

IVR

International Association for the representation of the mutual interests of the inland shipping and the insurance and for keeping the register of inland vessels in Europe.

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Dutch claims statistics

(Source TVM / EOC / RSA)

Subject	Financial year		
	2017	2016	2015
Hull / bridge	44	45	39
Mast / bridge	4	7	6
Radar mast / bridge	13	6	8
Wheelhouse /bridge	12	15	10

Causes analyses showed:

- 70% of the collisions were cause by human failure.
Human failure to be subscribed as too diverse as to why no single lead cause could be filtered out.
 - 36% is related to “touching bottom”.
 - 37% is related to “ship to object”.
 - 27% is related to “ship to ship”.

UK collisions statistics

(source RSA)

Collision with lock		Collision with bridge	
year	number	year	number
2010	3x	2010	5x
2011	1x	2011	4x
2012	2x	2012	1x
2013	2x	2013	3x
2014	7x	2014	9x
2015	6x	2015	7x
2016	7x	2016	2x
2017	7x	2017	6x

Causes analyses showed frequent cause to be human factor, but no further detailed analyses was carried out.

DE bridge collisions statistics

(source Annex 1 to CESNI/PT (17) 83 = CESNI (17) 32)

Collision with bridge	
year	number
2011	6x
2012	11x
2013	16x
2014	12x
2015	16x
2016	21x
2017	>20x

Causes analyses showed frequently to be human factor.

It also is concluded that 36 happened at daytime and 33 at night time, with in the summer a “reduction” of 50% compared to the other seasons. In 48% of the cases the wheelhouse wasn't lowered or not lowered enough.

The question remains... why?

Effects of bridge alarms

(source The Shipowners' Club 2019 Annex to CESNI/PT (19) 65

As vessels and equipment on board become increasingly smarter, seafarers are required to learn additional skills for the ongoing operation and maintenance of this technology. The installation of additional and new technology on board should always be done with the intention of enhancing the seafarer's ability to safely and efficiently navigate and operate the vessel. However, with more equipment comes the potential for more alarms.

Chart 3 - Frequent false alarms are a problem.

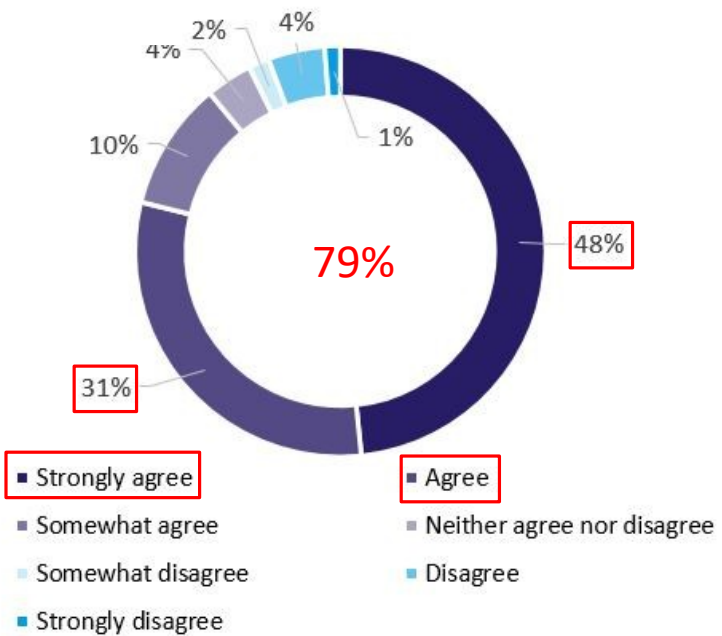
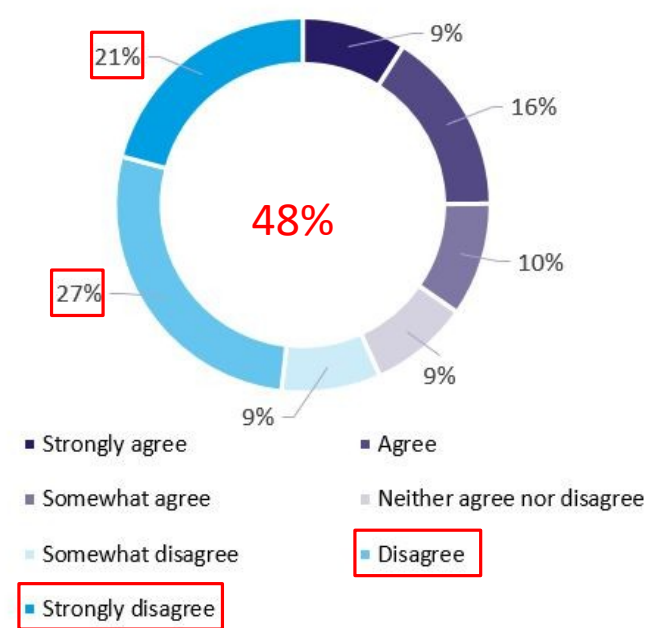


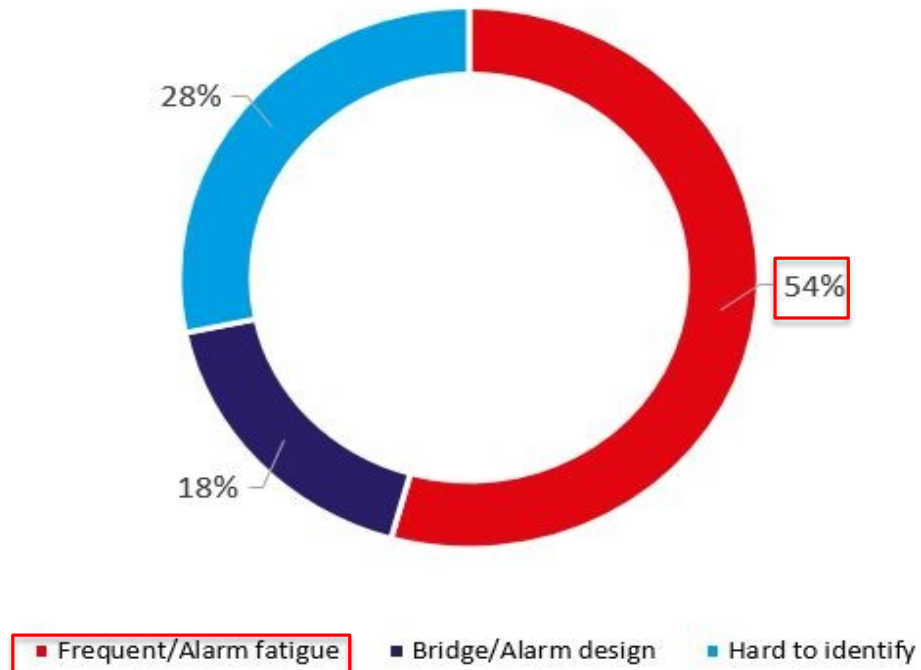
Chart 4 - Alarm sounds are graded, such that indicating more urgent situations sound more urgent than other alarms.



Effects of bridge alarms

(source The Shipowners' Club 2019 Annex to CESNI/PT (19) 65

Chart 8 - Free Text Comments by Area of Matter



Sophisticated safety systems

Dutch newspaper: Telegraaf article of 7th August 2019

Tesla rijdt veel meer schade dan diesel- of benzineauto

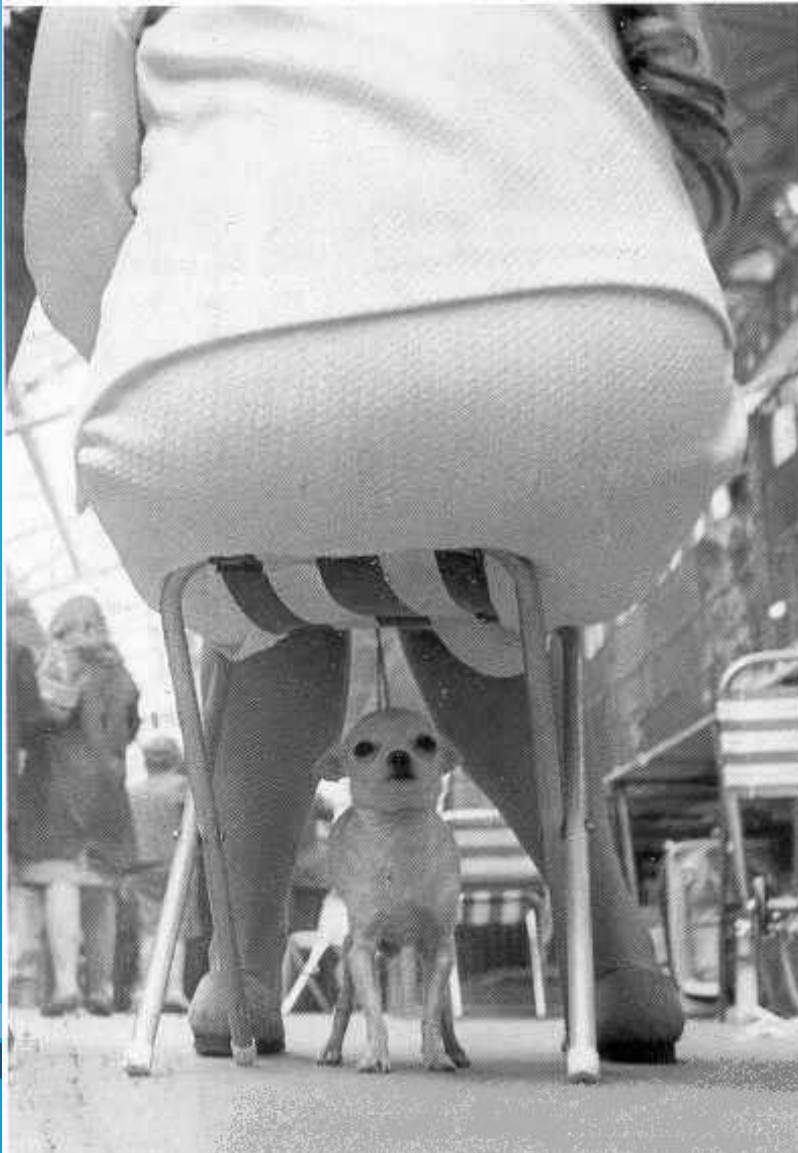
(Tesla suffers more damage than diesel- or petrol cars.)

Owners quote:

"You fully rely on the resources that you have available and if you suddenly have to intervene yourself, that may be just too late "

All available equipment gives an increasing "false" sense of safety

Risk awareness



Where some feel safe,
.....
others see dangers
and risks

Concluding

- It's not only “wheelhouse and bridges” (NL statistics 44 are hull / bridge and 12 is wheelhouse /bridge)
- Division “locks / bridges collisions” is 50% (UK statistics)
- Strong increase in collisions of all sorts the last few years, with no evident changes in locks / bridge height / wheelhouses
- Frequent false alarms and limited alarms priority “alarm fatigue”
- Lots of information to be dealt with by skipper in the wheelhouse / navigation systems / machinery information / ship to ship and ship to shore communication and information (AIS / ECDIS)
- Preparation for point of arrival (communication with charterers)

But all is for approx. 75% caused by: **HUMAN FACTOR**

Questions

- What triggers the HUMAN FACTOR;
 - When is it all too much
 - Is there indeed a “false sense of safety”?
 - What can a person (person’s mind) handle ???
 - How to find the most prominent cause(s)
 - What are the distractions if any
 - What creates the lack of concentration
 - What is influencing our behaviour
- Why did problems start around 2014
 - What triggered the increase????

Actions

- Let's analyse the root causes of the “HUMAN FACTOR”
- Based on the findings, discuss and implement:
 - Implement knowledge about Human Factor in technical applications
 - Adaptation of regulations (if required)
 - Implement crew- and waterways authorities awareness communication / training
 - Adjust training programs (if required)

Thanks for your attention