



Royal Netherlands Navy

From concept development
to capability

Over the horizon surface
picture compilation with
organic UAS

Royal Netherlands Navy
RNLN Maritime Warfare Centre
LTCDR JJH van den Kieboom
SME MUS and C-MUS

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Concept development 2022 - present

Future operating environment

Future (Maritime) Operating Concept

- What do we need to win in the future environment

Capability gap analysis RNLN

- 24/7 OTH (TG) picture compilation
- Legacy assets □ complement with (organic) UAS

What capabilities do we want with which unmanned assets

- CONOPS M-LRUAS (airfield based)
- CONOPS M-SRUAS (ship based)
 - No medium range



Maritime short range UAS

Operational roles:

1. OTH surface picture compilation (~150 nmi), comms relay, targeting
 - Desired effects vs realism
2. Transport, ASW

General capabilities

- Operate from current RNLN ships together with the NH90
 - Logistics
- Operate 24/7 in a maritime (RF degraded) environment
 - UAV platform and communications
- Remain outside short range weapons
 - UAV sensors
- Operate from the CiC



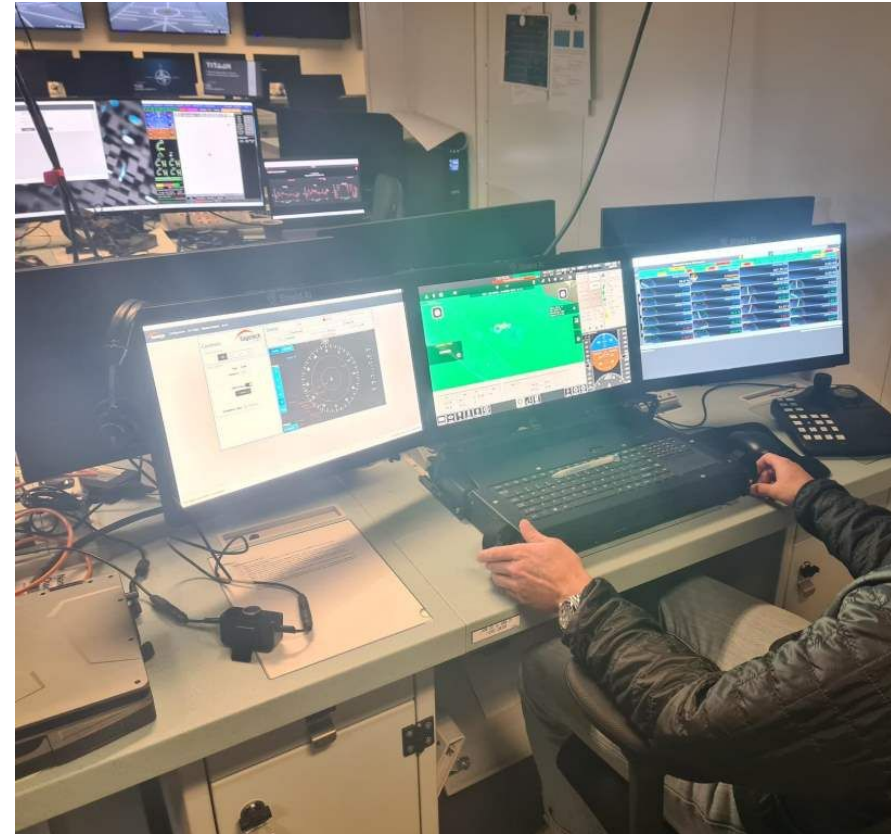
Testing

- Flight test philosophy and PWO experience
 - Role relation based on CONOPS
- Evaluate suitability of NATO class 1 (<150 kg) during REPMUS24
 - 3 weeks testing from JWIT (LPD) with “daily” flights
 - DOTMLPFI impact on naval ship
- Jump20 and VBAT128
 - 2 different concepts representative for other NATO class 1 UAS
 - Radar, EO/IR and AIS
 - Representative test setup
 - Operated from the CiC (incl L&R)
 - Preliminary SUOLS (NH90 flight test office and NLR)





UAV operator positions next to CiC





REPMUS results

- VBAT128 and Jump20:
 - Suitable (within limits) for maritime OTH picture compilation
 - Very good HMI ☐ keep it!
 - Information exchange with CMS
 - Must improve automatic detection/classification
 - Operator-maintainer concept
- Now:
 - Procure whilst investigating/ implementing DOTMLPFI, regulations etc
 - Accept risk of setbacks



Questions