



**Norges  
Rederiforbund**  
Norwegian  
Shipowners'  
Association

# MARITIME INDUSTRY - A DRIVING FORCE IN COMPETENCE DEVELOPMENT

**Dag Silkoset**  
Norges Rederiforbund

HFC Bergen, April 2015



## ...ABOUT THE SPEAKER...

- Engineer
- Aviation industry
- Maritime industry
- Work experience with certification of aviation and maritime personnel, training centers, simulators and training programs
- Present position is Advisor at Norwegian Shipowner Association

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## Subject:

The relation between accidents and incidents and the development of competence standards within the maritime industry

- Accidents and incidents
- Training/competence development of officers
- Human Factors

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Drivers in safety regulation development :

- Commercial interests (unwanted loss of cargo, equipment)
- Society interests (loss of life, harm to the environment)

Titanic, **SOLAS**



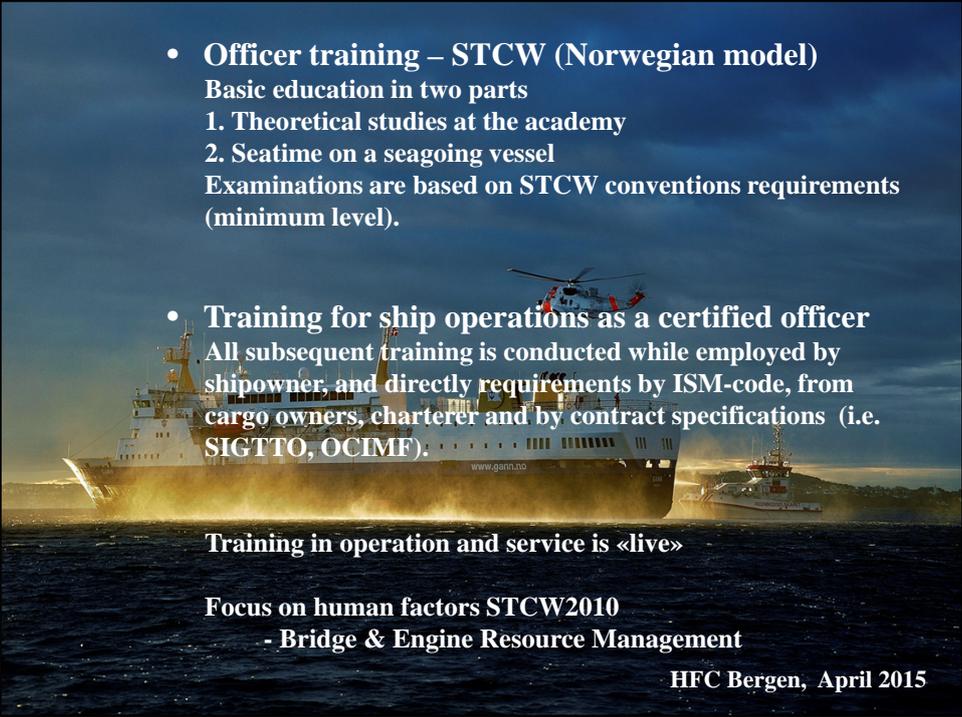


Herald of Free Enterprise, **ISM code**



Deepwater Horizon, **OGP 476**

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- **Officer training – STCW (Norwegian model)**  
Basic education in two parts
  1. Theoretical studies at the academy
  2. Seetime on a seagoing vessel
 Examinations are based on STCW conventions requirements (minimum level).
- **Training for ship operations as a certified officer**  
All subsequent training is conducted while employed by shipowner, and directly requirements by ISM-code, from cargo owners, charterer and by contract specifications (i.e. SIGTTO, OCIMF).

Training in operation and service is «live»

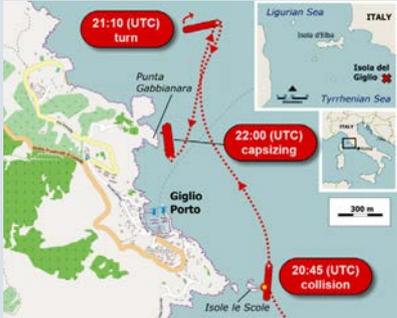
Focus on human factors STCW2010  
- Bridge & Engine Resource Management

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**Costa Concordia – 13. January 2012**  
**Collision with s underwater formation**

- 32 dead, 4252 passengers,
- Ship nav computer alarm was turned off
- Visual navigation because «I know this area well»
- «I have done this this many times before»
- The maneuver was cleared with the Costa Cruises management? Like in 2011.
- Communication challenges on the bridge (Indonesian chief mate)
- After 6 hours rescue operation most passengers are ashore

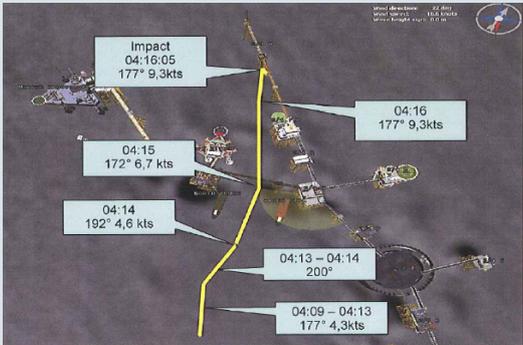




**Big Orange XVII – 13. October 2009**  
**Autopilot not deactivated**

- Type of work; well stimulating.
- Autopilot not deactivated before entering the field safety zone, thus planned vector changes could not be executed as planned by watch keeping officer.
- Collision with the unmanned water injection arrangement Ekofisk 2/4-W. Speed 9,3 knop.





Time	Heading	Speed
04:09 – 04:13	177°	4,3kts
04:13 – 04:14	200°	-
04:14	192°	4,6 kts
04:15	172°	6,7 kts
04:16:05	177°	9,3kts
04:16	177°	9,3kts
Impact	04:16:05	177° 9,3kts



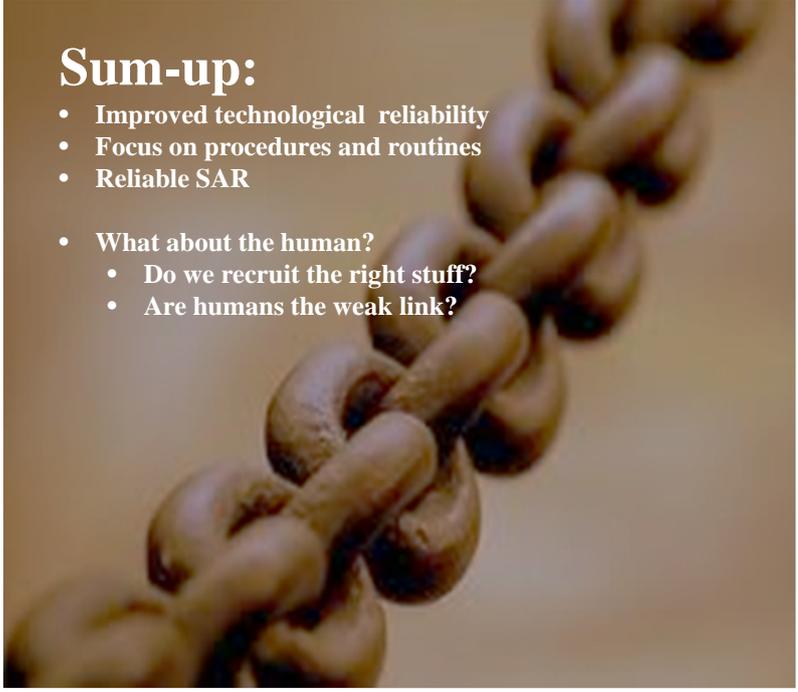
**Shipowner focus on competence development after the accident:**

**Company adapted training program MRM modules:**

- Human
- Team
- Communication
- Leader and leadership
- Assessment of individual and team performance

**For this shipowner: Required for all officers, regardless of ship type and operation**

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**Sum-up:**

- Improved technological reliability
- Focus on procedures and routines
- Reliable SAR
- What about the human?
  - Do we recruit the right stuff?
  - Are humans the weak link?

