Introduction
Continuing Airworthiness

All of the processes ensuring that, at any time in its life, an aeroplane complies with the technical conditions fixed to the issue of the Certificate of Airworthiness and is in a condition for safe operation (ICAO Document No 9713)

The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life. (ICAO Annex 8)

Airworthy - The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation. (ICAO Annex 8)
Flight Standards Directorate

Introduction
EASA Rules, AMC and GM

Reference: EASA Management Board Decision 19-2015

Regulatory Framework
New Basic Regulation

“These rules will ensure that flying remains safe even where our skies become increasingly busy”

DIGITAL TRANSFORMATION

DRONES

AVIATION SECURITY

Ground Handling

Cyber Security

AVIATION SAFETY

SES implementation

ATM/ANS

Operations Aerodromes

Licensing Environment

Airworthiness
**Basic Regulation 2018/1139**

- **Member States or organisations OPT-IN to have EASA as Competent Authority.**
  
  (Art. 2, Art 64, Art 65)

- **A flexible and performance based system: risk based elements reinforced, performance based rules.**
  
  (Principles in Art. 4)

- **Pool of European Aviation Experts / Additional privileges for QEs.**
  
  (Art. 63 / Art. 69)

- **Recognition of third-countries certificates.**
  
  (Art. 68)

- **Published in the Official Journal of the EU the 22.08.2019**
  
  (entry into force after 20 days)
  
  (Art. 141)
New Zealand and Australia: systems recognition (limited)
2018/040/ED / 2018/041/ED

- CAA Form One (NZ)
  - ARC
  - CAA Form 2136
    - Export Certificate of Airworthiness
  - Pacific Aerospace
    - PAC 750XL and its parts
- CASA Form 001 (Australia)
  - ARC
  - CASA Form 723
    - Export Certificate of Airworthiness
  - Alpha Aviation R2000 series
    - and its parts
  - Kavanagh Balloons
    - Products and parts
  - GippsAero GA8
    - Product and parts

Acceptable in the European Union’s regulatory system
Nowadays any component can only be installed if accompanied with EASA Form 1!

Might an EASA Form 1 be sometime too onerous or even unnecessary? What about those parts that are not exclusively designed for aviation? (light bulbs, fire axes, smoke detectors..)

- Allowance for certain parts used during aircraft/component maintenance to be manufactured by non-POA Organisations, thus without an EASA Form 1.
- Criticality Level of such a part to be identified by TCH / DAH.
- Repairs will still need the AMO Part 145.
- RMT.0018 / Opinion expected in 2018 Q4 / IR and Decision expected in 2019 Q4
In progress RMTs

Now drafting the amendments to IR/AMC/GM by assessing NPAs comments

RMT.0217: CAMO & Part 145 Responsibilities
- Mitigation of risks associated to a lack of coordination between CAMO and AMO (complex, multi-tier and subcontracted maintenance),
- Clarification on responsibilities linked to determination of the airworthiness of the aircraft,
- Clarification on the maintenance release process.


RMT.0097: B1 & B2 Support Staff
- Clarifications on qualification, authorisation process, roles and responsibilities of Certifying Staff, Support Staff and Sign-off staff,
- Level of supervision required before CRS,
- Applicable to Line and Base Maintenance.

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Safety issue</th>
<th>Subject</th>
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<tbody>
<tr>
<td>12/2013</td>
<td>Risks associated to acceptance of components from external suppliers.</td>
<td>Part M and Part 145 clarification on requirements for acceptance, installation and segregation of parts and material. It will entail more detailed procedures (documented and implemented).</td>
</tr>
<tr>
<td>Control of Suppliers</td>
<td></td>
<td>Ref: <a href="https://www.esa.europa.eu/document-library/opinions/opinion-122013">https://www.esa.europa.eu/document-library/opinions/opinion-122013</a></td>
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<tr>
<td>07/2015</td>
<td>AML holders release a/c without having the required basic knowledge.</td>
<td>Frauds on stand-alone exams triggered proposed restrictions on 147.A.145 about stand-alone basic exams performed outside to locations listed in the approval certificate. It addresses an immediate safety concern without a complete removal of the privilege.</td>
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<tr>
<td>Basic exam. by 147 AMTO</td>
<td></td>
<td>Ref: <a href="https://www.esa.europa.eu/document-library/opinions/opinion-072015">https://www.esa.europa.eu/document-library/opinions/opinion-072015</a></td>
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</table>
The significant increase of air traffic urges a proactive safety risk approach:

**ICAO Annex 19**
Safety management provisions for aviation service providers and operators

**SMS Phase 1 - Opinion 06/2016 (Pending)**
- Introduction of SMS in Continuing Airworthiness Management through a new “Part-CAMO”, which will supersede current Part M / Subpart G
- Changes aligned with other domains requirements (AirCrew, Air Operations, ATM/ANS..) will facilitate implementation of single management system by multi-approved organisations.
- The Opinion prepares the ground for allowing licensed air carriers to contract a CAMO.

Adoption: 2019/Q2  →  IR/Decision: 2020/Q2

**SMS Phase 2 - ToR**
- Introduction of SMS requirements in EASA Part 145 AMOs

NPA 2018 Q3  →  Opinion: 2019 Q2  →  IR/Decision: 2020 Q4
The volume of regulation created since 2002 was necessarily significant. Member States and Industry have indicated that there is a need for a ‘cool-down period’ in rulemaking in order for the system to absorb and consolidate the regulatory requirements.

Introduction of a cool-down period for the RMs output

<table>
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<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td>Opinions</td>
<td>16</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>NPA</td>
<td>28</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>ToRs</td>
<td>25</td>
<td>16</td>
<td>7</td>
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Data source (updated 28 August 2018):
CAW IRs – Latest amendments

- New **145.A.48**: Performance of maintenance (Op. 06/2013)
- Amd. **145.A.65**: Consistency with 145.A.48 and details (e.g. clear work-order),
- Annex Va - **Part T**: Rules for the continuing airworthiness of third country registered aircraft operated by EU operators or by operators residing in the EU. **Dry-leased aircraft** which oversight has not been delegated to an EU Member State (Op. 06/2012)

**2015/1536**

- Changes to Part M and Part 145 to clarify requirements for acceptance, **installation** and **segregation** of components, parts or material by persons and organisations performing maintenance. Organisations need to amend their procedures. (Op. 12/2013)
- **Limitations on Part 147 AMTO privileges** related to **stand-alone basic examinations**. (Op. 07/2015)
- Enter into force on **5th of September 2018** / Applicable (mandatory) from **5th of March 2019**.

**2018/1142**

- IRs
M.A.501 Classification and Installation
- Clarifications on component classification of components (when Serviceable, when U/S etc.)
- Clarifications on when components can be installed onto aircraft.

M.A.504 Segregation od components
- Details on segregation of components (Serviceable from U/S) (details) Data approved by Part 21 design organisation; or,

145.A.42 Components
- It reflects what above written in the Part M.

147.A.145 Privileges of the maintenance training organisation
It is still possible to carry out examinations of students who did not attend the basic training at the AMTO, out of the approved location, provided that:
- The examination is provided through an European Central Question Bank (ECQB),
  or
- in the absence of ECQB, the Competent Authority selects the questions for the examination.

- Critical Maintenance Tasks / Error capturing method
- Identical Maintenance Tasks / Error repetition
- Link to Part M for the data to be used in modifications and repairs

M.A.304 Data for modifications and repairs *(Regulation (EU) 1321/2014)*

Damage shall be assessed and modifications and repairs carried out using as appropriate:

- Data approved by the Agency; or,
- Data approved by Part 21 design organisation; or,
- Data contained in the CS referred to in Part 21

A “Critical Maintenance Task” is a task where a maintenance error could generate a threat to the flight safety (Official definition in Article 2 1321/2014 (CAW))
EASA issued several AMCs and GMs to clarify and detail the 145.A.48

AMC1/2/3/4 145.A.48(b) Performance of maintenance (ED Decision 2016/011/R)

- Describe how the procedure should be defined and detailed (includes training and qualification of staff applying error-capturing methods) (AMC1)
- Which maintenance tasks should be reviewed to assess their criticality (impact on flight safety) and which data sources may be used to identify critical maintenance tasks (AMC2)
- Definition of error capturing method (AMC3)
- Details on the independent inspection (one possible error capturing method) (AMC4): what it is, qualifications of persons performing independent inspection

GM 145.A.48, AMC 145.A.48(c), GM 145.A.48(c), GM 145.A.48(d)
...and CAO Section works on further additional clarifications

Identical Vs Critical Maintenance Task

MOE 2.25: to add the following table as an example on how to apply the error capturing methods priority

<table>
<thead>
<tr>
<th>Type of task</th>
<th>Description</th>
<th>ECM &amp; RM Primary</th>
<th>ECM &amp; RM Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identical Maintenance Task</td>
<td>Removal/installation or assembly/disassembly of several components of the same type fitted to more than one system, a failure of which could have an impact on safety on the same aircraft or component during a particular maintenance check.</td>
<td>Independent inspection OR Performance by different authorised persons of the same task in different systems (Planning Method)</td>
<td>Re-inspection by the same authorised person who has performed the task</td>
</tr>
<tr>
<td>Critical Maintenance Task</td>
<td>A Maintenance Task that involves the assembly or any disturbance of a system or any part of an aircraft, engine or propeller, if an error occurred during its performance, could directly endanger the flight safety.</td>
<td>Independent Inspection</td>
<td>Re-inspection by the same authorised person who has performed the task (limited to unforeseen cases when only one person is available)</td>
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</table>
• Foreign Part-145 approvals are those Part-145 organisations located outside the EU which are not subject to a bilateral agreement.
• EASA UGs only apply to Foreign Part-145.
EASA Foreign Part-145 webpage

- Current User Guides for Applicants and Approval Holders,
- EASA Information letters,
- List of valid and invalid approvals

- How some of the IRs are interpreted by competent authority,
- How to write the MOE,
- How to accept equivalent tools,
- Forms ... etc.

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Thank You!
Q & A

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Your safety is our mission.

An agency of the European Union