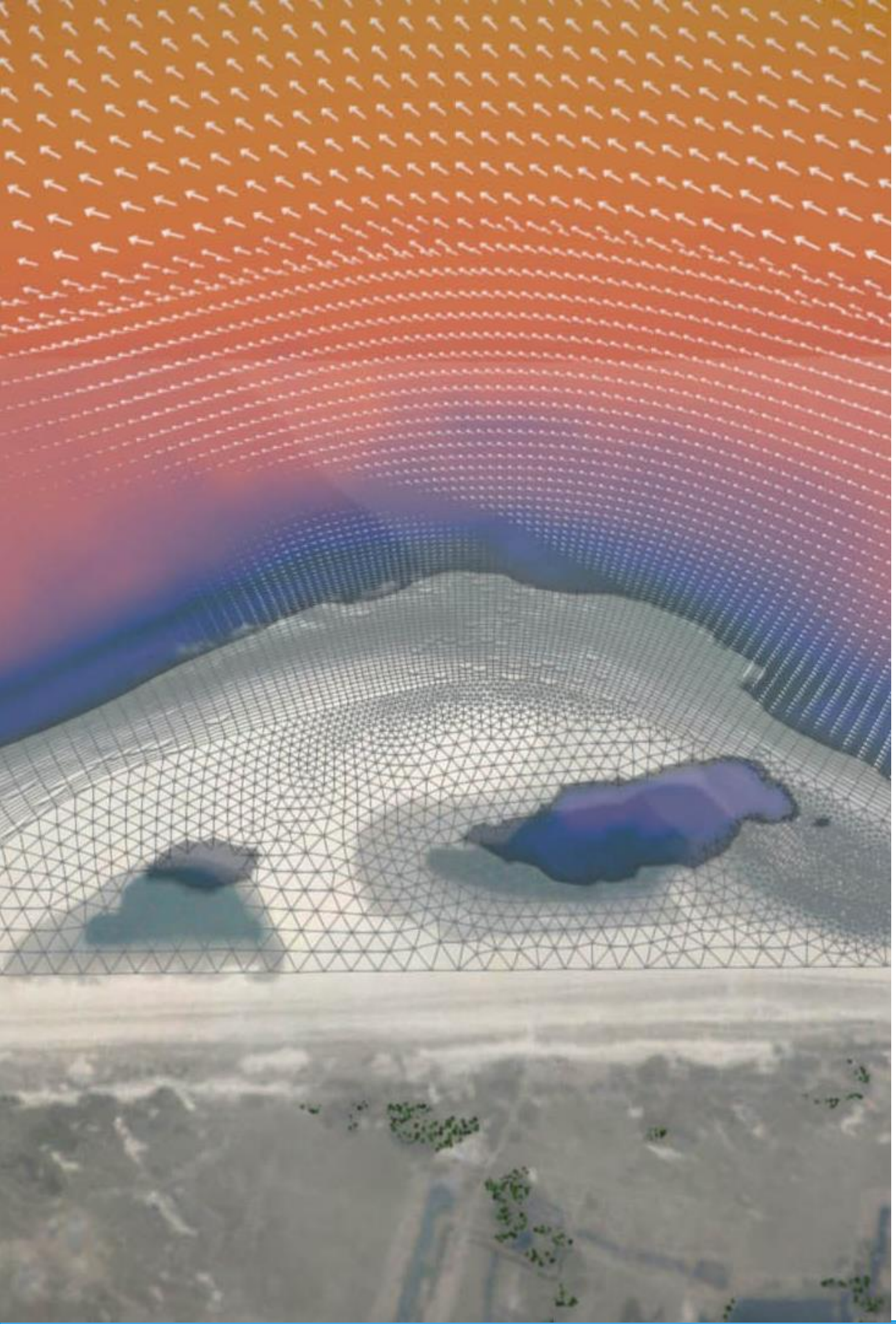


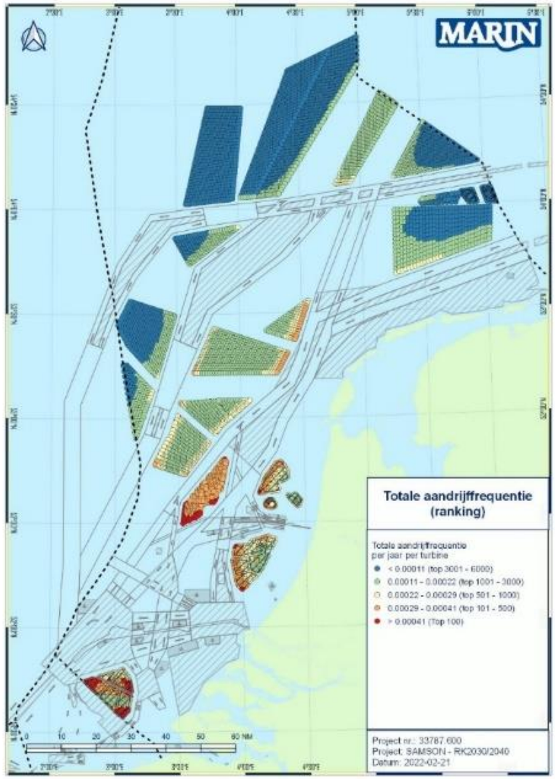
SAMSON and traffic analysis in DigiTwin Noordzee

Y. KOLDENHOF - MARIN

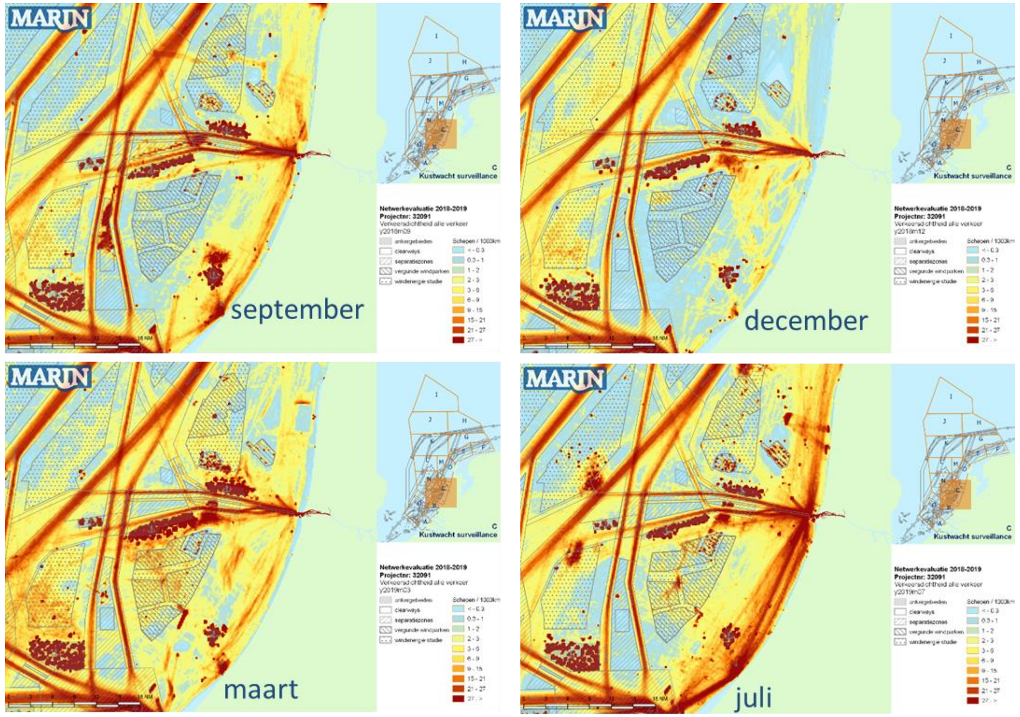
8th November 2022

Inhoud

- SAMSON als onderdeel van DigiTwin Noordzee



- Netwerkanalyse Noordzee 2021-2025 → resultaten in DigiTwin Noordzee



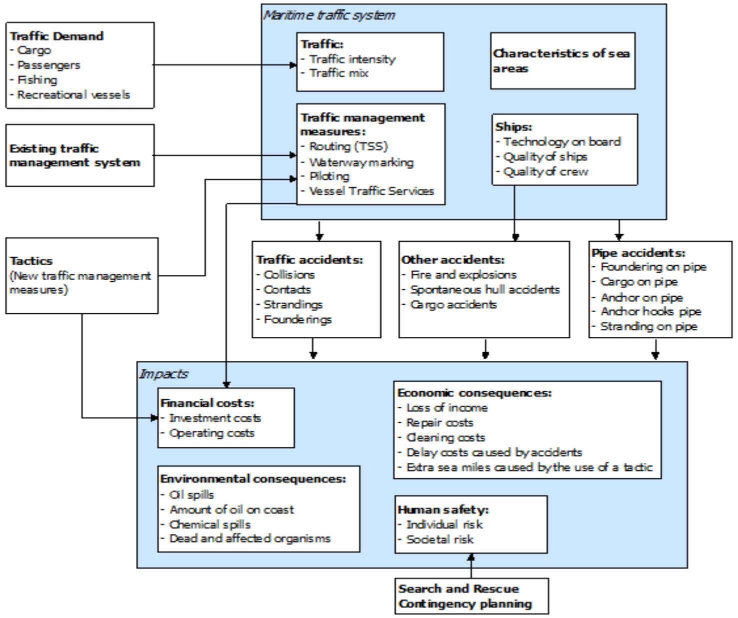
SAMSON: Safety Assessment Model for Shipping and Offshore on the North Sea

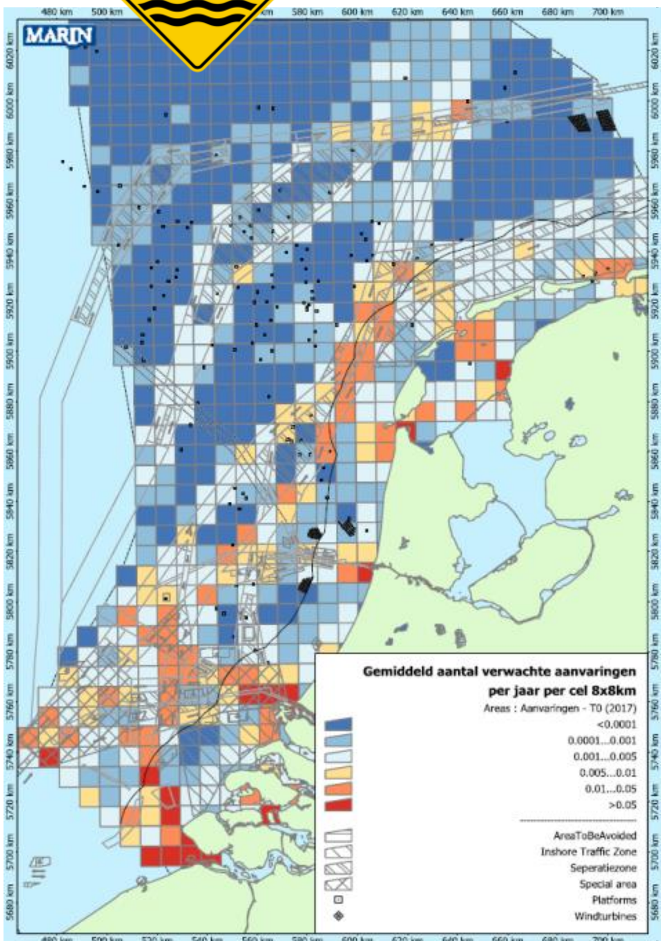
Purpose: Quantify the safety/risk of shipping given:

- The traffic flows
- The layout of the fairway/sailing area
- Traffic measures

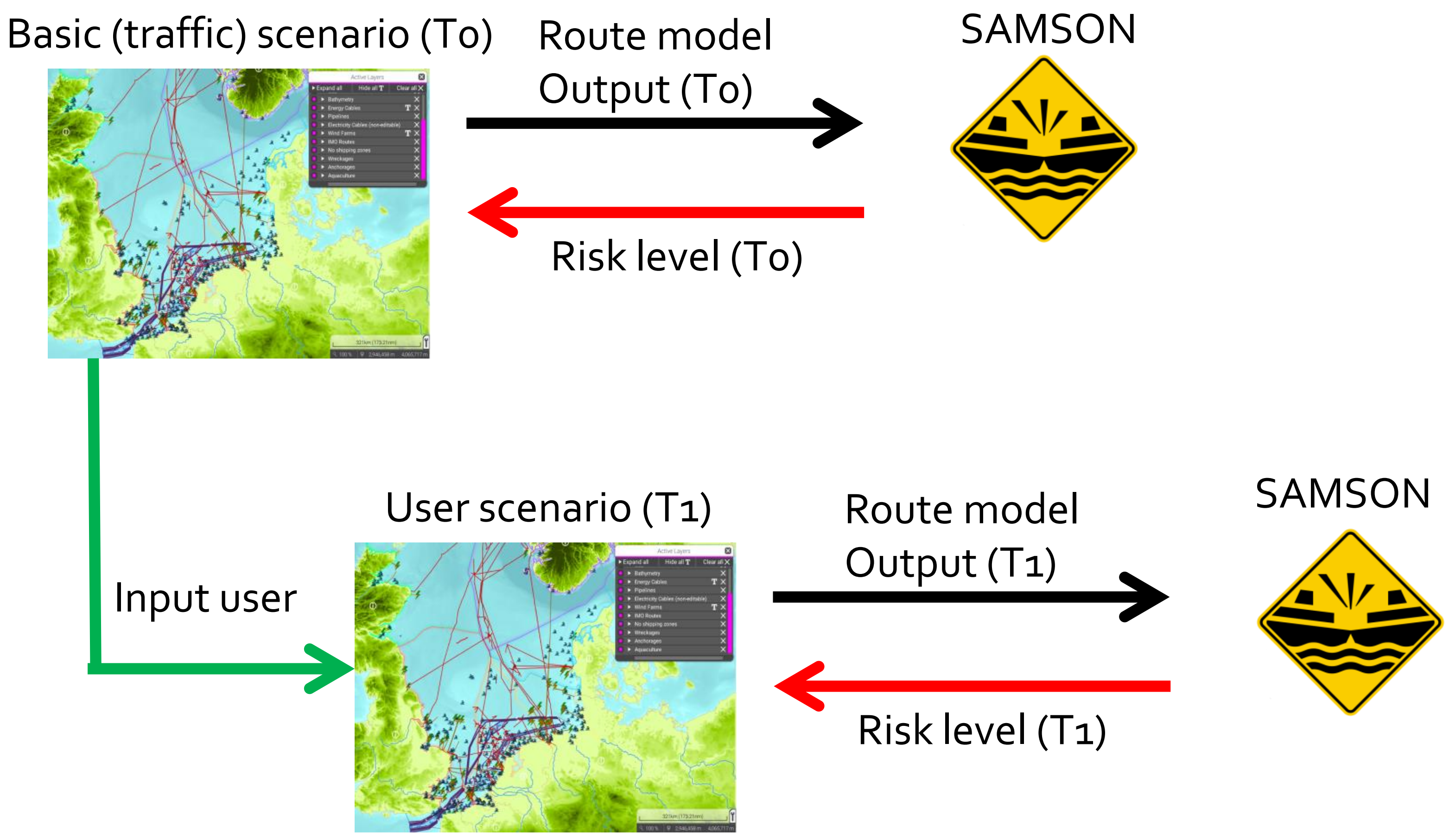
Accident type - Risks:

- Ship-ship collision
- Contact fixed objects
- Foundering
- Fire/explosion
- Persons at risks
- Oil-spill





Connection DigiTwin Noordzee and SAMSON



Goal: Add shipping risk assessment to the DigiTwin North Sea

Result:
Effect of users scenario on the safety of shipping

Challenges till now

SAMSON is a Windows implementation

- Combination of Fortran program and Python-wrapper)
- MARIN cloud (Amazon AWS) is linux-based
- Resulting in the fact that Samson has to be run via Wine
- Samson does not run using only one working-folder → poses challenges in setting paths

Calculation Time

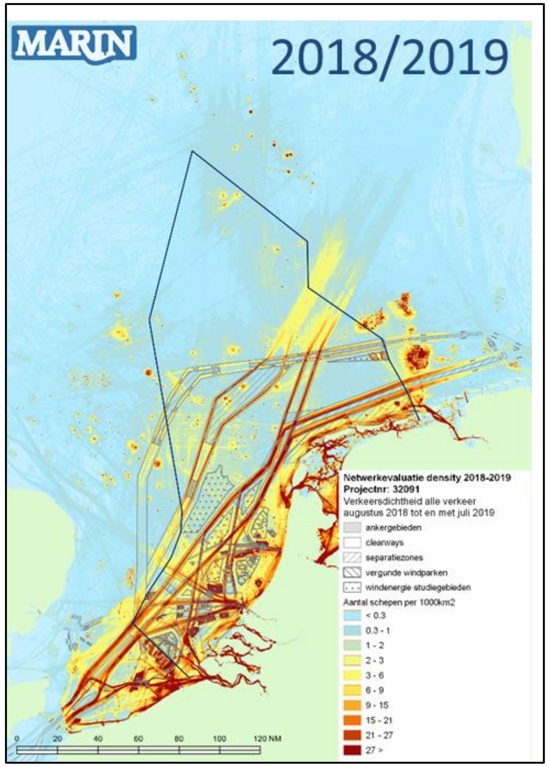
- Calculation time still to long for a good implementation in an interactive (game) setting. (minutes)

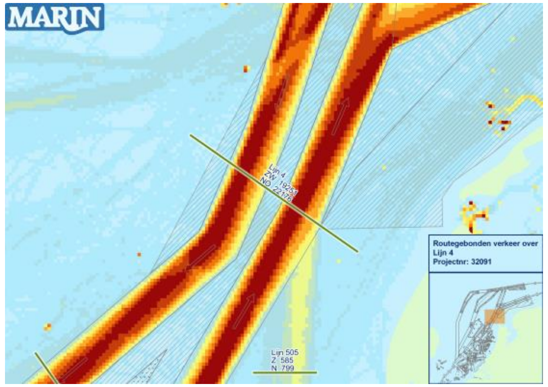
Capacity (persons)

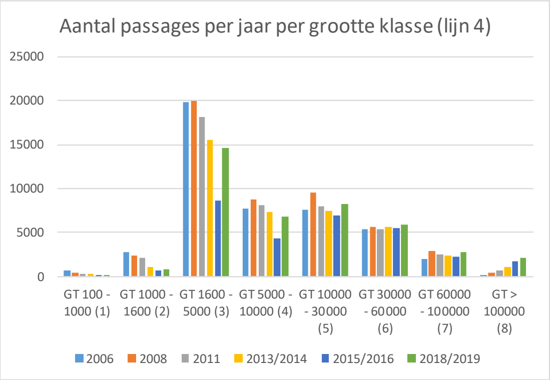
- Not MARIN's core business to build these type of applications, so partly learning on the job…

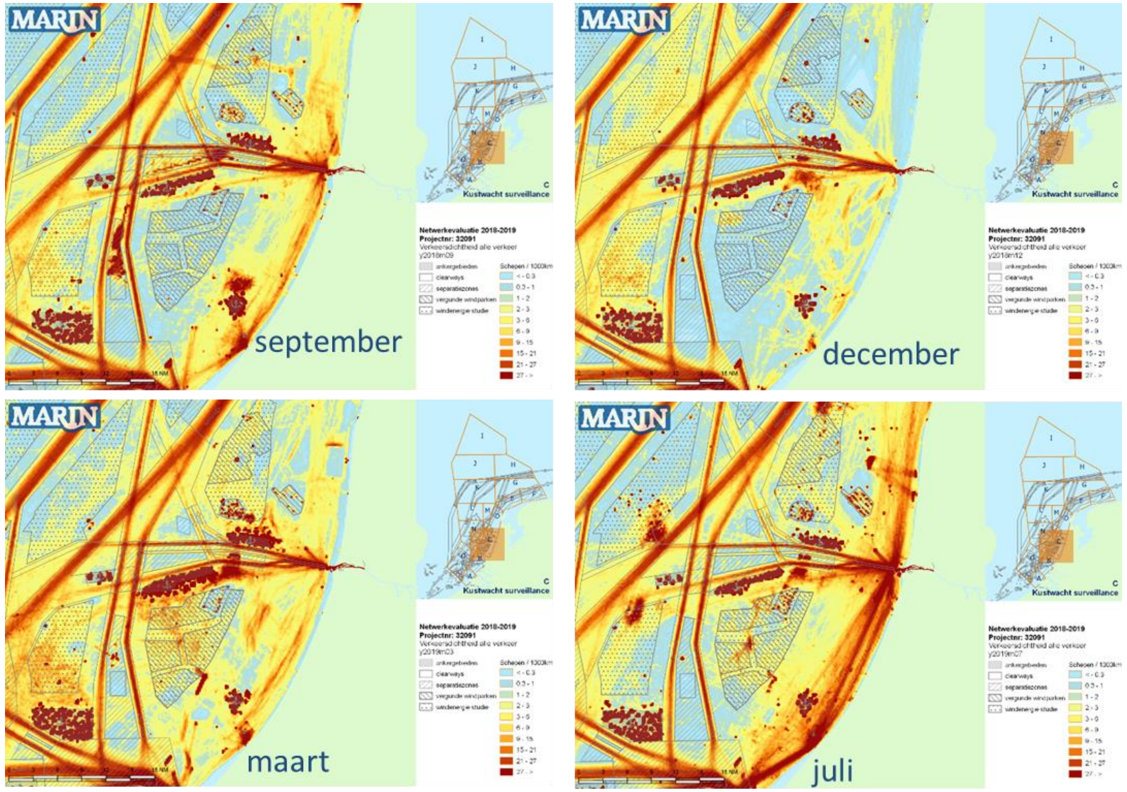
Netwerkanalyse Noordzee

- Project gestart 2022, in het kader van MOSWOZ
- Doel: analyseren van het scheepvaart verkeer op de Noordzee 2021 – 2025
- Wens vanuit gebruikersgroep DigiTwin Noordzee om vergelijkbare analyses toe te voegen









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