



European Aviation Safety Agency – Rulemaking Directorate  
**Advance Notice of Proposed Amendment  
2013-16**

## Lead Flight Test Engineer Licence

RMT.0583 (MDM.003c) – 13/08/2013

### EXECUTIVE SUMMARY

This Advance Notice of Proposed Amendment (A-NPA) is issued to examine the need for a lead flight test engineer (LFTE) licence. The competence and experience requirements for LFTE have been already addressed by CRD 2008-20 and will be reflected into an Opinion on Part-21 on Flight Testing.

The comments received on the LFTE licensing topic during the consultation period of NPA 2008-20 'Flight Testing' and during the reaction time period to CRD 2008-20, were divergent. Different opinions were also noted when the issue was debated during the dedicated rulemaking group discussions. Therefore, the Agency considers that it is necessary to receive a wider input from the stakeholders on this issue.

This A-NPA proposes two options on which the stakeholders are strongly invited to comment. The expected input will consist in focussed feedback on the pros and cons arguments for an LFTE licence.

Additionally, the questionnaire gives the Agency's direct input on the magnitude of the LFTE issue for the current projects and future developments. Stakeholders are asked to choose one of the two options proposed. Based on the input received, a Decision will conclude on the way forward on the LFTE licensing.

Applicability		Process Map	
Affected regulations and decisions:	None (Regulation (EC) No 216/2008, BR if NPA is pursued).	Concept Paper:	No
Affected stakeholders:	NAAs, FTEs, Organisations employing FTEs (i.e. aircraft manufacturers), Flight Test Training Schools	Terms of Reference:	N/A
Driver/origin:	Social, Safety/Industry	Rulemaking group:	Yes
Reference:	N/A	RIA type:	Light
		Technical consultation during NPA drafting:	No
		Duration of A-NPA consultation:	3 months
		Review group:	Yes
		Focussed consultation:	No

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## Table of contents

1. Procedural information .....	3
1.1. The rule development procedure .....	3
1.2. The structure of this A-NPA and related documents .....	3
1.3. How to comment on this A-NPA .....	4
1.4. The next steps in the procedure .....	4
2. Explanatory Note and key questions for stakeholders .....	5
2.1. What is the issue or problem that may require an action? .....	8
2.1.1. What is the regulatory framework?.....	8
2.1.2. What are the underlying drivers of the problem?.....	9
2.1.3. Who is currently affected, in what ways and to what extent? .....	9
2.2. Objectives .....	9
2.3. Overview of the options .....	9
2.4. Analysis of impacts.....	10
2.4.1. Safety impact .....	10
2.4.2. Environmental impact.....	10
2.4.3. Social impact.....	10
2.4.4. Economic impact.....	11
2.4.5. General aviation and proportionality issues.....	12
2.4.6. Impact on 'Better Regulation' and harmonisation .....	12
2.4.7. Summary of impacts .....	12
2.5. Questions for stakeholders .....	14
3. References .....	15
3.1. Reference documents .....	15
4. Appendices .....	16
4.1. Acronyms and definitions .....	16

## 1. Procedural information

### 1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the 'Agency') developed this Advance Notice of Proposed Amendment (A-NPA) in line with Regulation (EC) No 216/2008<sup>1</sup> (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure<sup>2</sup>.

This rulemaking activity is included in the Agency's Rulemaking Programme 2013-2016 under RMT.0583 (MDM.003c).

The text of this A-NPA has been developed by the Agency based on previous input of the Flight Test Rulemaking Group (MDM.003). It is hereby submitted for consultation of all interested parties<sup>3</sup>.

### 1.2. The structure of this A-NPA and related documents

Chapter 1 of this A-NPA contains the procedural information related to this task.

Chapter 2 (Explanatory Note) explains the core technical content of the issues and the related objectives and options with a preliminary analysis.

- This chapter starts building from previous flight test crew related work done in JAA. It continues with the new EASA legal framework, detailed information on flight test categories and where the flight test engineers may fit within the legal framework.
- The discussion is continued with the definitions of 'Flight test engineer' (FTE) and 'Lead flight test engineer' (LFTE), as well as the reason for a two-step approach.
- The first step was decided and will be completed by incorporating the FTE and LFTE requirements in Part-21. The second step has started with the discussion on creating the licensing scheme for LFTEs.
- Impacts and arguments (pros and cons) are presented and subsequently summarised. Stakeholders are invited to comment on the arguments supporting (or not) the licensing for LFTE.
- The A-NPA concludes with key questions for the stakeholders and a request to choose between the two options explaining the rationale for the choice.

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<sup>1</sup> Regulation (EC) No 216/2008 of the European Parliament and the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1), as last amended by Commission Regulation (EU) No 6/2013 of 8 January 2013 (OJ L 4, 9.1.2013, p. 34).

<sup>2</sup> The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision concerning the procedure to be applied by the Agency for the issuing of Opinions, Certification Specifications and Guidance Material (Rulemaking Procedure), EASA MB Decision No 01-2012 of 13 March 2012.

<sup>3</sup> In accordance with Article 52 of the Basic Regulation and Articles 14 of the Rulemaking Procedure.

### **1.3. How to comment on this A-NPA**

Please submit your comments using the automated **Comment-Response Tool (CRT)** available at <http://hub.easa.europa.eu/crt/><sup>4</sup>.

The deadline for submission of comments is **13 November 2013**.

The stakeholders are invited to give their opinions and views on the issues in sections 2.4 and 2.5.

### **1.4. The next steps in the procedure**

Following the closing of the A-NPA public consultation period, the Agency will review all comments.

The outcome of the A-NPA public consultation will be reflected in the respective Comment-Response Document (CRD). All comments received in time will be responded to and incorporated in a Comment-Response Document (CRD). The CRD will be available on the Agency's website and in the Comment-Responses Tool (CRT). The Agency will publish the CRD together with an Agency Decision.

The A-NPA shall not replace and is not automatically followed by an NPA. However, if the decision will be to proceed with an NPA, the feedback from this A-NPA will be used to consolidate the pre-RIA associated with the NPA.

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<sup>4</sup> In case of technical problems, please contact the CRT webmaster ([crt@easa.europa.eu](mailto:crt@easa.europa.eu)).

## 2. Explanatory Note and key questions for stakeholders

### Background

Flight test crew qualifications harmonisation has started in JAA in response to a request from industry. One of the reasons was a number of cases where the test crews qualified in one country were not recognised in other countries. Its objectives were to contribute to the free circulation of persons (flight test crews) and services (flight testing activities), and to improve safety, in particular by requiring the development by applicants (e.g. aircraft manufacturers) of a flight test operations manual (FTOM) approved by the competent authority.

When transferring the work into the EASA system, two legal bases had to be used: one for the pilots and another one for the flight test engineers. This difference was justified by the different nature of the qualifications as well as by the scope of Community competence. Article 7 of the Basic Regulation requires pilots to hold a licence, and Annex III to the same regulation contains requirements for pilot training and qualifications.

1. For pilots conducting category 1 and 2 of flight testing, a specific flight test qualification was linked to the pilot's licence. The main reason was that the training required is not specific to the organisation for which the pilot works. Since this training is general and related to the category of flight test that the pilot wishes to perform, it was considered that this qualification should follow a similar regime to other qualifications in Part-FCL for specific types of activity. The pilots engaged in category 1 and 2 flight tests will undertake the training at an approved training organisation. Once the applicants meet the requirements in the rules, they will have this qualification endorsed on the licence, which will allow them the benefits of mutual recognition.

2. For pilots conducting categories 3 and 4 flight tests, a different regime was applied. Their training is specific to the organisation for which the pilots work since it takes into account their specific procedures. A pilot who has received training in one organisation to conduct this kind of flight tests will not be automatically qualified to conduct the same tests for another organisation. Therefore, the qualification to perform these flight tests should not be linked to the pilot's licence or be subject to mutual recognition. The specific training requirements for pilots conducting this type of flight test (which add to the requirement for the issue of a Part-FCL licence) will be included in Part-21<sup>5</sup> (CRD 2008-20).

3. For flight test engineers, it was not possible to use the same legal basis as for pilots since the scope of community competence is for the moment limited to the licensing of only three categories of aviation personnel: maintenance engineers (Part-66), pilots (Part-FCL) and Air Traffic Controllers. The legal basis for regulating flight test engineers can be found in the requirements relative to permit to fly. As flight tests are performed under a permit to fly, the legal basis for regulating the qualification of flight crew is in Article 5 (5) (e) (ii) of the Basic Regulation. As a consequence, the qualifications for flight test engineers should be included in Part-21 (Subpart P). Paragraph 21A.708 'Flight Conditions' includes the conditions and restrictions imposed on the flight crew members and their qualifications. To reflect these specific requirements, the revised 21A.708 will contain a reference to new Appendix XII (CRD 2008-20).

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<sup>5</sup> <http://easa.europa.eu/rulemaking/docs/crd/2012/CRD%202008-20.pdf>

Discussion on licensing requirements for flight test engineers in the flight test review group

One important outcome of the consultation on NPA 2008-20 were the comments received on the absence of licensing requirements for FTEs. Significant comments were generated mostly by people having their activity in countries that have a licensing scheme for test crews including a licence for FTEs. The reasons provided to require such a licence were mostly:

- consistency with the ICAO Convention, in particular Article 32 'Licences of personnel';
- the perceived loss of status for the people that would lose the ability to have a licence; and
- the link between the licensing scheme and other national economic and social legislation, such as those related to insurance and pension schemes.

This issue received particular attention in the review group. The discussion included the following elements:

- Consistency with the Basic Regulation, as a licence for FTE is not explicitly required. The creation of a licensing scheme for FTE would require an amendment of the Basic Regulation;
- Consistency with ICAO Annex 1 'Personnel licensing', which also does not specifically refer to FTE; and
- Impacts of creating a licensing scheme for Member States, the industry and for the people currently developing this activity.

After discussions on this issue, it was agreed to distinguish FTEs from LFTEs as the latter have specific in-flight duties. This difference has allowed a more focussed discussion.

FTE has been defined as follows:

'A 'flight test engineer' (FTE) is any engineer involved in flight test operations either on the ground or in flight.'

It was unanimously agreed in the flight test group that FTEs who do not fulfil the definition of LFTE should be regulated through Part-21 and that there was no need to license them.

LFTE has been defined as follows:

'Lead flight test engineer' (LFTE) designates a flight test engineer assigned for duties in an aircraft for the purpose of conducting flight tests or assisting the pilot in the operation of the aircraft and its systems during flight test activities.'

The meaning of the phrase 'assisting the pilots' should be understood in the sense of the critical actions (e.g. actions described below) which could be performed by the LFTE, if requested by the flight test order and agreed by the flight test pilot.

LFTEs are those FTEs that have duties and privileges to operate some test aircraft systems, either directly or through flight test dedicated instrumentation, that could significantly interfere with aircraft basic systems, such as flight controls and engine controls, or eventually significantly impact aircraft stability, through weight and balancing flight management or flight control law changes. In addition, they have the duty to act as test director in flight on board the aircraft thus actively participating in the conduct of the flight and even making in-flight decisions. These duties and privileges could allow LFTEs, for

example, to shut down engines without any action of the pilots through controls that are not even accessible to the pilots.

The role of the LFTE appeared, therefore, to be paramount for the safety of the flight. Such a role, not clearly envisaged at the beginning of the rulemaking task, led some flight test group members to question if the LFTE should not be licensed.

It is important to note that:

- Among all the FTEs currently in activity (flying and non-flying) within European flight test organisations, only a limited number do actually perform tasks and duties of an LFTE.
- Among the LFTEs, only those who do flight test of CAT 1 and 2, as defined in CRD 2008-20 (Appendix XII to Part-21) should be affected.

Therefore, the Agency agreed with the group on the following two-step approach:

- **First step:** Incorporate in Part-21 safety requirements for FTE and LFTE and provide for a long transition period to allow for national licensing schemes to continue applying.

LFTE specific requirements were provided in Part-21, while the FTE requirements definition would be captured in the FTOM. The LFTEs shall receive appropriate training ensuring a level of competence commensurate for the type of test and the complexity of the aircraft under test. LFTEs are required to have accumulated a minimum of flight experience and can only be appointed for a specific flight if they are physically and mentally fit to discharge assigned duties and responsibilities (the AMC provides further details relative to the conditions of appointment). This is achieved by the issuance of an authorisation by the organisation that employs them.

CRD 2008-20 proposed a long transition period specific to FTE, to allow existing national licensing schemes to continue to apply for a certain period estimated to end by December 2017. During this period, Member States will apply the requirements of Part-21, but those countries that have a licensing scheme in place at the entry into force of the amendment to Commission Regulation (EC) No 748/2012, will be allowed to continue to use it until the end of the transition period. The rationale for such a transition period is to enable further work on the issue of LFTE licences.

- **Second step:** Issue an A-NPA to discuss the creation of a licensing scheme for LFTEs, with the purpose of clarifying the views of all stakeholders on the issue.

Depending on the outcome of the consultation on this A-NPA, the Agency, advised by a dedicated review group, (whose composition will be based on the existing flight test review group), will decide whether to propose an NPA introducing a licensing scheme for LFTE. A Decision will be published to establish the way forward. If the decision to go ahead with the rulemaking task on the LFTE licence is reached, the feedback from this A-NPA will be used to put together the corresponding pre-RIA associated with the future NPA.

The reasons for this two-step approach were:

- It allowed the use of the work already developed by the flight test group on the requirements for the training of FTEs. These requirements will be included in Part-21 and improve the level of safety and harmonisation, while not disrupting the existing national licensing schemes, where they exist, through the inclusion of an adequately long transition period.

- It allowed for informed debate on the only issue that remained controversial within the flight test group: the licence for LFTEs.

**Conclusion:** The Agency has not selected a preferred option as more consultation on this issue is required.

## **2.1. What is the issue or problem that may require an action?**

Define if the function of an LFTE should be subject to a licensing requirement.

### **2.1.1. What is the regulatory framework?**

The regulatory framework consists of the Basic Regulation and ICAO Annex 1. The review of the EU regulatory framework and ICAO has resulted in three main questions:

- (a) Is the Basic Regulation applicable for FTE and LFTE, and can they be regulated within the EASA system?

The activity of flight test and persons involved (for instance FTEs) are included within the scope of the Basic Regulation. Consequently, FTEs (as well as other personnel participating in flight test activity) have to be regulated at EU level and CRD 2008-20 defines the requirements.

Concerning the essential role of LFTE in flight (operation of the aircraft basic systems, engine controls, flight controls) their qualification requires specific consideration and further elaboration following the comments received to the CRD. The Opinion/Decision for Part-21 resulting from CRD 2008-20 will provide the requirements for LFTEs, however it does not propose a licence.

- (b) Are the provisions of the Chicago Convention and of its Annex 1 applicable to LFTE, and do they establish any obligations for Contracting States in relation to LFTEs?

No consensus was reached:

- (1) One view was that neither the Chicago Convention nor the ICAO Annex 1 established any obligation for Contracting States to regulate LFTEs in any particular manner as ICAO applies to international air traffic;
- (2) The other view is that ICAO Annex 1 requires a licence for LFTEs, as they operate aircraft controls.
- (c) Are the provisions of the Basic Regulation adequate to provide a legal basis to require a licence for LFTEs?

The exercise of the function of an LFTE is not subject to a licensing requirement in the Basic Regulation. Therefore, Implementing Rules (that are subordinate to the Basic Regulation) may not require a licence without a modification to the Basic Regulation. However, there was a view expressed that since the Basic Regulation targets at fulfilling ICAO obligations, the absence of specific requirements for a licence for LFTE should not necessarily be interpreted as the legislator having rejected the possibility of a licence for LFTE.

It is noted that two Member States (France and Italy) already have an FTE licensing scheme, however, they also have significant flight test activities. In these Member States, other social and economic legislation i.e. insurance and pension schemes are linked to



licensing. Other Member States do not have an FTE licensing scheme. In comparison, it should be noted that neither FAA nor Transport Canada have a requirement for an LFTE licence.

This difference of approach may be explained by the different legal framework and by the different scope of responsibilities given to the FTE. The role of the FTE varies from country to country. In the two countries mentioned above, as the FTEs were allowed to operate critical controls of the aircraft (flight controls, engine controls, etc.) and their actions could be paramount for the safety, it was considered that they needed to be licensed. In other countries, FTEs could have a different scope of responsibilities and therefore, do not necessarily operate critical controls of the aircraft.

Those different roles were discussed by the flight test group and have convinced the group that among all FTEs, at least for the LFTEs specific training requirements have to be defined. This may, however, be done with or without a licensing scheme.

The main question needed to be asked via this A-NPA is which option the stakeholders will prefer and what will be the reason for their choice.

### **2.1.2. What are the underlying drivers of the problem?**

Social, harmonisation, safety, economics

The main driver is social and licence harmonisation in Europe. The two opposite aspects would be the mutual recognition of LFTE licence in Europe compared with loss of the licence for more than 300 people by the end of 2017. The loss of licence comes with loss of social status and privileges, which may lead to social tensions.

The safety aspect is to a large extent addressed by the LFTE competence and training requirement already captured in CRD 2008-20.

Although for this task overall economics plays a minor role, the change may have a significant economic impact for the individuals affected.

### **2.1.3. Who is currently affected, in what ways and to what extent?**

Organisations that employ LFTEs and LFTEs doing flight test of Category 1 and Category 2, as defined in CRD 2008-20 (Appendix XII to Part-21) should be affected. This may represent more than three hundred people in Europe. It is expected a more accurate number to be determined based on the A-NPA feedback. The affected LFTE are most likely to be located in the countries having a significant amount of aircraft and related parts and appliances design activity (e.g. Czech Republic, France, Germany, Italy, Netherlands, Poland, Spain, Sweden, Switzerland, and United Kingdom).

## **2.2. Objectives**

The specific objective of this proposal is to seek views on the direction to be taken relative to a possible licensing scheme for an LFTE.

## **2.3. Overview of the options**

Two options have been identified:

### **Option 0 – Baseline scenario**

The baseline scenario is the implementation of the qualifications of the LFTE as per the Opinion on Part 21 (CRD 2008-20). This option does not create a licensing scheme, and requires the MS already providing LFTE licences to abandon their licensing scheme by the end of 2017. However, requirements for LFTE experience and training are defined.

### **Option 1 – Create a licensing scheme for the LFTE**

The need for a licence to complement the Opinion on Part-21 (CRD 2008-20) is open for discussion. The licensing scheme structure and privileges of such a licence would be discussed as part of the NPA creating the licensing scheme if the Agency would proceed that way. Necessary transition measures would need to be considered.

## **2.4. Analysis of impacts**

### **2.4.1. Safety impact**

#### **Option 0**

- LFTE training and medical fitness will be under the responsibility of each DOA/POA holder. They will be surveyed by the Agency/NAAs. Even if LFTEs are not part of a DOA/POA (e.g. freelance), their training and medical fitness should be checked when hired (by the DOA/POA) and ultimately overseen by the competent authority.

#### **Option 1**

- LFTE licensing would promote an adequate common standardisation level. A mutual licence recognition between Member States and organisations, would allow experience being shared, thus improving flight test safety and efficiency.
- Licensing will be under the responsibility of national competent authorities. Training and medical fitness will be under the responsibility of approved organisations overseen by the NAA.
  - Training provided by an approved training organisation (ATO) or organisation with additional approval, allows for a better harmonisation as the qualifications of the LFTE instructors and examiners would be clearly defined and well established.
  - A better standardisation of the medical requirements would also be introduced compared with Option 0 where the requirements remain very generic.
- Experience has shown that an identical formation for pilots improves the crew cockpit management and, therefore, has beneficial influence on safety. Option 1 leads to an improvement of the crew cooperation. Since the LFTE licence would be also applicable to authorities' LFTEs (if any), it will improve the crew coordination during certification flight tests. However, an improved crew cooperation/cooperation could also be achieved through CRM training received at the organisation.

### **2.4.2. Environmental impact**

Not applicable.

### **2.4.3. Social impact**

#### **Option 0**

By recognising LFTE qualifications, Option 0 already represents an improvement since it introduces in Part-21 common LFTE training requirements. However, as no certificate will be issued, Article 11 of the Basic Regulation will not apply, therefore, there will be no automatic recognition of the qualifications within Europe.

Although, no LFTE licence would be the status quo for most Member States, at least two Member States will need to abandon their licensing scheme by the end of 2017. This option will require some adaptation of national economic and social regulations, such as those related to pension and insurance schemes. The loss of licence may result in loss of privileges, social status and professional recognition, therefore it may generate important social tensions.

### **Option 1**

#### – Main impacts

In the countries that already have a licensing scheme, the situation of the already licensed LFTEs will not change.

Other affected countries will have to introduce the licence for LFTE. This may require additional National Authorities resources. However, the licence will enable LFTEs to be recognised throughout Europe, enhancing, therefore, the freedom of circulation of people.

#### – Additional impacts

Licensing will improve the recognition of crew privileges, as LFTE privileges should be defined in the LFTE licensing scheme.

Licensing should also allow a better monitoring of the crew's medical fitness by defining more robust requirements. Medical fitness will be certified by approved medical examiners or approved medical centres.

### **2.4.4. Economic impact**

Costs associated with the creation of LFTE licensing scheme should be:

#### – Training costs

The training requirements as defined in Appendix XII do not depend on the option chosen, however, cost differences may result from the fact that compared with Option 0, for Option 1 there will be a need for an ATO or an additional approval for the organisation.

#### – Administrative costs

- Related with the removal of licence requirement, currently provided by the organisations in the case of Option 0; and
- Related to the Issue of licence by the Member State in the case of Option 1.

In Option 0, most of the administrative burden is on the industry. According to Appendix XII to Part 21, each DOA/POA holder has the responsibility to define the training programme, to train, and to check the medical fitness of its LFTEs. The Agency/NAA will audit the DOA/POAs.

In Option 1, the creation of an LFTE licensing scheme will introduce the necessity for every Member State, especially where there is currently flight testing activity (e.g. Austria, France, Germany, Italy, UK, Sweden, Switzerland, Poland, Czech Republic, Spain) to establish administrative requirements for the licensing of LFTEs. These licensing

administrative requirements will need to be established also for Member States where there is no flight testing activity, since in principle anyone with the proper qualifications may apply for a licence in any Member State.

The cost of additional administrative burden may be in part offset by the existing licensing system currently in place for pilots. The distribution of these costs will depend on the national fees and charges arrangements.

#### 2.4.5. General aviation and proportionality issues

Regardless of the chosen option, specific training for LFTEs is necessary for CS-23 aircraft above 2000 kg and all CS-25, CS-27, CS-29 aircraft. As defined in CRD 2008-20, specific flight test training is mandatory only for CAT 1 and CAT 2 flight test. In addition to the 2000 kg threshold, it should also be noted that the competency requirements for CS-23 aircraft for Category 1 of flight test is divided in two (competence level 1 and level 2, depending on the aircraft speed and ceiling). General aviation will be, therefore, less impacted. In addition, most of the people that perform LFTE CAT 1 and 2 work for organisations that are located in Member States where an LFTE licensing scheme is already in place.

Finally, Member States and NAAs which do not have sufficient flight test activity could eventually allocate the administrative burden to other competent authorities or qualified entities.

#### 2.4.6. Impact on 'Better Regulation' and harmonisation

Consistency with the EASA Basic regulation

- Option 0 is consistent with the Basic Regulation.
- Option 1 would need an amendment of the Basic Regulation.

Comparison with selected foreign countries (e.g. USA, Canada, Brazil)

- For both options, there will be some degree of disharmony since none of those countries have specific training requirements for LFTEs and therefore, no licence.

Comparison with ICAO

- Option 1 could be seen as a more specific requirement than those contained in ICAO Annex 1 which does not contain a specific licensing scheme for flight test crews.

#### 2.4.7. Summary of impacts

To support the assessment, the impacts are summarised in the table below.

Impact type	Pros	Cons
Option 0: EASA Opinion for Part 21 (CRD 2008-20)		
Safety	None (status quo)	None (status quo)
Environmental	No impact	No impact
Social	Status quo for most of the states	Adaptation of pension and insurance scheme for states that currently have a licensing scheme.

		No significant improvement on the mutual recognition of LFTE qualifications
Economic	None (status quo)	Most of the burden is on industry
Proportionality issues	General Aviation will be less impacted	
Impact on regulatory coordination and harmonisation	Consistent with the Basic Regulation	Some degree of de-harmonisation as foreign countries do not have requirements for LFTEs
Option 1: Complement the Opinion on Part 21 (CRD 2008-20) by licensing the LFTE		
Safety impact	Better harmonisation of training and standardisation of medical requirements, crew coordination	
Environmental	No impact	No impact
Social	Enhancement of free circulation and recognition of certificates	
Economic	Reduction of burden on Industry	Creation or adapting the LFTE licensing scheme for all Member States requires administrative costs
Proportionality issues	Same as for Option 0 since most of the LFTE are employed in Member States that already have a licensing scheme	
Impact on regulatory coordination and harmonisation		Need of amendment to the Basic Regulation  Increased de-harmonisation as foreign countries do not have requirements for LFTE

## 2.5. Questions for stakeholders

You are kindly invited to provide information by answering the additional following questions:

Questions for Member States/ National Aviation Authorities:

1	Do you have flight test activities in your country as defined in Part-21?
2	Do you have a system for licences (or equivalent e.g. rating, authorisations) for crew members other than pilots for the purpose of flight test? Please provide the rationale for having (or not) a licensing scheme for crew members other than pilots for the purpose of flight test.
3	How many LFTE/FTE licences (or equivalent) do you have in your country?
4	How many people that would qualify as LFTEs are employed by the NAAs?
5	Do you anticipate TC or STC activities in your territory in the future?
6	If a LFTE licence requirement would be introduced in your country how would you estimate the impact of the additional administrative cost?

Questions for all other stakeholders:

7	How many people in your oversight perform flight test engineering duties?
8	How many of the people identified in 7 have duties that would qualify them as lead flight test engineers (LFTE)?
9	How many people identified in 8 (as LFTEs) operate independently? (e.g. freelancers)
10	How many of the people identified in 8 (as LFTE) have a licence (or equivalent)?

**Question for all stakeholders:**

<b>11</b>	<b>Please indicate which of the options 0 or 1 (licence requirement) is preferred and provide a justification for your choice.</b>
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### **3. References**

#### **3.1. Reference documents**

Convention on International Civil Aviation – Doc 7300 (Chicago Convention)

ICAO Annex 1 – Personnel Licensing

## 4. Appendices

### 4.1. Acronyms and definitions

#### Acronyms

A-NPA: Advance Notice of Proposed Amendment

APDOA: Alternative Procedure to DOA

ATO: Approved Training Organisation

CAT 1: Category 1

CAT 2: Category 2

DOA: Design Organisation Approval

EASA: European Aviation Safety Agency

JAA: Joint Aviation Authorities

ICAO: International Civil Aviation Organization

LFTE: Lead flight test engineer

FTE: Flight test engineer

FTOM: Flight Test Operations Manual

NAA: National Aviation Authority

NPA: Notice of Proposed Amendment

POA: Production Organisation Approval

RIA: Regulatory Impact Assessment

STC: Supplemental Type Certificate

TC: Type Certificate

#### Definitions

'Lead flight test engineer' (**LFTE**) designates a flight test engineer assigned for duties in an aircraft for the purpose of conducting flight tests or assisting the pilot in the operation of the aircraft and its systems during flight test activities.

'Flight test engineer' (**FTE**) is any engineer involved in flight test operations either on the ground or in flight.