

FLARE Risk Model

Further development of flooding risk model

Rainer Hamann

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The project has received funding from the European's Horizon 2020 research and innovation programme (Contract No.: 814753)

Background and Motivation

- SOLAS 2020 collision damage stability requirements were specified by IMO FSA, risk management (risk assessment and risk mitigation)
- The work was performed in EU funded projects GOALDS and EMSA3
- The risk model is the backbone of a risk analysis
- After GOALDS and EMSA3 the discussion on the risk model structure continued which indicated the need for revisiting it
- FLARE considered a task for a general review of the risk model

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Objectives

- Review of structure of existing risk models (GOALDS, EMSA III)
- Identify nodes to be considered in FLARE
- Focus on flooding risk related to sinking/capsizing: collision, contact and grounding accidents/incidents
- Relevant topics to be considered:
  - Risk model should characterise "real" risk and not only historical data
  - Risk is measured in terms of fatalities (<- focus), environmental pollution and loss of property
  - Casualty reports help to identify main factors triggering the consequences (~event sequence) but do not cover whole risk
  - Further investigation necessary to consider influences on risk that do not occur so far

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Further development of Flooding Risk Model

- Workshops
  - Discuss existing risk models and ideas for further development
  - Identify/collect influences on risk to person on board of passenger ships due to flooding accidents
- Outcomes
  - The structure of CN and GR model should be more consistent
  - The model should allow to use enhanced simulation tools for calculating the risk (as considered in FLARE)
  - The focus remains on risk to people on board

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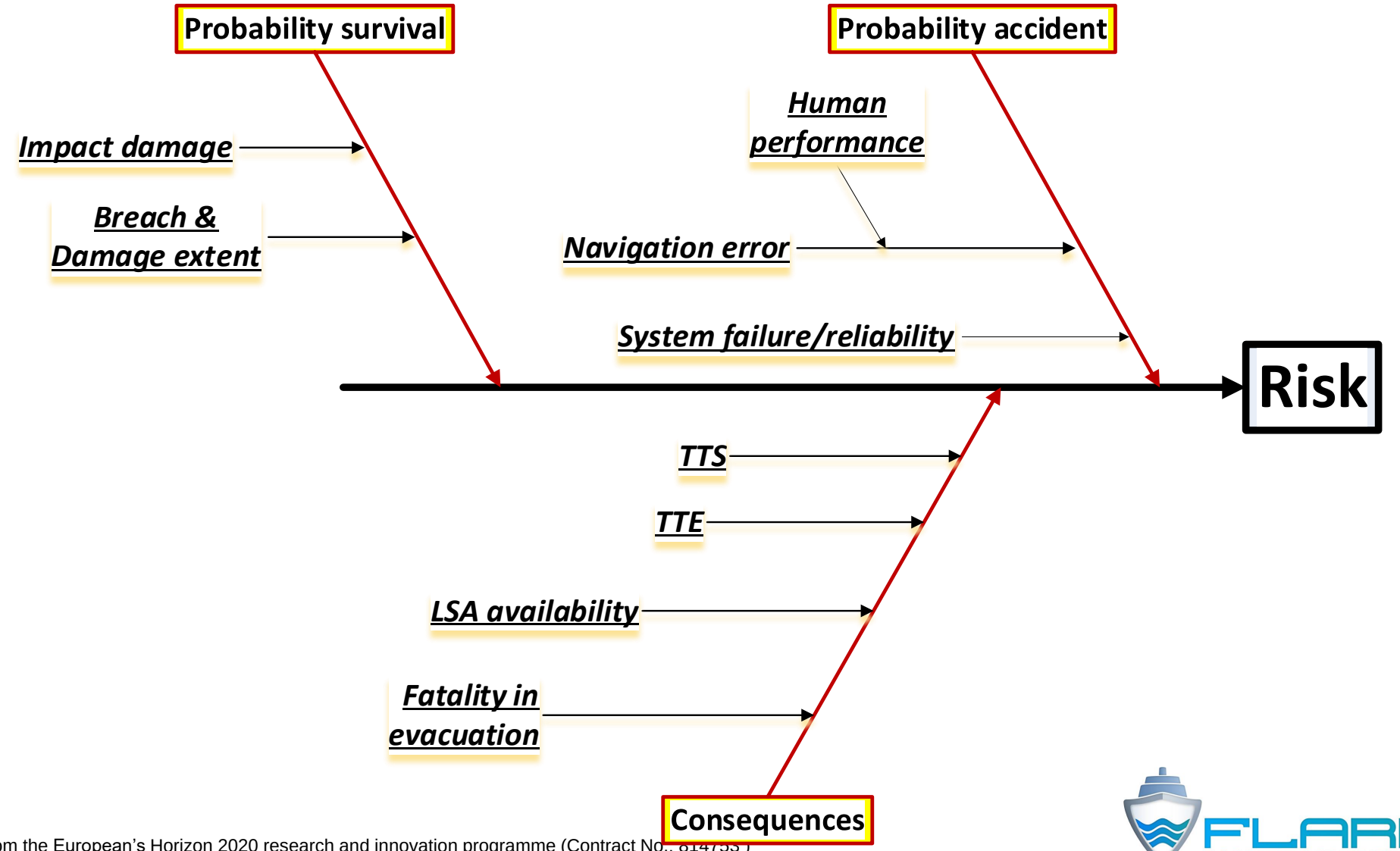
Influences on flooding risk



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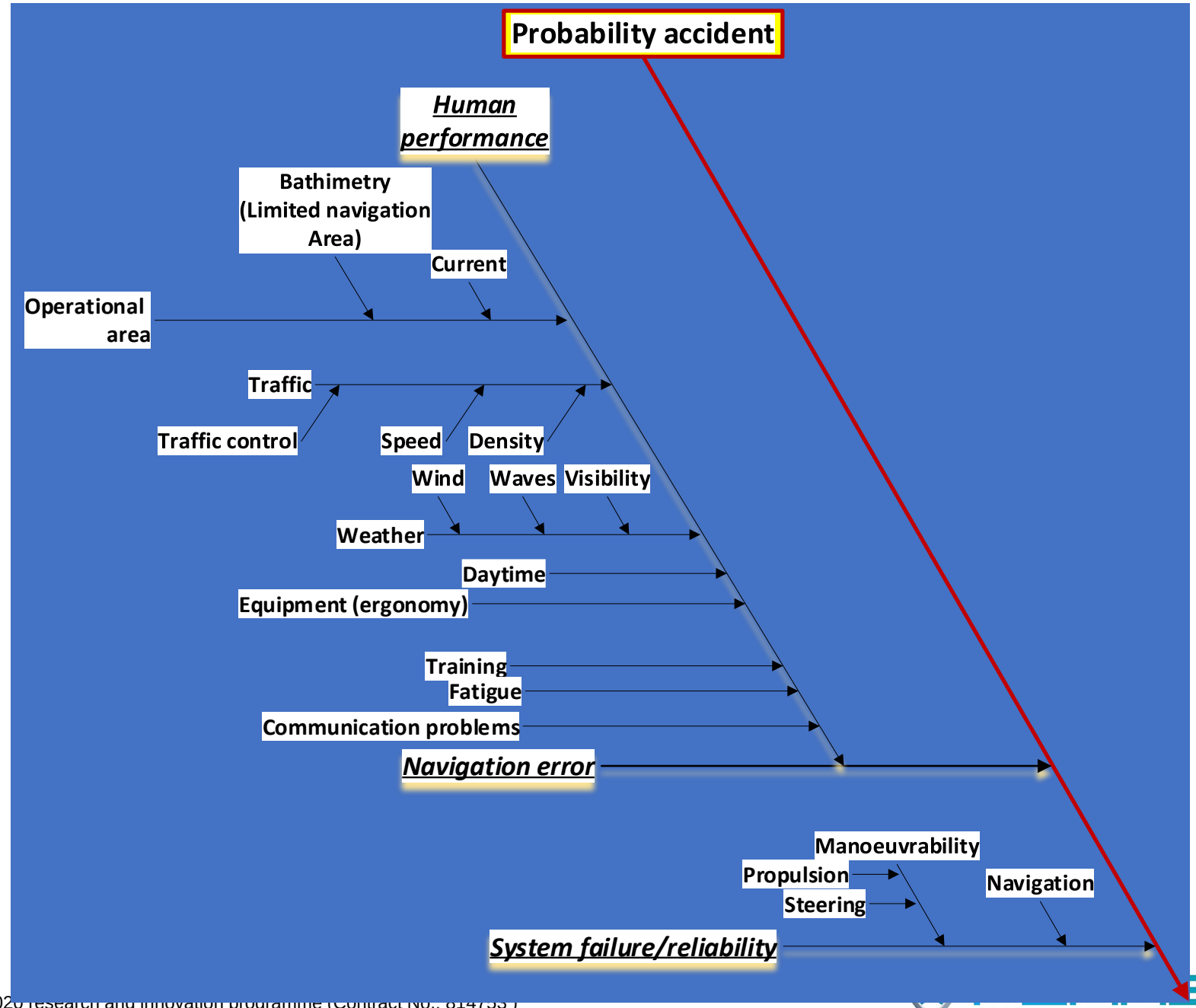
Influences on initial event



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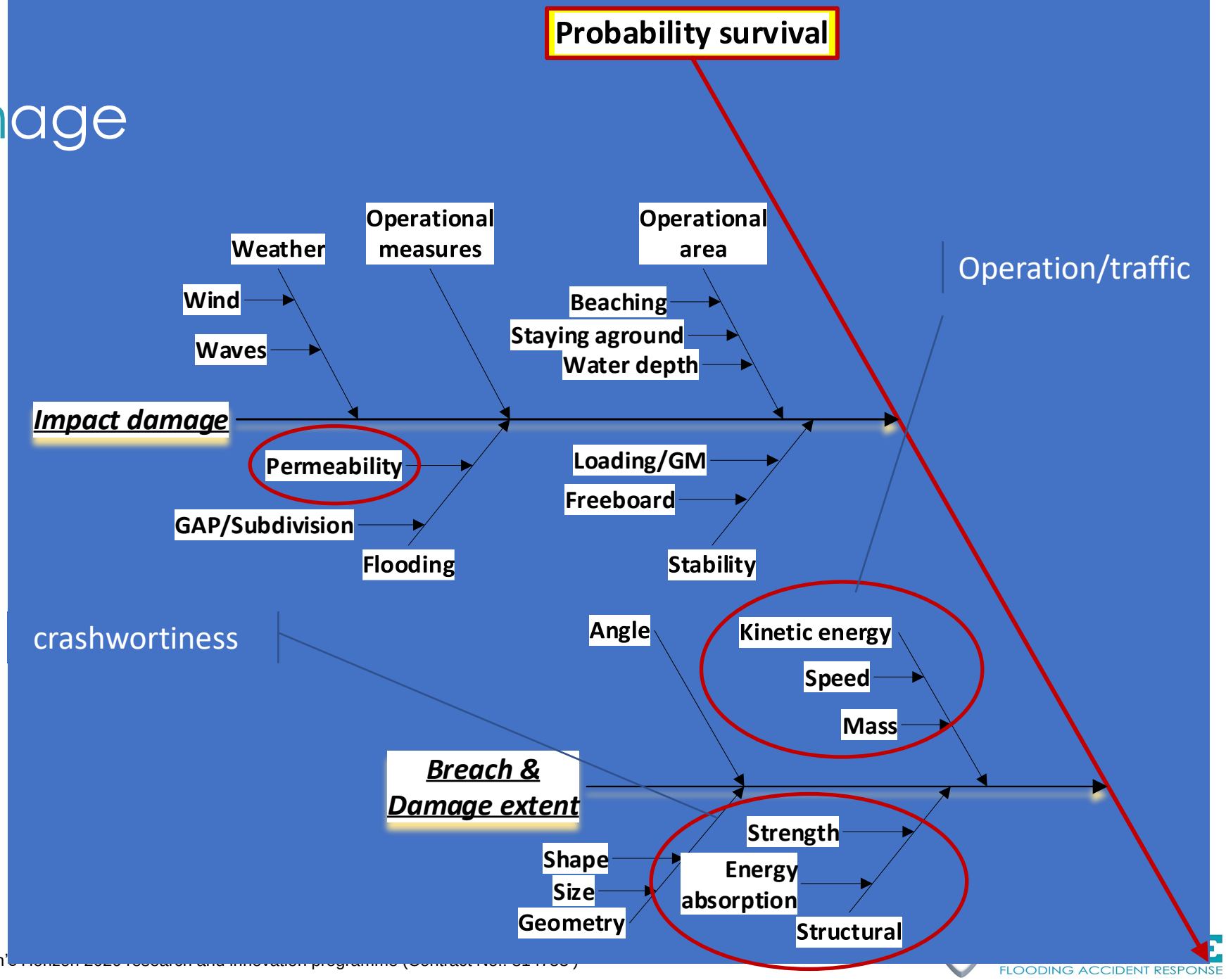
Damage & damage impact



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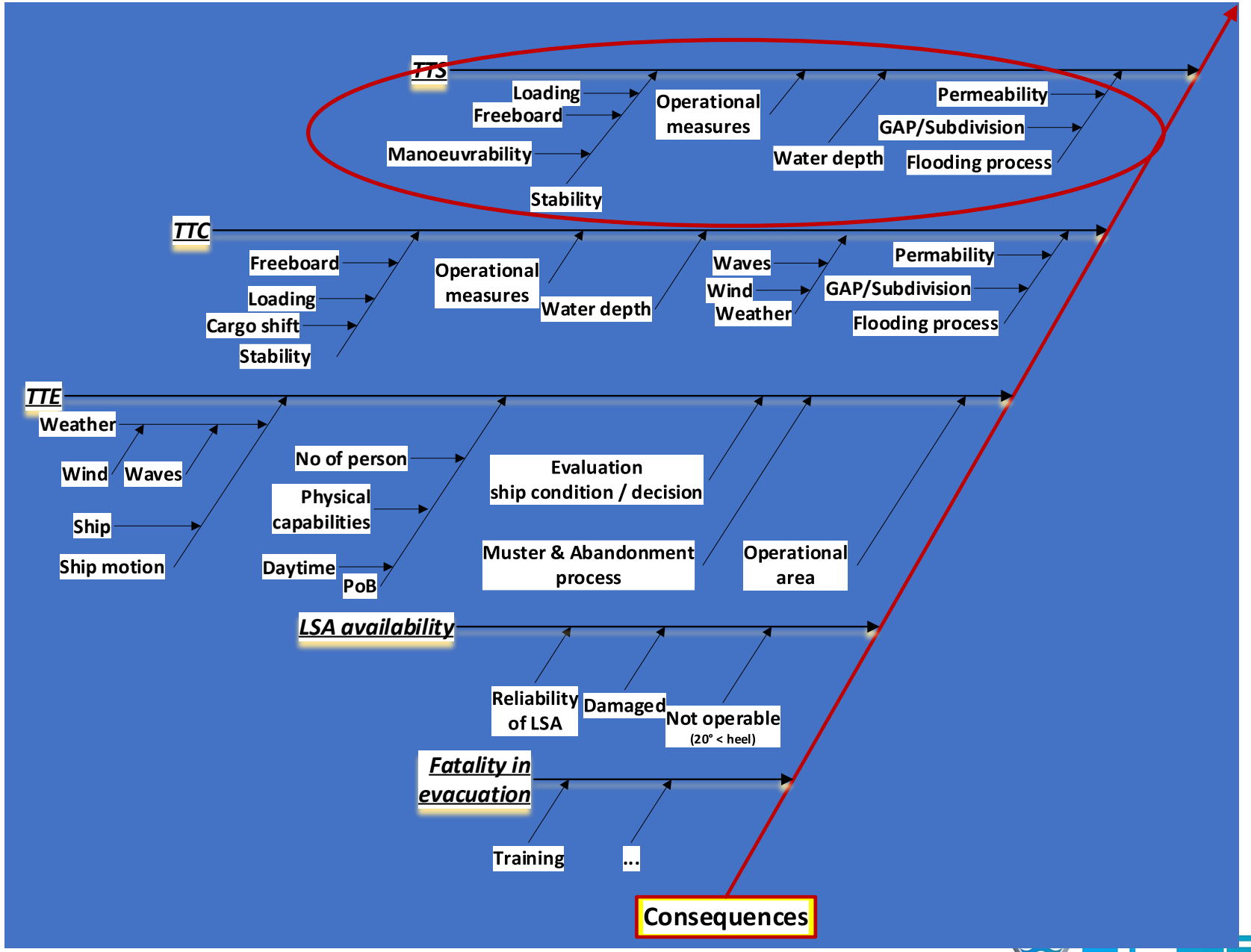
Consequences



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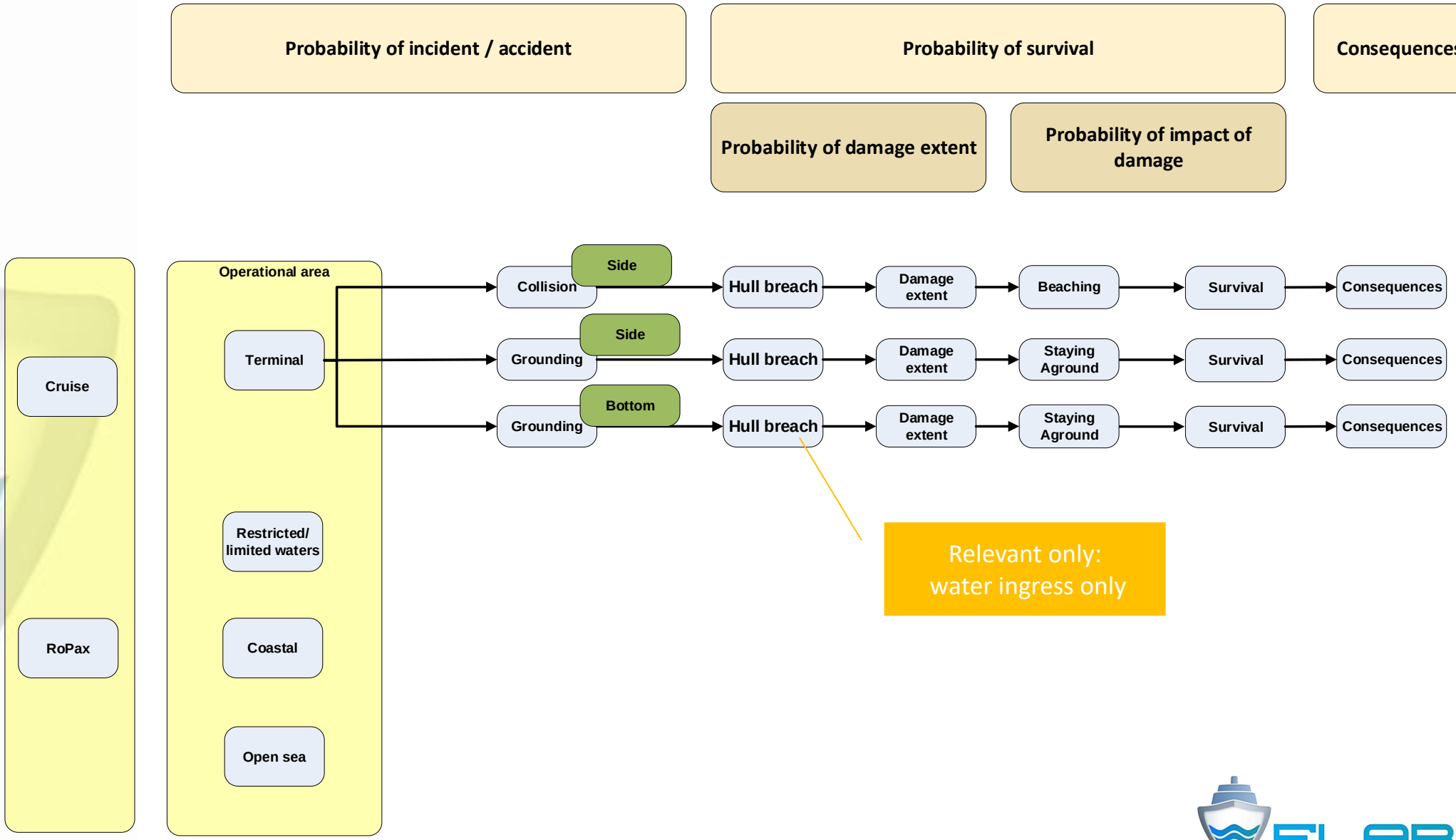
Basic structure of flooding risk model



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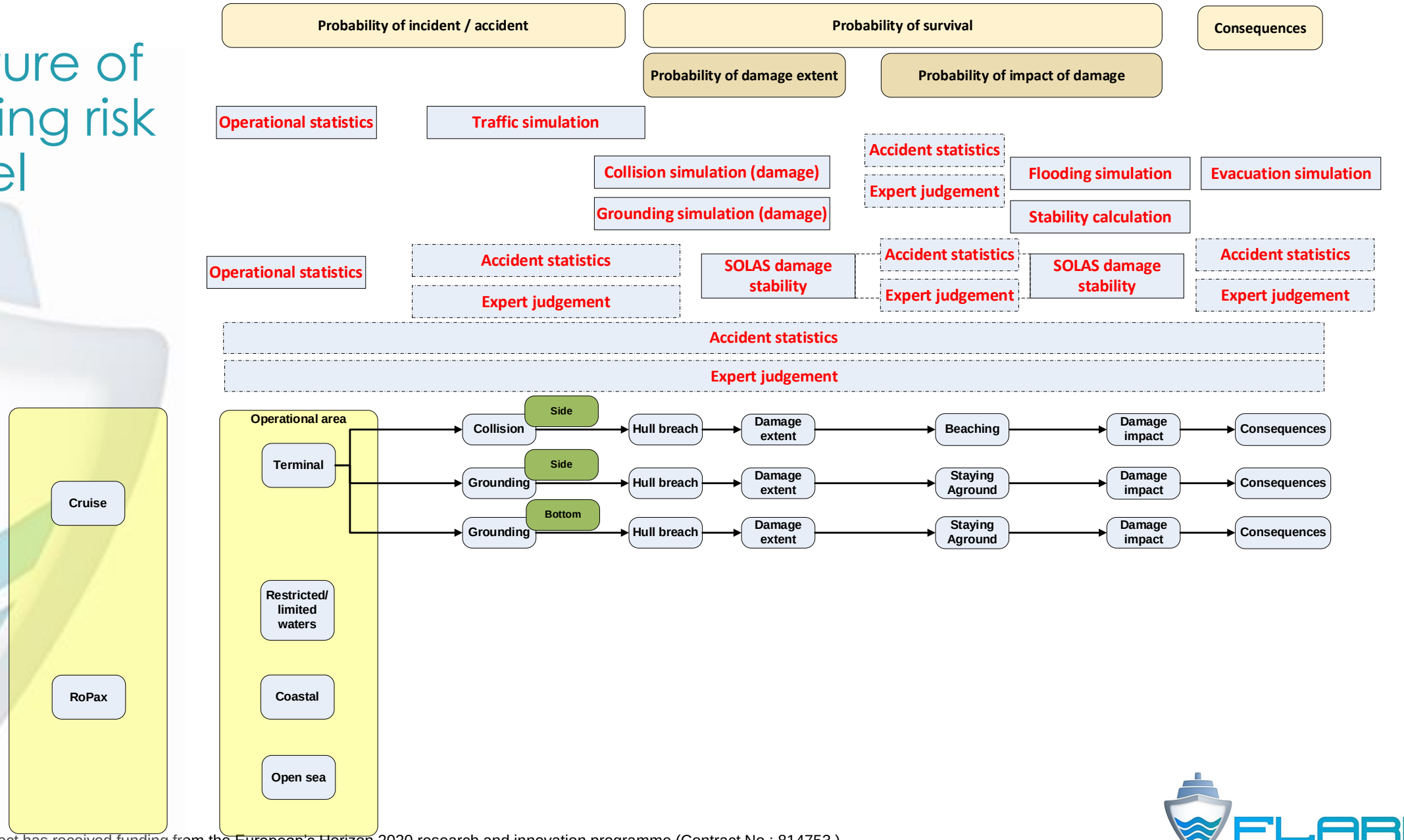
Basic structure of flooding risk model



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Summary

- Revised structure of risk model for flooding accidents agreed
- Major influences on risk for person on board of passenger ships (cruise & RoPax) summarised
  - Should be considered in FLARE work packages
- Specified which WPs provide input to the different elements (of decision tree) using elaborated tools
- Agreed to consider more detailed consequence model
- Revised risk model can be quantified by both FLARE results and approach by GOALDS/EMSA

Revised risk model specifies the basic structure of FLARE work!

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Thank you for your attention

Rainer.Hamann@DNV.COM

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