Shiphandling Training
- ECDIS Training (IMO Model 1.27and typespecific)
- Engine Operation Training (SIEMENS automation)

Function based Bridge Organisation – Bridge Ressource Management Training

- AIDA Cruises has introduced a function based bridge organisation, providing a minimum level of two navigational officers for low risk operation (green manning) and the maximum level of four navigational officers including the Captain for high risk operation like docking, undocking, pilotage, navigating in enclosed waters, etc. (red manning)

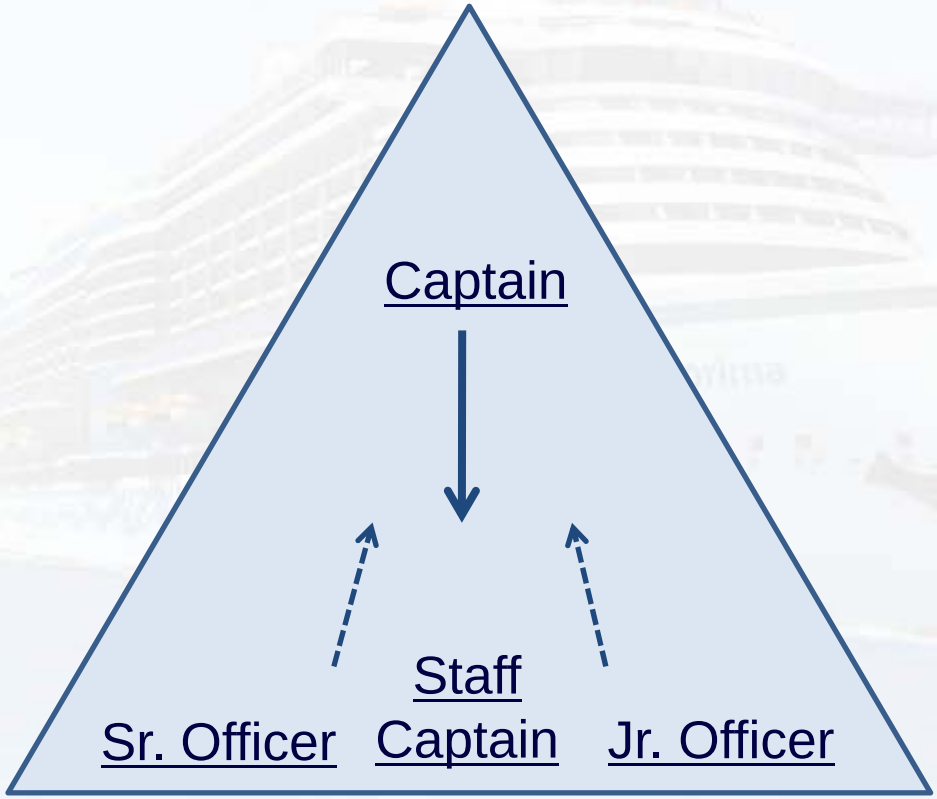
- This function based bridge organisation raises the requirement to make every officer understanding that additional to their technical skills (navigation, collision avoidance, type specific system knowledge, etc.) the non-technical skills to work efficiently in a team (communication, situational awareness, decision making, leadership and teamwork, managing stress, etc.) are required

- This message has to be brought across a multi-national -, multi-rank -, multi-age -, multi-gender community of the officers of the AIDA fleet

Function based Bridge Organisation – Bridge Ressource Management Training

Traditional Bridge Organisation

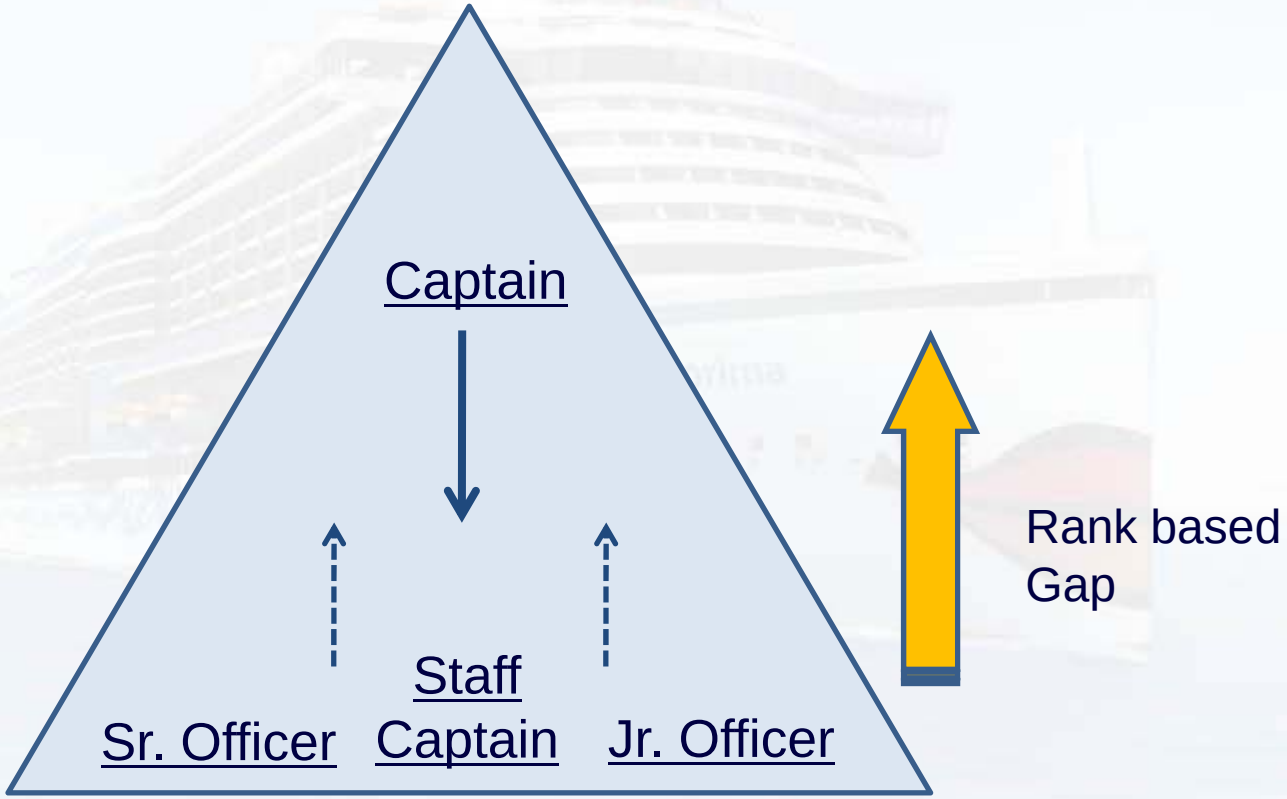
Captain as Operator and single person decision maker



Function based Bridge Organisation – Bridge Ressource Management Training

Traditional Bridge Organisation

Captain as Operator and single person decision maker



Traditional Bridge Organisation

Main disadvantages:

- Junior officers turn into passive bystanders when the Master has taken the charge (hide behind the chart table)
- Requires a fail-safe performance of the Master at all times
- Poor work satisfaction leads to complacency
- When promoted – junior ranking officers lack required skills

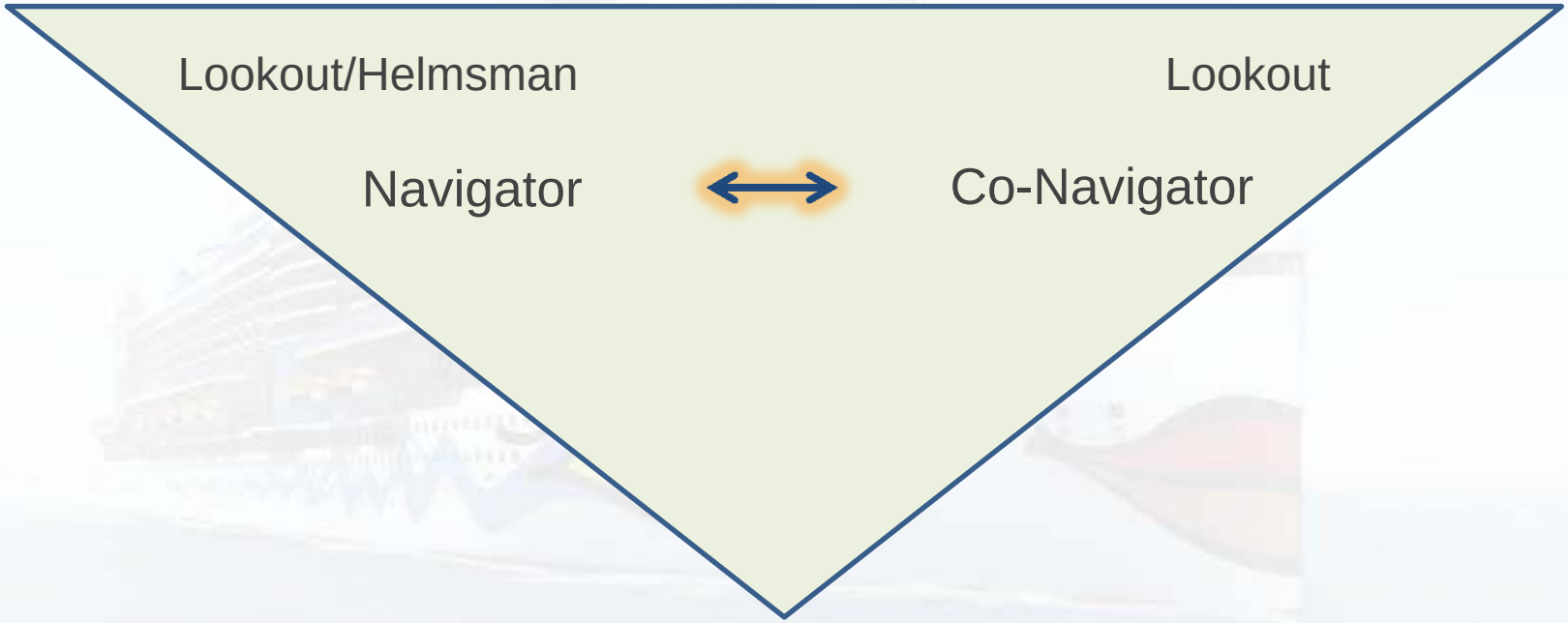
Resilient System Safety

How do we build a Resilient Safety System with these “unreliable components” human beings?

- Every member of the bridge team must become active part of the system by cross checking and supporting each other.

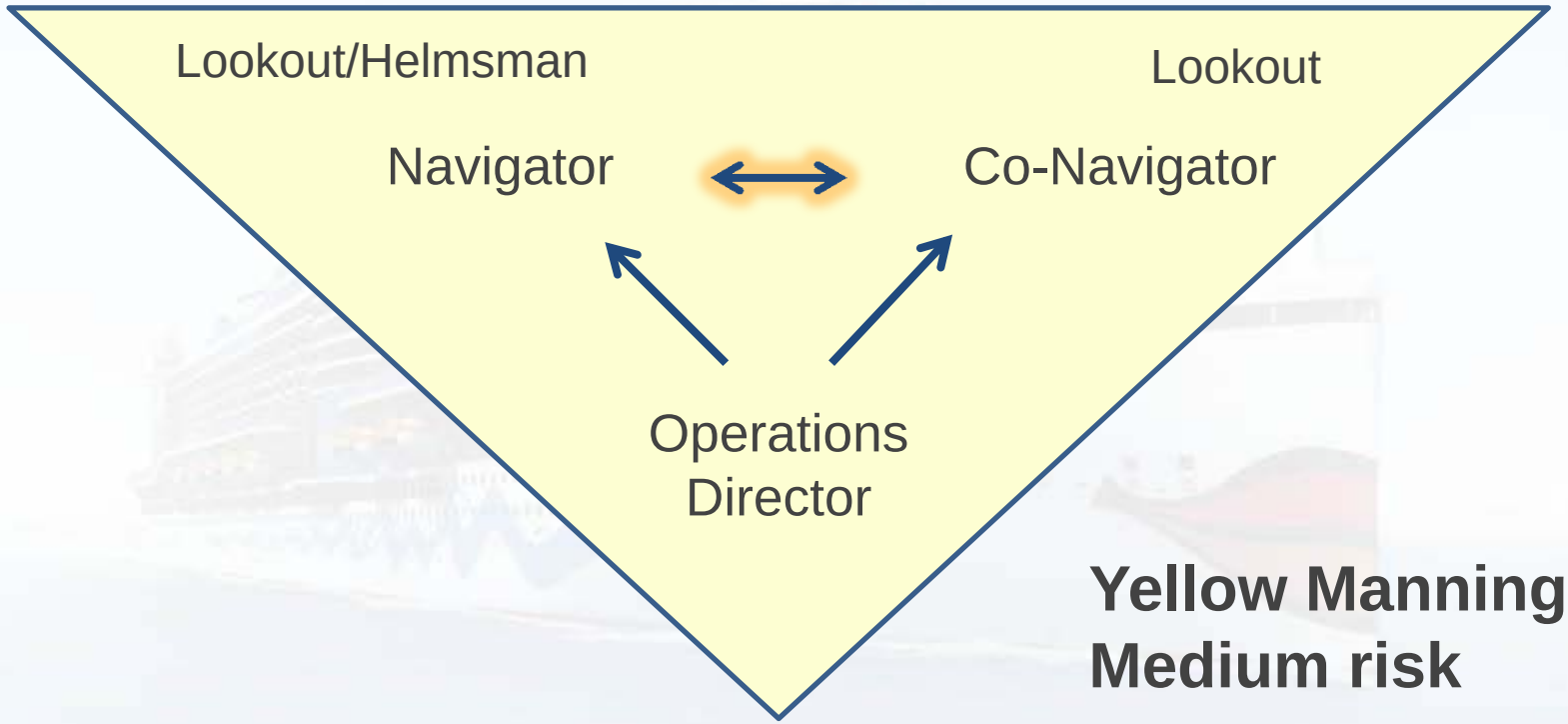
- Actively monitoring the progress of the operation - being able and available to detect and correct errors when they are made turns every member of the bridge team into an active element of a “safety net” around the operator and decision maker rather being a source of error.

Function Based Bridge Organisation



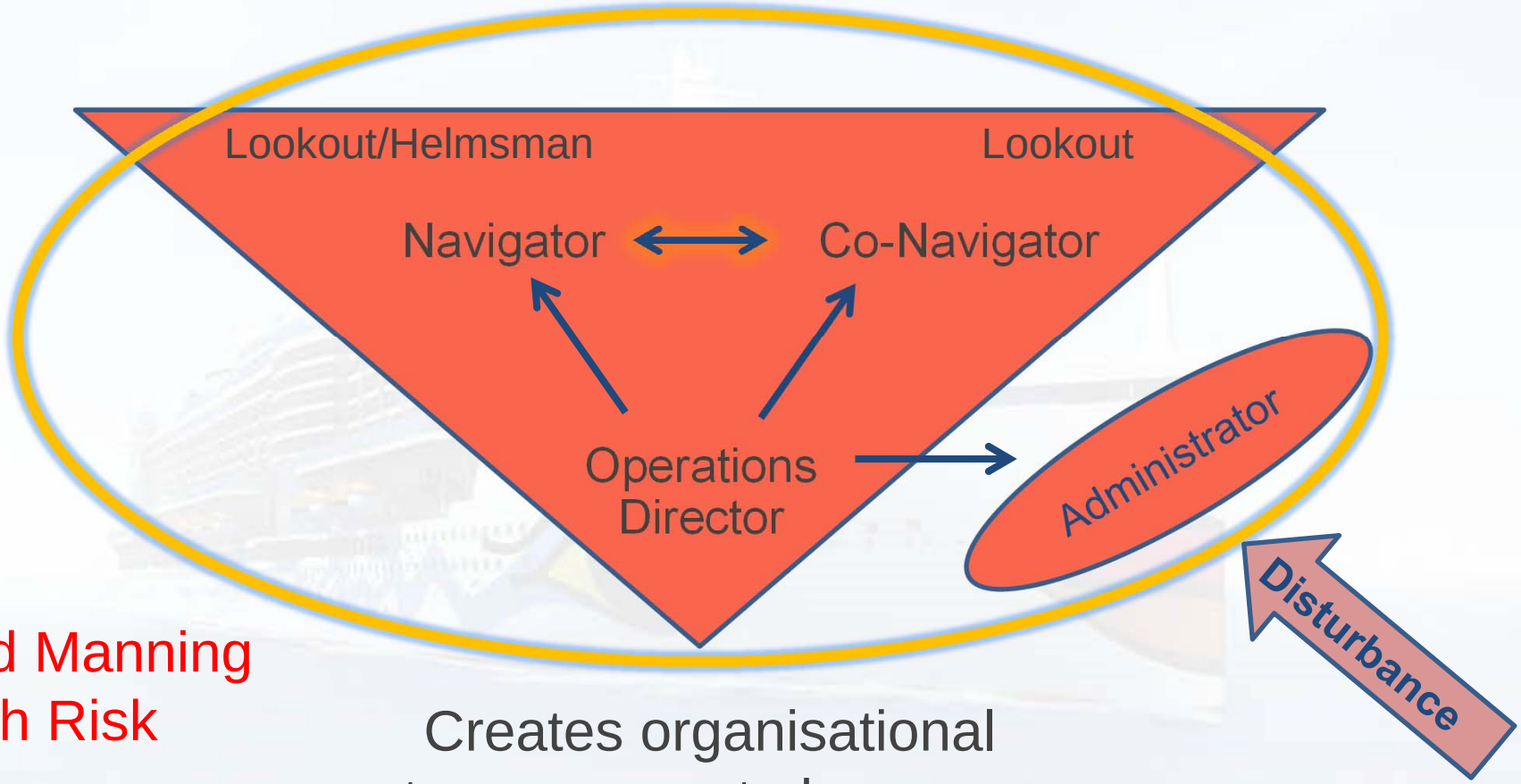
Green Manning
Low risk

Function Based Bridge Organisation



Yellow Manning
Medium risk

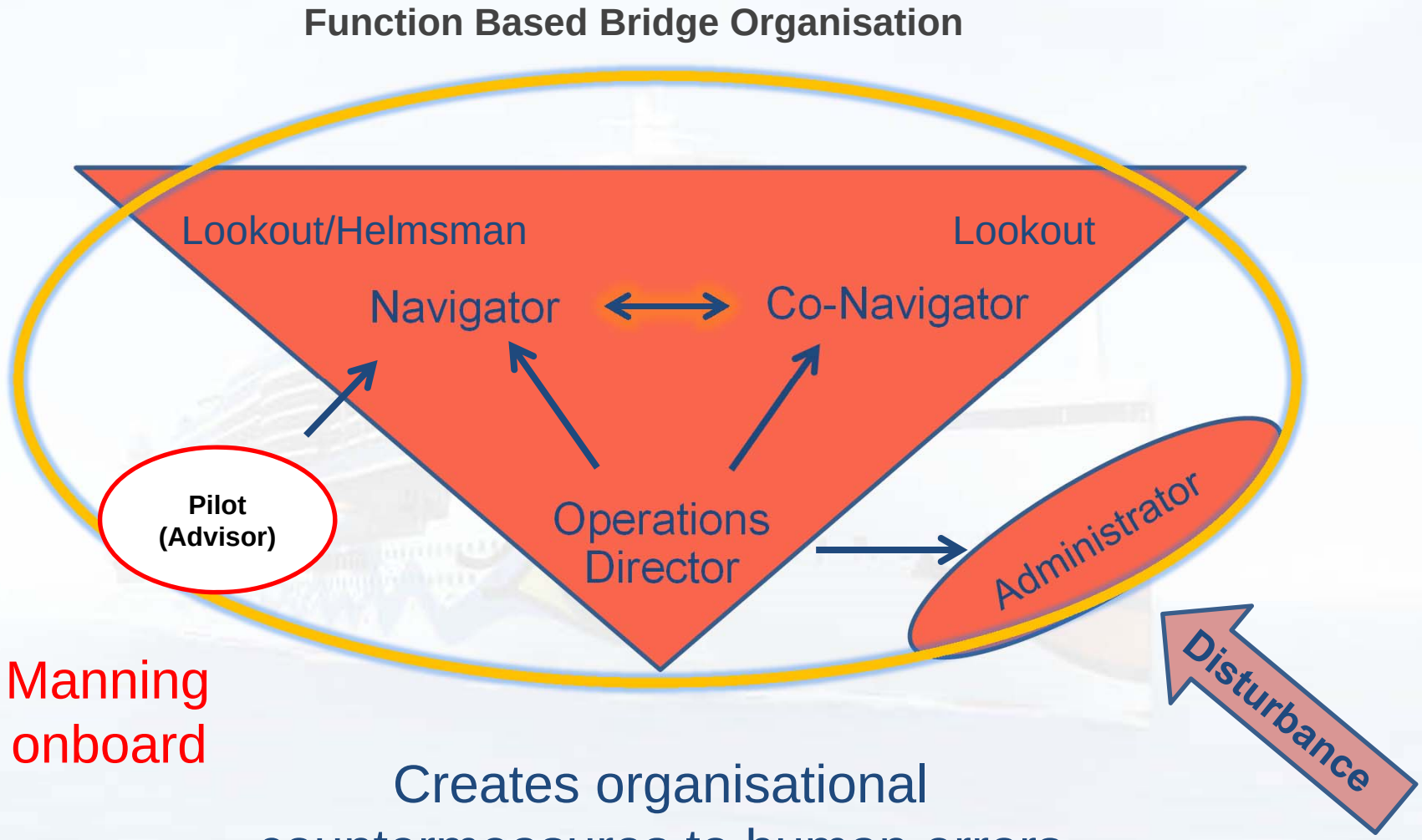
Function Based Bridge Organisation



Red Manning
High Risk

Creates organisational countermeasures to human errors

Function based Bridge Organisation – Bridge Ressource Management Training

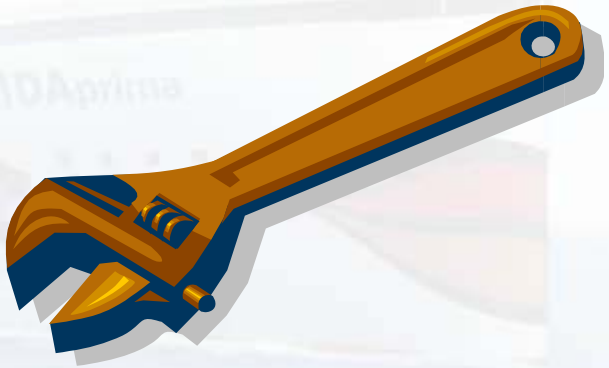


Red Manning
Pilot onboard

Creates organisational countermeasures to human errors

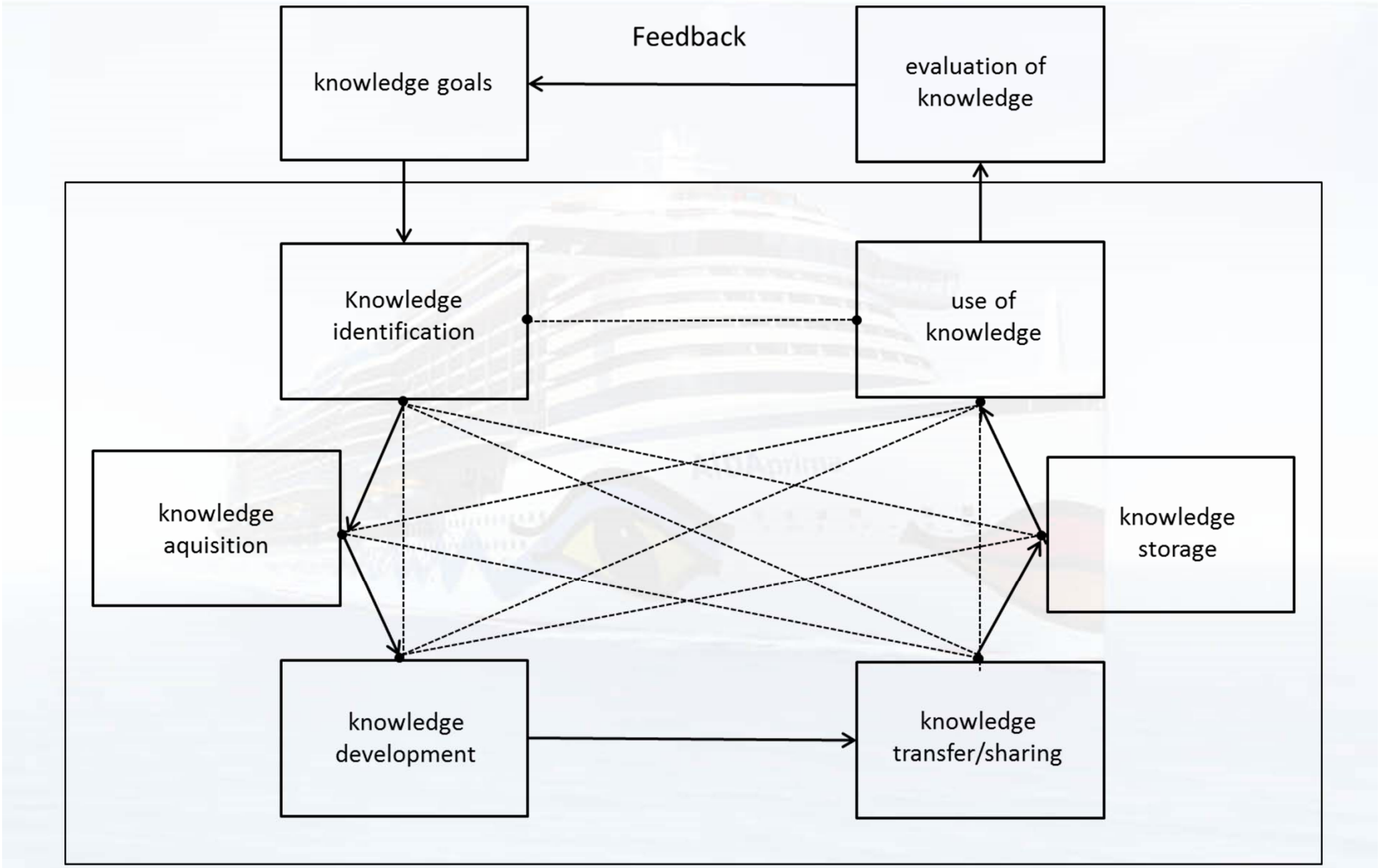
How do we manage to bring the message across?

What tools do we need to transfer the required knowledge ?

Using  or  ?

We look into the knowledge transfer process !

Operating Experiences – Lessons learned



Operating Experience – Lessons Learned

How do we open the minds of trainees and create a successful knowledge transfer process during the training?

- Set-up of the simulator hard- and software to be as close as possible to the onboard reality provides a positive „feel home“ and „feel well“ effect

- design of realistic training scenarios referencing to relevant near misses, incidents, accidents from the shipping industry and ideally from the own fleet

Operating Experience – Lessons Learned

- the feedback phase after simulator exercises instructors need to provide accurate and fair feedback to the training group. Exercise replays to be used to highlight positive moments/sequences of action and to adress critical stages of the operation in non-personal, non-attacking way

- depending on rank and experience of the individual we need to provide flexibility of challenge of the given tasks in the training scenarios in order to give a fair chance for everyone to succeed

Operating Experience – Lessons Learned

Applying „Just Culture“ in the de-briefings of simulator exercises are the moments when positive training effects are produced, behaviours modes are understood, minds are reached and a change process in individual attitudes is initiated !!!

PARTICIPANT FEEDBACK FOR INTEGRATED SIMULATION TRAINING

Every training course is concluded with an individual feedback session between lead instructor of the course and each individual participant.

Individual feedback sessions are:

- important elements of the training course to provide honest and fair feedback for both sides – the trainer/instructor view and the participant view
  - In parallel every participant has the chance to give feedback **anonymously** on course evaluation forms:
    - on a 1-7 rating scale
      (7-great, 6-very good, 5-good, 4-satisfactory, 3-fair, 2-acceptable, 1-insufficient)

PARTICIPANT FEEDBACK FOR INTEGRATED SIMULATION TRAINING

CONCLUSION

- Human element issues, our capabilities - but also our limitations are valid for any human and need to be understood by everyone involved in safety relevant operations.

- Successful knowledge transfer in simulator training, making best use of all elements of the knowledge transfer management process is a significant contribution to the safety culture of an organisation.

- Applying the “just culture” approach in simulator training and particularly in the de-briefings makes the difference to overcome the old fashioned “blame culture”.

CONCLUSION

- Having the 1:1 replicas of the real on-board technical systems available in our training facility this provides the capability to design and perform training exercises which are almost 100 % identical to real ship operation procedures on the bridges as well as in the engine control rooms.

- Trainees learn to manage their job duties better by following the required procedures and sequence of actions according to checklists in the training exercises exactly in the same way as they must do onboard in real ship operation.

CONCLUSION

We firmly believe that integrated company and ship specific training for nautical and engineering officers with combined procedure training and ship specific equipment training provides excellent training effects. Simulator training in the aviation industry has proven this concept to be successful where cockpit crews get trained in procedure skills, technical and non-technical competencies on flight simulators being of the same type as the aircrafts they fly.

CONCLUSION

Recurrent training in shorter cycles combined with structured onboard follow up training and mentoring raises competence and skills. We believe that regular recurrent simulator training combined with a proficiency assessment element needs to be introduced in the world wide shipping industry as a requirement to re-validate certificates of competence !

We are working towards a goal to get every Captain, every Chief Engineer and any nautical and engineering officer for an annual recurrent training and assessment week into our training facilities.

Questions ?


Thank you for your attention!
Happy to discuss your questions!