

NATO Recognition of Airworthiness Authorities: Return of experience

Briefing to
**EDA's MILITARY AIRWORTHINESS
CONFERENCE**
Vilnius, 09-10 Oct 2019

- **NATO Airworthiness Policy (NAWP)**
- **NAWP Implementation Plan**
 - **NATO Recognition Process (NRP)**
 - **AWAG Action Plan: Assessment of AAs**
- **Return of experience**
- **Conclusion**

Main principles:

■ Applicability (para 7):

- all aeronautical products, parts and appliances
- owned, leased, rented or chartered

■ by NATO



■ by Member, non-Member, or Partner Nations and operated on behalf of NATO



 **Out of the scope:** all aspects of flight operations, such as operational procedures, flight standards, operator training, aircrew qualification and licensing, and aerospace control operations (para 8)

■ Aircraft certification is a sovereign responsibility (para 3)

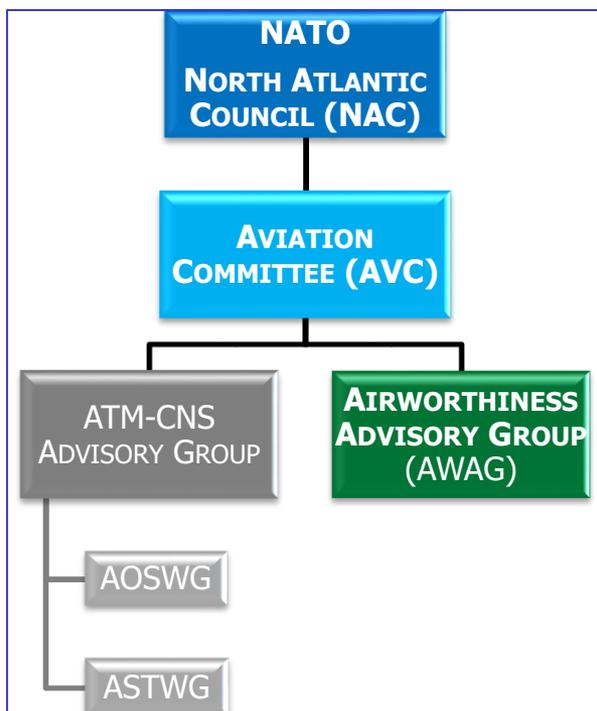
 **The NATO Airworthiness Executive (NAE) required by the NAWP is not an Airworthiness Authority**

Main principles:

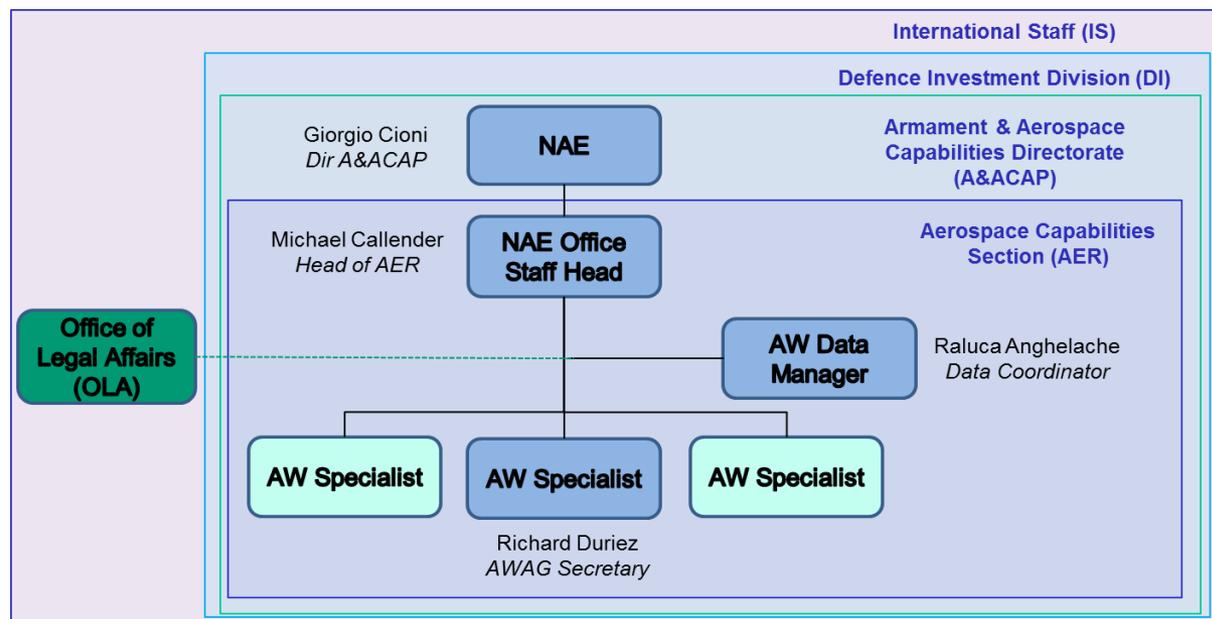
- All aeronautical products, parts and appliances provided on behalf of NATO shall be (para 9):
 - **certified as airworthy** by a [NATO Recognized Airworthiness Authority](#);
 - properly **controlled** in accordance with **approved continued airworthiness provisions**;
 - **operated** and **maintained** in accordance with **approved continuing airworthiness provisions**.
- ↪ Ensure airworthiness related materiel **risk process** exists (para 12)
- All work associated with the airworthiness process shall be performed by **authorized individuals** employing **approved processes** within **organizations accredited/approved** by a [NATO Recognized Airworthiness Authority](#) (para 10)

- **NAWP**: approved by the NAC on 18 JUL 2013
 - ↳ The NAE shall provide an Implementation Plan (IP) to be approved by the NAC before the policy takes effect
- **NAWP IP**: approved by the NAC on 01 JUL 2016

NAWP IP ⇨ **AVC, AWAG**

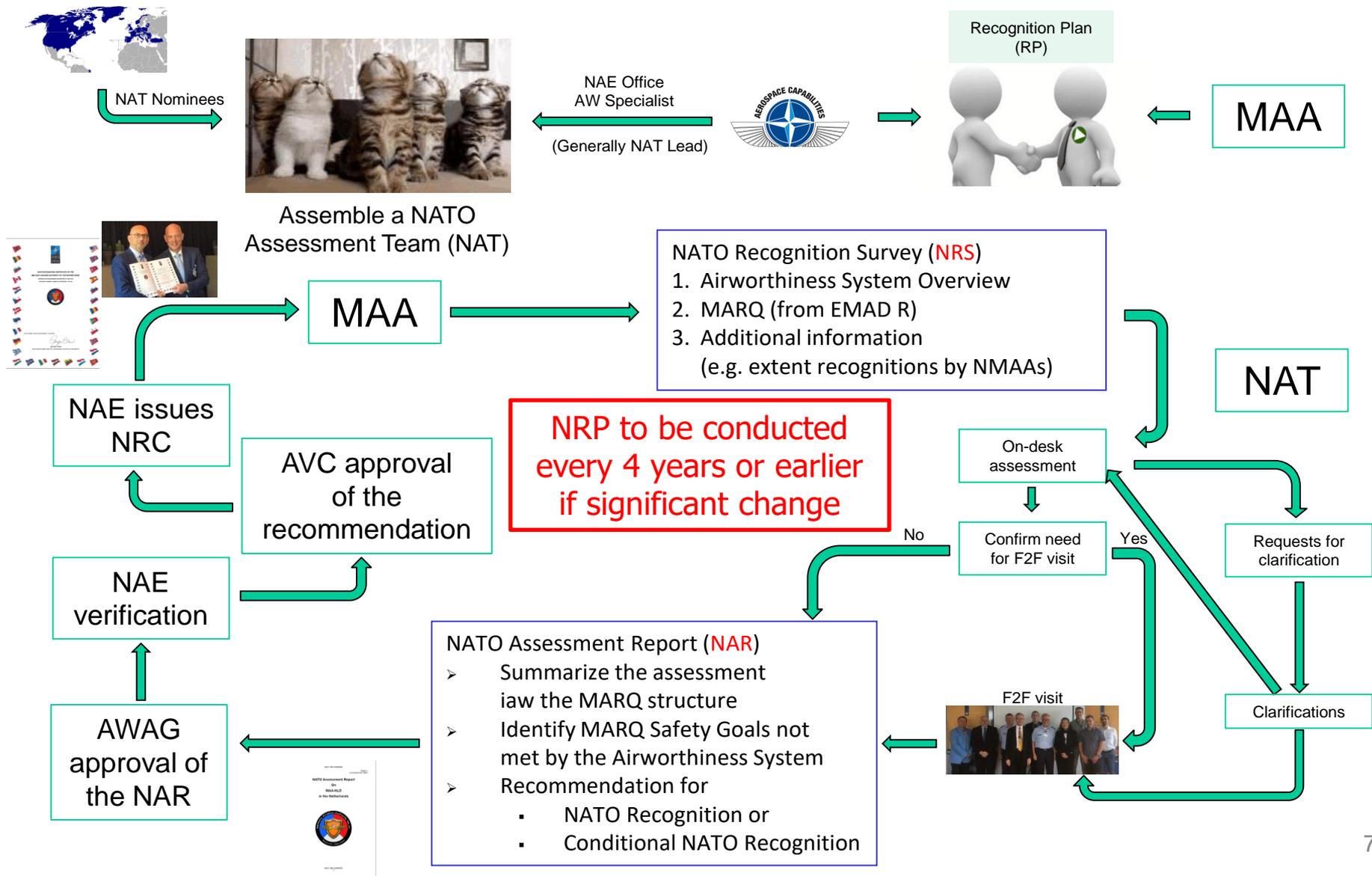


NAWP IP ⇨ **NAE Staff**



NAWP IP ⇒ develop and implement a NATO Recognition Process (**NRP**)

- **Draft NRP** approved by AVC on 12 APR 2017
 - experimental phase: validation against a Pilot Project
- **NRP** approved by AVC on 20 DEC 2017
 - Purpose: launch NRP with MAAs
- **Refined NRP** approved by AVC on 25 OCT 2018
 - Together with **NRP Manual** approved by the AWAG on 10 Oct 2018 comprising:
 - Guidance for the NRP
 - Templates
 - NATO Assessment Team (NAT) nomination package + Guidance
 - NATO Recognition Plan (**RP**)
 - NATO Assessment Report (**NAR**)
 - NATO Recognition Certificate (**NRC**)

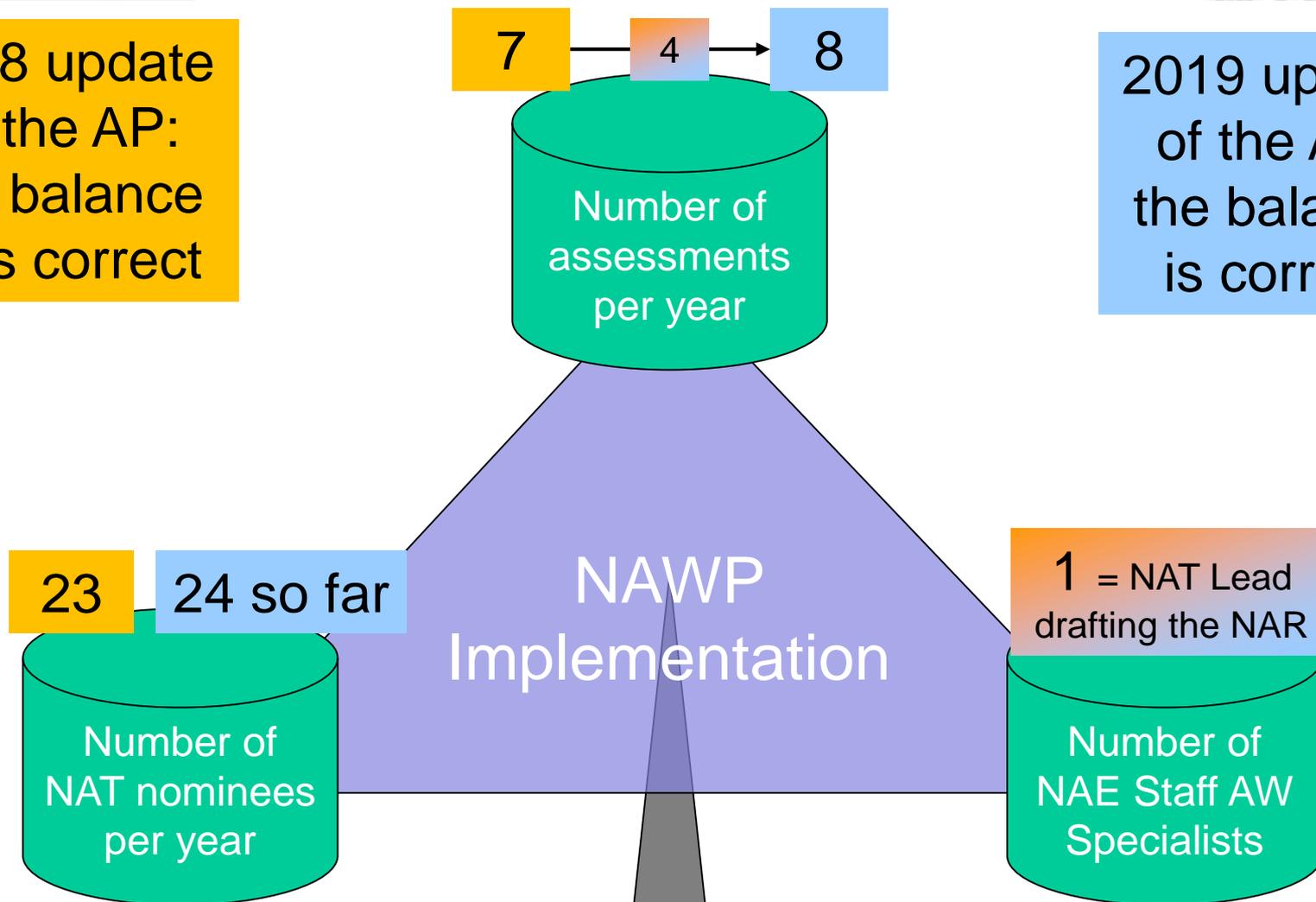


AWAG Action Plan (APR 2017, updated annually on MAY 2018 and MAY 2019)

AA	Status
  MAA-NLD	<ul style="list-style-type: none"> NATO Recognition on 10 JAN 2018 (NRC-0001)
  DAAA	<ul style="list-style-type: none"> NATO Recognition on 31 OCT 2018 (NRC-0002) 
  DSAÉ +  DGA	<ul style="list-style-type: none"> NATO Recognition on 31 OCT 2018 (NRC-0003)
  CA MAA	<ul style="list-style-type: none"> NATO Recognition on 01 MAR 2019 (NRC-0004)
  NMAA	<ul style="list-style-type: none"> NATO Recognition on 03 MAY 2019 (NRC-0005)
  HUN MoD SAD	<ul style="list-style-type: none"> NATO Recognition on 18 JUL 2019 (NRC-0006) 
  DGAM	<ul style="list-style-type: none"> NATO Recognition on 24 SEP 2019 (NRC-0008)
  BMAA	<ul style="list-style-type: none"> NATO Recognition on 23 AUG 2019 (NRC-0007)
 3 TAAs (USN  , USA  and USAF )	<ul style="list-style-type: none"> Face-to-face visit on 05-08 AUG 2019
  SN VLO	<ul style="list-style-type: none"> Face-to-face visit in 2020/Q1 (if deemed necessary)
  UK MAA	<ul style="list-style-type: none"> Face-to-face visit in 2020/Q1 (if deemed necessary)
 FAA,  Transport Canada, TCCA,  EASA (+ CAAs of EASA MS which are NATO Allies)	<ul style="list-style-type: none"> NRP provisions for NATO Recognition without further assessment Allows to cover Third Country Operators operated into, within or out one of these States NATO Recognition expected before late 2019

2018 update
of the AP:
the balance
was correct

2019 update
of the AP:
the balance
is correct



A proper balance is needed to achieve NAWP Implementation

■ Airworthiness System Overview

- Official exposition document (e.g. **NL: Organisation Manual**)
- Overview document specifically developed for the NRS (e.g. **IT**)
- Some regulations published in several languages, incl. English (e.g. **CA, BE**)
- Official or courtesy translation when regulation not published in English

■ MARQ

- The lighter the responses, the more requests for clarification
 - **BE** developed a MARQ companion book for more comprehensive responses with organisation charts and process charts

■ Additional information

- 👉 Recognition Certificates without Recognition Reports are useless
- 👉 MAA-to-MAA Recognitions are project driven and often EMAR based

■ One MAA or several MAAs?

- One MAA per service (e.g. US   ), each with its own regulation
- Two complementary MAAs (e.g. FR  ) under a single regulation
- MAA duties spread over different branches with close coordination and decisions taken by a joint Executive Board (e.g. BE )
- MAA decisions taken by an Airworthiness Board with members from the organic regulated community (e.g. ES )
- MAA under a Steering Board with the organic regulated community taking decisions on regulation and work plan (e.g. FR  )

 **There is no single universal solution:
the NRP is able to assess any airworthiness system, globally**

- **Assess the level of independence of the MAA within the MoD**
 - **Independence from operator influence**
 - **Independence from programme management and procurement**
- **Question: is there sufficient independence?**
 - **Some MAAs are directly under the Minister of Defence or report directly to the Minister of Defence**
 - **There is a decision making process ensuring the independence**
 - **The appointed authority is aware of the legal implications of duty of care**

On-desk assessment with the information provided with the NRS (airworthiness system overview, MARQ, additional information):

👍 from the outside, it looks quite standard

👉 But sometimes inside the regulation, it is like...



feeling like Champollion:



■ EMAR or not EMAR: is that a question?

- No EMAR implemented (e.g. CA, US)
- EMAR implementation is still in planning phase
- EMAR anticipated implementation pending official regulation (e.g. BE)
- EMAR implementation in force,
but limited to future and recent aircraft types
 - ❖ Living in parallel with a legacy regulation
more (e.g. FR) or less (e.g. HU) EMAR compliant
 - ❖ A transition period for EMAR implementation has been defined
 - ❖ Progressive publication: EMAR by EMAR
- Legacy regulation only, but more (e.g. NL) or less EMAR compliant
- EMAR fully implemented as sole regulation

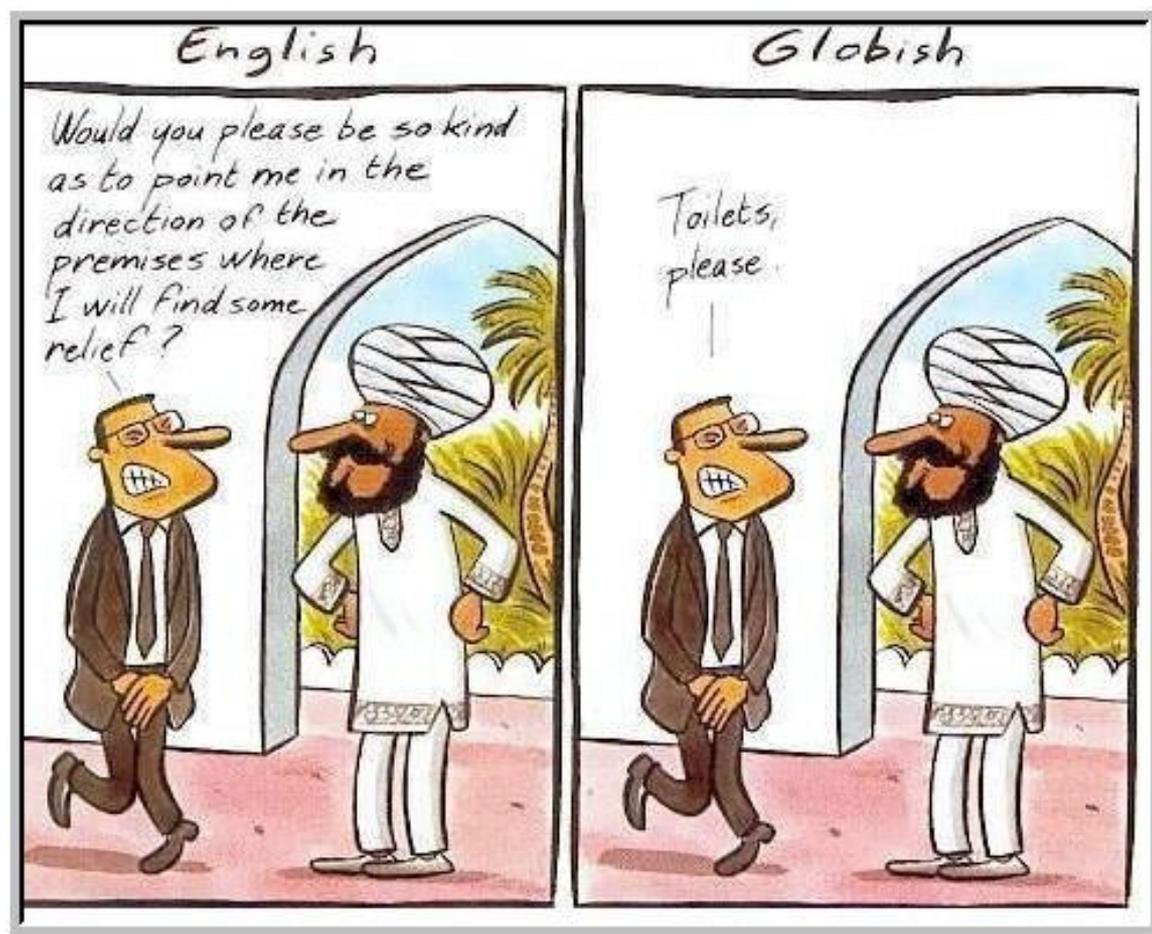


It does not matter: the NRP is EMAR agnostic

Except a few,

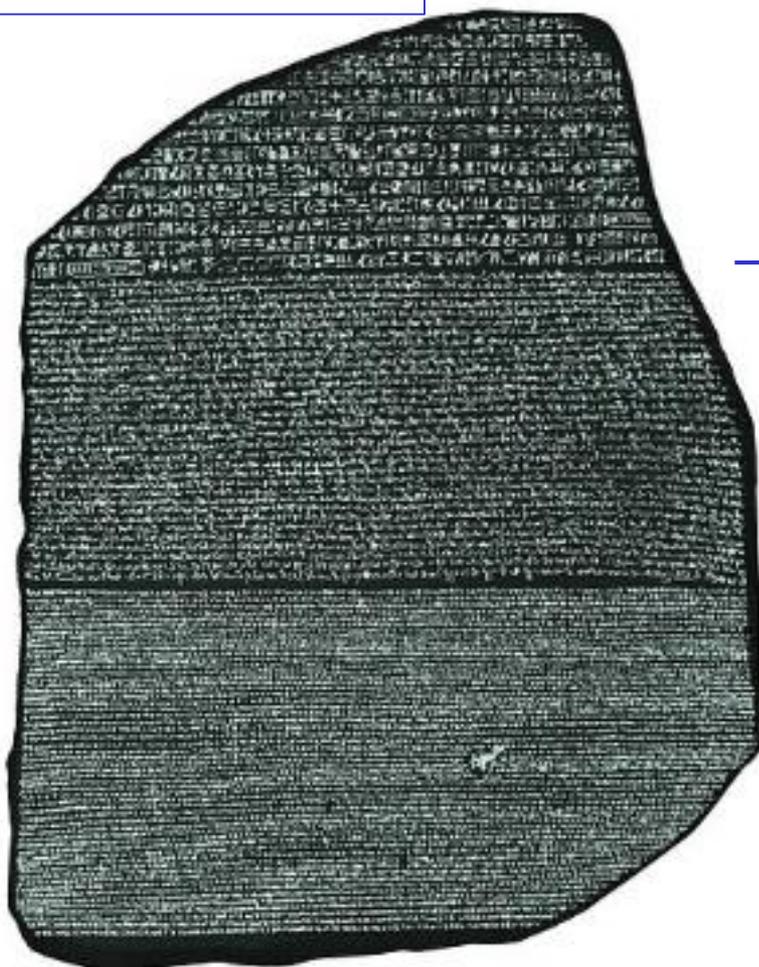


most of us speak
a lingua franca
called Globish:



But it does not mean that we understand each other

Champollion had
the Rosetta stone



We have:

- National Military
Airworthiness Requirements

- ICAO Document 9760 ed.3
Airworthiness Manual
(basis of MARQ Safety Goals)

- European Military
Airworthiness Requirements
(EMAR)

Is staff manning commensurate?

- **MAAs of nations procuring foreign aircraft types only may need less staff by relying on the MAA of the country/countries of origin**
 - **A formal recognition of the MAA of the country/countries of origin will help secure the use of substantiation documents and artefacts without further verification**
- **Civil type certified aircraft benefitting from CAA artefacts**
 - **Civil type derivatives also, if provisions in the regulation**
- **MAA manning permanent or temporary shortfalls can be mitigated by:**
 - **Organic outsourcing: GQAR, entitled personnel, AR Personnel**
 - **Contracted outsourcing: qualified consultants**

Continuing Airworthiness Management functions

- The MARQ contains Safety Goals about CAMOs
 - But some regulations do not contain requirements to set up CAMOs
- In fact, ICAO Doc 9760 AW Manual speaks of Continuing Airworthiness
 - The NRP has to make sure that essential Continuing Airworthiness Management functions are carried out i.a.w. ICAO Doc 9760
 - But sometimes they are scattered under the responsibility of several entities within the same service

Airworthiness approval of products in Production and release certificate in Maintenance

- EMAR or EASA Form 1 and Form 52 or equivalent
- Sometimes, Certificates of Conformity (CoC) without any airworthiness statement from an authorized individual are the sole documents

- **In the frame of the implementation of the NATO Airworthiness Policy, the NATO Recognition Process (NRP):**
 - is applicable to any national airworthiness system,
 - is EMAR agnostic,
 - allows NATO to have good insight of national airworthiness systems
 - ❖ through a standardized NATO Assessment Report (NAR), providing a detailed synthesis of the NRS

- **One challenge lies in the recommendation:**
“NATO Recognition” or “Conditional NATO Recognition”
 - It is based on the experience and the common sense of the each NAT; and
 - controlled by AWAG concurrence



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