

Ready for Real

Real experiences in a virtual world



# Full-Mission Simulators for High-Speed SAR and Military Boat Operations



# Key highlights Cruden B.V.

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1

## Started in 2002

- **20+ years** of world's leading simulator development in automotive
- Since **2015** active in **Fast Craft training Simulation**

2

## Strong and talented team to do the job

- **35 FTE** highly educated, loyal to Cruden,
- Willing to go the extra mile

3

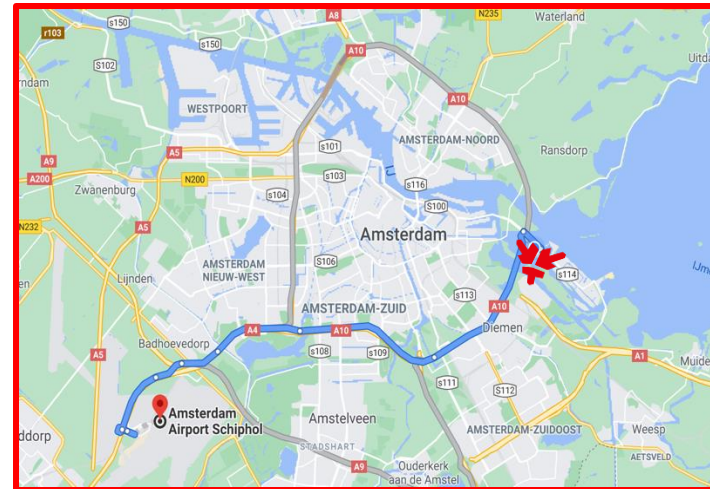
## Based in Amsterdam, The Netherlands

- **20 minutes from Schiphol** airport
- Easy to reach by public transport and car
- On the **waterfront**

4

## Culture that promotes R&D

- Open and dynamic work culture that stimulates R&D and creativity
- 80% of the employees is actively engaged in R&D





MEET US AT:

# *HighSpeedBoat OperationsForum*

JUNE 3-5 2025  
GOTHENBURG



## Customer categories

1

**Military**

2

**Search and Rescue**

3

**Government and other organizations**

4

**Manufacturers and architects**



# References





Porsche

Audi





# Artemis Technologies





## 2015: FSSS CODEMO





## 2018: MST FRISC



## 2022: Royal Australian Navy



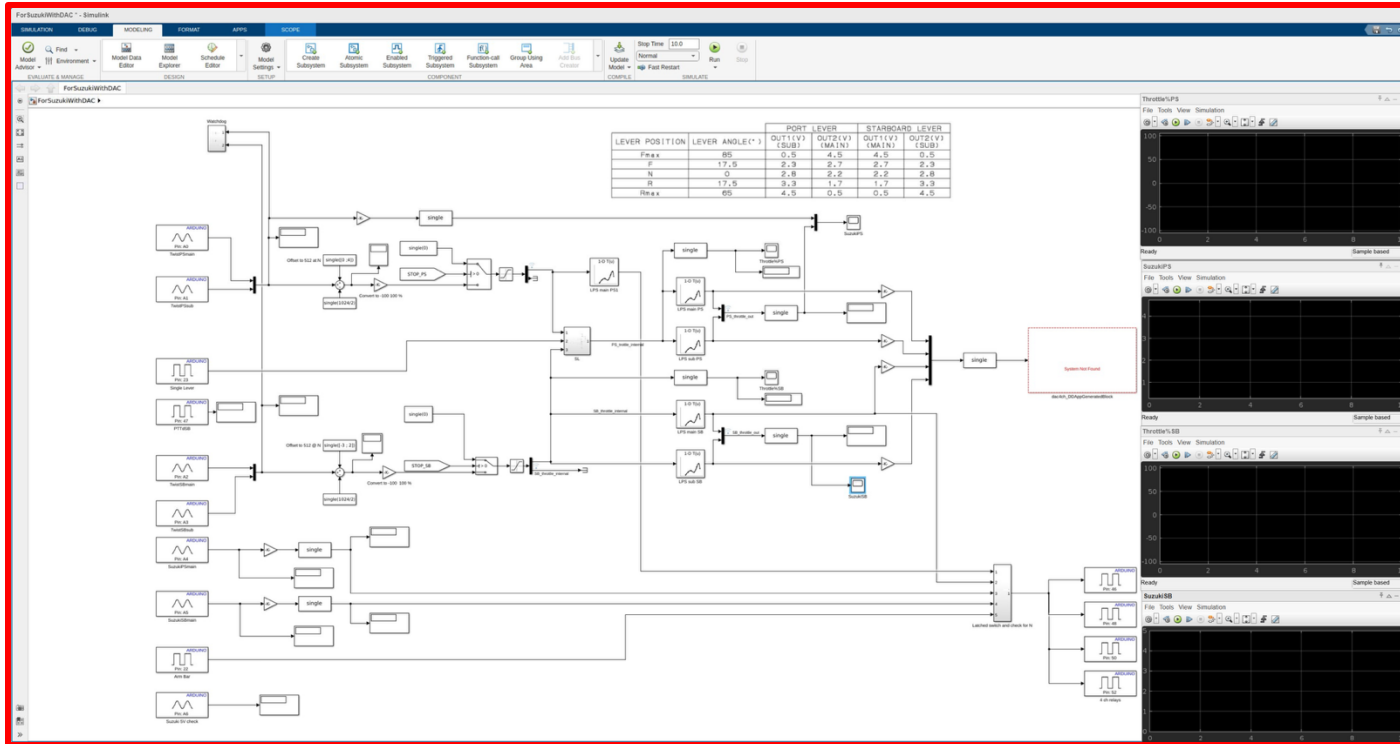


## 2024: SSRS



***SJÖRÄDDNING  
SÄLLSKAPET***

# 2025: Ullman Dynamics



**Ullman**  
PROTECTING PEOPLE

**SEARIB'S**  
RIGID INFLATABLE BOATS

**DOMETIC**

**SUZUKI** Suzuki Marin



# A good simulator makes on the water training more effective

1

## Familiarization

- Instruments and controls
- Maneuvering, Seakeeping, Rules of the road
- Fault and emergency handling



2

## On craft training (initial and ongoing)

- Launch and recovery: slipway, davit crane
- Pacing, Fendering, Interception, Multi craft formations
- High speed navigation, MOB, Tactics



3

## Mission training: Crew Resource Management

- On board, with multiple units, joined
- Standard procedures and terminology, effectiveness
- Data driven AAR to identify wrong/right/ better/develop



4

## Savings

- Health and Safety
- Cost: Material, Human resources, Fuel, Ammunition
- Environment

*“Cruden has a well-developed solution that is not comparable to anything I have seen in the industry”* subject-matter expert at RAN

5

## Train as you operate, emotionally engaged

- Instruments and controls are OEM. Operate as on board
- Realistic Radar, VHF and Weapon simulation
- Type specific craft response, optically correct view



# Standard configurations



1

Holyhead ORC

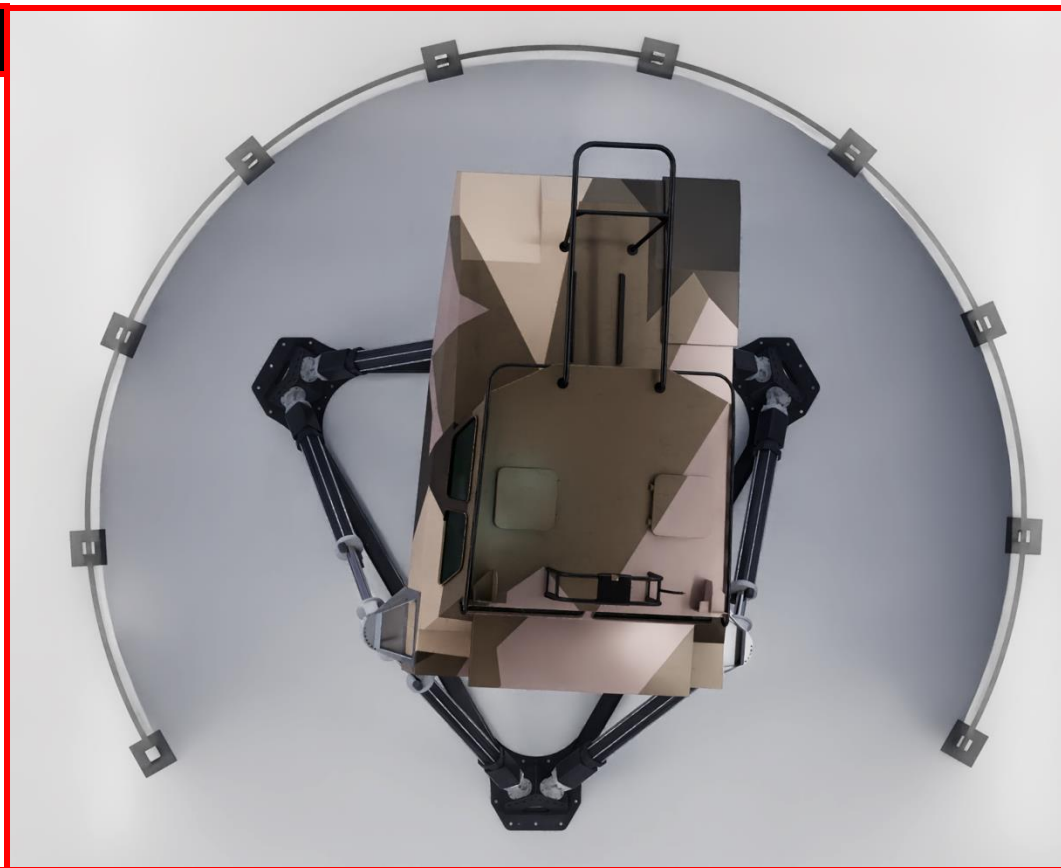


2

FRISC / BOOMERANGER

3

SAAB / DOCKSTA CB90





# Bespoke configurations

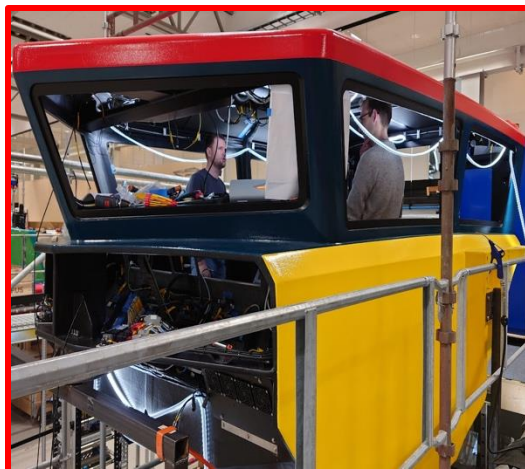


1

Kullman / Swedeship K09

3

Habbeké



2

Kullman / Swedeship K12

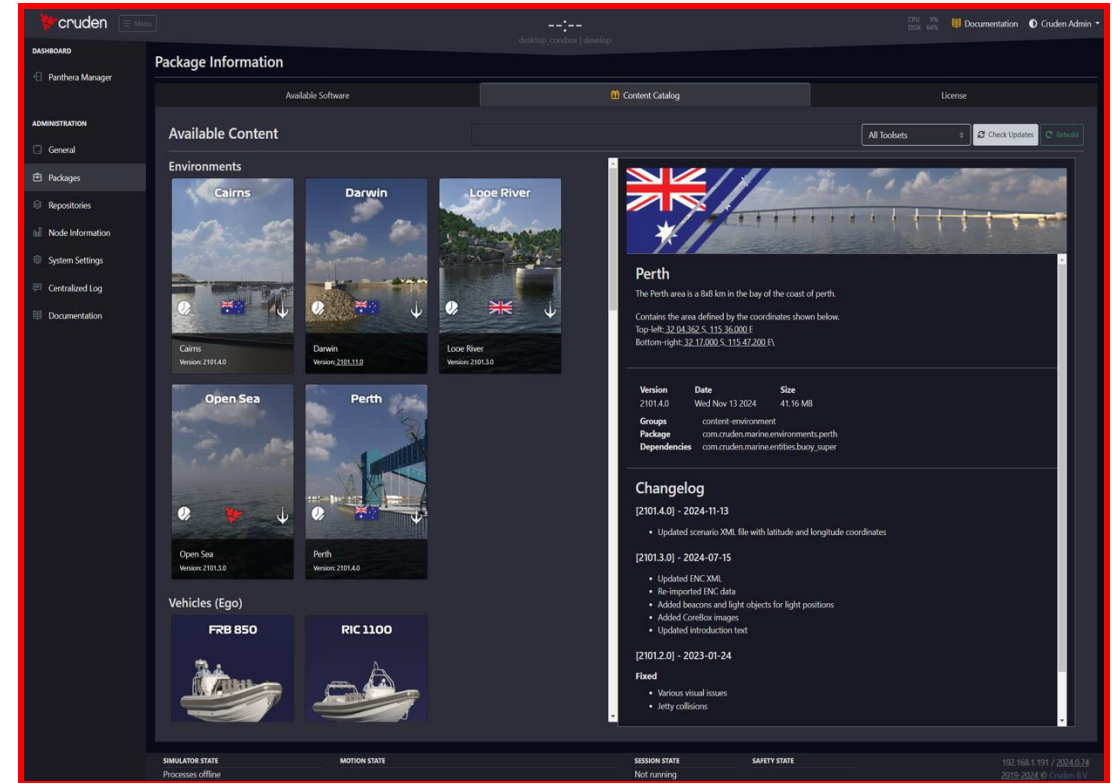
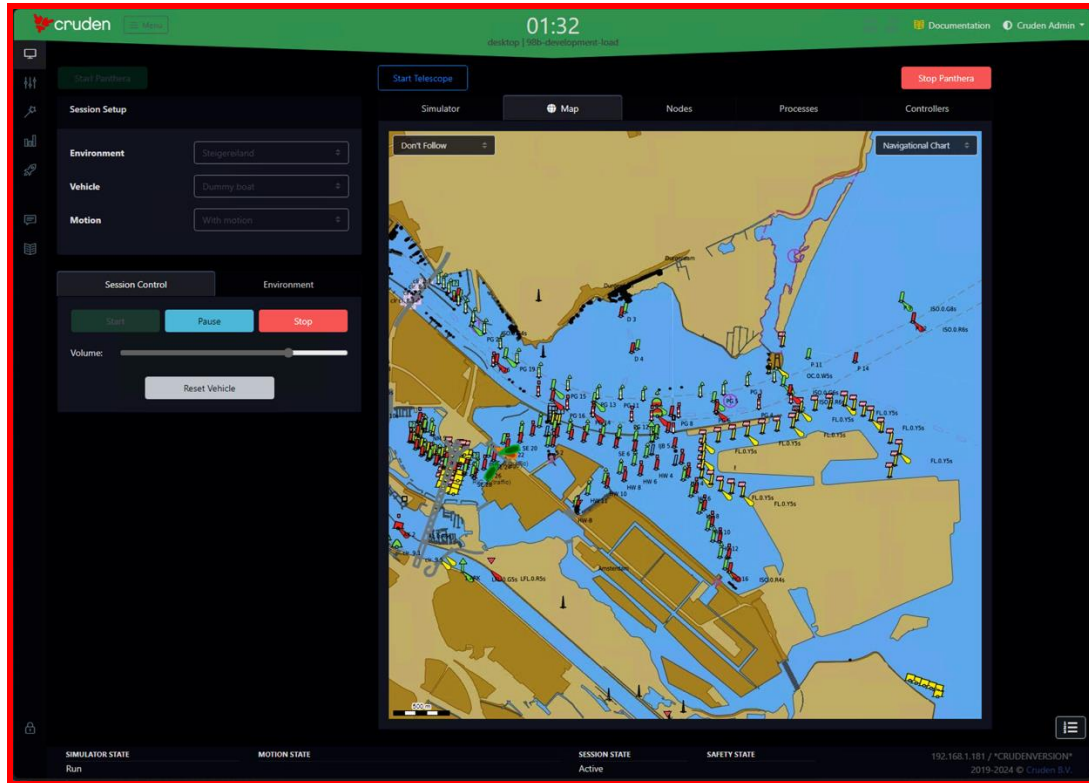
4

P51 / NSW / RibCraft / MkV





# Web based User Interfaces





## Video1 (Audio on): 12 [m] RHIB, Volvo, dual waterjet

4:14

Total duration

0:06

Start engines

0:22

Rotate around own axis on differential jets

1:00

Speed up to 40 [knots]

2:17

Cross wake

2:30

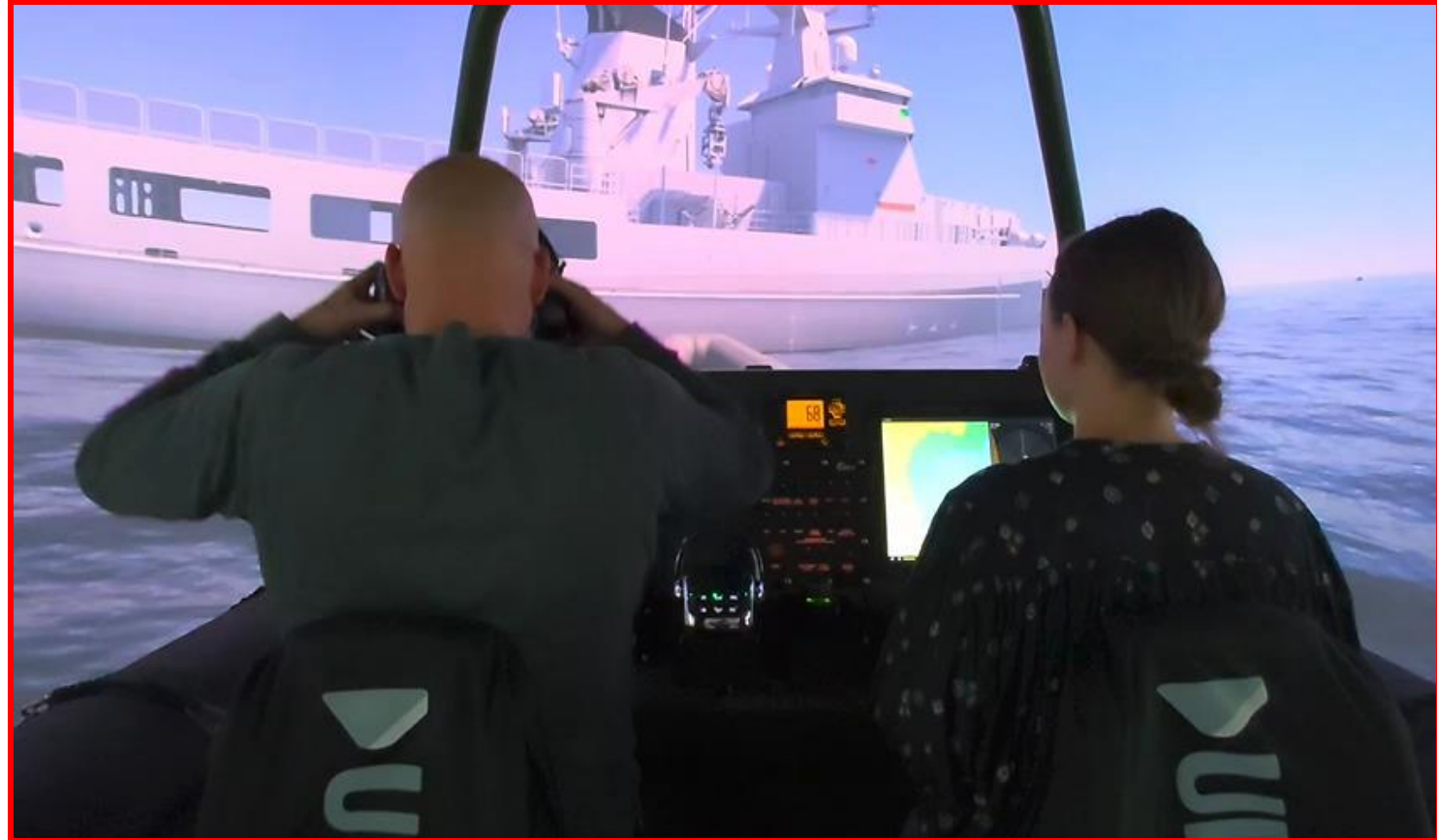
Pacing at 20 [knots]

2:50

Alongside

4:00

Stern ramp recovery



Play this video per mouseclick

## Video2 (Audio on): 11 [m] RHIB, Yanmar, dual waterjet

1:13

Total duration

0:04

Close up on shock mitigation seats

0:33

In transit

0:35

Sharp port turn

0:51

Instructor view

1:08

In transit

1:12

Slow down



Low visual quality due to bright ambient light  
In the Cruden workshop



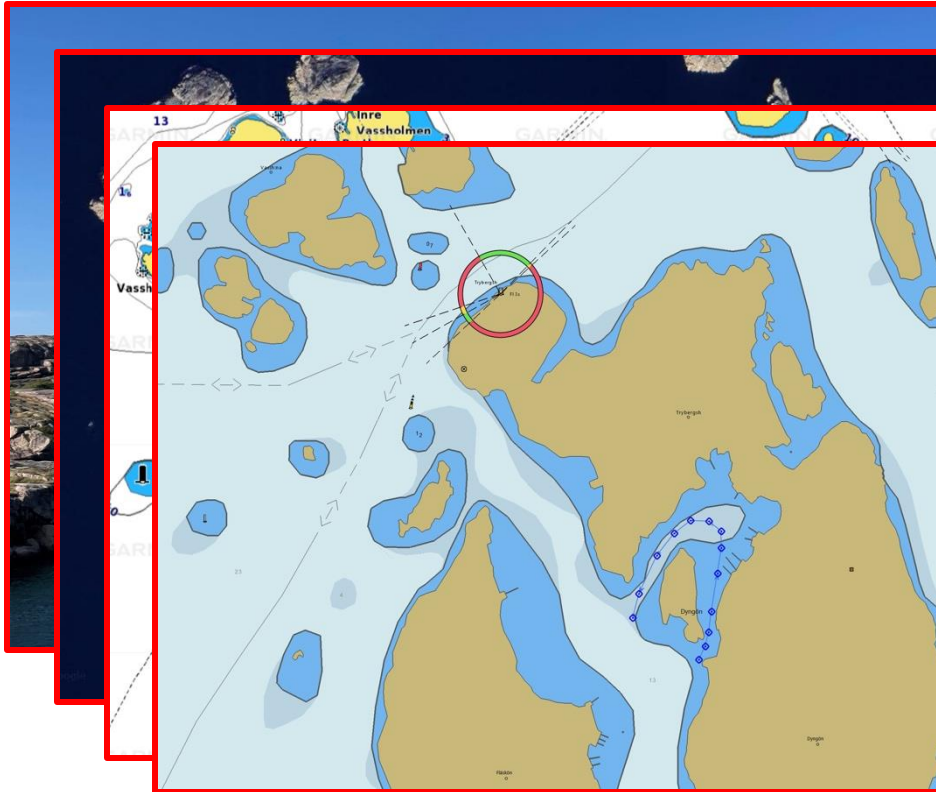
Play this video per mouseclick



# Database creation



Digital Twin development Dyngö (Work in Progress)



# Fire and maneuvering



1

## Combine tactics with primary task of boat crew

- Mounted guns
- Hand guns
- Remote weapon stations



2

## Preferred: dedicated motion and visual system for gunners

- Correct sightlines and motion perception
- Software configurable gunner position



3

## Networked

- Combine multiple simulators in a single scene
- Benefit from the state of the art Panthera graphics
- Tracers, watersplashes, hit detection, (ricochet off water)



4

## Combined or stand alone weapon operation

- In normal operation, the gunner is in the same scene as the boat crew
- Standalone operation on pre-recorded trip



Visit us at the exhibition hall

