



EUROPEAIRSPORTS

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Common rules in the field of civil aviation and establishing a European Aviation Safety Agency

Discussion Paper of Europe Air Sports

5 March 2016

PURPOSE OF THE PAPER

This paper discusses the Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and repealing Regulation (EC) No 216/2008 of the European Parliament and of the Council. For the set of amendments we consider essential, please see our position paper.

In these comments:

- ✓ indicates an opinion that a proposed change is positive and beneficial
- ✘ indicates an opinion that a proposed change is negative or that an opportunity for a positive change has been missed
- ✓✘ indicates an opinion that a proposed change is positive and beneficial but that the implementation in the text needs work

Text quoted from the proposed new regulation is shown like this.

Proposed amendments and additions are shown like this.

GENERAL COMMENTS

✓ SETTING THE DIRECTION FOR BETTER REGULATION IN THE FUTURE

Overall, the proposal is a welcome development of the previous basic regulation. Some commentators have characterised the first decade of the EASA system as a rush to harmonisation at the expense of optimisation. General Aviation (GA) was one of the losers from this impatience. The proposal addresses a number of the fundamental issues that have led to a negative reaction from end-users.

✓ EMBEDDING THE PRINCIPLES OF BETTER REGULATION

In 2012 the EASA Management Board initiated the development of the European GA Safety Strategy, which has been broadly welcomed and embraced by EASA in its recent regulatory programmes. Many of the principles of the Safety Strategy are now reflected, as they should be, in the proposal. This is a very positive change.

✓ A TOTAL SYSTEM APPROACH

Those who have dealt with the detail of EASA regulation over 10 years will recognise a siloed approach. While individual projects have often been of high quality, the overall result is undermined by a lack of strategic vision, both within each aviation domain and horizontally between domains. The emphasis on the European Aviation Safety Programme and European Plan for Aviation Safety (including a risk portfolio), in combination with a new approach to rulemaking within the Agency, makes considerable progress towards addressing this deficiency.

✓✘ SCOPE: COMMUNITY VS NATIONAL REGULATION

The most significant open issue for GA is the scope of the regulation. The existence of the Annex of excluded aircraft (previously Annex II, now Annex I) from the scope of regulation still leads to an unfortunate combination of two aspects of regulation in a confusing and unhelpful way.

The scope of the regulation should include aircraft and operations that benefit for Community-wide common rules and recognition. Generally, larger and faster aircraft operate over a greater geographical scale, and therefore it is natural to include them in scope, while excluding simpler and lighter aircraft. And so in the first decade of EASA, the EASA system has tended to impose much heavier regulation (appropriate to larger and more complex aircraft and their operations) than lighter national regulation (for smaller, local aircraft). Thus “EASA rules” have become synonymous with “heavy rules”, and “national regulation of Annex II” with “light rules”.

As a result, disproportionate rules have driven stakeholders at the lighter end of aviation to do everything in their power to remain outside the EASA system, as the costs outweighed the benefits. Stakeholders lobby to exclude more aircraft from the regulation by raising weight limits and in some cases have demanded the removal of entire categories like balloons and sailplanes from EU competence.

But this correlation between “EASA rules” and “heavy rules” is not inevitable: appropriate EU light rules would allow benefits to be gleaned without the spectre of disproportionate regulation. The proposed inclusion of unmanned aircraft, without a minimum weight limit, is an example of this: harmless flying toys will be subject to very light rules, but EU rules nonetheless.

So another opportunity is offered by the proposed opt-in (Art 2(4)) for manufacturers of aircraft below the weight limits set in the Annex of excluded aircraft. Combined with good, proportionate rules for certification at the lightest EU tier (e.g. ELA1), this means that they can now make a business choice as to whether the effort of EU certification is worthwhile. And it suggests that higher weight limits are appropriate, as the value that comes from inclusion in the scope of EU regulation is still available on a case by case basis: there is no argument that a higher weight limit deprives a manufacturer of the advantages of EU certification.

✘ THE DEVIL IN THE DETAIL – NEEDS WORK TO SUPPORT THE PRINCIPLES

However, all the positive aspects of the previous section depend on the possibility of proportionate regulation under the new Basic Regulation. It is in the detail of this that the proposal is disappointing. While the articles in the main body of the proposal reflect some welcome thinking in introducing the flexibility required for GA, the Essential Requirements (ERs) still look as if they were written for airliners and airline pilots.

In the last few years, implementing rules have been tailored to the proportionate requirements of GA. However, on many occasions, the Basic Regulation and the Essential Requirements have presented stark and immovable obstacles to the joint efforts. The ERs should simply make up a risk register of what needs to be addressed for safety, not how it should be addressed. The “how” must be tailored to specific needs, of the aircraft or the operation.

There are three classes of ER that need to be addressed:

- Those that are written to reflect the risk portfolio and operating methods of the airlines, which may not be appropriate for GA [which contradicts Art 4(2)].
- Those that mandate a particular way of achieving an objective rather than stating the objective itself [which contradicts Art 4(1)(e)].
- Those that contain a level of detail that limits the flexibility required to address progress in technology and practices [which contradicts Arts 1(2)(g) and 4(1)(a)].

In that sense, the detail of the proposal lacks consistency with the principles it sets out.

SPECIFIC COMMENTS

✓ ART 1(2)(A) IMPROVING PERFORMANCE

This Regulation further aims at ... contributing to the wider Union aviation policy and to the improvement of the overall performance of the civil aviation sector;

This is an excellent addition to the objectives. If safety regulation balances the immediate safety objective against realistic economic needs, a healthy industry will be better able to make the progress that it needs to support that safety objective.

✓ ART 1(2)(G/H) INNOVATION AND INTEROPERABILITY

promoting research and innovation, amongst others in regulatory and certification processes;

This is also a welcome improvement to support the other objectives.

✓ ART 1(2)(G/H) INNOVATION AND INTEROPERABILITY

promoting, in the fields covered by this Regulation, technical and operational interoperability.

This is welcome, though it is important that interoperability is just one tool in promoting total system safety and efficiency, and not an objective in its own right. We propose moving this to a sub-paragraph of Art 4(1).

ART 1(3)(B) RECOGNITION OF CERTIFICATES AND DECLARATIONS THROUGHOUT THE UNION

ensuring that the declarations and certificates issued in accordance with this Regulation and its delegated and implementing acts are valid throughout the Union, without any additional requirements;

While this is unchanged, it should be noted that this is an area in which the EASA System has performed poorly over the last decade. For example, Language Proficiency certification for pilots is not mutually recognised, undermining a level playing field.

✓ ART 1(3)(F) EVIDENCE-BASED DECISION MAKING

The objectives ... shall be achieved by ... the gathering, analysis and exchange of information to inform evidence-based decision making;

Evidence-based decision making is another key enabler, and is very welcome.

✓ ART 1(3)(G) SAFETY PROMOTION

the undertaking of awareness and promotion initiatives, including training, communication and dissemination of relevant safety information.

The recognition that rulemaking is not the only (and often not the best) path to safety is important and welcome.

✘ ART 2(1)(B)(II) THIRD COUNTRY AIRCRAFT

registered in a third country and operated by an operator established, residing or with a principal place of business in the territory to which the Treaties apply;

The continued inclusion of third-country aircraft operating privately is a missed opportunity for a positive change.

Non-commercial operators of third-country aircraft have always operated with a level of safety commensurate with EU operators. The oversight mechanisms are adequate. In a regulation that now trumpets evidence-based decision-making, the lack of evidence to support bringing third country non-commercial operators into the scope of the BR is an ugly anomaly. The Commission has had the embarrassment of 3 extensions to the imposition of the Aircrew regulation on third country non-commercial operators, which is an implicit acknowledgement that there is no evidence of a significant safety risk. Enough is enough. Restrict the scope to commercial operations (and non-commercial operations of complex motor-powered aircraft) by operators of third-country aircraft based in the EU:

registered in a third country and used by an operator established or has a principal place of business in the territory to which the Treaties apply and engaged in a type of activity which requires it, by the delegated acts adopted pursuant to Article 28, to hold a certificate or declare its capability;

✘ ART 2(1)(E) AERODROMES IN SCOPE

(e) the design, maintenance and operation of aerodromes located in the territory to which the Treaties apply, which are:

- (i) open to public use;*
- (ii) serve commercial air transport;*
- (iii) serve operations using instrument approach or departure procedures; and*
- (iv) have a paved runway of 800 metres or more, or exclusively serve helicopters;*

The point “serve commercial air transport” is open to broad interpretation. Is a single CAT flight sufficient to meet this criterion, and if so, what is the mechanism for the operator of the aerodrome to be informed of the flight?

At a time when EASA is trying to promote IFR as a means of improving GA safety, it is disappointing that the establishment of IFR procedures at an airport causes the spectre of EASA certification appear. The procedure for exemption is complex and difficult.

A preferred option would therefore be to replace criteria (iii) and (iv) with the passenger/movement criteria in Art 2(7), combined with an opt-in for airports with fewer passengers/movements, as follows.

(e) the design, maintenance and operation of aerodromes located in the territory to which the Treaties apply, which are:

- (i) open to public use;*

(ii) handles more than 10 000 passengers per year as commercial air transport or more than 850 movements related to cargo operations per year as commercial air transport.

Art 2(7) would then be replaced by:

An organisation responsible for the operation of an aerodrome may request the Commission to decide that the provisions of Section IV of Chapter III apply to the aerodrome, aerodrome equipment, the operation of aerodromes and the provision of ground handling services and apron management services where the aerodrome:

(a) serves operations using instrument approach or departure procedures; and

(b) has a paved runway of 800 metres or more, or exclusively serve helicopters.

The Commission shall decide on the basis of that request, after having consulted the Agency and the Member State where the organisation concerned has its principal place of business, whether the criteria of the first subparagraph have been fulfilled. That decision shall be adopted by means of an implementing act which shall be adopted in accordance with the advisory procedure referred to in Article 116(2) and shall be published in the Official Journal of the European Union. The Agency shall also include that decision in the repository referred to in Article 63.

From the date specified in that implementing decision, the aerodrome, aerodrome equipment, the operation of aerodromes and the provision of ground handling services and apron management services shall be solely regulated by the provisions of Section IV of Chapter III and of the delegated and implementing acts adopted on the basis of those provisions.

Alternatively, the adverse effect on safety might be alleviated by basing the criterion on the presence of an instrument runway rather than an IAP.

✓✘ ART 2(3)(D) ANNEX I AIRCRAFT EXCLUDED FROM SCOPE

of aircraft the operation of which involves low risk for aviation safety, as listed in Annex I

This appears to present a risk criterion falling into the trap described above of conflating light regulation with national regulation. Many other aircraft also represent low risk. The appropriate criterion is whether the aircraft type would benefit from EU regulation rather than national regulation. High risk activities may be best regulated locally, while many low risk activities would benefit from EU regulation. See also the section above on Scope. To avoid the implication that all low risk operations are better excluded from scope, a re-phrasing is required.

of aircraft listed in Annex I, the operation of which involves low risk for aviation safety,

Further, the adjustment by delegated acts is limited in the proposal to dates and weights. It must also be possible for paragraphs (b) and (c) of Annex I to be adapted to account for changes in technology and business models. For example, modern kits significantly improve the safety of amateur built aircraft, but reduce the proportion of work performed by the amateur builder. The intent of the rule is that the amateur builder willingly takes some responsibility for the aircraft production, without reliance on the type certification processes associated with standard aircraft manufacture. This does not require a 51% criterion. It would be simple to allow the Commission more freedom with its delegated acts.

As regards point (d), the Commission shall be empowered to adopt delegated acts in accordance with Article 117 in order to adjust, where this is necessary to in light of technical or operational developments, in particular the introduction of new manufacturing techniques or new technologies, and in as far as this is justified in light of the low risk for aviation safety involved in the operation of the aircraft concerned, the following criteria set out in Annex I:

(i) the dates referred to in point (a)(i) of that Annex;

(ii) the weight, speed, and hot air volume limits referred to in points (e), (f), (g), (h), (i) and (j) of that Annex; and

(iii) the criteria set out in points (b) and (c) of that Annex.

✓✗ ART 2(4) OPT-IN CRITERIA FOR DESIGNS

Similarly the opt-in appears to be limited to manufacturers whose aircraft fall below the weight criteria etc. It may also be appropriate for TC holders of historic and ex-military aircraft, and for builders of quasi-industrial kit aircraft to have an opt-in.

(c) the design of that aircraft type has not been approved in accordance with the national laws of a Member State.

is also unhelpful. Many manufacturers would wish to start under national laws, and then move to European regulation, and this should be encouraged.

Delete criterion (c). It is not necessary.

✗ ART 2(7) EXEMPTION PROCESS FOR AERODROMES

This section appears to significantly complicate the process of exempting airfields that serve just a few CAT passengers or cargo operations. The explanatory note, ironically perhaps in the section “Regulatory fitness and simplification”, says:

The initiative also exempts aerodromes which are not open to public use, which do not serve commercial air transport, or which do not meet certain minimum technical characteristics related to the size or scope of operations.

But the process described is far more complex than the process for exemption in the current Basic Regulation. It is not clear what advantage this complexity offers, and it will probably be onerous for member states and aerodrome operators to comply with.

(Please note the comments on Art 2(1)(e) which call for more significant changes on this theme.)

✗ ART 3(1) DEFINITION OF OVERSIGHT

‘oversight’ means the verification, by or on behalf of the competent authority, on a continuous basis that the requirements on the basis of which a certificate has been issued or the requirements in respect of which a declaration has been made, continue to be complied with;

The second part clouds the distinction between a certificate and a declaration. In the case of a declaration, there is no *verification*, only action in respect of *breaches* of requirements. The word continuing (“ongoing”) which was previously used is more appropriate than continuous (“without interruption”).

‘oversight’ means the verification, by or on behalf of the competent authority on a continuing basis, that the requirements on the basis of which a certificate has been issued continue to be complied with, or the detection and rectification of any breach of requirements in respect of which a declaration has been made;

✘ ART 3(10) DEFINITION OF OPERATOR

‘operator’ means any legal or natural person operating or proposing to operate one or more aircraft or one or more aerodromes;

This definition remains valueless. The issue is what it means to *operate* an aircraft. In the literal sense of the word, the pilot who physically manipulates the controls operates it: on the other, it is traditional that an airline is considered the operator of its fleet. It is the choice of where and when to fly that is important. We suggest adding a definition:

‘operate’ an aircraft means to have control over the timing and routes of the flights of that aircraft.

✔✘ ART 3(23) DEFINITION OF COMMERCIAL AIR TRANSPORT

Article 4 of the proposed basic regulation requires that measures under the regulation must take into account, as appropriate for the activity concerned, inter alia:

(a) whether persons other than flight crew are carried on board, and in particular whether the operation is open to members of the public; ...

(f) the extent to which the persons affected by the risks involved in the operation are able to assess and exercise control over those risks;

The level of regulatory intervention required should depend on whether, in the absence of that intervention, stakeholders are able to assess and control risk. This principle gives rise to the so-called “risk hierarchy”.

The operation of an air carrier, from whom a member of the public buys a ticket for carriage from A to B, occupies a distinct place high in the “risk hierarchy” in that it seems self-evident that such a passenger is, without the support of a regulatory framework, in no position to assess and exercise control over risk. At the lower end of the hierarchy, a private pilot flying solo requires no protection from the law (though third parties may do so, hence some aspects of the flight might need to be subject to regulation).

However, there are other situations in which passengers are carried, money changes hands, but it is not appropriate to apply the same level of regulatory intervention as for an air carrier.

At the lower end of the hierarchy, those who choose to cost share in a light aircraft are surely not naïve enough to believe that the level of protection is equivalent to an airline flight, any more than someone participating in car pooling would expect regulation.

Perhaps near the middle of the risk hierarchy is a flight in a vintage aircraft like a Spitfire, where money is paid for the carriage of a passenger, but it is paid for the experience of the flight, not for transport from A to B. The UK has developed the helpful concept of Safety Standards Acknowledgement and Consent (SSAC) to cover such cases, and applies an intermediate level of regulation, though its status under the existing BR is somewhat unclear.

At the higher end, a service offered by one company to transport the employees of another (for example, a helicopter operation to transport workers to offshore installations) has many of the characteristics of an airline operation, though it is not a scheduled service and an individual member of the public cannot buy a ticket.

The definition of commercial air transport in the BR is critical in to the implementation of the risk hierarchy.

Good and effective regulation must apply the principles of Article 4, and hence the regulatory approach to the risk hierarchy is critical. A critical feature of the approach is whether to

- use a **broad definition** of CAT in the BR and carve out exceptions for activities in the middle of the hierarchy, or
- use a **restrictive definition** and, where required, apply additional regulatory measures to activities in the middle of the hierarchy through implementing rules.

CAT was not defined in 216/2008. The proposal from the Commission is to insert a definition of CAT into the BR. If the definition is now in the BR, the exceptions must also be set out in then BR.

If a **broad definition** is to be used, and a proportionate concept of what should be excluded would require more detailed technical investigation, then it would be essential to add to Article 28 a paragraph (h):

(h) the conditions under which, taking into account the principles of Article 4, operations shall be exempted from the requirements applicable to commercial air transport in this Regulation and the measures taken under this Regulation.

Alternative approaches considered **and rejected** by us would be to allow exceptions within the implementing rules either:

- by amending Art 27(1)
(1) Unless otherwise established by the delegated acts adopted pursuant to Article 28, operators with a principal place of business in the territory to which the Treaties apply and engaged in commercial air transport operations shall be subject to certification and shall be issued with a certificate.

- or by adding to Article 28 a paragraph (h)
(h) the conditions under which, taking into account the principles of Article 4, operations should be excluded from the requirements of Articles 27 and 49 and the delegated acts established under Articles 28 and 50.

Both of these approaches would provide flexibility in Ops regulation, but would **not** alleviate the encompassing definition of CAT in other domains, such as aircrew and maintenance. Analogous problems have introduced unnecessary complexity in the current implementing rules.

The Commission's proposal is to use a more **restrictive definition**:

'commercial air transport' means an aircraft operation to transport passengers, cargo or mail for remuneration or other valuable consideration between two different aerodromes;

As it stands, this is inadequate, as it is not restrictive enough. The exclusion of A-to-A flights from this scope is welcome. However, there are a number of other types of flight currently excluded (after much technical debate) from the scope of Part-CAT by the Air Ops regulation 965/2012, including:

- cost-sharing between private individuals;
- competition flights; and
- introductory flights.

Other exceptions may, based on the experience of future application of 965/2012, be required for proportionality.

If a **restrictive definition** is to be used, one approach would be to refine the definition further to:

*'commercial air transport' means an aircraft **operation open to the public, where remuneration or other valuable consideration is given or promised for the transport of passengers, cargo or mail between two different aerodromes;***

Note that Art 4(2)(a) explicitly requires that "whether the operation is open to members of the public" must be taken into account in enacting measures. It would be inconsistent if the BR itself did not respect this principle.

The rewording is intended to distinguish an operation primarily intended to deliver passengers or cargo from A to B from an operation where the primary purpose is the flight itself (like an A to A flight) which happens to take-off and land at different places. This would support the concept of SSAC.

Another approach might be feasible using a **restrictive definition** is one that has found favour at EASA in the development of Part-M Light. That is to harmonise the approach with that in Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the Community (Recast).

Article 3 Operating licence

1. No undertaking established in the Community shall be permitted to carry by air passengers, mail and/or cargo for remuneration and/or hire unless it has been granted the appropriate operating licence.

An undertaking meeting the requirements of this Chapter shall be entitled to receive an operating licence.

3. Without prejudice to any other applicable provisions of Community, national, or international law, the following categories of air services shall not be subject to the requirement to hold a valid operating licence:

(a) air services performed by non-power-driven aircraft and/or ultralight power-driven aircraft; and

(b) local flights.

The Opinion on Part-M Light is likely to propose that Part-M Light can be applied to non-complex-motor-powered aircraft that not used by operators required to hold operating licences under 1008/2008.

Air carriers regulated under 1008/2008 are clearly performing CAT. Similarly it has never been suggested even by the most zealous regulator that a cost-sharing flight in a light aircraft would be required to obtain an operating licence: such a flight is self-evidently not an “air service” performed by an “undertaking”.

Thus the simplest approach using a **restrictive definition** would be to define:

*‘commercial air transport’ means an aircraft operation to transport passengers, cargo or mail for remuneration or other valuable consideration **by an undertaking required by Regulation (EC) No 1008/2008 to hold an operator’s licence.***

With either of these **restrictive definition** approaches, implementing rules could apply requirements, beyond those applying to purely private operations, for cases in the middle of the risk hierarchy. This approach, for example, has been taken in Opinion 01/2016 for “commercial passenger ballooning”, which is not treated as CAT, but is subject to additional rules and oversight.

✘ ART 3(28) DEFINITION OF NON-INSTALLED EQUIPMENT

‘non-installed equipment’ means any equipment carried on board of an aircraft but not installed in the aircraft and which may have an impact on safety;

Mere carriage is not sufficient to distinguish this from cargo. We propose

*‘non-installed equipment’ means any equipment **intended for use in the operation of an aircraft**, which may have an impact on safety, and carried on board the aircraft but not installed in it;*

✔ ART 4(1) PRINCIPLES

A number of new principles are welcome additions to the foundations of aviation regulation. In particular:

(b) build on the best available evidence and analysis;

places evidence-based regulation at the heart of the EASA system. Without plausible evidence of significant risk, the imposition of regulation is very rarely justified.

(d) take into account interdependencies between the different domains of aviation safety, and between aviation safety and other technical domains of aviation regulation;

The EASA System has suffered from a silo-approach, lacking a total system picture. This requirement is critical to improving overall safety performance of EU aviation.

(e) lay down, where possible, requirements in a manner which focuses on objectives to be achieved, while allowing different means of achieving compliance with these objectives;

The move towards objective-based regulation is particularly important for the broad spectrum of aircraft types and operations that is GA.

(g) take non-binding measures, including safety promotion actions, where possible;

We also know that regulation is just one of many types of effective safety intervention. This is another critical principle. “*where practical*” would be better.

*(g) take non-binding measures, including safety promotion actions, where **practical**;*

✓ ART 4(2) MEASURES

The measures taken under this Regulation shall correspond and be proportionate to the nature and risk of each particular activity to which they relate.

The promotion of proportionality to a top level criterion is an important aspect of the new BR. In particular, consideration of:

(f) the extent to which the persons affected by the risks involved in the operation are able to assess and exercise control over those risks;

is an important way of making sure that regulatory protection is focused where it is needed, and not on those who knowingly choose to take risk affecting only themselves.

✓ CHAPTER II: PROGRAMMING AND PLANNING

The emphasis on programming and planning complements Art 4(1)(d) by underpinning a joined up approach to safety management, for which regulation is just one of many tools. It is welcome.

✓ ART 6(3) ACCEPTABLE LEVEL OF SAFETY PERFORMANCE

The European Plan for Aviation Safety shall specify, taking into account the objectives set out in Article 1, an acceptable level of safety performance in the Union, which the Member States, the Commission and the Agency shall jointly aim at achieving.

This is an important and progressive principle. Without benchmarks, which of course need to be tailored to different activities and aircraft types, inconsistencies between domains cause a sub-optimal allocation of resources. If one were to ask a group of engineers to collaborate to build a “strong” chain, any good engineer would first ask “how strong is strong enough?” So too with safety: we must specify “safe enough” to avoid resource being spent addressing low risks, when it could better be allocated to higher risks.

We propose adding:

The acceptable level of safety performance shall be tailored to activities, in accordance with the principles and measures of Article 4.

✓✗ CHAPTER III SUBSTANTIVE REQUIREMENTS

The general appearance of the phrase “*unless otherwise established by the delegated acts*” throughout this chapter helps to address the issues that have led to disproportionate regulation for GA over the first decade of EASA. On too many occasions, end-users, manufacturers, Member States and the Agency have all wanted to agree proportionate rules, only to find a legal obstacle in the BR.

The absence of the phrase in Arts 11 (Type Certification) and 14 (Certificate of Airworthiness) is disappointing, and underpins the need for the derogations in Art 17. It would be much better to introduce the possibility of exceptions through the delegated acts in Arts 11 and 14, to take account of the needs of aircraft at the boundaries of scope. We already have a framework around

It is also not clear how Art 18(1)(d)(i), which allows the Commission to set

the conditions for situations in which, with a view to achieving the objectives set out in Article 1 and while taking account of the nature and risk of the particular activity concerned, such certificates shall be required or shall not be required, as applicable;

interacts with the apparent global requirements in 11 and 14.

Insert the phrase

Unless otherwise established by the delegated acts adopted pursuant to Article 18,

at the beginning of Art 11 and Art 14.

The flexibility offered by Arts 12, 13, 15, 16(1), and 20(1) is most welcome.

✓ ANNEX I EXCLUDED AIRCRAFT: HISTORIC

Annex I currently excludes historic aircraft from the scope of EU regulation using fixed dates:

(a) historic aircraft meeting the following criteria:

(i) simple aircraft whose:

- initial design was established before 1 January 1955, and*
- production has been stopped before 1 January 1975; or*

Provision needs to be made for aircraft types that are becoming unsupportable. The provisions in the BR and its implementing rules for airworthiness and continuing airworthiness are written based on assumptions about the support of the TC holder and the availability of parts, which are poor assumptions for older aircraft.

One option which might be considered would be the amendment of paragraph (a) to a later or rolling date. However it would not be appropriate for aircraft reaching a certain age to fall from EU regulation to national regulation, because member states and competent authorities might not have the regulatory structures nor resources to deal with these aircraft.

While the issue is a complex and difficult one, the conclusion should be that no change is appropriate. The issue should instead be dealt with by improving the EU rules for such aircraft.

✗ ANNEX I EXCLUDED AIRCRAFT: EXPERIMENTAL

The provisions for experimentation in aircraft design are inadequate. Since the provisions of the BR assume an intent towards serial production from the outset and does not accommodate experimentation, the exclusion needs to be broader. By contrast, the UK CAA's 'E' Conditions for experimental aircraft (CAP1220) allow such development and experimentation up to the proof of concept stage. We therefore propose:

*(b) aircraft specifically designed or modified for research, experimental, **technology development** or scientific purposes, likely to be produced in very limited numbers or as a **proof of concept prior to production.***

This would allow, particularly with relevance to GA aircraft, new companies to explore new designs, technologies and projects prior to committing to formal production and certification. This would have the potential to reduce the cost of entry into the market place and encourage growth in such sectors.

✘ ANNEX I EXCLUDED AIRCRAFT: AMATEUR

(c) manned aircraft at least 51 % of which is built by an amateur, or a non-profit making association of amateurs, for their own purposes and without any commercial objective;

The “51% rule” does not reflect modern business models (as Arts 1(2)(a) and (g) and 4(1)(a) demand). Many modern aircraft that are built by amateurs are assembled from factory kits. In general, the more that is manufactured in the factory, the better the safety performance of the product, because the factory has better equipment and facilities for high quality production. To force some of the production work to be done by the amateur builder to satisfy the 51% rule may therefore reduce the safety of the end result.

A rule is required that caters for the genuine amateur builder but avoids circumvention of standard certification procedures for manufacturers who supply almost complete aircraft that would otherwise need to go through a full certification process.

The European Federation of Light, Experimental and Vintage aircraft has proposed the following alternative:

(c) aircraft which is built by an amateur individual, or a non-profit making organisation of amateurs, where the construction of the aircraft is from plans or a kit and requires a defined level of involvement of the builder, is intended for use by the builder and without any commercial objective in terms of production or subsequent private sale.

While this moves us in the correct direction, there is a genuine concern that this removal of the 51% criterion might be exploited by a manufacturer seeking to circumvent the provisions of Chapter III Section 1.

EASA has recently started some important work on Part-21 proportionality. In order that the regulatory framework around amateur-built aircraft can take advantage of this important technical work, it is doubly important that the amendment to Art 2(3)(d) proposed above is introduced, to allow the implementing rules to refine the detail of this paragraph (c).

✘ ANNEX I EXCLUDED AIRCRAFT: LIGHT AIRCRAFT

The plethora of weights listed in (e), (f) and (g) have little rhyme or reason behind them. There appears to be no risk-based safety objective behind them: a third party on the ground cares little whether they are hit by an aircraft with an electric engine or a piston engine, nor whether it has a fixed wing or rotary wing, nor indeed whether it has one seat or two.

A 450 kg (or lower) limit for two-seat microlights has appeared to have a counter-intuitive effect on safety. For some types with high empty weight, there is not enough payload for two adult occupants and fuel. Many if not most such aircraft are flown overweight, possibly safely enough, though one should not ignore the human factors aspects of pilots learning that they are breaking the rules almost

from flying lesson number one. Some stakeholders have requested various increased limits, such as 540 kg and 560 kg, but this would mean having an EASA certification regime for aircraft in a narrow 60 or 40 kg weight range up to the next tier, which is VLA.

Only a tiny number of light sports aircraft (LSA) have been certified under CS-LSA (in effect, 450 kg to 600 kg MTOM), and European LSA manufacturers rely on export to states with more permissive certification regimes in order to stay in business.

Coupled with these challenges, the Commission has proposed an innovative approach: an opt-in (Art 2(4)) for manufacturers of aircraft falling into Annex I but who wish to work within the EASA system. This presents an interesting opportunity: under the existing framework, if LSA were excluded from the scope of the BR, each Member State would have to retain a regulatory regime for the LSA MTOM range to cater for national manufacturers needing it. This made it difficult to exclude LSA from the current BR.

But with the opt-in possibility of the new BR, a manufacturer has a choice between a national and EASA regulation. In states where a national regulatory regime is available in the appropriate weight range, manufacturers can make a decision between that and the EASA regime based on business value. This also offers Member States the choice of providing a national regulatory regime for LSA (as well as microlights) or alternatively requiring manufacturers who wish to design aircraft that exceed the national microlight limits to work within the EASA system.

We therefore propose to move the threshold for light aircraft to include the LSA range. The stall speed must be increased commensurately, and an empty weight limit is added to avoid the “vanishing payload” issue seen in microlights and described above.

A maximum empty weight limitation already appears in ASTM F2245, adopted by CS-LSA. This depends on engine power, and for a 100 hp engine typical of a 2-seat 600 kg LSA, the maximum empty weight is approximately 405 kg. This is therefore chosen as the maximum empty weight for inclusion in Annex I (e).

(e) aircraft, other than balloons, having the minimum steady flight speed in landing configuration not exceeding 45 knots calibrated air speed (CAS) and having no more than two seats that have a maximum take-off mass (MTOM) of no more than 600 kg, and an empty mass, excluding fuel, of no more than 405 kg.

(f) replicas of aircraft meeting the criteria of points (a) or (d), for which the structural design is similar to the original aircraft;

(g) hot-air balloons having a single occupancy and a maximum design hot air volume of not more than 900 m³;

(h) any other manned aircraft which has a maximum empty mass, including fuel, of no more than 70 kg.

There is no risk-based safety rationale for providing different limits for aircraft with different engine types, nor with no engine, nor with a rotary wing.

Careful consideration needs to be given to the arrangements for legacy aircraft, which currently fall within EASA scope but would be excluded with this higher weight limit. Art 2(3)(d) therefore needs a corresponding amendment:

*(d) the design, production, maintenance and operation of aircraft the operation of which involves low risk for aviation safety, as listed in Annex I, and to the personnel and organisations involved therein, **unless the aircraft has been issued, or deemed to have been issued, with a certificate in accordance with Regulation (EC) No 216/2008.***

✘ ANNEX II ESSENTIAL REQUIREMENTS FOR AIRWORTHINESS: NON-INSTALLED EQUIPMENT

The introduction of essential requirements for non-installed equipment is a minefield. There may well be unintended consequences. The ERs for non-installed equipment require:

1.4.3 Non-installed equipment must be designed to minimise errors which could contribute to the creation of hazards.

This implies that non-installed equipment must be *designed* with a knowledge of aviation hazards, which precludes commercial off the shelf equipment designed for generic use. The ER would be better as:

1.4.3 Non-installed equipment must not introduce significant errors that contribute to hazards, unless the associated risks can be managed and mitigated.

✘ ANNEX IV ESSENTIAL REQUIREMENTS FOR AIRCREW: THEORETICAL KNOWLEDGE

1.2 Such knowledge must include at least the following:

is far too detailed for an ER. Omit the list, as the first sentence of 1.2 is sufficient.

1.3.2. An appropriate level of competence in theoretical knowledge must be maintained. Compliance must be demonstrated by regular assessments, examinations, tests or checks. The frequency of examinations, tests or checks must be proportionate to the level of risk associated with the activity.

Demonstration is not appropriate for an ER. The pilot must *have* the competence: the method and level of assurance of that depends on the context, according to the principles of Art 4. Restrict the requirement to:

1.3.2. An appropriate level of competence in theoretical knowledge must be maintained.

✘ ANNEX IV ESSENTIAL REQUIREMENTS FOR AIRCREW: PRACTICAL SKILLS

1.4 ... and must cover, if appropriate to the functions exercised on the aircraft, the following:

As above, the list is too detailed for an ER. Delete the list, retaining only

1.4 A pilot must acquire and maintain the practical skills as appropriate to exercise his/her functions on the aircraft. Such skills must be proportionate to the risks associated to the type of activity.

1.5.2. An appropriate level of competence in practical skills must be maintained. Compliance must be demonstrated by regular assessments, examinations, tests or checks. The frequency

of examinations, tests or checks must be proportionate to the level of risk associated with the activity.

As with TK, the method of assurance is not appropriate for an ER. Delete all but the first sentence to leave:

1.5.2. An appropriate level of competence in practical skills must be maintained.

✘ ANNEX IV ESSENTIAL REQUIREMENTS FOR AIRCREW: LANGUAGE PROFICIENCY

1.6. Language Proficiency

A pilot must have demonstrated language proficiency to a degree appropriate to the functions exercised on the aircraft. Such demonstrated proficiency shall include: ...

“Demonstration” is not appropriate for an ER. The pilot must *have* the proficiency: the method and level of assurance of that depends on the context, according to the principles of Art 4. Restrict the requirement to:

A pilot must have language proficiency to appropriate to the functions exercised on the aircraft. Such proficiency shall include: ...

✘ ANNEX IV ESSENTIAL REQUIREMENTS FOR AIRCREW: TRAINING

1.8.1. Training must be executed through a training course.

This is pointless. If the phrase “training course” is interpreted prescriptively, it creates valueless administrative burden for the simplest of training needs. If the phrase “training course” is interpreted sufficiently broadly (as it tends to be in the IRs) then the ER has no regulatory value. Delete this and allow the IRs to specify where a training course is required.

✘ ANNEX IV ESSENTIAL REQUIREMENTS FOR AIRCREW: MEDICAL FITNESS

3.1.1. All pilots must periodically demonstrate medical fitness to satisfactorily execute their functions, taking into account the type of activity. Compliance must be shown by appropriate assessment based on aero-medical best practice, taking into account the type of activity and the possible mental and physical degradation due to age.

Again the *demonstration* aspect is inappropriate for an ER, and will obstruct necessary progress in risk-based regulation. Replace it with:

3.1.1. All pilots must **have and maintain** medical fitness to satisfactorily execute their functions, taking into account the type of activity.

✘ ANNEX V ESSENTIAL REQUIREMENTS FOR OPS: OPERATING PROCEDURES

1.2. A flight must be performed in such a way that the operating procedures specified in the Flight Manual or, where required the Operations Manual, for the preparation and execution of the flight are followed. To facilitate this, a checklist system must be available for use, as applicable, by crew members in all phases of operation of the aircraft under normal, abnormal and emergency conditions and situations. Procedures must be established for any reasonably foreseeable emergency situation.

This ER is typical of the requirements derived from airline operations, in its mention of “operating procedures”, a “checklist system”, and “normal, abnormal and emergency conditions”. While in many circumstances, similar approaches may lead to good practice in much of GA, it is not *essential* for a significant portion of GA operations, where, for example, small manufacturers have not had the resource to consider operating procedures appropriate to the full spectrum of operating conditions and environments. As an analogy, one would not expect the operator of a private car to operate it in the regimented way with checklists and SOPs; rather, we rely on the competence of the individual to react appropriately to situations as they arise.

Move this requirement to section 8, applicable to CAT and NCC only.

✘ ANNEX V ESSENTIAL REQUIREMENTS FOR OPS: HAZARDOUS FLIGHT CONDITIONS

2(e) In case of flight into known or expected icing conditions, the aircraft must be certified, equipped and/or treated to operate safely in such conditions.

This is an example of a requirement that is far too detailed to be essential. Replace it with:

2(e) Appropriate mitigation means or contingency plans must be in place to deal with potentially hazardous atmospheric conditions expected to be encountered in flight.

✘ ANNEX V ESSENTIAL REQUIREMENTS FOR OPS: PRE-FLIGHT PLANNING OF CONDITIONS

2(f) For a flight based on visual flight rules, meteorological conditions along the route to be flown must be such as to render compliance with these flight rules possible. For a flight based on instrument flight rules a destination and where applicable alternate aerodrome(s) where the aircraft can land must be selected, taking into account in particular the forecasted meteorological conditions, the availability of air navigation services, the availability of ground facilities and the instrument flight procedures approved by the State in which the destination and/or alternate aerodrome is located.

Likewise this is far too detailed for an essential requirement.

2(f) The forecast meteorological conditions, the availability of air navigation services, the availability of ground facilities and the availability of instrument flight procedures must indicate that the planned flight, or a suitable contingency plan, can be safely executed.

✘ ANNEX V ESSENTIAL REQUIREMENTS FOR OPS: OPERATING PROCEDURES AGAIN

4.1. An aircraft must be operated in accordance with its airworthiness documentation and all related operating procedures and limitations as expressed in its approved flight manual or equivalent documentation, as the case may be. The flight manual or equivalent documentation must be available to the crew and kept up to date for each aircraft.

Again this ER is typical of the requirements derived from airline operations. It is inconsistent with the principles in Art 4 (c) and (f). The requirement to comply with “operating procedures” is inappropriate for GA. The ratio of the breadth of operating conditions to the resource available to design such procedures in advance is high for GA, and leads to sub-optimal or even dangerous operation if the

operating procedures are considered obligatory. Pilots must be allowed to use their judgement. The consideration of airworthiness limitations as mandatory could be reviewed in the same light, but the paradigm is so deeply embedded in aviation culture that it might be better to retain it. Delete the mention of operating procedures:

*4.1. An aircraft must be operated in accordance with its airworthiness documentation **and limitations** as expressed in its approved flight manual or equivalent documentation, as the case may be. The flight manual or equivalent documentation must be available to the crew and kept up to date for each aircraft.*

✘ ANNEX V ESSENTIAL REQUIREMENTS FOR OPS: MAINTENANCE

6.1 (d) the maintenance of the aircraft is performed in accordance with the applicable requirements.

This is a welcome revision but is not well phrased for an ER. It is circular. The ERs should *determine* the applicable requirements.

6.1 (d) the maintenance of the aircraft is performed so as to assure its continuing airworthiness.

✘ ANNEX V ESSENTIAL REQUIREMENTS FOR OPS: RELEASE AFTER MAINTENANCE

The aircraft must not be operated unless it is released to service by qualified persons or organisations, after maintenance. The signed release to service must contain in particular, the basic details of the maintenance carried out.

This assumes the mechanism by which the ER will be achieved. Replace with.

The aircraft must not be operated unless it is in a serviceable state after maintenance. The basic details of the maintenance carried out must be recorded.

✘ ANNEX V ESSENTIAL REQUIREMENTS FOR OPS: SIMULATION OF EMERGENCIES

7.4. Emergency or abnormal situations must not be simulated when passengers or cargo are being carried.

This is not appropriate for GA, where passengers may be interested participants. Most simulations of emergency or abnormal situations do not expose occupants to an unacceptable level of risk for GA. It is, of course, appropriate where fare paying passengers are carried on CAT. Move it to section 8 for CAT and NCC.