

SPERWER AFTER S/A TC

Military Aviation Requirements;
an approach to address the new RNLA UAV domain

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Report Documentation Page

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Actual situation Sperwer

As a result of S/A Certification finalised last year by the Military S/A Authority (RNLAf), and the facts that:

- ▶ Ctd S/A to be covered in a consistent way for the LOT of Sperwer,
- ▶ DM / RNLA being assigned as TCH-Sperwer,

a pragmatic approach has been chosen to cover these areas by the so-called “LE- requirements UAV” approach.



LE- requirements UAV RNLA

(LE = military aviation requirements)

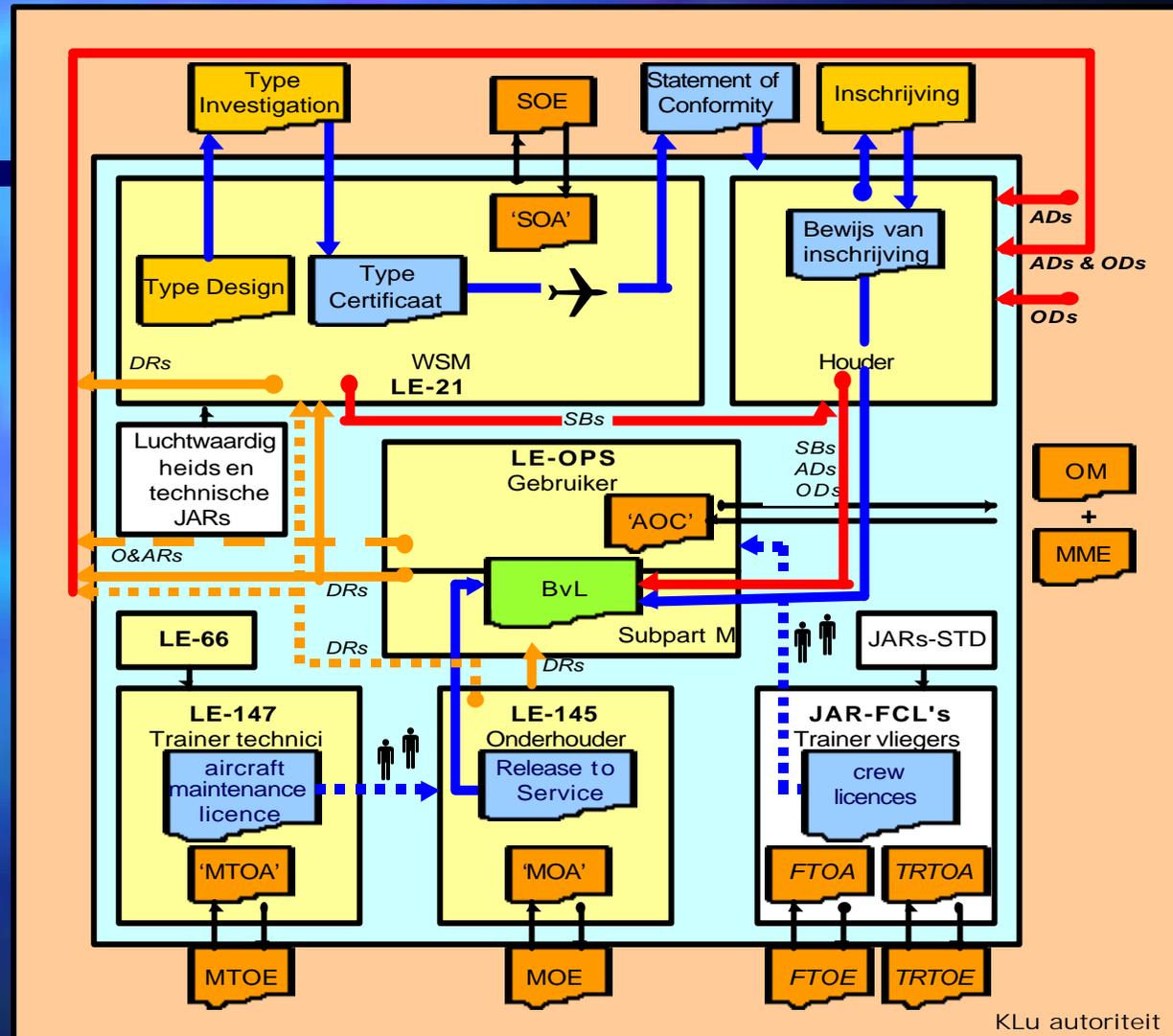
- ▶ JAR-requirements chosen as a guideline, tailored to take into account specific military and tactical UAV conditions.
- ▶ To be issued by military authorities, being:
 - * RNLAF on S/A - matters, incl. Maintenance
 - * RNLA on Operational and Training matters.
- ▶ Serving as a framework for deriving from it specific Sperwer procedures and instructions, like an Operational Handbook, SOPs, SOIs, LOPs, etc.



RNLAF-LE- phylosophy



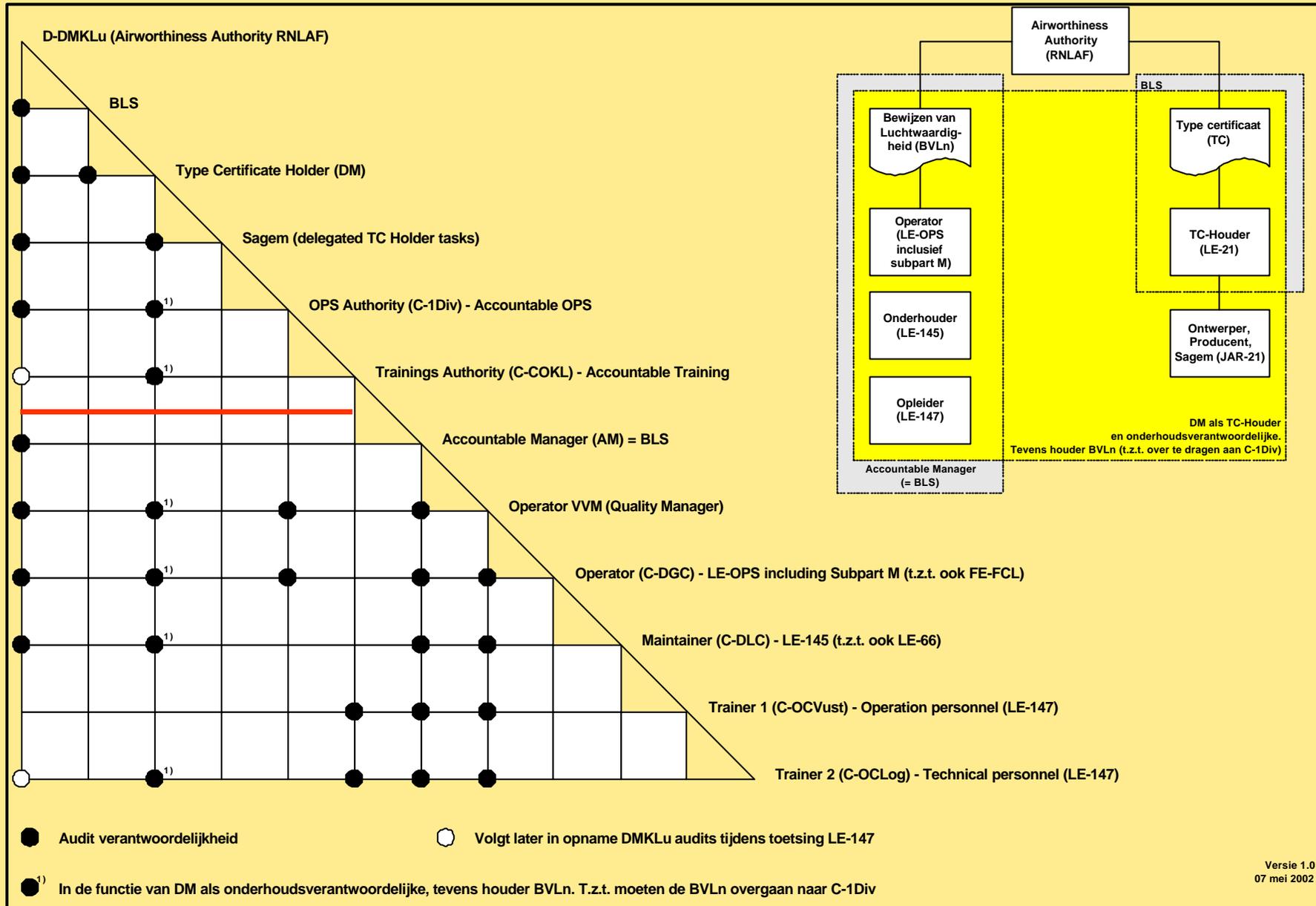
Certification
Maintenance
Utilisation
Mandates



RNLA and Sperwer

- ▶ Sperwer , first air mobile platform under operational RNLA responsibility since WW2
 - ➔ RNLA learning to become “aviation minded”
- ▶ RNLA never to be an Aviation Operator like RNLA F
- ▶ However, Sperwer a specific RNLA operational capacity for reconnaissance and intelligence.
 - ➔ Flight safety operational matters best to be implemented in a scope of “own RNLA involvement / commitment”





Type Certificate Holdership (TCH)

- ▶ TCH responsibility and tasks covered by LE-21 as a guideline
- ▶ **TC Configuration Control Management:** with RNLA / DM as interactive linking pin between:
 - OEM (*Original Equipment Manufacturer*)
 - RNLA 'Operator' & 'Maintainer'.
- ▶ **CCM activities OEM** covered by specific contract
- ▶ **CCM on Maintainer level:** interference of RNLA organic responsibilities: DM (staff level) and Maintainer (executor)



Other RNLA Constraints

Current RNLA Authorities, being Operator and Trainer

- ▶ Operating Authority \equiv C - Div, being also 'CEO' Operator
 - ▶ Training Authority \equiv C-COTKL, ,, ,, 'CEO' Initial training
- ➔ no independent Military Authorities;

RNLA Training "Ops & Maint"

: Initial- & follow-up on unit level

- ▶ initial training: skills; qualification by examination,
 - ▶ Unit training: qualification for several competence levels
- ➔ Sperwer requires specific RNLA harmonisation.



LE - OPS UAV RNLA

(1)

- ▶ To be issued by the Operational Authority
- ▶ To get a **generic UAV** reference for operational requirements, derived from many, many available documents having been produced over the last years, like:
 - TC - compliance reports,
 - Flight Performance Manual,
 - Operating Manuals of the UAV sub-systems,
 - Interim 'Guidelines for RNLA Sperwer flight operations',
 - Flight Authorisation Instructions (FAI's).



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Royal Netherlands Army

LE-OPS UAV RNLA

(2)

- ▶ Some contradiction between “generic” and available basis “Sperwer documents”, otherwise said ‘Long Term’ versus ‘Short Term’.
- ▶ Harmonisation for case study “ Completion of operational requirements for Sperwer UAV system” and NL Military Ops UAV framework (MLA)
- ▶ Discrepancy “content to be described” and “ certain RNLA Operator levels to become aviation minded”.
- ▶ Internal NL Armed Services, UAV pioneering activities contributes to:
 - an evolving RNLA Operator commitment to develop a framework for “ the Operational Handbook Sperwer”,
 - a clear described point of departure for defining MLA LE’s on UAV.



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LE- OPS UAV RNLA

(3)

- ▶ Basis : JAR-OPS to be tailored to (military) UAV purposes
- ▶ Some LE-OPS subparts N/A for UAV, e.g. subpart O (cabin crew)
- ▶ Some LE- OPS subparts better match for tact UAV than others concerning weight and propulsion systems, like subpart H, performance class
- ▶ Specific design characteristics unmanned air vehicle
- ▶ Pragmatic approach, not too detailed, for requirements to be adapted/tailored to UAV system,

- ▶ For the time being Restricted Areas only
- ▶ LE- OPS UAV only applicable in peace time.

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Status OPS HANDBOOK Sperwer

- ▶ Framework defined by subpart P of LE-OPS UAV
- ▶ Compliance facilitated by a cross reference list for subjects - available doc
- ▶ To make inputs coherent and output understandable, also outside RNLA
- ▶ Working load of editors a problem (always same group!)

The main challenge for RNLA: 101 RPV bty LE- implementation to be effectuated mid 2003

- ▶ TCH and Authorities “Ops/ Training” to remain in phase, to obtain a level of acceptable readiness in sense of material and “training”, covered by a complete LE-environment, to be applied in an involved way.
- ▶ Audit by RNLA to cover RNLA responsibilities TCH (LE-21) and Maintainer (LE-145) with Spin off to “Training” and - in consequence - to “Operator”.
- ▶ This lining-up to serve as a route planner for the implementation of the LE-structure for Sperwer



THE LE-APPROACH :

on national level

- ★ integrate Sperwer in a consistent flight safe way within RNLA, thereby compensating for the existing lack of experience with Army Aviation matters,
- ★ a basis for a flight safe application of UAV's within the other (NL) Military services,
- ★ an extra dimension to embody UAV -matters within an Independent Dutch Military Aviation Authority (MLA), envisioned to be in place in 200x,
- ★ thereby ending the uncomfortable “two hat” position for RNLA (and RNLAFF!).



THE LE-APPROACH: international level

- ★ it should lead to deliver information to (Military) Authorities for smoothening the access for Sperwer UAV operations to restricted airspace outside NL.
- ★ it could serve as a reference to harmonise regulations for UAV operations by other military users
- ★ Long term: input for airspace integration discussions ?