EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT

EASA Regulatory System and Feedback on Safety Recommendations

Rulemaking Directorate

9 April 2014

easa.europa.eu

Outline

- The aviation system and EASA scope
- Regulatory structure and approach
- Airworthiness
- ATM
- Aerodromes
- OPS/Aircrew

The EU aviation safety system

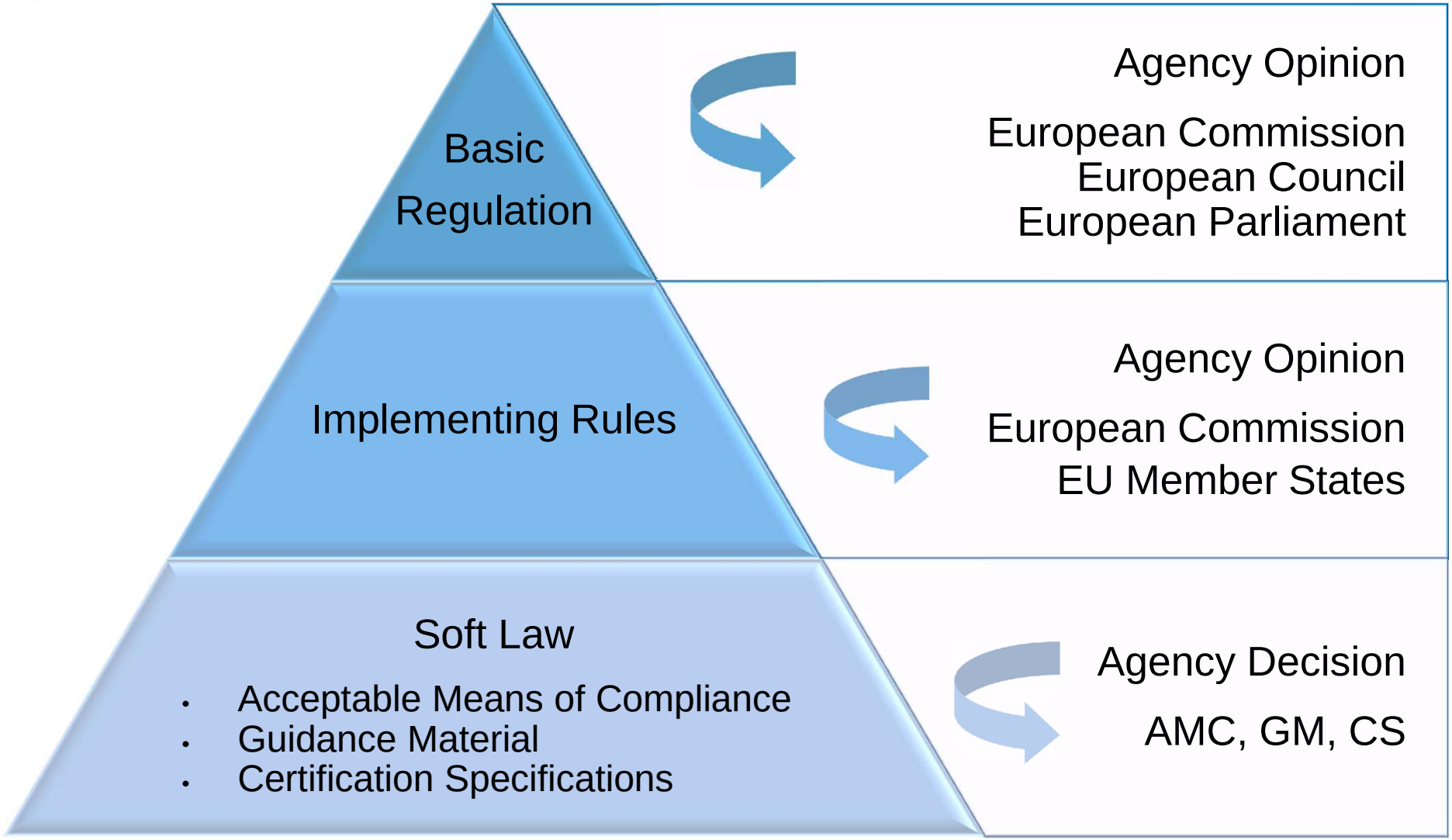
EASA Scope - exemptions

- EASA system not applicable

Airworthiness and environmental protection (EP) of aircraft	- all domains: while carrying out military, customs, police, S&R, firefighting, coastguard or similar services - Airworthiness: aircraft referred to in Annex II
Pilots and operations	- OPS/LIC: aircraft referred to in Annex II, unless used for CAT operations (e.g. historic aircraft)
Aerodromes	- that are controlled and operated by the military - not meeting one or more of the below criteria: open for public use; not serving commercial air transport; not having IFPs; and not having paved runway ≥ 800m (unless exclusively serving helicopters)
ATM/ANS	- that are provided or made available by the military

- consequence: national rules apply

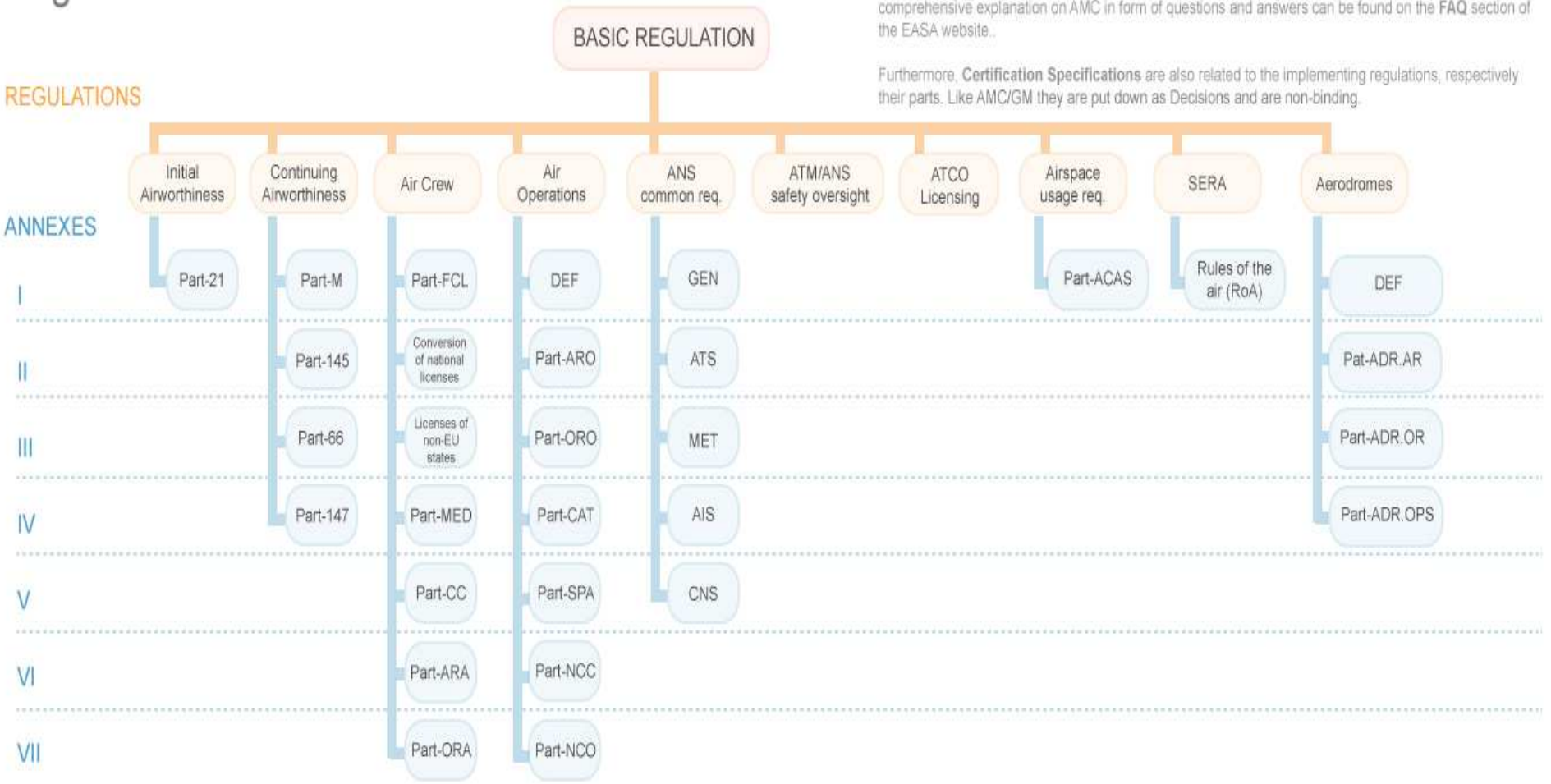
Regulatory Structure



Regulations Structure

Each Part to each implementing regulation has its own **Acceptable Means of Compliance and Guidance Material (AMC/GM)**. These AMC and GM are amended along with the amendments of the regulations. These AMC/GM are so-called 'soft law' (non-binding rules), and put down in form of EASA Decisions. A comprehensive explanation on AMC in form of questions and answers can be found on the **FAQ** section of the EASA website..

Furthermore, **Certification Specifications** are also related to the implementing regulations, respectively their parts. Like AMC/GM they are put down as Decisions and are non-binding.



FULL TITLES

Commission Regulation (EU) No 748/2012 of 03/08/2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations

Commission Regulation (EC) No 2042/2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these

Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament

Commission Implementing Regulation (EU) No 1035/2011 of 17 October 2011 laying down common requirements for the provision of air navigation services

Commission Implementing Regulation (EU) No 1034/2011 of 17 October 2011 on safety oversight in air traffic management and air navigation services

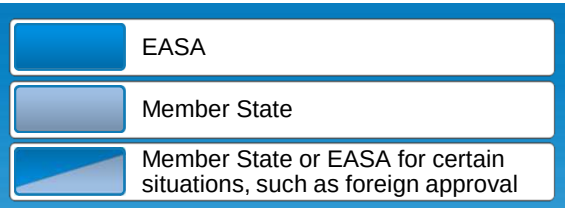
Commission Regulation (EU) No 805/2011 for air traffic controllers' licences and certain certificates pursuant to Regulation (EC) No 216/2008

Commission Implementing Regulation (EU) No 1332/2011 of 16 December 2011 laying down common airspace usage requirements and operating procedures for airborne collision avoidance

Commission Implementing Regulation (EU) No 923/2012 of 26/09/2011 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation

Commission Implementing Regulation (EU) No 139/2014 of 12/02/2014 laying down requireme/nts and administrative procedures related to aerodromes pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

Certificates and approvals



Initial Airworthiness

- Type Certificates (Full / Supplemental / Restricted)
- European Technical Standard Order Approvals (ETSO)
- Design Organisation Approval
- Production Organisation Approval
- Certificates of Airworthiness
- Noise Certificates

Continuing Airworthiness

- Continuing Airworthiness Approvals
- Maintenance Organisation Approvals
- Aircraft Maintenance Licences
- Maintenance Training Organisation Approvals

Flight Standards

- Operators Authorisation
- Flight Crew Licences
- Flight Training Organisation Approval
- Aero Medical Centres
- FSTD Qualification

Aerodromes

- 1 certificate for aerodrome and its operator
- 2 certificates aerodrome operator & aerodrome certificate
- Safety oversight
- Apron Management Service Provides certificate (or declaration)
- Certification of aerodrome equipment

ATM

- Air Navigation Service Providers
- ATCO licences
- ATCO training organisations
- Technical systems and Constituents
- Aero Medical Centres

Regulatory approach

- System oriented
- Requirement of Safety Management System
- Task orientation is left to industry and authorities
- Flexibility and subsidiarity
- Responsibility of the regulated entities
- Shift from prescriptive to performance-based rules

Regulatory approach

- Regulatory impact assessment
- Analyse the impacts of a proposal with regards to
  - Safety
  - Environment
  - Social
  - Economic
  - Equality and proportionality
  - Regulatory co-ordination and harmonization

Ask yourselves

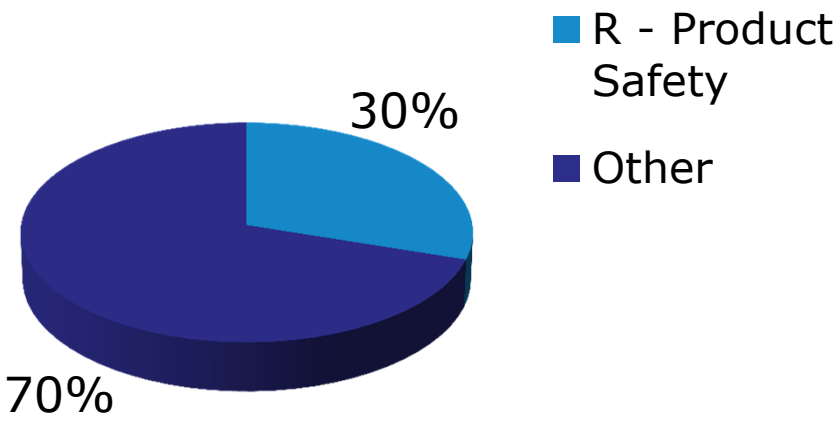
- Was one of the main contributing factor to the occurrence the application of EU law? Or was it rather the management of the activity or the lack of oversight?
- Are the factors leading to the occurrence so significant that they require a regulatory change for all of Europe? How high is the likelihood of recurrence?
- Is this particular occurrence manifesting a trend that can only be addressed through regulatory changes? Or can it be solved through for example safety promotional means?

Domains

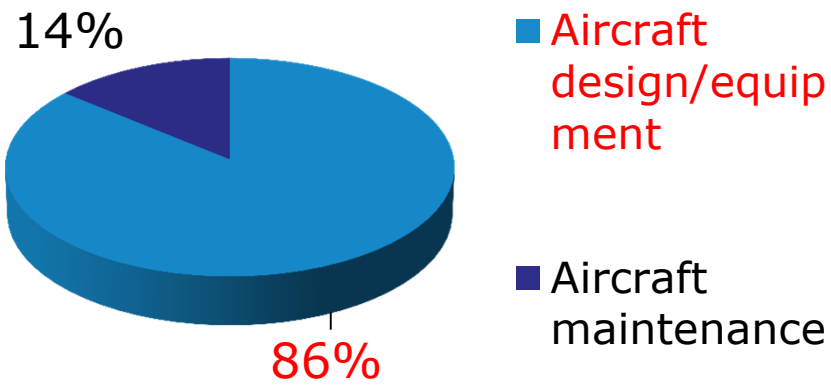
- Airworthiness

Airworthiness

EASA SR



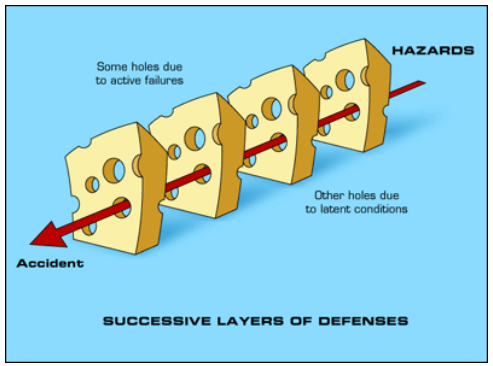
SR – R–Product Safety



=> High expectation from the aircraft

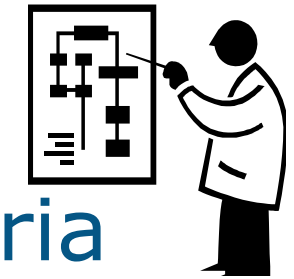
Airworthiness

- Aviation Safety level in Europe very high, therefore:
  - Very difficult to further gain safety – complexity of measures, costs involved
  - Safety related accidents/serious incidents result from combination of factors acting together
- Root cause analysis to look at the full picture of complex systems
- Trend on multidisciplinary measures for safety improvement – remove the remaining "small holes of the cheese"



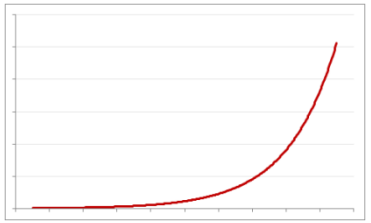
Airworthiness

- Trend on expectations from the aircraft:
  - Sophisticated, very reliable, and safe
  - Automations to limit pilot workload (and mistakes…) – but not too much…,
  - Highly dispatchable, whatever (almost) the atmospheric conditions…
  - Forgiving human errors (pilot, maintenance, ATC,…)
  - And economical!
- => not simple to match all criteria



Airworthiness

- New airworthiness requirements
  - Demonstrate clear safety issue
    - Occurrences recorded/trends (not necessarily accident(s)!), or



    - New threats identified from new technologies

  - Cost impact must be proportionate to the safety benefit envisaged

Airworthiness

- New airworthiness requirements (cont'd)
  - New types of aircraft
    - Short process (months): Special Condition/ Interpretative material (CRI process)
    - Long process (years): Rulemaking task amending Certification Specs/AMCs
  - Already certified aircraft
    - Airworthiness Directives possible within the limit of Part-21 (i.e. unsafe condition): quick process addressing a type (or sometime several types)
    - Future regulatory frame Part-26/CS-26: Additional airworthiness requirements for operation (still to be adopted by EC) for general issues

Airworthiness

- Advice for safety recommendation writers
  - If possible, analysis of other similar events
    - General studies on an issue highly appreciated by EASA
  - Identify all the contributing factors
  - Is it type specific or is there a general weakness?

Airworthiness

- Safety recommendations:
  - Objective oriented
    - What do we want to achieve?
    - Avoid as much as possible being prescriptive
      - Propose a performance oriented objective
      - Do not try to draft the rule (EASA process)
      - Avoid prescribing specific technical solutions
    - Vague recommendations also difficult to handle – to be avoided

Airworthiness

- Safety recommendations:
  - Identify key domain(s) where safety gain can be expected
    - Consider the seriousness and the extent of the safety threat
      - Is it worth doing rulemaking?
      - Is there a more efficient and workable solution?
    - Focus on items where actual safety can be gained
      - Keep in mind a RIA has to be made

Airworthiness

- Safety recommendations:
  - Realistic and proportionate to the scale of issue
    - The proposal should be commensurate with the safety issue identified
    - The aircraft should not be accountable for any and all human created issues

Airworthiness

- Safety recommendations:
  - Adapted to the aviation sector – impact assessment
    - General aviation vs. commercial aviation
    - Operators vs. aeroplane manufacturers
  - Non-safety items
    - To be addressed to the competent authorities (e.g. health issues)

Domains

- ATM

ATM

- On-going rulemaking
  - Opinion 11/2013 on the licensing and medical certification of air traffic controllers
  - NPA 2013-08 on the 'Requirements for ATM/ANS providers and the safety oversight thereof'
    - NPAs on 'Meteorological services' (transposing ICAO Annex 3) and 'Safety assessment of changes to ATM/ANS functional systems', complementary to the content of NPA 2013-08

ATM

- On-going rulemaking
  - NPA 2014-053 on Standardised European Rules of the Air (SERA) Part C
  - NPA 2014-09 on remotely piloted aircraft systems (RPAS)

ATM

- Safety recommendations stats
  - 9 processed
  - 4 open
  - 4 closed with agreement/partial agreement
  - 1 closed with disagreement
- Recent example of an outcome, SIB 2014-06, “ATC Communications to Aircraft Flight Crew during Missed Approach”

Domains

- Aerodromes

Aerodromes

- Regulation 139/2014 published on 14-02-2014
  - 1st common European aerodrome rules –a real challenge!
  - AMC/GM and CS published on 06-03-2014
  - CS are used for establishing the aerodrome CB
  - Certificates to be converted by 31-12-2017
  - EASA competent only for rulemaking & standardisation (in the future) - NAAs are responsible for certification & safety oversight
- On-going rulemaking activities
  - NPA 2013/24 on AMS at aerodromes (Opinion Q2 2014)
- During the above 2 NPAs we received around 10.000 comments
  - comments from all around Europe, NAAs, operators, …; however not from AIBs; a conscious decision or a "missed chance"?

Aerodromes

- Near future rulemaking activities
  - *remission factor* of RFFS level of protection & development of medical standards for RFFS personnel
  - ICAO SL 20/2013
  - VFR heliports collocated with aerodromes
- SR received/handled so far:
  - Received: 8
  - Closed: 6
  - Open: 2 (1 study)
- In general, reports and SR were clear
  - appreciated that some AIBs inform EASA why they did not take its comments on board

Domains

- OPS/Aircrew

OPS/Aircrew – sample recommendations

- *TO THE AERONAUTICAL AUTHORITIES: Consider implementing changes to compliance requirements regarding training and qualification of crews, related to areas of flight manoeuvres with a large attack angle and abnormal flight attitudes.*

- addressee not clear
- It is not clear if the safety investigation authority is suggesting that the level of mitigation in the existing regulations needs to be improved, as there is no reference to the current level and the expected target level.
- Terminology of "training and qualification of crews" not specific enough – does it mean initial, type, recurrent training?

OPS/Aircrew – sample recommendations

- *It should be ensured by EASA that before a student pilot undertakes his/her first solo flight, they are prepared for the possibility of a bounced landing and are able to take appropriate counter measures (correction of the landing, or execution of a go-around). This is especially applicable to night flights, because a supervising flight instructor, who has an outside perspective, is unable to accurately judge a poor landing profile.*
- 'ensured by EASA' is only possible within the remit of the Agency eg through Opinions and ED Decisions, Standardisation inspections, safety promotions, ADs and SIBs; better to define the action, e.g. rulemaking
- The SR should take into account current legislation i.e. to identify gaps or weakness in the existing provisions.

OPS/Aircrew – sample recommendations

- As regards recommendations for pilot training, consider the following:

- Shift to competency/evidence-based training under ATO/operator responsibility
- Adding an additional line of training in the rule has effects on the overall required training within a limited time: emphasis of specific manoeuvres will leave less time for other training; is it really a regulatory issue to be applicable for everyone?
- Some safety recommendations ask for a very detailed change; impact on existing rules has to be taken into account

OPS/Aircrew – sample recommendations

- Well constructed examples:

- *It is recommended that the European Aviation Safety Agency amend AMC1 CAT.OP.MPA.170, 'Passenger briefing', to ensure briefings emphasise the importance of leaving hand baggage behind in an evacuation.*

- *The 'Safety Investigation Authority' recommends that EASA detail in the EU-OPS the various types of non-revenue flights that an operator from EU state is authorised to perform.*

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Any Questions?