

Transformation from legacy to EMARs: a practical case

Lt Col Jonas Larsson
Head of the Operational Section, FLYGI



Outline:

- ≥ **Background: Swedish Air Force, Swedish MAA and Rules for Military Aviation (RML)**
- ≥ **Basic principles of the Swedish Aviation Law (The Triangle)**
- ≥ **Implementation of the SE-EMARs**
- ≥ **Lessons learned**



Swedish Air Force

Fixed wing:

Saab Gripen A/B/C/D/E/F

Saab 105 (Basic trainer)

C-130H Hercules (TP)

Saab 340 (TP/AEW)

Gulfstream IV/550

RPAS

Helicopters:

NH 90 (TP/SAR/ASW)

Sikorsky UH-60M

Agusta 109 (LBO+SBO)



SE MAA and RML

- ≥ **Gripen accident Stockholm 1993**
- ≥ **Responsibilities between:**
 - Swedish Armed Forces 
 - FMV (Defence Material Administration) 
 - Industry
- ≥ **FLYGI (SE MAA) established in 1997**
- ≥ **Rules for Military Aviation (RML) 1997-**
- ≥ **RML originally produced by consultants**
- ≥ **Based on the JAR and later EASA requirements/approach**
- ≥ **Long implementation (~10 years)**
- ≥ **~66 approvals**

”The triangle of legislation”

**Swedish Aviation Act
(2010:500)**

(Swedish Parliament)

**Swedish Aviation Ordinance
(2010:770)**

(Swedish Government)

Swedish Armed Forces Statutes (FFS 2016:1)

(Supreme Commander)

Rules For Military Aviation (EMARs etc.)

(Director SE MAA)

Transformation → EMARs

- ≥ Full implementation simultaneously (SE-EMAR 21, M, 145, 147, 66) (SMS, Ops req., ASM, C^2, Mil Aerodromes, Mil Rules of the Air)
- ≥ Project Manager (SE MAA); integrated project team (FLYGI, Legal, Swedish Air Force)
- ≥ Project plan with milestones (Target; signed ~~11th October 2019~~ 11th November 2019)
- ≥ Analyse and address the differences from the legacy RML
- ≥ Graphic design (Good first impression, easy to read and understand)
- ≥ Implementation plan (1-3 years, synchronized with the FLYGI audit plan)
 - ≥ Information
 - ≥ Training
 - ≥ Auditing
 - ≥ Issuing of new organisation approvals, MTC, MAM Licences, forms, etc.
 - ≥ Controlled phase out of inactive approvals

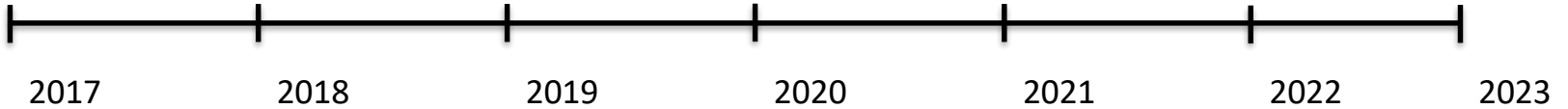


Key SE-EMAR adaption

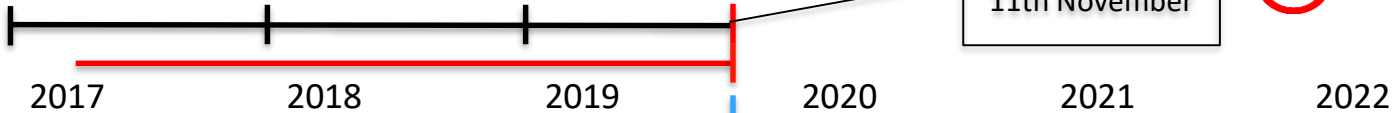
- ≥ **Audit cycle; 24 months acc. EMAR → 36 months (all SE-EMAR)**
- ≥ **Expositions to be written in Swedish or English language (all SE-EMAR)**
- ≥ **Military Type Acceptance (SE-EMAR 21)**
- ≥ **Acceptance of national (civ. or mil.) AML (SE-EMAR 66/145)**
- ≥ **50 series modules not mandatory (SE-EMAR 66)**
- ≥ **Possibility to subcontract complete Type training Courses (SE-EMAR 147)**



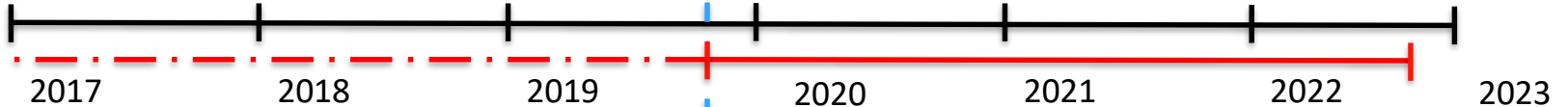
FLYGI master audit plan (12-36 months interval)



FLYGI EMAR project plan (production activities)



FLYGI EMAR implementation plan



Information & training

- Audit of implementation
- Issuing of SE-EMAR; DOA, POA, MOA, MTOA, MAML

Key lessons learned

- ≥ **Implementation takes time (easy to underestimate)**
- ≥ **Performing the rulemaking "in house" has given invaluable experience**
- ≥ **Integrated project team a succes;**
 - ≥ **Promoted a mutual understanding between the regulated community (Swedish Air Force) and the SE MAA (FLYGI)**
 - ≥ **Promoted a mutual understanding between the SE MAA (FLYGI) and the legal department**



Questions?