

Focus on Human Factors

A shipowners perspective

Presentation to Innovasjonskonferansen e-nav.no

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Why is Human Factors needed in the Industry?





Don't forget to fly!



Eastern Air Lines Flight 401 was a Lockheed L-1011-1 Tristar jet that crashed into the Florida Everglades at 11:42 pm December 29, 1972, causing 101 fatalities.

The crash occurred while the entire flight crew was preoccupied with a burnt-out landing gear indicator light.

They failed to notice that the autopilot had inadvertently been disconnected and, as a result, the aircraft gradually lost altitude and crashed.

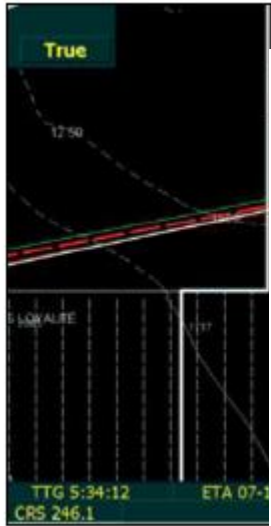
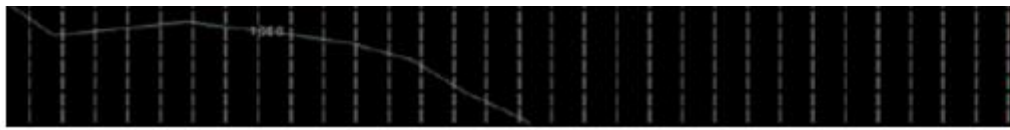


Figure 4: *Kea Trader* hard aground on *Recif Durand*

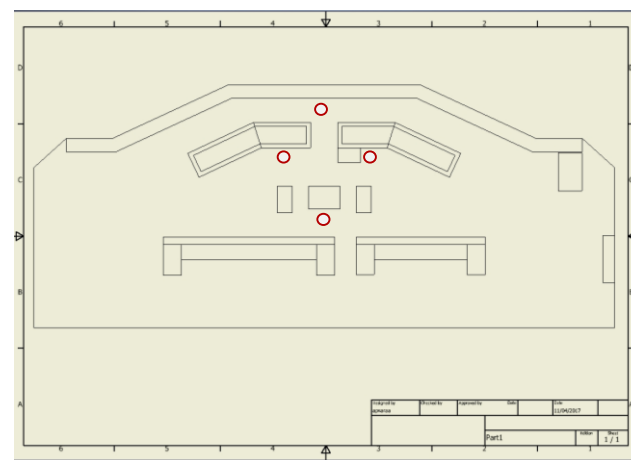
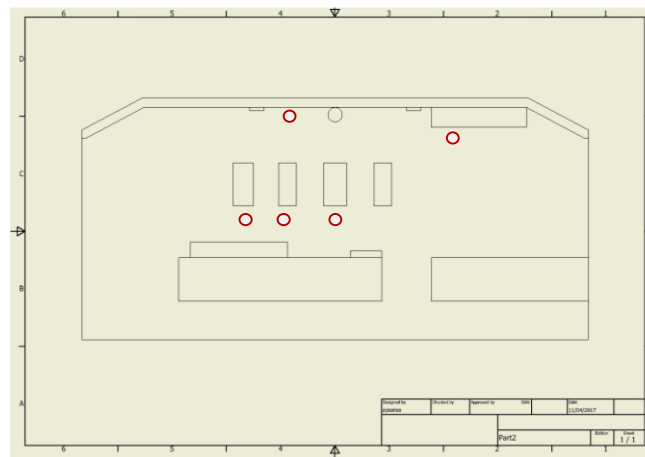


BRM & SOLAS v 15 and link analysis

“Requires owners, naval architects, manufacturers and administrations to ensure compliance with specified ergonomic principles”

“Requires owners and masters to ensure that bridge procedures are adopted which take ergonomic criteria into consideration”

- If the bridge layout is below par, and crew numbers at a minimum teamwork is very demanding and at times suboptimal.
- One size does not fit all.





Analysis of navigational incidents & near-misses

**Bridge
Resource
Management**
10/12

**'Forgot to
sail the ship'**
6/12

**Bridge
Discipline**
5/12

Assertiveness
6/12

**Competence
with Equipment**
4/12

Knowledge
4/12

Human Factors identified



We know where most incidents happen

... its rarely in the middle of the ocean...



Pilotage

6/12



Restricted Waters

6/12



Departure

5/12



Arrival

1/12

Systemic flaws

BWs Focus on Human Factors





Best on Water



ZERO HARM

– BW Safety Culture

Operational Resilience

- Ability to bounce back in unexpected situations -

Visible leadership

Leadership Development
Life Saving Rules

- Management commitment to Zero Harm
- Ship visits from senior management
- Welcome On Board
- Leadership & Competence building
- Sharing Best Practices/Safety Culture

Learning from incidents

Just Culture
Zero Harm Library

- Case studies / Reflective learning
- Root Cause Analysis (by TapRoot®)
- Training adapted to workplace
- High Severity – Low Frequency (HILO)
- Near Miss Reports
- Safety campaigns & initiatives

Zero Harm Behaviours

Zero Harm Appraisal
Zero Harm Profile Test

- Behavioural Competencies
- Resilience / Reflective learning
- Disciplinary Process
- Crew Assessment Strategy
- Risk Management
- Work / Rest hour Management

COLLABORATE

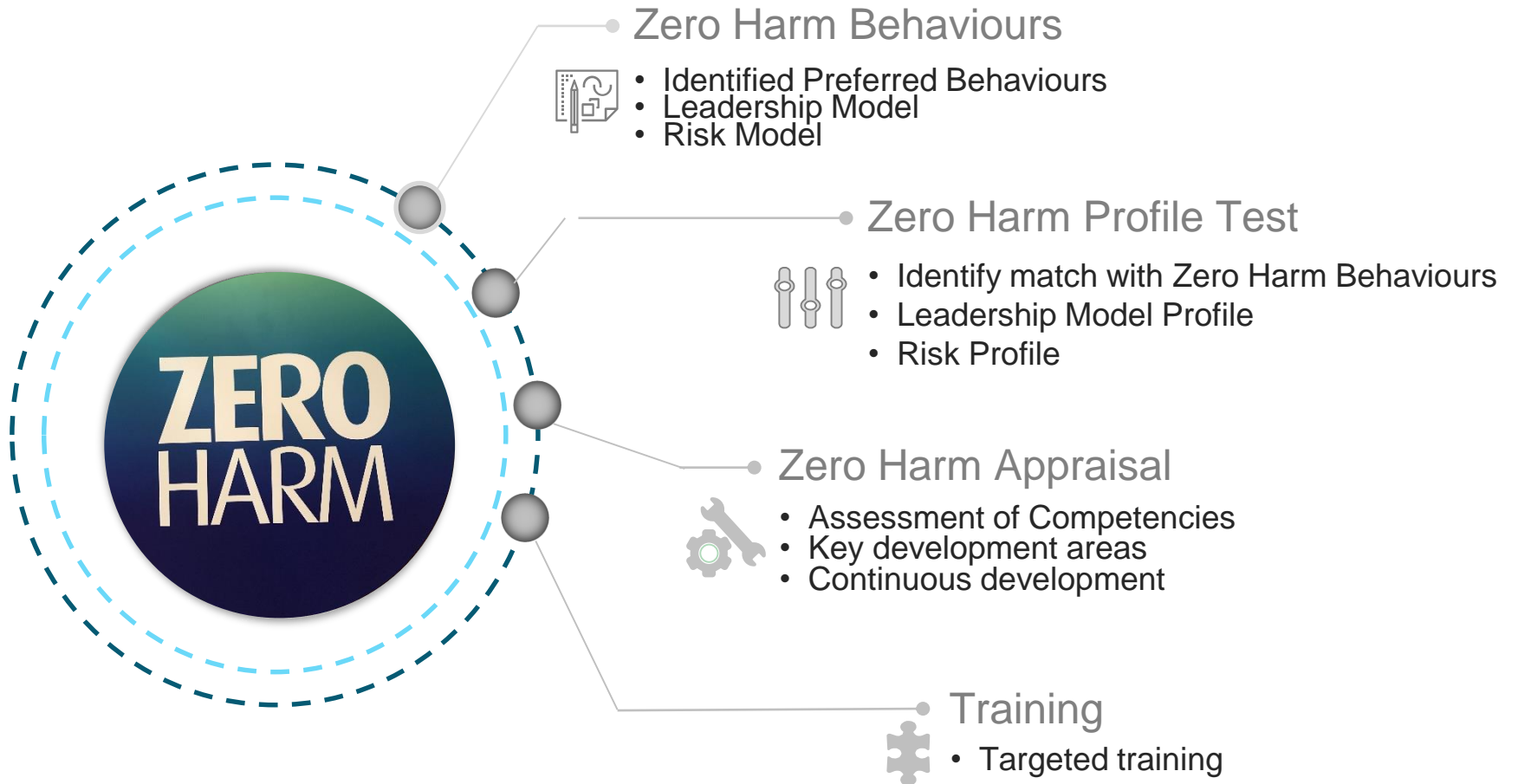
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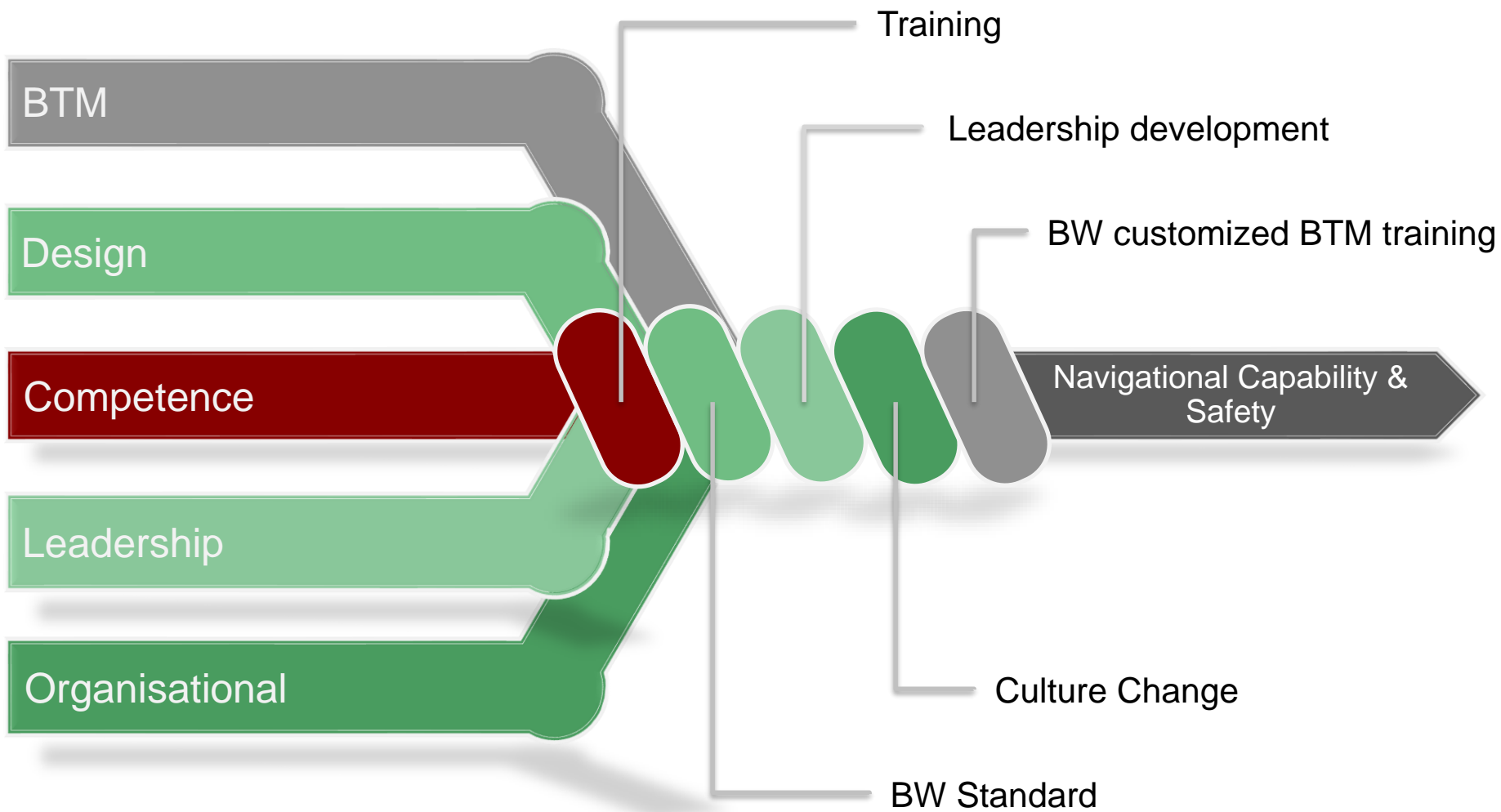
RELIABLE

ENDURING



Embedding in key crew processes







Three simple areas of attention



Crewing strategy

Go from “BOS” to building teams

Competency management

Ensure that the big muscle movements of training, responsibility and work in harmony.

Operational landscape

Understand the operational context

Many potential futures





We believe in Zero Harm



To People, Environment, Cargo and Property with a commitment to return safely to our families and friends



Best on Water