

Evaluation report

Evaluation of the applicable rules for initial and recurrent pilot training, testing and checking

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DISCLAIMER

The views expressed in this evaluation report are those of the consultants and do not necessarily reflect those of the European Union Aviation Safety Agency (EASA) or the authorities of the Member States concerned.

The evaluation is performed before the COVID crisis and does not reflect the consequences resulting from it.

EXECUTIVE SUMMARY

As the single European Union (EU) agency for aviation safety in Europe, the European Union Aviation Safety Agency (EASA) is committed to ensuring that pilot training rules are not only harmonised across Europe and are proportional for all stakeholders in the aviation training industry, but also meet industry expectations in terms of quality, duration, and performance (to name a few criteria).

In this context, EASA has commissioned the evaluation of the applicable rules for the initial and recurrent pilot training, testing and checking in Europe, as laid down in Commission Regulation (EU) No 1178/2011 (the Aircrew Regulation) and Commission Regulation (EU) No 965/2012 (the Air Operations Regulation), as well as in the related acceptable means of compliance (AMC) and guidance material (GM).

The evaluation aims to provide an evidence-based judgement of the extent to which the current rules are effective, efficient and relevant given the current needs, coherently contributing to achieving common objectives and EU added value.

Besides the classic ex post evaluation of the current rules, based on the analysis of historical data, the objective of the evaluation is also to assess the degree to which these rules adequately respond to the future challenges that the aviation sector will be facing in Europe.

The evaluation of these rules has been conducted through a combined implementation of face-to-face interviews with professionals within the field, an online survey that was launched between December 2018 and March 2019, and a desk research aimed at collecting the widest possible base of qualitative and quantitative data to objectively assess the application of the related regulations in Europe.

The current rules for pilot training, testing and checking are generally covering well the needs of the different categories of stakeholders, although their evolution in terms of structure, clarity and usability is considered important in view of the continuous growth of both commercial and non-commercial aviation in Europe.

Although the effort made by EASA to clarify the rules (e.g. through the Easy Access Rules and the consolidated versions of the regulations and related AMC and GM) is acknowledged by the majority of the industry, a further simplification of the regulatory structure and clarification of some differences in local interpretation would also be particularly welcome by the industry, which often perceives the requirements as being too dispersed across the different documents (regulations and annexes, AMC, GM, alternative means of compliance (AltMoC), exemptions, etc.), and sometimes difficult to understand them especially due to the legal language.

Although the current rules do facilitate the free movement of pilots, some practical barriers have been identified to still exist and discourage their free movement. In particular language barriers, administrative differences among the different competent authorities (CAs) and examiner differences are the main obstacles to the full achievement of the free movement of pilots in Europe.

The quality of the training should continuously improve through the evolution of the system towards the development and assessment of competencies, not only for pilots but also for instructors, examiners and CA staff. The evolution of the regulations from the current prescription-based format to a performance-based spirit represents an important driver to ensure that the whole pilot training and assessment system remains aligned with the real needs of the market, leveraging the most modern and effective tools and technologies.

Functional to the achievement of a truly performance-based, uniform system in Europe is also the open and efficient collaboration among all stakeholders, making use of their systems for the sharing of information and aimed at sorting out all the different interpretations and gaps in the implementation.

The issue of insufficient budget and shortage of qualified inspecting staff is registered as a constant concern, shared by both industry stakeholders and CAs. This issue is not new, and needs to be addressed as soon as possible in view of the forthcoming technological innovations and aviation market growth.

This final evaluation report contains the results of the analysis and the related recommendations, and it integrates the results stemming from the discussion with CA and industry representatives held during the Final Project Workshop on 2 and 3 July 2019 in Cologne.



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1. Introduction

1.1. Purpose of the evaluation

The present document is the Final Report submitted by ALG for the ‘Evaluation of the applicable rules for initial and recurrent pilot training, testing and checking’, under the ‘Support to Impact Assessment and Evaluation of EASA rules (ASSESS II)’ Multiple Framework Contract. The overall objective of the evaluation request is to provide an independent, transparent, robust and evidence-based evaluation of the performance of the rules on pilot training, testing and checking, following the European Commission Better Regulation Guidelines¹.

1.2. Scope of the evaluation

The following is within the scope of the evaluation: initial pilot training, issuance of licences, recurrent training and assessment of competence by the instructors and checking by the examiners during the entire pilots’ career.

The evaluation explores both the commercial and non-commercial aviation (which includes NCCs and NCOs) domains, and it provides an analysis of each relevant stakeholder affected by the regulations with a specific focus on pilot career. Only aeroplane pilots are included in the analysis.

Conversely:

- all types of aircraft which cannot be classified as aeroplanes; and
- pilot licence fees applied by each Member State

are outside the scope of the evaluation.

1.2.1. Regulations

The regulations that are within the scope of the evaluation and cover aircraft pilot training, testing and checking are the following:

- Regulation (EU) 2018/1139² (the EASA Basic Regulation) of 4 July 2018 setting out in its Annex IV the essential requirements for pilot training;
- Commission Regulation (EU) No 1178/2011³ (the Aircrew Regulation), as amended, and in particular its Annex I (Part-FCL — Flight Crew Licensing), Annex VI (Part-ARA — Authority Requirements for Aircrew), and Annex VII (Part-ORA — Organisation Requirements for Aircrew), stipulating all the requirements for the issue of pilot licences and associated ratings and certificates, and the conditions for their validity and use;

¹ <https://ec.europa.eu/info/sites/info/files/better-regulation-guidelines.pdf>

² Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1570194969354&uri=CELEX:32018R1139>).

³ 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 (OJ L 311, 25.11.2011, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1570195048314&uri=CELEX:32011R1178>).



- Commission Regulation (EU) No 965/2012⁴ (the Air Operations Regulation) and in particular its Annex III (Part-ORO — Organisation Requirements for Air Operations, Subpart ORO.FC — Flight Crew) that sets out further requirements to be met by the operators related to flight crew training, experience and qualification;
- all the AMC and GM to Part-FCL and Subpart ORO.FC.

Note: In this document, when reference is made to ‘regulations’, it should be understood as the Air Operations and the Aircrew Regulation. Reference to ‘rules’ means the AMC and GM to the above-mentioned regulations.

1.2.2. Stakeholders

This evaluation includes the following stakeholders:

- training organisations:
 - approved training organisations (ATOs),
 - declared training organisations (DTOs) and other recognised training facilities;
- air operators/organisations subject to the Air Operations Regulation and that:
 - hold an air operator certificate (AOC),
 - perform non-commercial air operations with complex motor-powered aircraft (NCC),
 - perform non-commercial air operations with other than complex, motor-powered aircraft (NCO);
- national competent authorities of the EASA MSs;
- pilots:
 - commercial air transport (CAT) pilots,
 - non-commercial pilots (i.e. general aviation (GA) pilots);
- instructors and examiners.

1.2.3. Geographical scope

The evaluation refers to all 32 EASA MSs (all EU MSs and Iceland, Norway, Liechtenstein and Switzerland) as well as non-EU MSs and stakeholders for which EASA acts as the competent authority.

⁴ 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 and of the Council (OJ L 296, 25.10.2012, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1570195146701&uri=CELEX:32012R0965>).



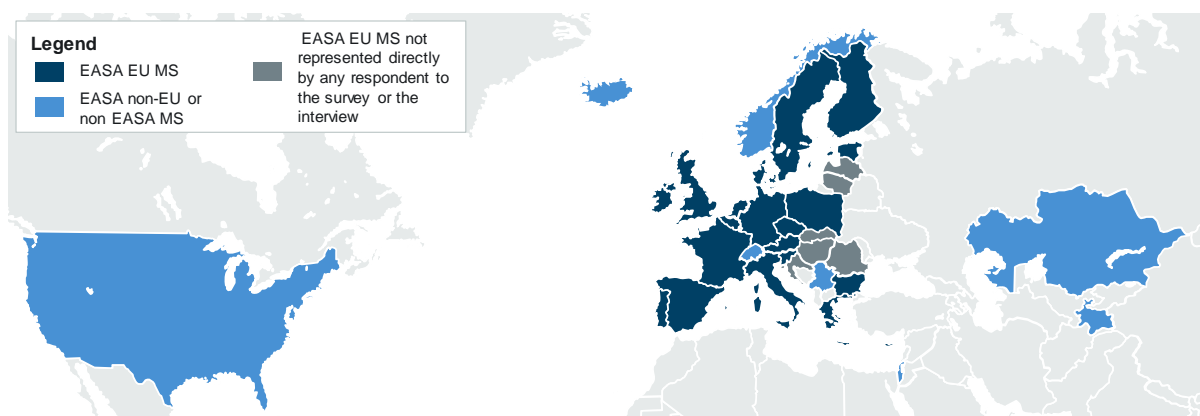


Figure 1: Geographical coverage of the evaluation

1.2.4. Evaluation time frame

The evaluation covers the period from the date of applicability of the related regulations till the point in time the evaluation was conducted (i.e. 2019). However, the future opportunities and challenges related to pilot training, testing and checking are also covered, especially considering the forthcoming market demand for commercial pilots and the need for pilot training to evolve accordingly.

The data analysis covers different periods within this general time frame, according to the availability of data:

- The AltMoC, AMC, exemptions and derogations cover the 2015–2018 period.
- The number of pilot licences, AOCs and ATOs cover the 2013–2018 period.
- The safety occurrences related to pilot training cover the 2008–2018 period.
- The standardisation reports cover the 2012–2017 period.

1.3. Evaluation methods

For the evaluation of the European regulations and rules for pilot training, testing and checking a structured methodology has been employed, based on the analysis of different inputs organised around three main pillars:

- Face-to-face interviews with the stakeholders were organised in the period from October 2018 to March 2019, involving representatives from CAs, ATOs, airlines, GA, pilot representation bodies/associations, examiners and instructors, who provided their views in a semi-structured format, based on open qualitative questions, interleaved with specific ones based on quantitative data.
- An online survey was launched from December 2018 until February 2019 to involve a larger number of representatives from CAs, ATOs, airlines, GA, pilot representation bodies/associations, examiners and instructors indirectly providing their views through a structured format, involving a mix of specific questions based on quantitative indicators, multiple-choice questions and qualitative open questions.
- A desk research was carried out in parallel in the period from October 2018 to March 2019 to collect the widest possible base of relevant qualitative and quantitative data in order to objectively assess the application of the related regulations in Europe, focusing on documents published by ICAO, IATA and Airbus, and then focusing on EASA databases, in particular:



- the AltMoC, AMC, exemptions and derogations covering the 2015–2018 period,
- the number of pilot licences, AOCs and ATOs covering the 2015–2018 period,
- the safety occurrences related to pilot training covering the 2008–2018 period,
- the standardisation reports covering the 2012–2017 period.

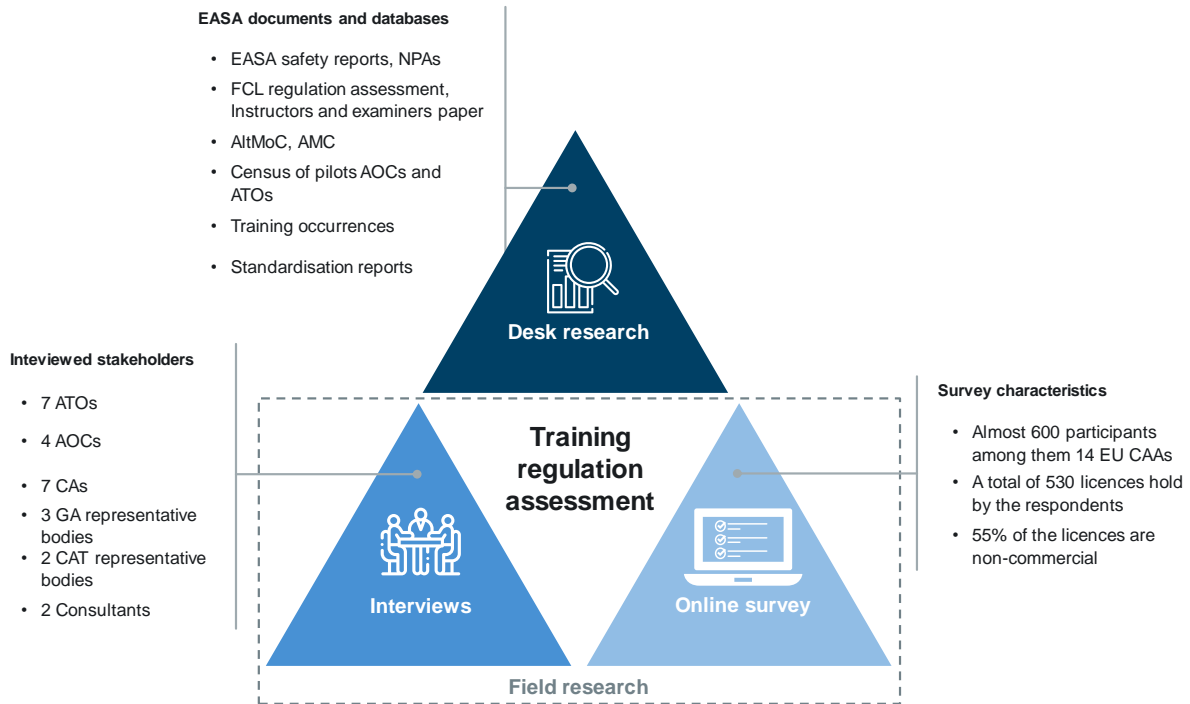


Figure 2: Methodological pillars of the study



1.3.1. Interviews

In total, 22 interviews have been conducted, including ‘deep-dive’ interviews, with domain experts from different MSs. Interviews have been conducted either face to face on the interviewees’ premises or via videoconferencing. They proved to be very fruitful sessions where the different actors shared openly their thoughts on the pilot training regulation. In addition to the EASA MSs, there has been the opportunity to interview EASA-certified stakeholders from non-MSs, in particular an approved training organisation (ATO) from the United States (US) and a Brazilian aviation training expert. Their point of view will be also integrated within the analysis and it is considered to be of great value for the project. The interviews have been arranged so that the whole aviation training industry is represented, as reflected in Figure 3 below:

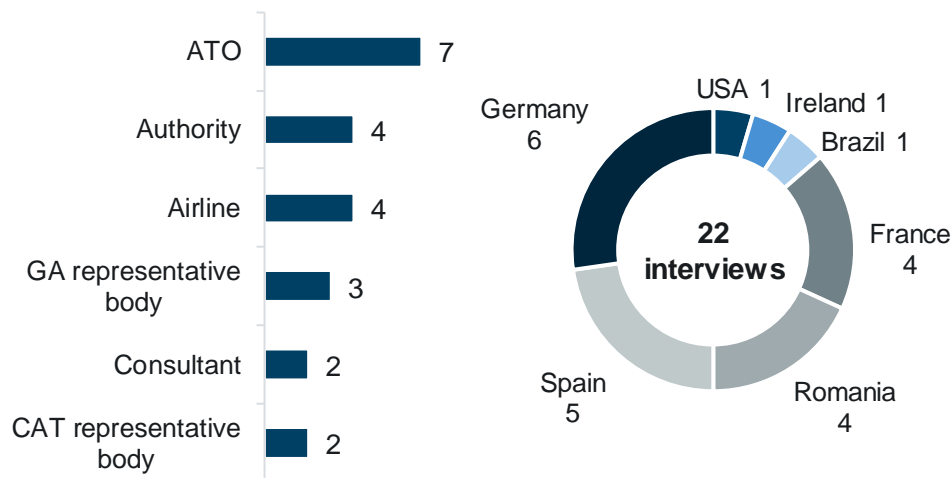


Figure 3: Interview statistics

Different representatives of each stakeholder category from different MSs have been interviewed to increase comparability, identify differences introduced in socioeconomic contexts, and eliminate subjective bias in the responses. Furthermore, this also allowed to measure the overall harmonisation level of the regulation across Europe.

The EASA MSs chosen to conduct face-to-face interviews were selected in order to build a representative sample that could cover different socioeconomic as well as operational scenarios for aviation: France, Germany, Romania and Spain.

A preparatory document including a number of questions along with the main evaluation criteria was sent to the interviewees in advance in order for them to better prepare for the interview.

Each interview had a duration between 1 and 2 hours, depending on the level of feedback from the interviewee and ensuring that enough time was available to specifically cover all the evaluation questions.

1.3.2. Carrying out the online survey

The online survey involved almost 600 participants from 30 countries, representing organisations (ATOs, airlines, etc.) of different sizes. In particular, 115 respondents represented aviation organisations mostly of small or medium size as indicated in the statistics presented in Figure 4 below. The responses from BPL and SPL holders were finally discarded from the analysis since they were outside the scope of the study.

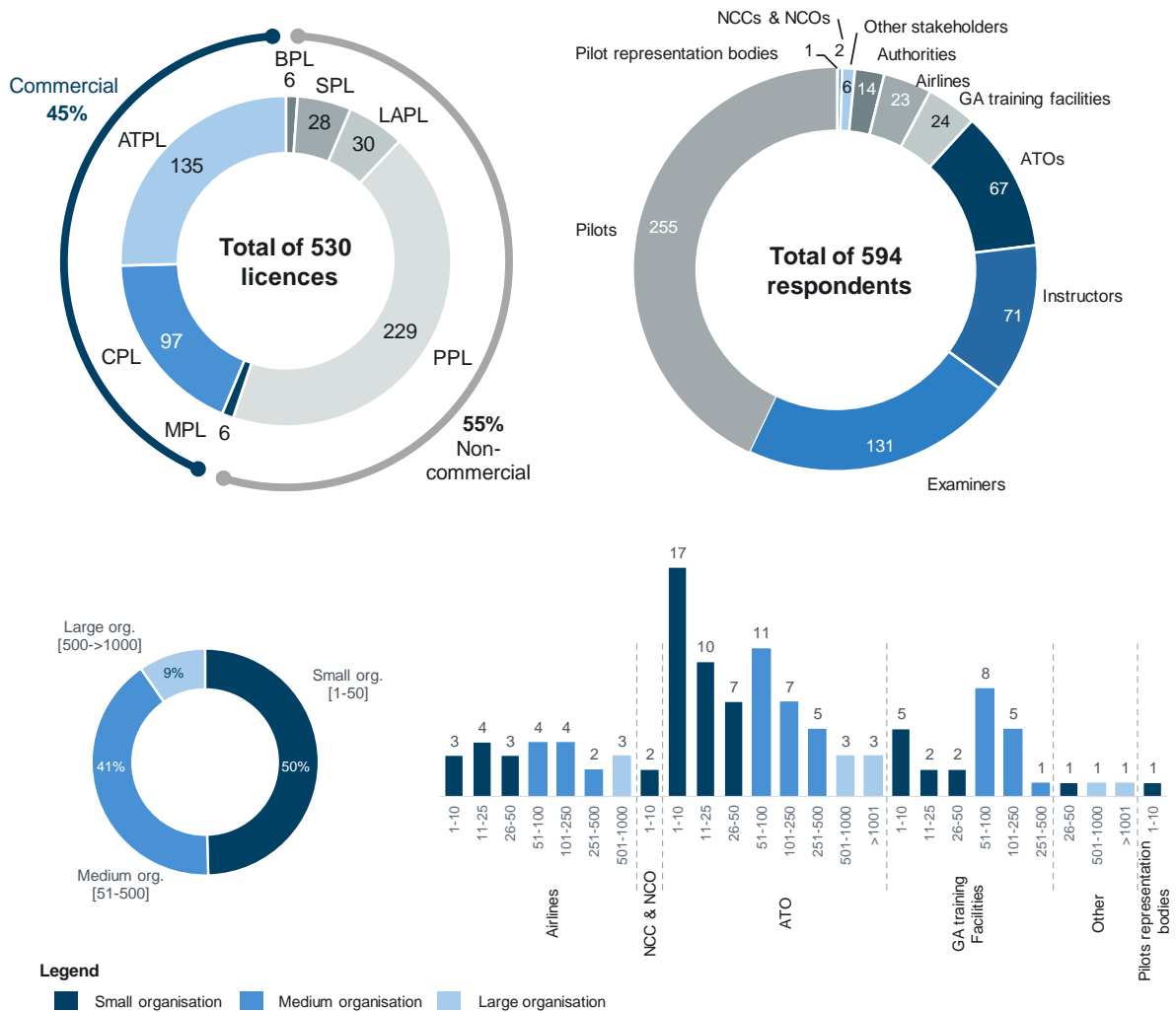


Figure 4: Statistics of the stakeholder categories of the online survey

The survey comprised two questionnaires, specifically designed to collect feedback separately through slightly different questions addressed to:

- industry stakeholders (training organisations (TOs), GA pilots/GA pilot representation bodies, CAT pilots/CAT pilot representation bodies, air operators, instructors and examiners);
- authorities (national civil aviation authorities (CAAs)).

The questionnaire questions were derived from the evaluation questions. They are sufficiently basic for the respondent to answer them and focus on the user's opinion. They also help to collect data not retrieved through desk research or cross-check data collected with other evaluation tools. The questionnaires were composed of a total of 71 questions; some questions are common to all stakeholders, and some others are targeted to specific stakeholders, with the aim of having a maximum of around 36 questions to be answered by each respondent, independently of their category.

The questions proposed combined both structured items and open-end questions, with a preference for structured items and a few open-end questions, so that post-analysis is facilitated and coherency ensured.



EASA launched the two questionnaires through EUSurvey for consultation from 17.12.2018 until 5.3.2019.

The complete questionnaires are available in Annex 2: Online questionnaires.

1.3.3. Desk research

Desk research was carried out in parallel to the online questionnaires in the period from October 2018 to March 2019 to collect the widest possible base of relevant qualitative and quantitative data to objectively assess the application of the regulation in Europe, focusing in particular on the following:

- the AltMoC, AMC, exemptions and derogations covering the 2015–2018 period;
- the number of pilot licences, AOCs and ATOs covering the 2013–2018 period;
- the safety occurrences related to pilot training covering the 2008–2018 period;
- the standardisation reports covering the 2012–2017 period.

1.3.3.1 Acceptable means of compliance (AMC)

The information on the AMC was obtained through the EASA website. It also included information on the amendments applied to regulation parts and applicability dates. The AMC studied are those to Part-FCL, Part-ORA, Part-ARA and Subpart ORO.FC (Regulations (EU) Nos 1178/2011 and 965/2012) as these are the parts of the regulations related to pilot training, testing and checking. A total of 27 AMC to all the regulation parts were studied.

The analysis of the AMC contributed to the determination of the results in terms of clarity of rules and level of complexity.

1.3.3.2 Alternative means of compliance (AltMoC)

The ‘List of AltMoCs notified by competent authorities’ available on the EASA website⁵ was the source of information used to obtain data on the AltMoC.

The database consisted of 171 elements and were filtered to take into account only the AltMoC that applied to the study. In the filtering process, elements not related to the Aircrew Regulation, repeated elements and those AltMoC related to the Aircrew and the Air Operations Regulation but not related to the subject matter of the study were discarded. After the filtering process, 50 AltMoC related to Part-FCL, Part-ORA, Part-ARA and Subpart ORO.FC (as relevant to pilot training, testing and checking) remained to be studied.

⁵ <https://www.easa.europa.eu/document-library/acceptable-means-compliance-amcs-and-alternative-means-compliance-altmocs>

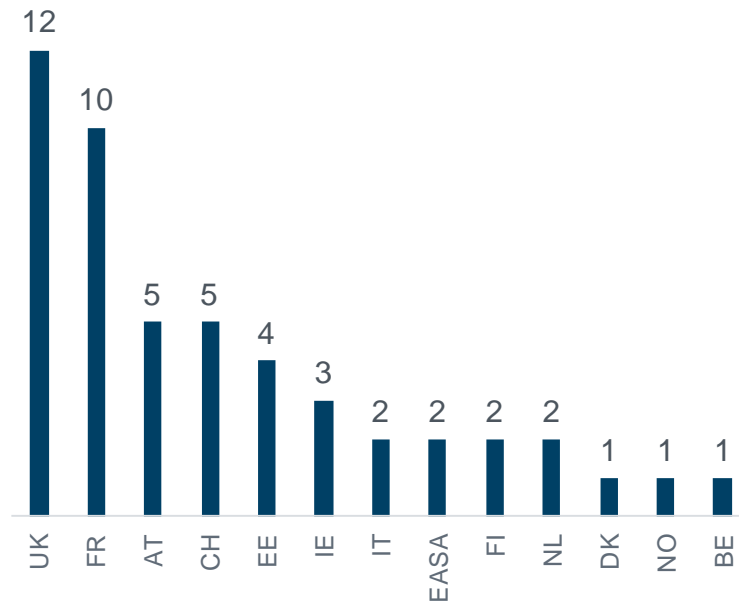


Figure 5: Number of AltMoC per MS issued during 2015–2018

The analysis of the AltMoC contributed to the determination of the results in terms of clarity of the rules and level of complexity.

1.3.3.3 Exemptions and derogations

The information on the exemptions and derogations was retrieved from the EASA internal database as notified by the competent authorities. The data covers the period from 2015 to 2019. The exemptions and derogations studied are only the exemptions related to Part-FCL, Part-ORA, Part-ARA and Subpart ORO.FC as relevant to pilot training, testing and checking. The database shared by EASA had almost 380 elements. Filtering was made to only take into account the elements related to the Aircrew and the Air Operations Regulations' parts, leaving a total of 121 elements; from these elements, there are 117 exemptions and only 4 derogations.

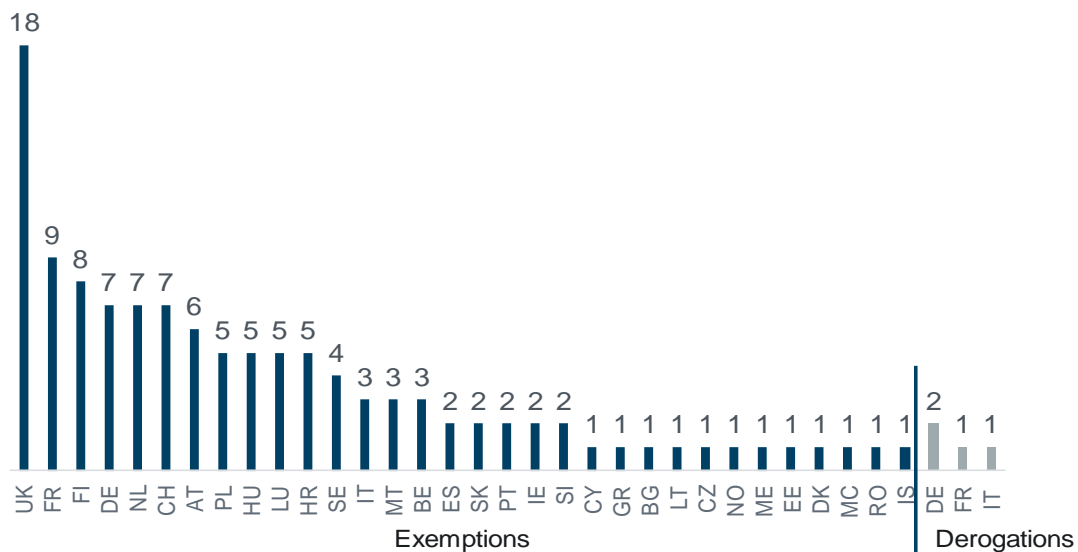


Figure 6: Number of exemptions and derogations per MS issued during 2015–2018





The analysis of the exemptions and derogations gives some indication to draw some preliminary conclusions about the capacity of the rules to facilitate level playing field.

1.3.3.4 Number of pilots, AOCs and ATOs

An analysis has been carried out of the evolution of the number of pilot licences, AOCs and ATOs per MS. The data shared by EASA covered the period 2013 to 2018 and was already segregated by MS and by year, while the licences were detailed by type (PPL, CPL, ATPL and MPL).

The complete data series on the number of licences per MS per year can be found in **Error! Reference source not found.**

The analysis of pilots, AOCs and ATOs contributed to the determination of the results in terms of the degree to which the rules serve the current needs.

1.3.3.5 Safety occurrences related to pilot training

A study was conducted of the occurrences as reported during the last years on the training of pilots using the data provided by EASA.

A filtering was carried out to only take into account the elements that are within the scope of the project. The elements were filtered by location of the occurrence, only keeping those that occurred in an EASA MS and by type of aircraft, only considering the ones involving fixed-wing aircraft. A total of 258 individual occurrences remained after the filtering processes and the elimination of duplications.

The main outputs obtained from the study are the following tables where occurrences are evaluated by different characteristics. The main statistics obtained from the analysis are presented below:

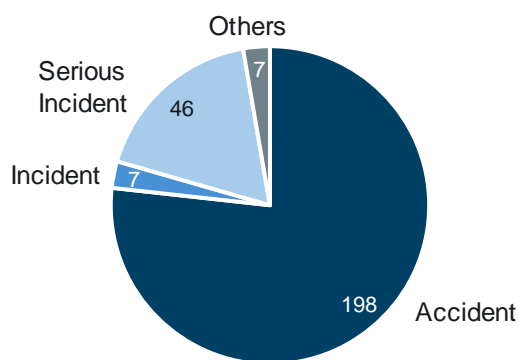


Figure 7: Number of occurrences by type of event

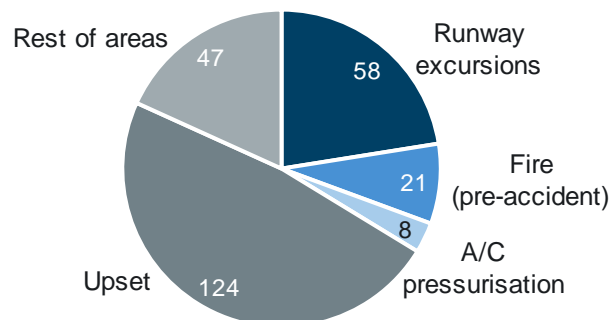


Figure 8: Number of occurrences by type of EASA key risk area

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CAT	0	1	1	1	2	7	10	9	20	9	3
Non-CAT	2	2	1	2	1	9	28	34	42	46	14
Unknown	0	0	0	0	2	0	0	2	8	0	2
Total	2	3	2	3	5	16	38	45	70	55	19

Table 1: Number of occurrences by type of aviation per year



The complete tables are available in **Error! Reference source not found.**Annex 3. It is, however, interesting to note that thanks to the establishment of Regulation (EU) No 996/2010⁶ (which made the reporting of accidents and serious incidents mandatory) and of Regulation (EU) No 376/2014⁷ (which made the reporting of occurrences with significant safety risk mandatory), the reported occurrences have considerably increased, thus testifying the establishment of a stronger reporting culture rather than the degradation of safety levels.

The analysis of safety occurrences contributed to the determination of the results in terms of capacity of the rules to ensure a high and uniform level of safety.

1.3.3.6 Standardisation reports

The Annual Standardisation Reports published by EASA during the last 6 years (2012–2017) have been analysed. The analysis performed included both the interpretation of the findings' evolution over the last years and a snapshot of the current status.

Figure 9 below shows the findings that have been collected for each domain during the standardisation inspections performed from 2014 to 2017. Please note that the findings collected in the period 2012–2013 have not been reported because the domains inspected were slightly different due to some restructuration of the domains.

The findings collected during the standardisation inspections are classified according to the different domains: AIR (Aircrew), OPS (Air Operations), FCL (Flight Crew Licences), MED (Medical), STD (Synthetic Training Device), ANS (Air Navigation Services), RAMP (RAMP Inspection Programme).

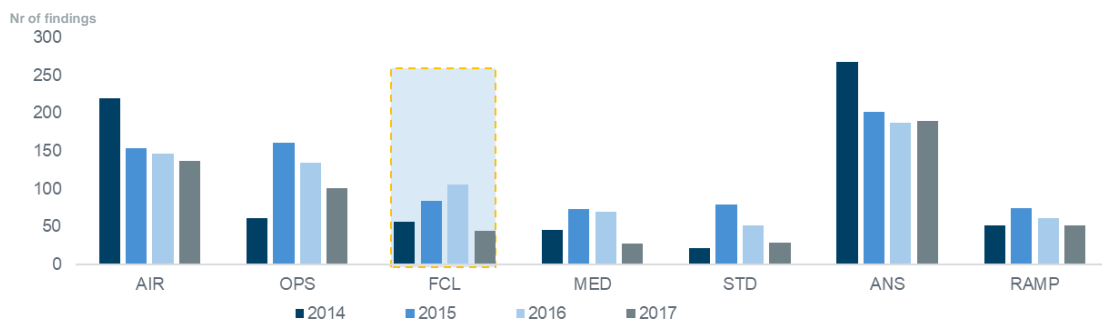


Figure 9: Evolution of standardisation inspection findings by domain

The exercise conducted at different years results in a global reduction of reported findings. Focusing on each domain, and checking the feedback contained in the reports, some assumptions as regards the maturity and the users' perception of the regulations can be made.

The analysis of the standardisation reports has contributed to the determination of the results in terms of the degree to which the rules have been successful in producing the expected results.

⁶ Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1570207551932&uri=CELEX:32010R0996>).

⁷ Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/2007 (OJ L 122, 24.4.2014, p. 18) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1570207640853&uri=CELEX:32014R0376>).



1.3.4. Final workshop in Cologne

A workshop was organised by EASA in Cologne on 2 and 3 July 2019 to present the main results and recommendations from the draft final report to an audience comprising almost 40 representatives of CAs, training organisations, airlines, and commercial and non-commercial⁸ aviation associations. The main objective of the workshop was to validate the results with the participants, complementing or expanding them with additional input, if necessary, through a consolidated discussion.

The workshop was structured in two half-days with the following content:

- Day 1: Introduction to the study and presentation of the results, the conclusions and the recommendations from the evaluation;
- Day 2: Working in two groups (composed of authority and industry representatives respectively), with the objective to critically review one by one the set of conclusions and recommendations.

The workshop was an excellent occasion to validate the results of the evaluation. Overall, the conclusions and recommendations were confirmed by the stakeholders. The comments and ideas raised during the workshop were taken into consideration when finalising the evaluation report.

⁸ As regards the term 'general aviation' (GA), whenever it is mentioned in the report, it refers to non-commercial aviation including NCCs and NCOs.





1.4. Challenges of the study

This section aims to state the major challenges faced along the conduct of the interviews, survey and desk research, the main mitigation actions taken and their expected impact on the project.

The main challenge of the study was to guarantee sufficient representation of the sampled respondents, which was limited to the participating experts (either through interviews or the survey) as illustrated in Section 1.3.2. The study succeeded in ensuring that all the categories of stakeholders had at least one respondent providing answers, thus ensuring that their perspective is included in the analysis. The main conclusions were also corroborated with objective data analysis, as illustrated in Section 1.3.3, as a means of validation and generalisation of the registered feedback.

1.4.1. Desk research

The desk research involved the following main issues:

- The amount of data available and its scope: since pilot training constitutes a central element within the entire aviation value chain, there is a high number of reports and papers available publicly which provide directly or indirectly some useful input for the study at different levels. These had to be reviewed and filtered.
- The different granularity of the data: the great variability of the sources used included a certain amount of differences in the granularity at which data was categorised. This has been addressed by always focusing on the elementary data available per stakeholder category and EASA MSs, as defined at the beginning of the study.
- The different time horizons of the data: different data series referred to different time horizons. This represented a limitation in the analysis of the effect of the date of applicability of the regulations.

EASA has always shown a collaborative attitude towards jointly tackling these issues. All mitigation actions were supervised and approved by EASA itself.

1.4.2. Online survey

The main limitation of the online survey proved to be the lack of interaction with the survey respondents. That could lead to uncontested questions, wrongly interpreted questions or answers, outliers in the data provided, and differences in the participation of experts from different stakeholder categories. In order to address these issues, ALG (jointly with the EASA) took the following main actions:

- The number of questions, adequacy and question path were structured and defined for each category of respondent.
- The outliers within the answers or the blank answers, which were removed from the pool of data.
- The different background of experts responding and their personal bias is expected to have been overall overcome by the high number of respondents. The results were, however, analysed per category of stakeholder to identify patterns in the answers due to the different nature of the respondents.

1.4.3. Interview challenges

There were no major challenges during the interview process. The problems fell under the common development of such activities and were related to the following issues:





- Availability of the stakeholders, especially for experts in operation it was extremely difficult to find a sufficient time slot (2 hours per interview) ensuring their complete availability and to coincide with the interviewer's availability. In these cases, good coordination was ensured.
- Some interviewees were concerned about the confidentiality of their opinions. To ensure their anonymity, the identity of the participants was removed from the minutes of the interviews.
- Some stakeholders had interests in representing two roles, e.g. pilot and instructor, or instructor and ATO. During the study of the feedback obtained, the duality of roles was taken into account and opinions were divided according to each role.
- For the US stakeholders, time difference presented sometimes a major barrier for conducting the interviews. This was overcome by additional coordination during the preparation of the interviews.





2. Background information

2.1. Overview of the origin of the rules on pilot training, testing and checking, and initial objectives

On 16 February 2004, EASA published NPA No 2/2004 on 'Applicability, basic principles and essential requirements for pilot proficiency and air operations and for the regulation of third country aircraft operated by third country operators' as required by Regulation (EC) No 1592/2002⁹. They have been designed 'to provide for an appropriate mitigation of any reasonably probable risk specific to the regulated field. They are drafted in a way, which potentially allows to cover all types of activities (commercial, business and recreational). They have been conceived to provide for a good legal basis for the adoption of Joint Aviation Requirement for the operation of commercial air transport (JAR-OPS), Joint Aviation Requirement for the Flight Crew Licence (JAR-FCL) as possible implementation rules so as to avoid disruption and transitional bureaucratic burden'¹⁰.

In November 2005, the European Commission presented its proposal for the amendment of Regulation (EC) No 1592/2002 to require all pilots that operate in the Union to hold a licence attesting compliance with the common safety requirements covering their theoretical and practical knowledge and to regulate a new category of licence, the leisure pilot licence (LPL), tailored more specifically to this category of airspace users.

Regulation (EC) No 216/2008 (the Basic Regulation) was adopted in 2008 setting the essential requirements for pilot licensing. The FCL rules were then adopted in 2011 (Annex I to the Aircrew Regulation) and in 2012 (Annex III to the Air Operations Regulation), and since then they have been amended several times.

At the time of writing this report, EASA has been preparing some forthcoming amendments to the pilot training, testing and checking rules, which are presented in the European Plan for Aviation Safety (EPAS) for 2018–2022¹¹, including the Rulemaking and Safety Promotion Programmes. These are generally intended to evolve the currently compliance-based system to a future, performance-based one.

2.1.1. Intervention logic reconstruction

In order to respond to the question 'What did we want to achieve with the rules on pilot's training, testing and checking?', the intervention logic of the rules was reconstructed at the inception of the evaluation.

The intervention logic is defined with a bottom-up approach, explaining how intervention activities are expected to transform input into results and the results into a series of long-term positive impacts through mechanisms and assumptions that hold.

It explains the overall problems, the resulting objectives for rulemaking activities, and the desired positive impacts of the rules at the moment they were drafted or adopted.

⁹ Regulation (EC) No 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealed by Regulation (EC) No 216/2008.

¹⁰ NPA No 2/2004 'CONSULTATION DOCUMENT ON THE APPLICABILITY, BASIC PRINCIPLES AND ESSENTIAL REQUIREMENTS FOR PILOT PROFICIENCY AND AIR OPERATIONS AND FOR THE REGULATION OF THIRD COUNTRY AIRCRAFT OPERATED BY THIRD COUNTRY OPERATORS'

The safety objectives (I.1.11) (https://www.easa.europa.eu/sites/default/files/dfu/npa_02_2004.pdf).

¹¹ <https://www.easa.europa.eu/document-library/general-publications/european-plan-aviation-safety-epas-2018-2022-leaflet>





2.1.1.1 Details on the problems/issues that triggered the need to draft the rules on pilot training, testing and checking

The major needs that triggered the development of the rules, as extracted from NPA 2008-22f 'Regulatory Impact Assessment on Flight Crew Licensing (FCL)'¹², are as follows:

- **Safety risks:** The concept of mandatory safety reports in case of serious incidents was not detailed enough in terms of format of the information to be sent, responsibilities of the originating authority and timeliness. The lack of comprehensive EU rules was identified that prevented safety programmes from being properly implemented, in particular in respect of competence and quality as well as collective oversight of organisations providing services. Hazards linked to pilot competence or quality of training, and the disconnection of the GA rules from commercial aviation rules directly affect flight safety.
- **Free movement of people, services and goods:** In the JAR system the period of validity of the certificates issued to organisations was left to the discretion of the competent authorities. This led to non-uniform rules, which in turn did not contribute to the creation of a level playing field in the internal market. It should be noted that the free movement of people existed already in the JAR system, but was not obligatory.
- **Proportionality and flexibility:** The ICAO and JAA requirements have evolved along the decades but have not always been 'performance based'. This gave rise to concerns about these rules being in some cases over-prescriptive and not proportionate for the different stakeholders.
- **Global harmonisation:** The structure of the JAA rules presumed the existence of international standards on the one hand (i.e. ICAO) as well as of national legislation on the other. In other words, this leads to three layers of regulation: global + European + national. On the contrary, in the EASA system, only two layers of rules exist: global + European. As a consequence, aspects left by the JARs to individual States need now to be covered by common EU rules. Their structure needs to be suitable for this purpose, otherwise compliance with ICAO is necessary.

2.1.1.2 Initial objectives

The possible impacts (positive and/or negative) of any new rules are correlated with the initial objectives, which represent the overall initial policy goals aimed at meeting/addressing the initial needs/issues, and define the scope of the regulations. The initial objectives of the FCL rules were the following ones (as per NPA 2008-22f):

- **Ensure a high uniform level of safety** in all EASA MSs;
- **Facilitate the free movement of people** in order to allow European professionals and organisations to develop their work in all EASA MSs;
- **Facilitate the level playing field** where all players have the same opportunities and face the same challenges;
- **Promote cost-efficiency and proportionality** among all the pilot training stakeholders and between GA and commercial aviation;
- **ICAO compliance and FAA consistency** with the new EU regulations.

¹² NPA No 2008-22f 'Regulatory Impact Assessment on Flight Crew Licensing (FCL)' (<https://www.easa.europa.eu/sites/default/files/dfu/NPA%202008-22f%20-%20RIA%20FCL.pdf>).



2.1.1.3 Initially expected results/impacts

Based on the objectives identified and reported in Figure 5, it is also possible to formulate some assumptions regarding implicitly expected effects that were not mentioned in the related NPAs.

So, after the rules are in place, the system should work on the following assumptions:

- The stipulation of rules that contain essential requirements for pilot competencies and training quality leads to the improvement of safety;
- The standardisation of examiners in the sense of harmonised rules across the EU would contribute to the creation of a level playing field in the internal market;
- There might be some other factors affecting the level playing field: standardisation of authorities, standardisation of training programmes, and standardisation of instructors, administrative burden, and mutual recognition;
- The proportionality and flexibility of the pilot licensing system potentiates the development of GA and provides a set of proportionate regulations to all stakeholders;
- The harmonisation of the rules ensures compliance with the ICAO standards and consistency with the FAA.

The logical link between objectives, results and impacts is explicitly illustrated in Figure 10. The diagram relates direct outcomes and field impacts with the expected objectives of the regulations and provides also a framework for the information collection process implemented in support of the evaluation.

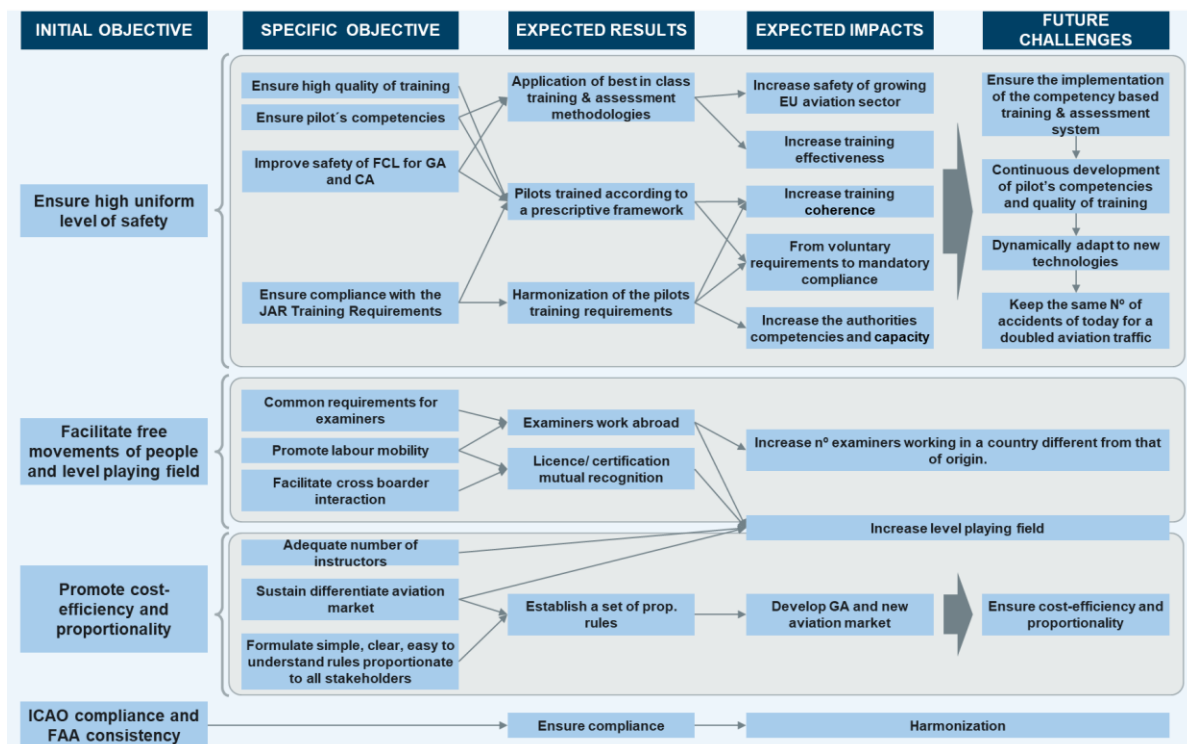


Figure 10: Diagram of impacts — relation between objectives, results and expected impacts



2.2. Current situation and modern aviation challenges and opportunities

The actual rules were implemented almost a decade ago and since then some amendments have been implemented in a continuous effort to adapt the rules to the continuous evolution of modern aviation.

Besides the classic ex post evaluation of the current rules, based on the analysis of historical data, the study therefore also tried to assess the adequacy/capacity of these rules to adequately respond to the future challenges that aviation will be facing in Europe.

As stated in the EPAS, 'Aviation is a very dynamic sector with rapidly innovating new technologies and business models, and constantly improving efficiency and productivity. At the same time, it is confronted with evolving new risk scenarios in terms of both safety and security. These rapid changes are a challenge for the staff of aviation authorities, as well as for aviation organisations, to keep abreast with new developments and to update their knowledge and competencies to discharge their responsibilities.'¹³

The FCL rules should evolve to accommodate the increasing demand for CAT pilots from the market (see Figure 10) that requires a smart approach to gradually evolve from a rigid prescriptive system to a competency-based one linking safety performance to business performance. At the same time the FCL rules should ensure an organic growth of GA proportionality and abatement of entry barriers for young people approaching aviation.

The evolution from a prescriptive- to a performance-based regulatory framework for FCL will require a radical transformation in the way regulators and regulated organisations and entities think and work. Far more flexibility and judgement will be required, particularly in the case of identifying risks and defining appropriate management systems and common performance criteria to be applied in a consistent way throughout Europe to ensure the highest level of safety through continuous improvement of the pilot competencies and the quality of pilot training. At the same time, the new rules must keep pace with the new technologies and guarantee an efficient, uniform and proportional system for pilot training, testing and checking across the EASA MSs.

2.3. Evaluation questions

The evaluation provides replies to the evaluation questions, which were defined by EASA and fine-tuned by the consultant at the inception phase. They follow the standard evaluation criteria/topics¹⁴ and are supported by judgement criteria. The judgement criteria clarify the parameters/thresholds against which the rules are assessed in terms of their impact on achieving the initial objectives.

Relevance of the rules (looking at how the rules match the needs and problems)	
Evaluation questions	Judgement criteria
<u>Evaluation question 1:</u> To what extent have the rules for pilot training, testing and checking ensured a high uniform level of safety?	Capacity of the rules to achieve a high and uniform level of safety
<u>Evaluation question 2:</u> To what extent have the rules for pilot training, testing and checking facilitated the free movement of people?	Capacity of the rules to facilitate the free movement of people

¹³ European Plan for Aviation Safety (EPAS) 2018–2022 (<https://www.easa.europa.eu/document-library/general-publications/european-plan-aviation-safety-epas-2018-2022-leaflet>).

¹⁴ EC Better Regulation Framework (https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en).



<u>Evaluation question 3:</u> To what extent have the rules for pilot training, testing and checking facilitated level playing field?	Capacity of the rules to facilitate level playing field
<u>Evaluation question 4:</u> To what extent has the regulator covered the real needs of stakeholders in terms of pilot training and assessment? Are there additional requirements needed on top of the ones mandated by the regulation? What are the non-relevant/superfluous areas in the rules?	Degree to which the rules meet the current needs Degree to which the rules are superfluous to the current needs
<u>Evaluation question 5:</u> To what extent do the rules on pilot training, testing and checking meet the current needs and challenges of modern aviation?	Adequacy of the rules to the modern aviation opportunities and challenges
Effectiveness (how effectively the rule has supported the stakeholders in achieving their objectives)	
<u>Evaluation question 6:</u> To what extent are the rules on pilot training, testing and checking drafted clearly, are easy to understand, unambiguous, simple, precise and concise, without unnecessary elements from the user's point of view?	Clearness and accuracy of the rules Level of complexity of the structure of the rules
<u>Evaluation question 7:</u> What is the real capacity of the authorities to fulfil their obligations in order to ensure effective oversight of the training organisations, instructors, examiners, and operators?	Degree to which the rules are successful in producing the expected results
Efficiency (looking at whether cost-effectiveness has been achieved)	
<u>Evaluation question 8:</u> To what extent do the rules ensure regulatory efficiency, avoid administrative burden and are proportionate for all affected stakeholders?	Ability of the rules to promote cost-efficiency and proportionality
Coherence, consistency (rules coherently contributing to achieving common objectives and with other relevant EU policy interventions)	
<u>Evaluation question 9:</u> To what extent do the Aircrew and the Air Operations rules ensure synergy and a holistic approach as regards pilot career, e.g. consistency in the overall training (initial/recurrent), testing and checking?	Interfaces and degree of collaboration between authorities, training organisations, operators Inconsistencies between different regulations
Added value of regulation at EU level	
<u>Evaluation question 10:</u> To what extent do the EU rules on pilot training, testing and checking still need to be addressed at EU level?	Need to maintain the rules at EU level



3. Answers to the evaluation questions

3.1. EQ1: Capacity of the rules to achieve a high and uniform level of safety

Evaluation question 1: To what extent have the rules for pilot training, testing and checking ensured a high uniform level of safety?

Judgement criterion: Capacity of the rules to achieve a high and uniform level of safety

Answer:

There is general consensus on the fact that the rules for pilot training, testing and checking have created the right conditions to ensure so far a high uniform level of aviation safety in Europe.

However, the current challenges that the modern aviation sector is facing (growth of air traffic, increase of the technological complexity on board, etc.) call for a commensurate evolution of these rules, extending competency-based training to all licences and ratings, specifying more adequate and proportionate requirements for instructors and examiners for both professional and private pilots, while at the same time ensuring the proficiency of CA staff.

Justification:

3.1.1. Desk research

3.1.1.1 Safety occurrences related to pilot training

Four key risk areas are defined in the EASA preliminary safety overview for 2018: aircraft upset, runway excursions, fire (occurring previously to the accident), and aircraft pressurisation. The vast majority (81 %) of the occurrences linked to pilot training that were analysed in the period 2008 to 2017 are related to these four key risk areas.

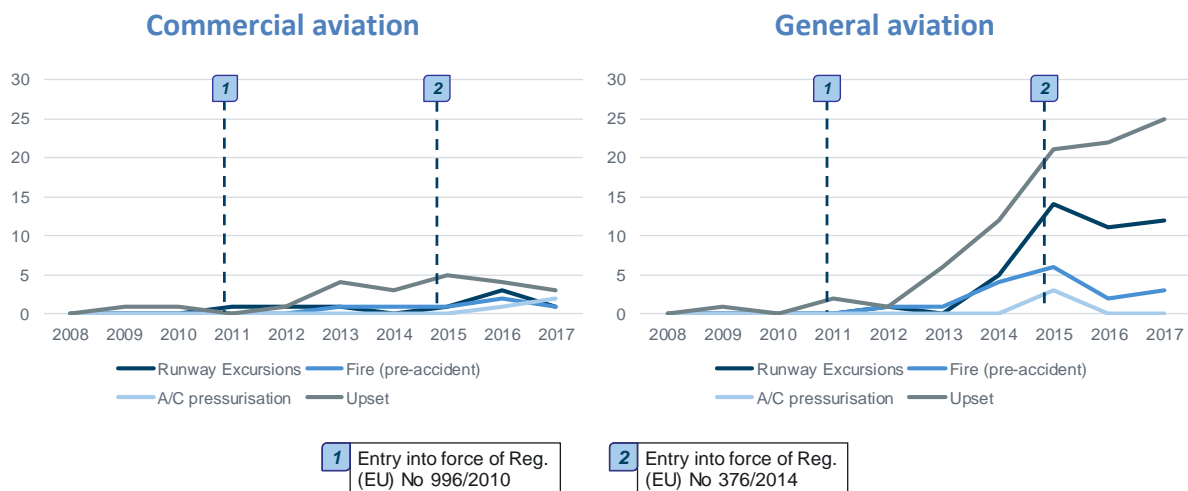


Figure 11: Evolution of the number of events of the EASA key risk areas

The general increase in the number of events is mainly due to the establishment of Regulation (EU) No 996/2010 which made the reporting of accidents and serious incidents mandatory and of Regulation (EU) No 376/2014 which made the reporting of occurrences with significant safety risk mandatory. The growing tendencies that appear in Figure 11 are therefore only a symptom of a stronger reporting culture and cannot be associated with the risk analysis.



Upset occurrences represent 60 % of the total occurrences analysed within the four key risk areas. In order to reduce the number of occurrences related to upset risk, EASA has developed specific upset recovery training. The upset recovery training became mandatory in April 2018 with a 1-year transition period for all aeroplane pilots. For commercial pilot licences (i.e. CPL, ATPL and MPL) it is, therefore, currently mandatory to undergo a specific upset prevention and recovery training (UPRT) module during training, while for GA EASA plans to modify the current training syllabus in order to integrate basic UPRT elements as can be seen in EASA Opinion No 06/2017¹⁵. The effect of the new upset recovery training courses will be possibly reflected in the number of occurrences reported in the future years, but the data seems to suggest that GA pilots should undergo a more detailed upset recovery training, since this is the cause of most of the safety occurrences.

3.1.2. Online survey

The majority of the survey respondents are of the opinion that the current rules should be amended to improve the level of safety.

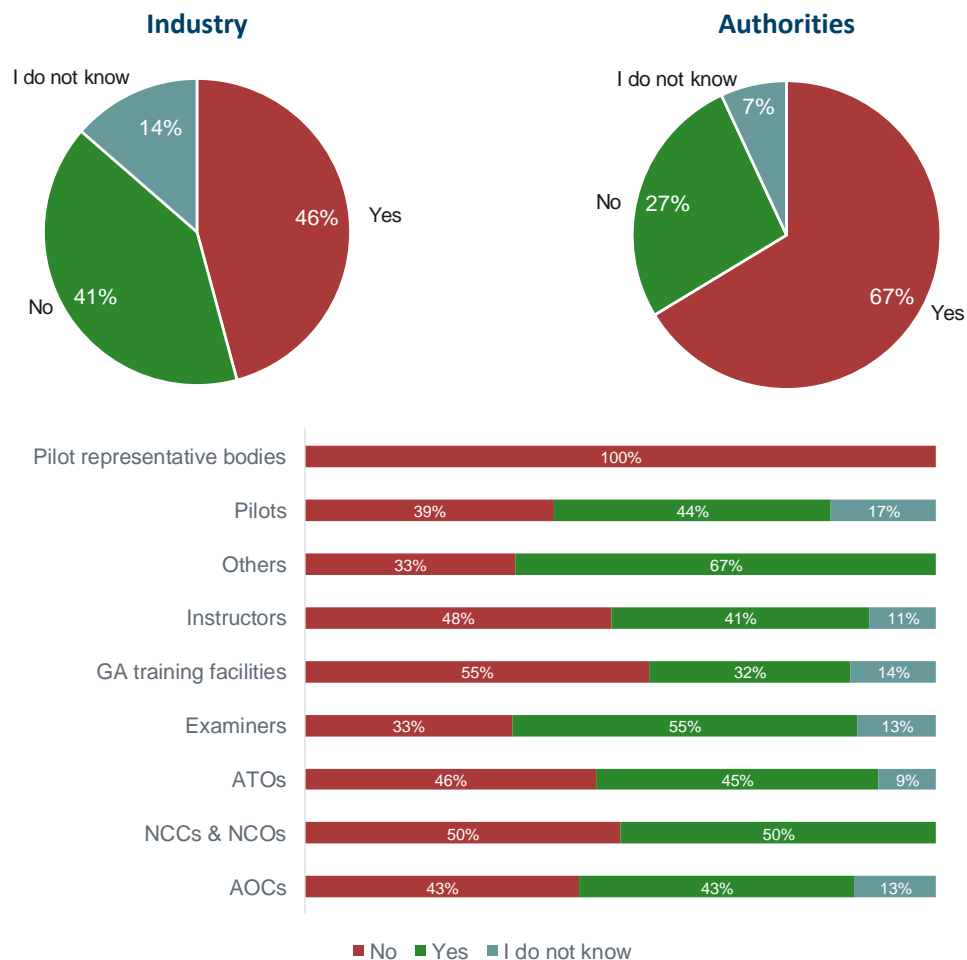


Figure 12: Do you think that the current pilot training rules should be changed to improve the safety level?

¹⁵ EASA Opinion No 06/2017 'Loss of control prevention and recovery training' (<https://www.easa.europa.eu/sites/default/files/dfu/Opinion%20No%2006-2017.pdf>).



The feedback from industry is mainly triggered by the regulatory spirit of focusing too much on the theoretical knowledge rather than on the real competencies of pilots (navigational skills, upset recovery, stalls) to correctly use all the available technology support (especially GPS and moving maps) to fly in different conditions (such as bad weather, or reversion to manual flying).

Imposing additional flight hours on real flights and simulators is often indicated as a good approach to increase safety. Additional training on human resources (e.g. multi-crew cooperation (MCC)) is also indicated as a valuable means to reduce errors and accidents that are mainly caused by pilots.

Several respondents also indicated that recurrent training should be better regulated (i.e. further roll-out of EBT and its extension to GA, additional yearly simulations, specific regular sessions on training events with physical instructors) and additional recurrent checks (e.g. 6 months after the initial grant of the licence) could be imposed to enhance the level of safety.

Finally, a number of respondents observed that the administrative overhead incurred by the current regulations should be reduced to increase safety and encourage people to fly.

3.1.3. Interviews

A number of interviewees believed that the main remaining problem of the actual European pilot training system is its quality. The risk of not ensuring adequate quality of training has been echoed by the Aircrew Training Policy Group, which has raised concerns about the quality of the training programmes offered by certified pilot schools: ‘Skills gained by the cadets may not always match the skills required by airlines. Airlines representing a significant share of the EU market have reported that a large proportion of pilots that hold an airline transport pilot licence do not meet the airlines’ basic entry requirements.’¹⁶

The concern on training quality is sometimes attributed to the scarce availability and/or insufficient experience of the instructors and examiners. This is attributed to a combination of different reasons, among which are the following:

- The job conditions offered by training organisations are in many cases worse than those offered by airlines to pilots;
- The lack of sufficient experience in teaching and training by an increasing number of instructors and the difficulties for the NAAs to monitor and verify adequately their performance;
- The different criteria applied by instructors to assess the competencies of applicants to recommend them for the exam and of examiners for their assessment (i.e. the individual interpretation of the checklist) due to a certain degree of interpretability of the rules;
- The different evaluation criteria applied by examiners during skill tests due to their subjective interpretation of the minimum standards;
- The lack of a standardised and common EU system for the evaluation of the examiners’ performance, based on the feedback of ATOs and pilots.

There is unanimous position in considering that the initial requirements for the screening and selection of trainee ab initio pilots is a crucial filter during pilot career and a key element in maintaining the highest level of safety of the system, while at the same time rationalising costs of training students

¹⁶ Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — Aviation Strategy for Europe: Maintaining and promoting high social standards; Section 4.12 (Quality of training) (<https://ec.europa.eu/transparency/regdoc/rep/1/2019/EN/COM-2019-120-F1-EN-MAIN-PART-1.PDF>).



who are not yet suitable to become pilots. However, the selection of pilots is not regulated today, and is mainly based on best practices recommended by airline associations through guidance material. Ultimately, every actor is free to organise the preselection and pilot aptitude tests based on their own processes and criteria, which usually consider a mix of academic certification and general knowledge (maths, physics, etc.), English language knowledge, psychometric and psychological tests.

A detailed standard definition of the tested aptitudes and their weight in the examination is a key element in ensuring the quality of the training.

3.2. EQ2 Capacity of the rules to facilitate the free movement of people

Evaluation question 2: To what extent have the rules for pilot training, testing and checking facilitated the free movement of people?

Judgement criterion: Capacity of the rules to facilitate the free movement of people

Answer:

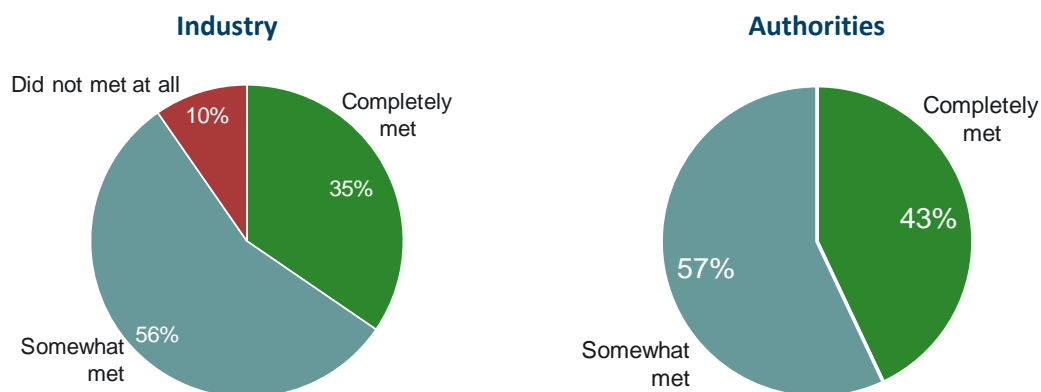
The initial objective of achieving the free movement of aviation professionals in Europe is considered only partially fulfilled. In fact, although the current rules facilitate the free movement of people, some practical barriers (such as language barriers and administrative differences) are still identified to exist and hinder the free movement of people.

Justification:

3.2.1. Online survey

The free movement of people is mostly considered achieved by the survey respondents, either entirely or partially. However, practical barriers are pointed out.

This negative perception is particularly widespread among the respondents from GA training facilities, who are the ones generally perceiving the worst the free movement of people and the level playing field.



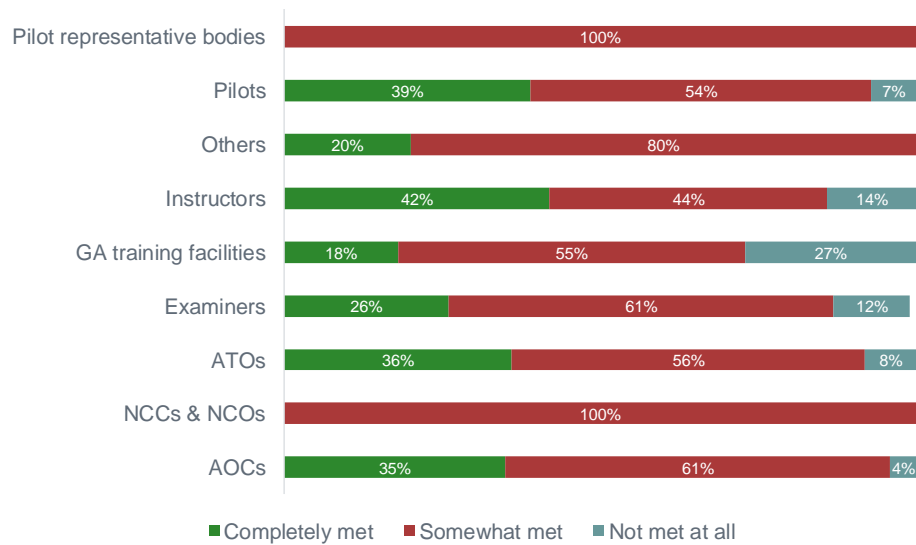


Figure 13: Have the FCL rules met the initial objectives of the free movement of people and services, and level playing field?

The main barriers perceived by industry representatives' and authorities' respondents are:

- the differences in language, especially for instructors, since most of the ATOs perform the initial courses in the native language of the students and particularly for GA (i.e. within the LAPL and PPL courses);
- the mutual recognition of licences, certificates and privileges therein is still not always automatic among the different MSs: language proficiency and examiner differences are the two more recurrent examples pointed out by the survey respondents and interviewees that hinder the free movement of professionals.

Other data reported through the online survey corroborates these conclusions: the vast majority of professionals exercise the privileges of their licences/ratings in the same MS where they were originally issued: 83 % for pilots, 93 % for instructors, and 92 % for examiners. This may be also due to the existence of practical barriers that hinder the free movement of people and support the industry's perception that the objective has only been partially met.

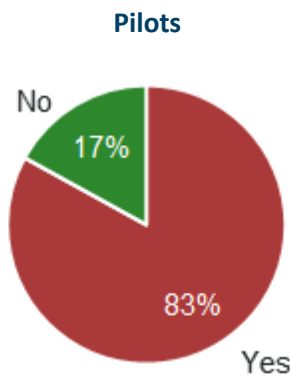


Figure 14: Number of pilots who work/exercise the privileges of their licences/ratings in the same MS where they were originally issued

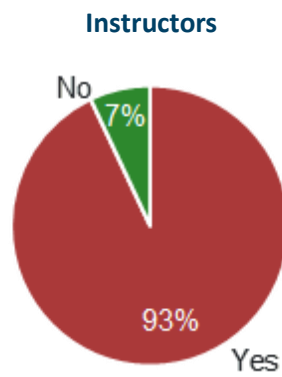


Figure 15: Do you exercise the privileges of your instructor certificate in the same MS where it was originally issued?

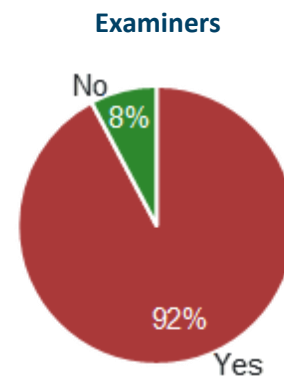


Figure 16: Do you exercise your examiner certificate privileges in the same MS where it was originally issued?

3.2.2. Interviews

Most of the interviewees agreed that the regulation facilitates the free movement of people across the EU. A trainee pilot that wants to become air transport pilot can start their certification in Spain, then become CPL holder in France, and then move to Italy for the IR. So there are no borders among the MSs any more for pilot training.

For GA, the EU rules apparently did not change a lot as regards the free movement of people. Before, the national CAs were issuing ICAO-compliant licences that allowed pilots to fly everywhere in the world. The language instead continues to be the main barrier to the free movement of GA pilots, instructors and examiners, since the PPL course is usually given in the national language. Generally, English seems to be more promoted in the Eastern countries.

On the other hand, there is no full harmonisation in the recognition of professional pilot licences by airlines due to the different administrative processes, depending on the MS's CA. The transfer of pilot licences issued by other EU MSs is a practice used by airlines due to administrative reasons and not due to strict regulatory compliance. However, in some cases, EU MS CAs do not accept other MSs' licences, arguing that there are administrative concerns related to other MSs' licensing processes.

Pilots from legacy airlines are still mostly nationals of the nationality of the flag carrier, while low-cost carriers seem to exploit more the free movement of pilots, especially to staff their bases throughout Europe.

For CAT pilots, airlines in some MSs must include the national regulations of the airline's State of Registry into their own pilot-in-command (PIC) training syllabus (as most of them have never studied the national rules during their initial and recurrent training). These courses show a lack of harmonisation and an impediment to the free movement of professionals.



EU examiners, by familiarising themselves with the ‘additional national requirements’ document provided by EASA, can perform pilot testing and checking in any EASA MS. However, the applicable regulation is not clear enough on some administrative processes, leaving sometimes the application of administrative requirements open to interpretation. For instance, for a new type rating endorsement, depending on the CA — and for a particular instrument rating (IR) endorsement, which is currently in place, but needs to be renewed — the date acceptable for renewal and new endorsement is, depending on the CA, either the date when the IR renewal course starts, or the date when the exam is conducted or the date when the course ends. This may lead to a situation where the IR may not be applicable any more when the course takes place (when offered to international students with different EU nationalities) before completing the course. Another example is that different CAs from the EU MSs (e.g. the Czech Republic) have included PBN directly as a note on the pilot licence, while others (e.g. UK) just in the pilot logbook, but this difference is not included in the ‘examiners’ difference document’ that is promoted by EASA.

3.3. EQ3 Capacity of the rules to facilitate the level playing field

Evaluation question 3: To what extent have the rules for pilot training, testing and checking facilitated level playing field?

Judgement criterion: Capacity of the rules to facilitate level playing field

Answer:

The current rules have partially succeeded in establishing a level playing field in Europe by providing common provisions for pilot training, testing and checking. In fact, there is still a number of different applications of some requirements, mostly due to the different interpretation of the rules, thus creating sometimes different conditions for the applicants to comply with. This is mostly attributed to the clarity of the language used in the regulation which is often perceived as bureaucratic.

Justification:

3.3.1. Desk research

3.3.1.1 Analysis of exemptions and derogations

A total of 121 exemptions related to pilot training, testing and checking were issued by EASA MSs since 2015. The exemptions are issued mainly due to operational needs of limited duration. The exemptions cover a wide range of operational needs, but the exemptions shown in Figure 17 are the most recurrent ones:



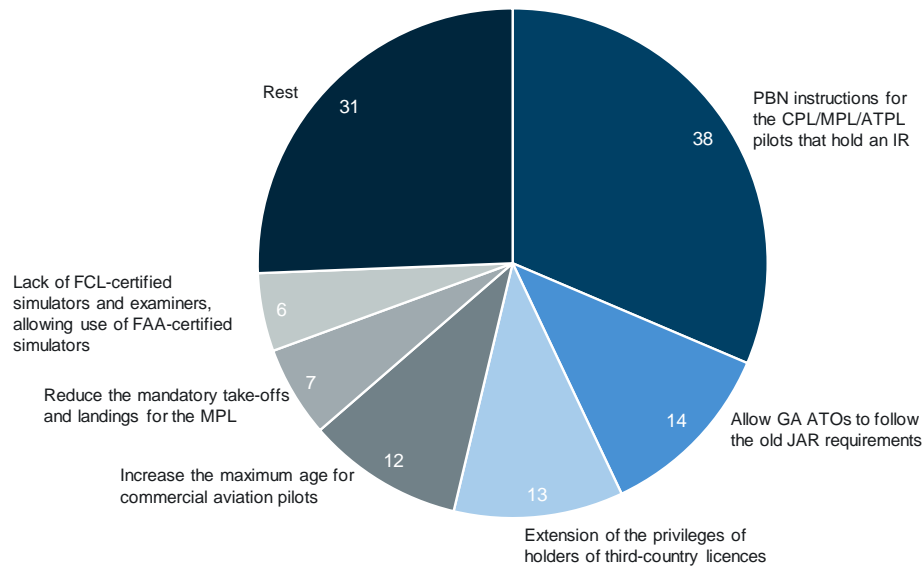


Figure 17: Number of exemptions by regulation area

Exemptions can apply to technical as well as to administrative requirements. While the majority of exemptions are linked to the introduction of the PBN regulation (and the associated administrative processes), it can be observed that in other cases there are technical exemptions, modifying the requirements to obtain the licence (e.g. maximum age for pilots or number of take-offs and landings).

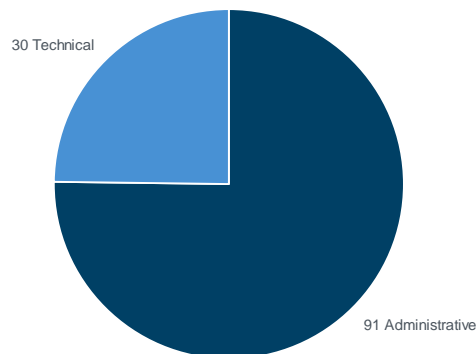


Figure 18: Number of exemptions by nature of exemptions

Only one derogation was issued by a MS (Germany) and was related to the European Central Question Bank (ECQB), and in particular to complement it with additional questions to cover airships (which are outside the scope of the study).

It is important to consider that the flexibility introduced through the exemption and derogation provisions established by the Basic Regulation cater for exceptional cases and therefore should not be used routinely by MSs in order to seek derogations from the implementation of certain rules. This would in fact create an unfair advantage whenever creating important technical differences among the MSs on how to apply the requirements. However, this effect seems to be very limited due to the mutual recognition provision included in Article 14(3) of the Basic Regulation and considering the minority of technical exemptions with respect to the administrative ones.

On the other hand, the high number of administrative exemptions and derogations potentially imply that the regulation is flexible enough to be adapted occasionally to the real needs and constraints of a particular stakeholder, thus enhancing cost-efficiency and proportionality.



3.3.2. Survey

The application of exemptions and derogations just represents the formal part of the flexibility of the provisions included in the applicable regulations. The other part corresponds to the local interpretation of the application of these provisions in the practical processes for pilot training, testing and checking.

The different interpretations of the regulation by the different national CAs is often raised as an issue that creates differences in the application of the rules for pilot training, testing and checking, thus practically affecting the level playing field.

In particular this is recognised to lead to different testing standards applied by different MSs, thus making some MSs generally to interpret the rules stricter than others to be on the safe side, while at the same time creating additional challenges for the users to demonstrate compliance with respect to another MS that has interpreted the same rule more broadly. For instance, for a particular IR endorsement that needs to be renewed, the date acceptable for renewal and new endorsement can be, depending on the CA, the date when the IR renewal course starts, or the date when the exam is conducted or the date when the course ends.

This problem is mainly attributed to the language used in the regulation, sometimes considered ambiguous rather than pragmatic and operational and, therefore, leaving space to different operational interpretations.

3.3.3. Interviews

According to many interviewees there might be the conditions to exercise some form of 'competition' among the different national CAs, based on local differences in applying the requirements that stem from the regulation.

In some cases, interviewees noticed different methods of applying the regulation by different CAs, making it possible for users to select what authority is preferable for them. For example, in order to renew a type rating, some authorities require conducting some simulation hours while some others do not.

Also the different interpretation of the requirements can sometimes create an unfair advantage for ATOs from different MSs.

The implementation of different tax schemes in different MSs is also identified as a potential leverage to influence the method of oversight by the CAs and relevant differences for such processes.

Another situation perceived as unfair and that created distortion in the level playing field is identified by one interviewee in the evolution of the EU regulation, being amended too frequently and thus giving a last-moving advantage to the users that have waited for the amendments instead of ensuring immediate regulatory compliance. The requirements for ATOs, later followed by the introduction of the declared training organisation (DTO) concept, is mentioned specifically in one case as favouring those training centres that did not undergo the process to become ATOs in the first place.



3.4. EQ4 Degree to which the rules meet the current needs

Evaluation question 4: To what extent has the regulator covered the real needs of stakeholders in terms of pilot training and assessment? Are there additional requirements needed on top of the ones laid down in the regulation? What are the non-relevant/superfluous areas in the rules?

Judgement criterion: Degree to which the rules meet the current needs

Answer:

There is often the impression from industry that the skills of pilots do not meet the necessary quality level for CAT. Additional hours of practical training are required to ensure proficiency. However, the analysis of additional hours of practical training (through simulators and in flight) reveals that especially for PPLs and CPLs it is already common practice and is not directly correlated with higher success rates. The training quality issue seems to be corroborated by numbers: 25 % of the ATPL pilots that participated to the survey have not found a job at an airline 1 year after having obtained their licence.

Justification:

3.4.1. Desk research

3.4.1.1 Number of pilots, AOCs and ATOs

As it can be seen in Figures 19 to 26, there is a clear increasing trend in the number of pilots along all the types of licences during the last 6 years in the EASA MSs. Commercial aviation is growing faster than GA with a compound annual growth rate (CAGR) higher than 24 %, compared to a 6.4 % for the PPL. Most of the pilots are commercial ones, with the ATPL course being the most popular, followed by the CPL and the MPL. To be noted that the number of licences analysed includes the replacement of existing licences with EASA Part-FCL licences occurring in 2014, following the entry into force of Commission Regulation (EU) No 1178/2011¹⁷, thus introducing a considerable increase for that year.

The MPL is the category increasing at a highest rate (46.4 % CAGR), since this is the newest category of licences, but also testifying that it is well received by the industry as it is becoming a real alternative to the traditional ATPL course. Germany is leading the use of the MPL with 65 % in 2018, mainly due to Lufthansa adopting it as the main course for trainee ab initio pilots.

¹⁷ 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 (OJ L 311, 25.11.2011, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590509767516&uri=CELEX:32011R1178>).





MPL

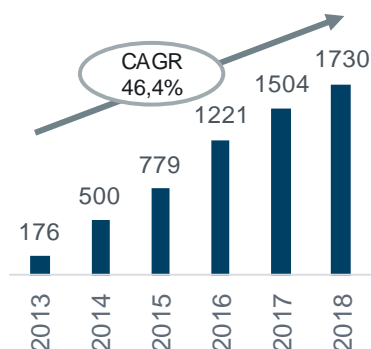


Figure 19: Evolution of the number of MPL holders in the EASA MSs

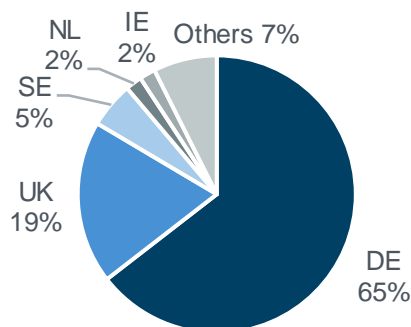


Figure 20: Top 5 MSs with the most MPL holders in 2018

ATPL

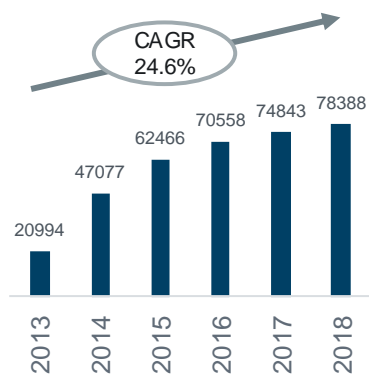


Figure 21: Evolution of the number of ATPL holders in the EASA MSs

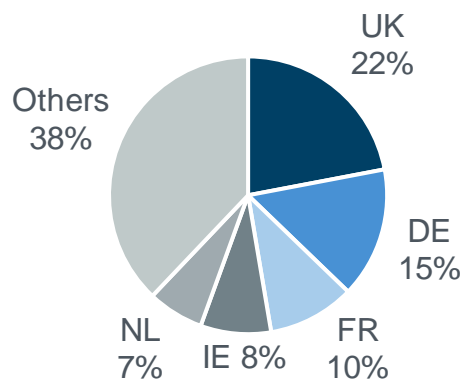


Figure 22: Top 5 MSs with the most ATPL holders in 2018



CPL

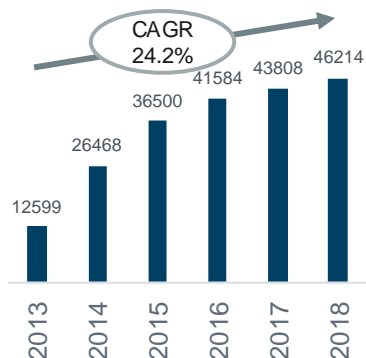


Figure 23: Evolution of the number of CPL holders in the EASA MSs

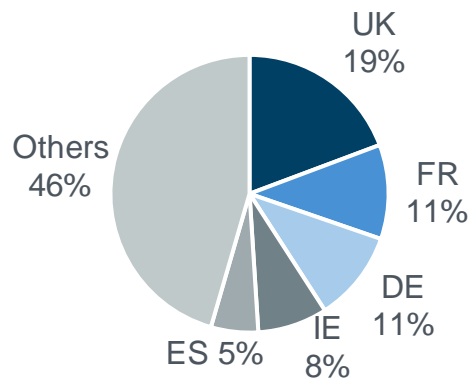


Figure 24: Top 5 MSs with the most CPL holders in 2018

PPL

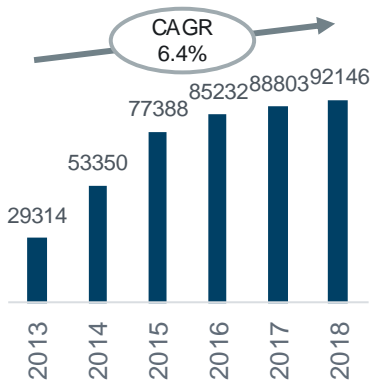


Figure 25: Evolution of the number of PPL holders in the EASA MSs

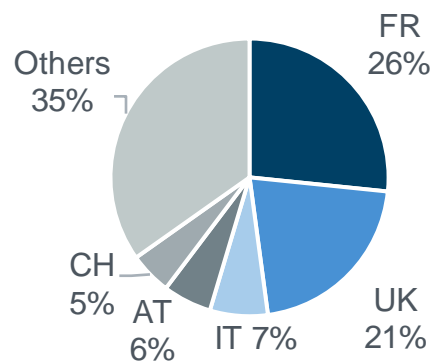


Figure 26: Top 5 MSs with the most PPL holders in 2018



The number of ATOs is growing at a rate of 2.8 % CAGR (Figure 27), indicating that the business volume of pilot training is growing, and due to the high demand for pilots whose absolute number is also increasing.

The number of AOCs is decreasing at a rate of –2.8 % CAGR (Figure 28), indicating a general trend for the sector to consolidate smaller operators.

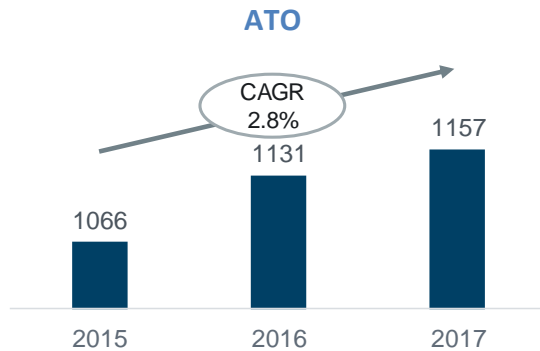


Figure 27: Evolution of the number of ATOs in the EASA MSs

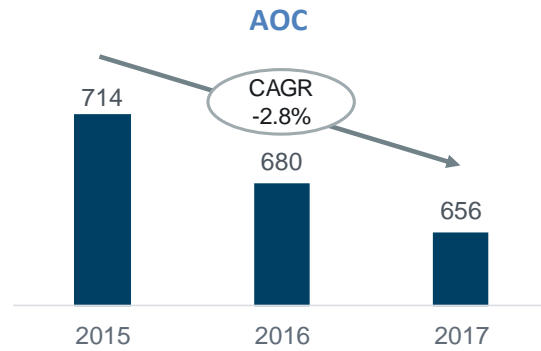


Figure 28: Evolution of the number of AOCs in the EASA MSs

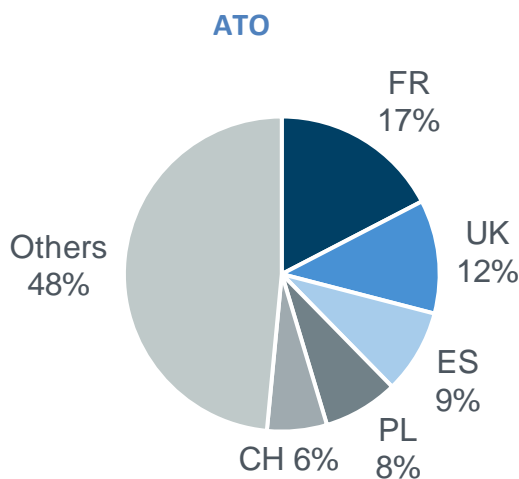


Figure 29: Top 5 MSs with the most ATOs in 2017

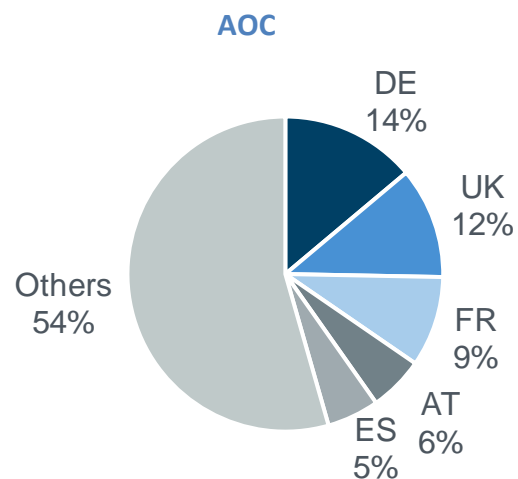


Figure 30: Top 5 MSs with the most AOCs in 2017

The United Kingdom, France and Germany are the countries with the most commercial pilots and AOCs in the EASA MSs in 2018, and are also the countries in which the aviation sector tradition is historically well established. France notably exceeds other countries in the number of GA pilots (PPLs).

The increasing number of new pilot licences that the authorities have to issue yearly, combined with the increasing number of ATOs to be audited, implies an even higher workload for national CAs in the coming years. This needs to be accompanied by an increase in the resources dedicated to such key oversight tasks in order to ensure that the current level of safety is maintained.

The increasing number of ATOs may imply that new pilot schools are continuously opened in Europe with little or no experience, and subject to commercial pressure, to train an increasing number of pilots at the minimum possible cost to be competitive in the market. This implies a potential concern on the final quality of the delivered training and ultimately on the level of safety, especially if the authorities' capacity for oversight is kept constant.



3.4.2. Survey

The number of additional training hours required for student pilots has been considered as a proxy for the adequacy of the system to objectively evaluate the preparation of individual candidates and to meet their real needs in terms of training.

On average, 61 % of the student pilots require more training hours than the minimum specified by the regulation, based on the responses to the survey questions, although the majority of them only require up to 5 % of additional hours.

Among the reasons behind the additional training needs, the most frequently reported ones are the following:

- for GA, the long intervals between classes reduce the effectiveness of the training;
- for GA, older students may bias the results since they usually have a slower learning curve;
- refresher flights with the flying instructor after some time without flying are usually necessary for the learning process;
- bad weather for flying in some European regions may also delay learning.

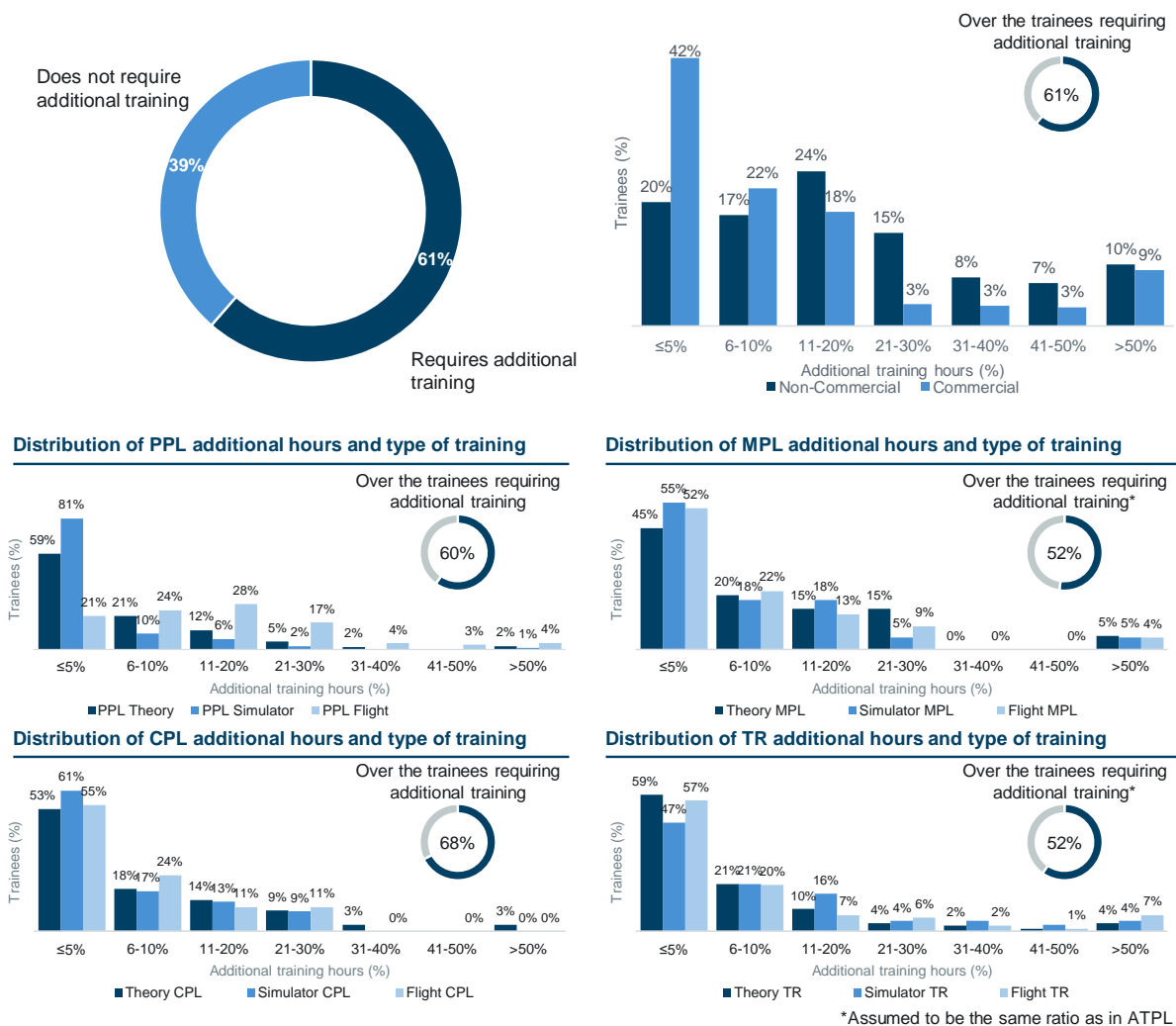


Figure 31: Additional training hours by type of aviation and type of licence



For each licence category, the average success rate reported by ATOs is above 90 %; however, for PPLs the minimum success rate reported by one respondent is as low as 30 % and is linked with the peak of the extra training hours (i.e. 40 % more than the minimum requirements).

This indicates that specific cases of candidates that do not meet the minimum requirements may be first tackled by providing additional training and then not passing the exam despite this additional training. This might also in turn indicate that the competencies that are assessed by instructors in order to recommend a student for the exam are not sufficiently clear or are differently interpreted by different instructors and examiners.

For CPLs the situation in terms of success rate looks much better (i.e. between 80 and 100 %), although showing the same tendency for PPLs of registering the lowest success rates where the highest additional training is provided. The general success rate across all pilot licences and ratings is above 90 %, therefore it seems reasonable to conclude that the training provided by ATOs overall meets the testing and checking criteria of the examiners.

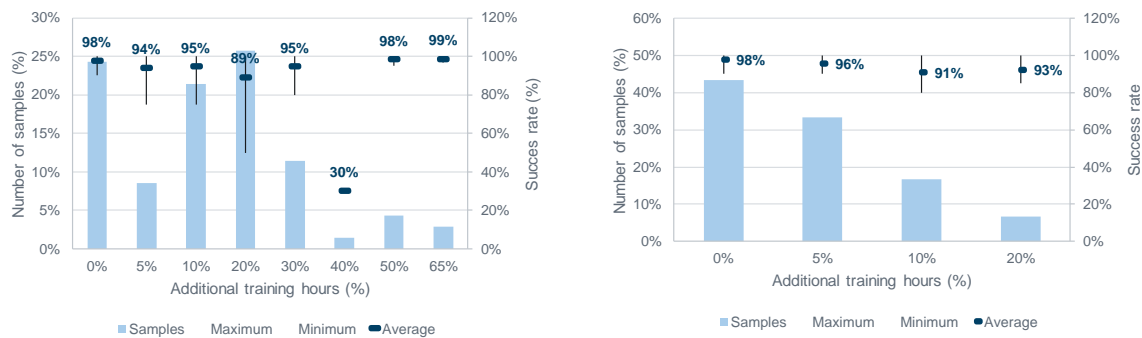


Figure 32: Average success rate and additional training hours for the PPL and the CPL

The vast majority of commercial pilots manage to find a job within a year after completing the initial training. The peak of employment rate is registered for MPLs (i.e. 99 %), as can be seen in Figure 33. For the ATPL frozen, however, only 81 % of the respondents have found a job in an airline after 1 year, meaning that on average 1 out of 4 ATPL pilots struggle to get a job for which they have invested a considerable amount of money and time. This result seems to corroborate the conclusions of the EC report¹⁸ on Aviation Strategy for Europe, i.e. that a large proportion of pilots that hold an ATPL do not meet the airlines' basic entry requirements.

¹⁸ COM(2019) 120 final: 'Aviation Strategy for Europe: Maintaining and promoting high social standards' (<https://ec.europa.eu/transparency/regdoc/rep/1/2019/EN/COM-2019-120-F1-EN-MAIN-PART-1.PDF>).

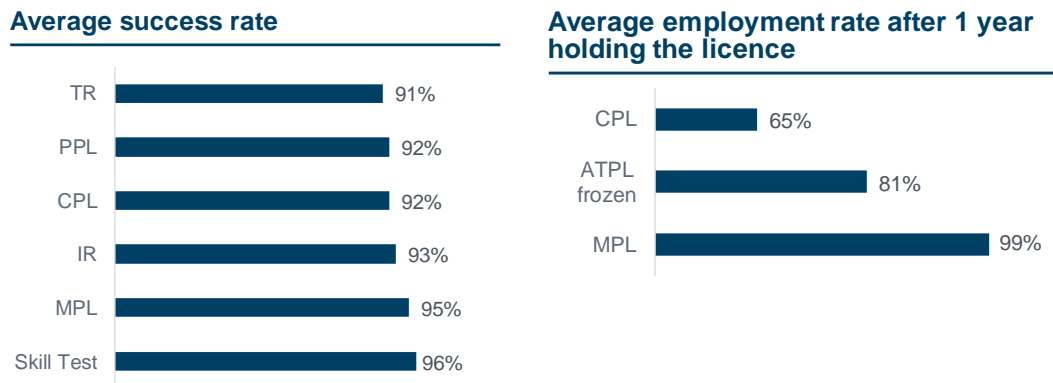


Figure 33: Average success rate and average employment rate 1 year after obtaining the licence

3.4.3. Interviews

Due to the constant pressure from the industry for training time to be reduced, some of the interviewees believe that pilots are receiving less training today and with less quality than before. For instance, the amount of flight hours for the CPL under the JAR requirements was at least 500 hours, while with the current regulations it is reduced to 200 hours. This fact, according to the interviewees, can introduce safety problems due to the fact that new pilots may not be fully confident in the flight crew compartment.

Some interviewees think that the requirements for pilot licences are too lax, especially the requested amount of flight hours and the details of the topics (too many nice-to-have and too few must-have). The MPL is widespread in Asia where the need for pilots has grown exponentially in recent years, and in central Europe where the high traffic density limits the availability of airspace for pilot training — and where the MPL is the licence that allows more the replacement of flight hours with simulator hours.

Pilots can obtain their ATPL after completing fewer flight hours compared to the USA (200 hours and 1 500 hours to unfreeze the licence), compared with the straightforward 1 500-flight-hour requirement under the FAA regulations.

Actually the flight hours to obtain an ATPL have been reduced already to a minimum of 195. An additional reduction of the number of hours could seriously affect flight safety.

The recurrent training of pilots may also be perceived by airlines as an interference to their operations because courses are scheduled right after the shift of the pilots, when they are exhausted. That does not help make the course as useful as it should be.

Regarding General Aviation, some interviewees believe that the requirements in terms of minimum flight hours before being granted the privilege to carry passengers in a glider are too lax and should be made stricter, given that these pilots usually have too little experience to carry passengers on board.

A lack of guidance material is also noticed about the specific training for pilots who wish to perform parachute free-fall operations. Currently, some ATOs provide this training with their own material, but this should be aligned in order to ensure a common level of quality.



3.5. EQ5 Adequacy of the rules for the modern aviation opportunities and challenges

Evaluation question 5: To what extent do the rules on pilot training, testing and checking meet the current needs and challenges of modern aviation?

Judgement criterion: Adequacy of the rules for the modern aviation opportunities and challenges

Answer:

The current rules have been frequently amended since they entered into force to ensure keeping pace with the technological advancements and fast market evolution. It is, however, considered essential for the whole regulatory structure and amendment process to evolve in the next years to ensure that the training syllabi are kept updated and the proficiency of instructors, examiners and inspectors is always guaranteed through a leaner and more efficient regulatory and oversight process.

Justification:

3.5.1. Survey

The applicable regulations are generally perceived to be adequate for the modern aviation challenges by both the industry and the authorities. However, the latter are much more optimistic, since 54 % of the authority staff have a very positive opinion, while only 19 % of industry respondents have this perception.

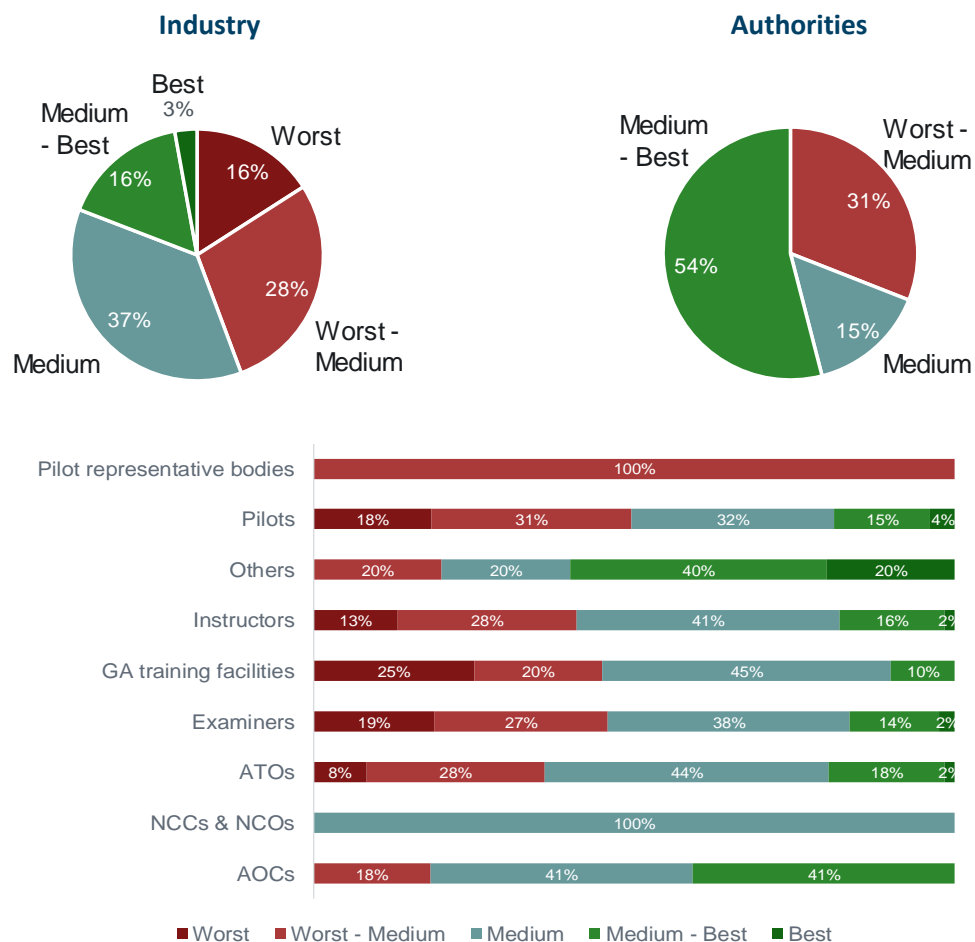




Figure 34: How would you consider the current regulation adequacy to modern aviation challenges in a scale of 1 (Worst) to 5 (Best)?

3.5.1.1 Training design and delivery

Has your training organisation introduced technological innovations to enhance course delivery within the last 8 years?

Are the innovative training tools reducing the costs?

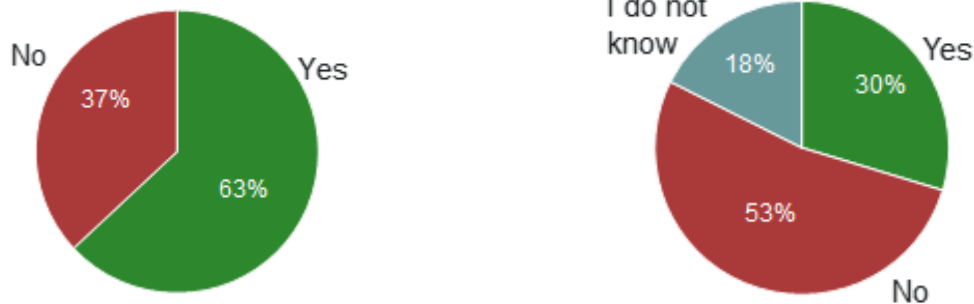


Figure 35: New training delivery tools

The majority of training organisations (63 %) have introduced technological innovations in the last years to enhance course delivery, including new FSTDs, CBT for distance learning, training apps, ICAO core competencies, ATQP data analysis with electronic check forms and computer grading applications and forms. The newly introduced technologies do not lead to a reduction of costs (53 % of the respondents do not believe it), but rather to an improvement of the quality of the training.

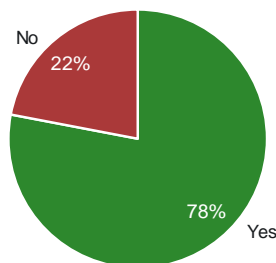


Figure 36: Does your training organisation design the content and develop the courses in terms of setting out training objectives, identifying trainees' needs, defining training content, and choosing training tools and environments?

78 % of the training organisations design the content and develop their courses in terms of:

- setting out training objectives,
- identifying trainees' needs,
- defining training content,
- choosing training tools and environments.

The main approach taken by the European ATOs in the design and development of the courses is as follows:



- training engineering function inspired by ICAO Doc 9868 'Procedures For Air Navigation Services — Training',
- adaptation of the programmes according to a standard FCL framework, based on considerable experience with the target audience being private pilots,
- developing the training aligned with ISO 9000 for pilot training organisations.

More than half of the training organisations (60 %) have already introduced the newest training areas in their programmes, including PBN, UPRT, new TCAS, EFB and GPS.

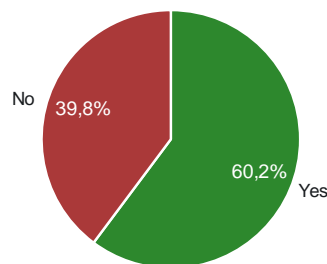
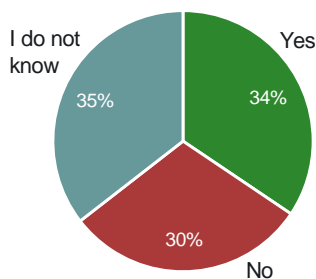


Figure 37: Has your training organisation introduced new training areas or subjects due to technologies within the last 8 years (e.g. PBN)?

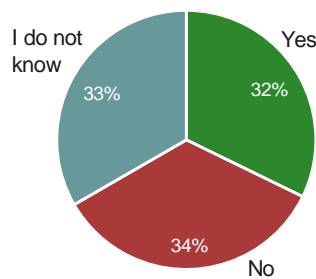
The perception training organisations have of whether the current applicable regulations facilitate the introduction of new training areas, concepts and tools is both positive and negative.

Some of them see a need for a major overhaul of Part-FCL, Part-ORA and Part-ARA in order to regulate safely, efficiently and effectively in the coming 10 years. It is often believed that some parts of the training are still teaching old technologies (e.g. navigation with charts).

New training areas or subjects



New training concepts



New training tools

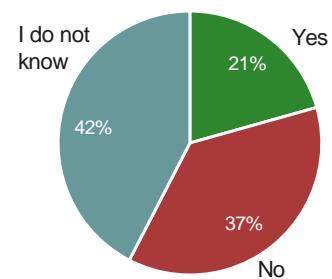


Figure 38: Has the regulation facilitated the introduction of new training areas or subjects, new training concepts and new training tools?

Only a minority (21 %) of the respondents from training organisations believe that CA staff are not fully prepared for the future challenges.

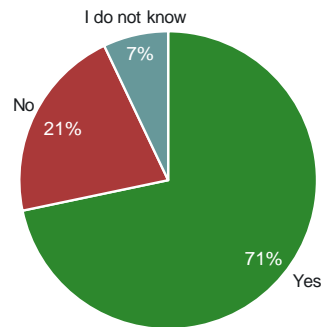


Figure 39: In your opinion, are competent authority staff trained enough to face future challenges as regards pilot training, checking and testing?

In particular, they recognise a significant lack of knowledge of modern navigational systems among many of the currently approved examiners and their average age around 50–60 years old is provided as a proof. Currently, some CAs do not impose nor require future and recurrent training for modern avionics and procedures. One example is pointed out by a respondent: future A320 neo and 737 MAX pilots are being examined by people who are about to retire/leave service (so they have no experience with modern avionics and procedures).

Also, the application of the ATQP and EBT principles is pointed out as requiring CA staff to have the necessary background and have received training to properly understand the way training is delivered today.

3.5.2. Interviews

Airlines are constantly introducing new training areas or subjects due to new technologies, i.e. UPRT, PBN, OBT, virtual reality training (cabin crews only), and computer-based simulators for some of the systems of the aircraft. The applicable regulations somewhat facilitate the implementation of the new areas, subjects and tools, but they should be updated.

In fact, according to the views expressed by an ATO, the problem is not the regulation — the main barrier to the introduction of new technologies is the financial aspect that can highly undermine smaller pilot schools. The interviewee also remarked that new technologies have to be introduced gradually because it happens several times that students do their training on modern aircraft and then face some difficulties to deal with older aircraft. The opposite (that is, training on old aircraft and then flight with modern aircraft) does not cause any problem.

The applicable regulations are sometimes perceived as not facilitating new technological developments, always running behind. Examples: PBN implementation and UPRT: it took 10 years to have UPRT covered by the Air Crew Regulation. The process to amend the regulation is too long.

On the other hand, one CA is of the opinion that the time frame to opt out when amendments are proposed to the Aircrew Regulation is sometimes too short. They in fact consult the industry (operators and ATOs) through dedicated meetings to explain the new concepts and collect feedback, which is then taken into account for opting out and the whole process requires some time.

In the past, the experience with the introduction of the PBN regulation proved very negative in several MSs: a general exemption for operators had to be introduced at the last minute. The reality is that for en route, the situation is very different from that of approaches and, therefore, approvals should be different. There are concerns that there could be an equivalent situation for remotely piloted aircraft systems (RPASs) in the future.



According to several interviewees, the level of proficiency of CA staff probably represents the biggest problem. They often lack sufficient knowledge in order to understand the real challenges and opportunities. It is much easier to check numbers on a checklist. This can represent an obstacle to progress. This is an increasingly considerable concern for the CAs: they should be on the first line to justify and defend a new regulation, while they are now increasingly missing the background information for these new regulations and losing expertise.

The same concern is shared by industry: in general, there is a serious concern about the fact that the implementation of new technologies will not be adequately overseen by the national CAs.

3.5.2.1 Evidence-based training and assessment (EBTA)

The applicable regulations permit EBTA programmes but do not facilitate their implementation. By way of example, different scenarios for the recurrent assessment of pilots (as conceived by airlines) are not recognised by the CAs at this moment, and there are discussions regarding role playing during check flights. Nowadays, the way to perform a proficiency check always requires the same manoeuvres — which are not sufficiently representative of the complex situations that can happen in flight.

Several airlines that were interviewed already assess pilots against the nine ICAO and EASA pilot competencies. Instructors receive competency-based training in accordance with ICAO Doc 9995 'Manual of Evidence-based Training'. A concern is voiced regarding the use of the term 'competency': the assessment of competencies by the instructor is different from the competencies in EBTA.

The EBTA concept is sometimes perceived to be easy to be corrupted by the air operators/airlines, so it must just be applicable to the 'good' stakeholders that have good SMS, FDM and reporting culture. Moreover, the EBTA is considered to be difficult to be audited because there are few EBT experts in the CAs since it is a new concept. The EBTA is a good concept but must be more strictly audited by the CAs.

Regarding GA, one interviewee believes that the requirements on the minimum number of hours in the applicable regulations are based on broad experience and reflect a proxy for acquiring the necessary competencies. Currently, GA stakeholders understand that the hours are just complementary to the competencies, and that only a few instructors apply the minimum. However, the situation is different in every MS. Instead, pilots should know better the on-board technical systems to understand exactly what is going wrong when there is a situation in flight.

3.6. EQ6 Clarity of the rules and level of complexity

Evaluation question 6: To what extent are the rules on pilot training, testing and checking drafted clearly, are easy to understand, unambiguous, simple, precise and concise, without unnecessary elements from the user's point of view?

Judgement criterion: Clarity and accuracy of the rules and level of complexity

Answer:

There is a diffused perception within the industry that the applicable regulations are generally not clear enough and are complex to consult, since the requirements are dispersed across different documents (regulations and annexes, AMC, AltMoC, exemptions, etc.) and it proves generally difficult, especially for pilots, to easily navigate through the related material and identify the specific provisions that apply to them. However, the CAs' perception of the clarity and complexity of the applicable regulations is more positive.



Justification:

3.6.1. Desk research

3.6.1.1 Acceptable means of compliance (AMC)

Specifically the AMC to Part-FCL, Part-ORA and Part-ARA of the Aircrew Regulation have been amended frequently since the entry into force of the Regulation in 2011. Part-FCL and Part-ARA have been amended the most, with 7 AMC amendments, followed by Part-ORA with 6 amendments.

On the other hand, the AMC to Part-ORO of the Air Operations Regulation has been amended 14 times, but only 6 amendments covered the Flight Crew Subpart.

On average, the different parts within the Aircrew and the Air Operations Regulations are amended once per year, meaning that users have to understand and learn 4 new AMC amendments per year covering pilot training, testing and checking (Part-FCL, Part-ORA, Part-ARA, and Subpart ORO.FC).

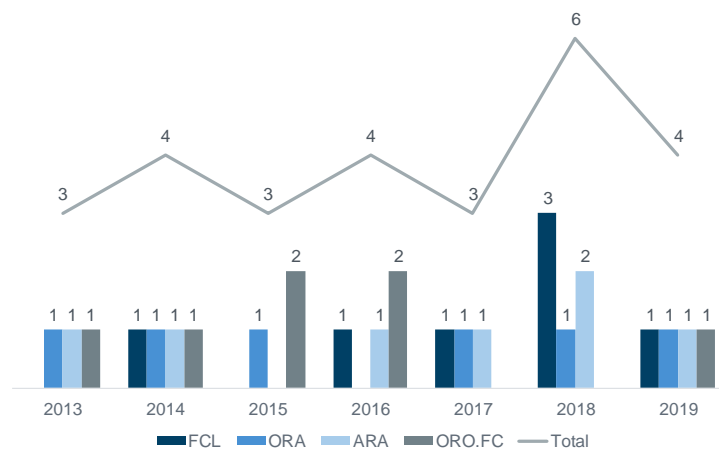


Figure 40: Number of AMC per each Regulation's part

3.6.1.2 Analysis of the AltMoC

CAs issued 36 out of the 50 AltMoC, the rest were issued by organisations. The AltMoC can be divided according to their nature into *technical*, *administrative* and *clarification*. The *technical* ones are directly related to the means for pilot training, testing and checking; the *administrative* ones are related to the associated administrative processes, while the *clarification* ones are used to clarify the wording and the definitions.

Most of the AltMoC are issued for technical reasons, meaning that the means defined by the AMC are not completely applicable to the user's day-to-day working methods and the AltMoC are used as a tool to ensure that their specific methods are compliant with the regulation.

For instance, some of the *technical* AltMoC include the following:

1. redistribution of questions among the examination subjects in the theoretical knowledge (TK) examinations for the ATPL, MPL, CPL and IR;
2. reduction of the training hours for applicants for licences, ratings and certificates with equivalent ICAO qualification issued by a third country;



3. acquisition of adequate aerodrome knowledge as an active aircrew member under the supervision of a suitably qualified PIC nominated by the operator and already familiar with the aerodrome;
4. alternative requirements for the extension of the privileges of a TRI(A) to give instruction in a TRI(A) course.

The *administrative* AltMoC, on the other hand, include for instance the following:

1. forms for the transfer of medical records between medical sections of the licensing authorities;
2. approval of organisation forms that are more detailed than the AMC form;
3. electronic equivalent to the AMC-prescribed paper forms;
4. minor additions to the evaluation report templates.

The *clarification* AltMoC were all issued by the national CAs and included clarifications regarding:

1. the definitions in the AMC;
2. the wording of the AMC.

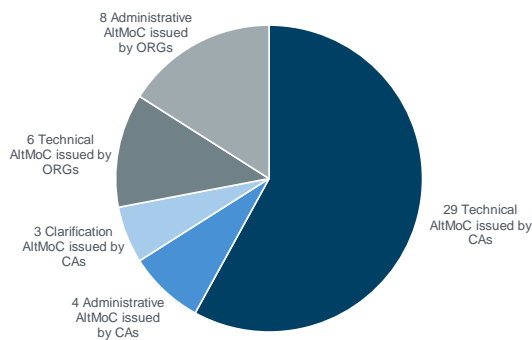


Figure 41: Number of AltMoC by nature and issuer

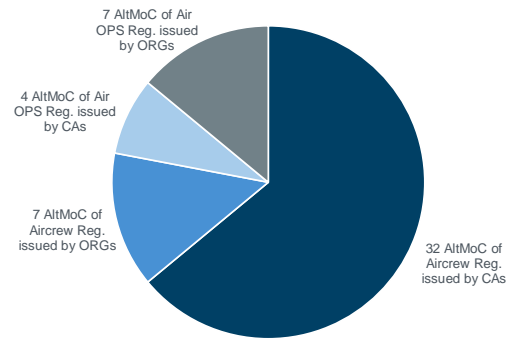


Figure 42: Number of AltMoC by type of issuer and regulation

The majority (32) of the AltMoC were issued by only one MS as it can be seen in Figure 43, while only 8 AltMoC were issued by more than one MS. This implies that the majority of the AltMoC are used to adapt the AMC to the individual specificities of a single MS or user, thus indicating a high flexibility of the regulatory framework of being proportional, but creating additional complexity for the users to establish the overall reference regulatory framework.

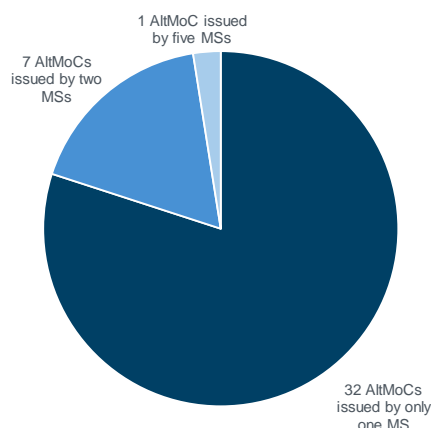


Figure 43: Number of AltMoC by number of MSs that have issued it

The AltMoC of *technical* nature are mainly used as a tool to adapt the content or the methods of pilot training, testing and checking to the local specificities and limitations of certain users/MSs. This may imply a distortion of the level playing field since small organisations cannot afford the economic cost to perform the whole AltMoC process, requiring time and dedicated experts to coordinate with the national CA, as the AltMoC process demands. This can possibly create an advantage for larger organisations that have more resources to dedicate to this process in order to adapt the AMC to their needs. For instance, reducing the number of training hours could create a considerable difference in the training costs among the ATOs that apply this reduction from other ATOs in MSs that do not apply it.

3.6.2. Survey

On the one hand, the aviation industry mostly perceives the current Regulation to be unclear. In fact, a total of 56 % of the respondents evaluate this aspect of the Regulation negatively (i.e. either worst or worst-medium) while only 43 % evaluate it positively (i.e. either medium-best or best), as it can be seen in Figure 44. GA training facilities is the group with the worst general impression.

On the other hand, the authorities' perception of the clarity of the Regulation is much clearer — in fact, 85 % of the CA respondents evaluate positively this criterion (i.e. either medium or medium-best).

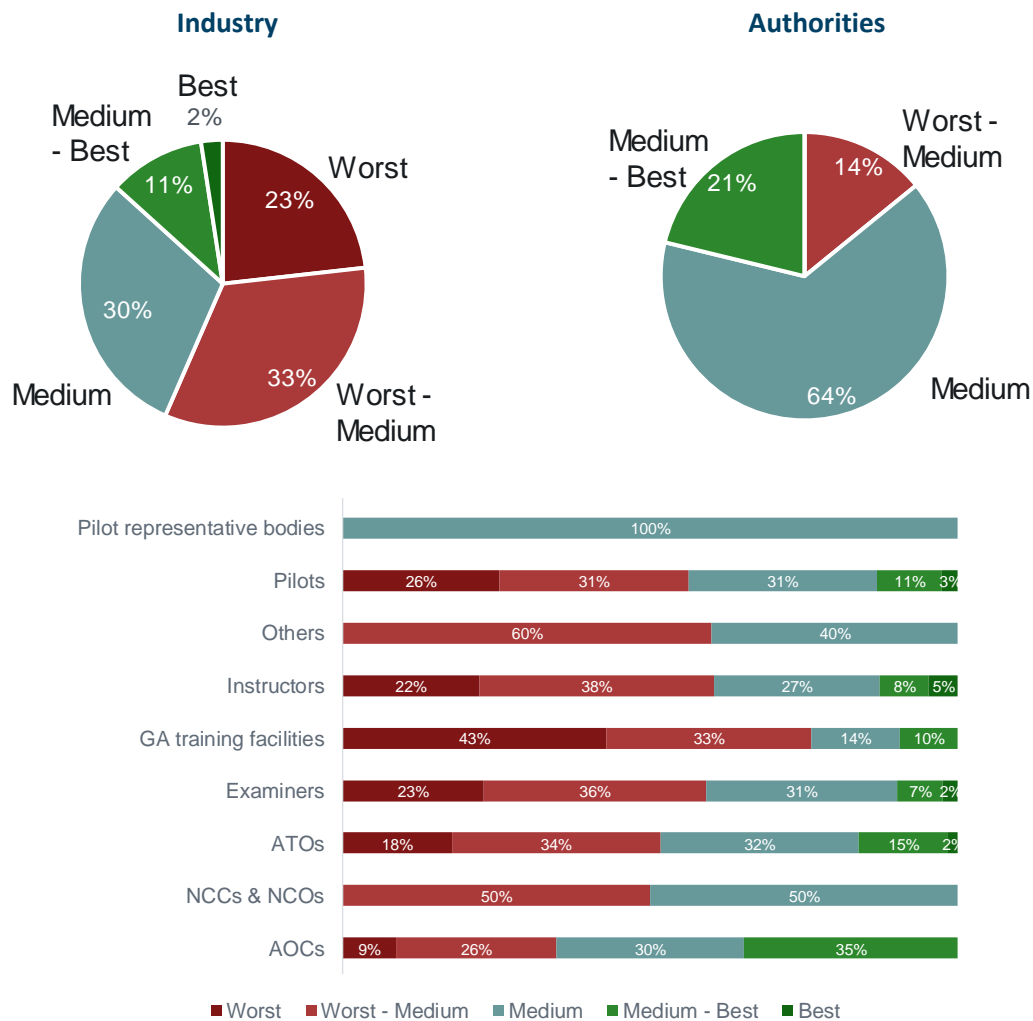


Figure 44: How would you consider the current Regulation's clarity in a scale of 1 (Worst) to 5 (Best)?

The most frequently reported issue from industry on the clarity of the Regulation is the different interpretation of the same rules, slowing down the overall training process and its effectiveness, and also allowing some unfairness in the way the rules are implemented in different MSs. For instance:

- the instructors' qualifications and experience are not clearly stated; for instance, regarding the requirement for instructors to perform at least 3 flights in 90 days, some interpret it as solo flights while others as flights with passengers;
- the PBN extension can be certified as an additional memo on the logbook or extra sheet;
- the language proficiency tests vary from one MS to another: the different CAs should be able to endorse any ICAO language proficiency on the licences they issue provided that the licence holder has completed the appropriate language proficiency test;
- operational requirements: night flying and ATC in the UK is quite easy, while in Spain there are all sorts of hurdles in the regulations to overcome;
- night VFR qualification validity starting as soon as it is validated by the CFI (and endorsed on the pilot's logbook) or only after the CA re-edits the licence.



The language is another common issue:

- it is often considered to be confusing and hard to understand for a person that is not familiar with air law;
- it is composed of too many acronyms which do not mean anything to the average pilot¹⁹;
- issues with the translation into the national languages.

The regulatory structure is also often perceived to be too complex, thus rendering it user-unfriendly:

- the regulatory structure has too many layers, not fully understood especially by pilots, looking at something straightforward that applies to their licence (e.g. as PPL holders, CPL holders, etc.);
- the information is too widespread in different documents with too many cross-references;
- there is a lack of a single point of access to the applicable regulations;
- there is still a large amount of paperwork and administrative workload;
- crediting when one has one licence and moves to another licence category is in many cases very cumbersome.

However, in several cases the EASA website is found to be a practical means to understand each regulation (including AMC and GM), in particular thanks to:

- the Easy Access Rules for Part-FCL and Part-ORA;
- the Easy Access Rules for AIR OPS;
- the consolidated version of Regulation (EU) No 965/2012 (the Air Operations Regulation);
- the consolidated version of Regulation (EU) No 1178/2011 (the Aircrew Regulation).

The survey respondents highlighted the following measures to enhance regulatory clarity:

- reduce regulatory fragmentation;
- use the specific aviation terminology in order to resolve technical ambiguities and imprecisions;
- remove obsolete/outdated text from the regulations (e.g. on licence conversions, etc.);
- promote the Easy Access Rules as they are more clear and some users are not aware of their existence;
- improve the translations of the regulations into the national languages;
- when the regulations/rules are amended, make best use of training aids on the internet to explain how the new regulation/rule will impact on each pilot and how to practically follow the regulation/rule when flying.

3.6.3. Interviews

There is a consolidated opinion within the industry that the regulations are not always totally clear, often being open to interpretation by the regulated entities (users) and lacking details on *how* to apply the requirements to the day-to-day business of pilots and ATOs.

¹⁹ The free-access website <https://www.part-aero.com> is indicated by an ATO respondent as an effective tool to access the Regulation.



Since ATOs cannot address their questions directly to EASA, the ambiguities are usually clarified through coordination with the national CAs. However, it might happen that even the national CA will not have a clear or proper answer, therefore the requests for clarification are referred to EASA, which usually implies longer waiting time to get a clear and official reply.

Sometimes the language is not considered to reflect the common and established terminology used by the operators, and often legal terminology is preferred and used over operationally meaningful terms. This problem is specifically attributed by two different respondents in Spain and France to the translation of the regulations in the national languages.

This implies that the same portions of the regulations are open to interpretation by the different actors and users. In case of doubt, the FAA FCL rules are often followed by the operators as they reflect the reality of the day-to-day challenges they are facing.

On the other hand, it is generally acknowledged that some measures have been taken to improve the situation. For instance, technical expert board meetings are organised twice per year with EASA and all the relevant stakeholders to discuss about gaps and inconsistencies in the regulations. A number of questions are usually addressed by each CA to EASA at each meeting. An example is about the renewal of the MPL: when exceeding 3 years, it is not clear whether the skills are maintained as for the IR.

The overall complexity of the structure of the regulations and rules is also often considered to be an issue by industry stakeholders, and is mostly attributed to the dispersion of the relevant information in different types of documents (i.e. regulations and annexes, AMC, AltMoC, exemptions, etc.) and in different parts of the same regulation (e.g. Part-ORO, Part-FCL). In general, it seems to be very difficult for stakeholders to clearly and easily identify where the relevant information is contained.

Moreover, the rapid evolution of the related documentation and the amendments introduced are exacerbating the feeling of not being fully aware of all the regulatory requirements. Many interviewees believe that EASA is moving too fast, using too much the AMC as 'soft law' to introduce amendments, while the industry cannot keep pace with all the amendments. It is noted that changing the culture and habits of pilots takes much longer than many of the amendments that EASA introduces do.

The high structural complexity is especially a recurrent feedback from the pilot community: the time available to instructors who are also pilots on duty to keep up with the regulatory evolution is limited and many interviewees feel that the information is scattered in too many different documents, preventing them from getting confident they have the complete picture.

Interviewees in a number of cases believe that this impression of complexity of the overall regulatory structure could represent an entry barrier for private pilots, especially since the current regulations and rules distinguish among too many categories of operations (aeroplanes, balloons, sailplanes, light aeroplanes, very light aeroplanes, etc.), thus introducing an initial obstacle to the orientation of new pilots towards the right training.

It is also acknowledged, however, that EASA has made a significant effort and progress in reducing the complexity of the regulatory structure, but the problem seems to be inherited from the complexity of the founding regulations.

Nonetheless, the feedback from the CAs is very diverse: they do not report issues about the complexity of the applicable regulations, thus possibly indicating that once one familiarises themselves with the regulations, this will not pose a real issue anymore.





3.7. EQ7 Degree to which the rules are successful in producing the expected results

Evaluation question 7: What are the real capacities of the authorities to fulfil their obligations to ensure effective oversight of the training organisations, instructors, examiners, and operators?

Judgement criterion: Degree to which the rules have successfully produced the expected results.

Answer:

The current regulations provide CAs with sufficient means to perform effective oversight. However, the issue of insufficient budget and shortage of qualified inspecting staff is noted as a constant concern, shared both by industry stakeholders and by the authorities themselves. This problem is not new, and needs to be solved as soon as possible in view of the forthcoming technological innovations and market growth.

Justification:

3.7.1. Desk research

3.7.1.1 Standardisation reports

Looking at the general outcome of standardisation inspections, a positive trend for the FCL domain is appreciated compared with the results from previous years. Furthermore, the findings for the FCL domain were clustered in specific areas, e.g. compliance monitoring and ATO oversight, and no separate findings were issued for each identified non-compliance. However, the process of certification and oversight of training organisations and persons continues to be an area of concern for some CAs. Shortcomings continued to be identified in the area of compliance monitoring, including safety risk management. The graph in Figure 45 below details the evolution of findings collected for the FCL domain divided by class.

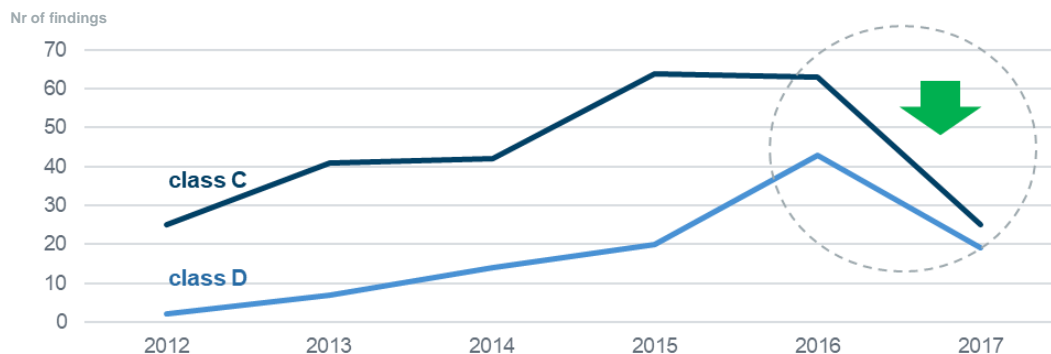


Figure 45: Evolution of standardisation inspection FCL findings by class

All the FCL findings identified are classified as Class C or Class D respectively:

- Class C: a non-conformity with the applicable requirements raising mainly standardisation concerns;
- Class D: a non-conformity with the applicable requirements raising standardisation and safety concerns if not corrected in a timely manner.



From the screening of findings per critical element of a safety oversight system, it emerges that most of the findings are linked to the activities performed by the CAs. In particular, the superficial approval and oversight of crew training and checking programmes continues to be an issue that affects many CAs. In several cases, the lack of detailed syllabi in the Operations Manual (OM) Part-D did not allow a satisfactory assessment of the operators' intended training and checking activities, in particular when training is combined with checking or when training is subcontracted to service providers. Moreover, a number of CAs have failed to plan inspections of training and checking events, therefore not identifying the ineffective implementation of the relevant programmes. The lack of in-depth review was also identified for other safety-critical parts of the OM, such as mass and balance and performance limitations.

The issue of insufficient budget and the shortage of qualified inspecting staff was a contributing factor to many findings raised in CE 6 (licensing, certification, authorisation and approval obligations) and CE 7 (surveillance obligations), including all those subject to supplementary reports.

Unfortunately, the outlook is not positive as more CAs are struggling to address the shortcomings identified in the previous cycles and to achieve sufficient oversight capacity. In such cases, the involvement of the States' governments is needed to find long-term, systemic solutions.

3.7.2. Survey

These concerns about the availability of sufficiently competent staff for CAs was also reported by the survey respondents. Most of the CAs believe that they are understaffed and the competence of their staff must be improved.

93 % of the respondents from CAs reported that they already perform oversight based on a risk assessment (see Figure 9). The flexibility provided by the regulations to perform oversight is appreciated, in particular to extend the period of the oversight (if the training organisation is not complex, or the possibility to extend the cycle using the oversight based on a risk assessment) is identified as a good tool to adjust more adequately the schedule of inspections.

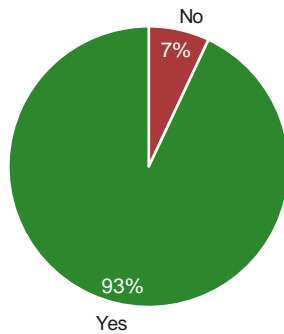
However, 21 % of the CAs answered that the regulations and rules only partially enable them to perform an effective oversight of the ATOs. However, the main issue identified is not in the regulations but rather in the lack of sufficiently and suitably qualified inspectors in the FCL domain or in financial limitations.

The fast evolution of technology, coupled with the reported severe limitation of resources, creates challenges on how to maintain inspector competencies. Therefore, the CAs are not fully confident that their experts are sufficiently prepared for the future challenges of the aviation world. The following areas are particularly mentioned: EBT, Area 100 KSA, UPRT, PBN, and drones.

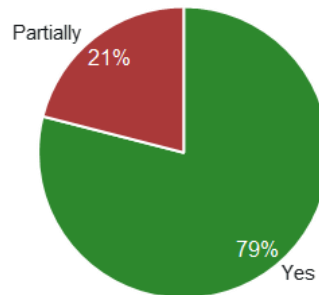




Does your organisation perform oversight based on a risk assessment?



Do the current rules enable the CA to perform effective oversight of the ATOs?



Are your staff trained enough to face future challenges as regards pilot training, checking and testing?

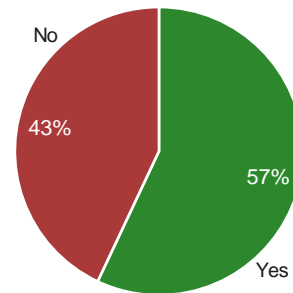


Figure 46: ATOs — oversight process

3.7.3. Interviews

In one case a CA reported that common findings are related to compliance monitoring and records as well as to consequent correction action plans. Those related to compliance monitoring, according to the interviewees, are due to the fact that the Regulation is too complex and the industry does not have a complete understanding of its requirements or concepts. The GM should be clearer in order to solve this problem. Findings related to records are usually small details that are easily addressed by the ATOs.

A number of interviewees believe that the CAs' oversight processes as regards pilot schools are most of the times based only on document evidence (compliance) and don't really go deeper into the real performance of the ATOs.

In several cases it is mentioned that the result of the inspection depends on the inspector's interpretation of the Regulation, and there is no standardised approach by all CA staff.

Some of the interviewees think that the CAs need more staff and industry experts in their teams in order to conduct inspections on behalf of the CA.

The impression of some interviewees is that the performance of some CAs does not match the required level. EASA is also identified as being partially responsible for this situation because the standardisation visits performed by EASA to the MS authorities are not always performed by the best qualified auditors and best practices are not applied. On the other hand, the same interviewees acknowledge that EASA does not have enough qualified inspectors to conduct standardisation visits, which in turn affects the performance-based oversight model.



3.8. EQ8 Ability of the rules to promote cost-efficiency and proportionality

Evaluation question 8: To what extent do the rules ensure regulatory efficiency, avoid administrative burden and are proportionate for all affected stakeholders?

Judgement criterion: Ability of the rules to promote cost-efficiency and proportionality

Answer:

The Regulation is generally perceived to reflect the natural pilot career path, being proportional to the type of stakeholders and type of aviation. Although the costs to be borne by pilots to be licensed remain generally high in Europe, both for GA and CAT licences, this is considered to be inherent to the nature of aviation. Some unnecessary administrative burden (e.g. paper-based administration) could, however, be removed in order to reduce costs as much as possible.

Justification:

3.8.1. Online survey

The proportionality among the stakeholders is better perceived by the CAs than by the industry. In fact, while 43 % of the industry stakeholders believe that it is either the worst possible or medium to worst, only 21 % of the CAs share this opinion.

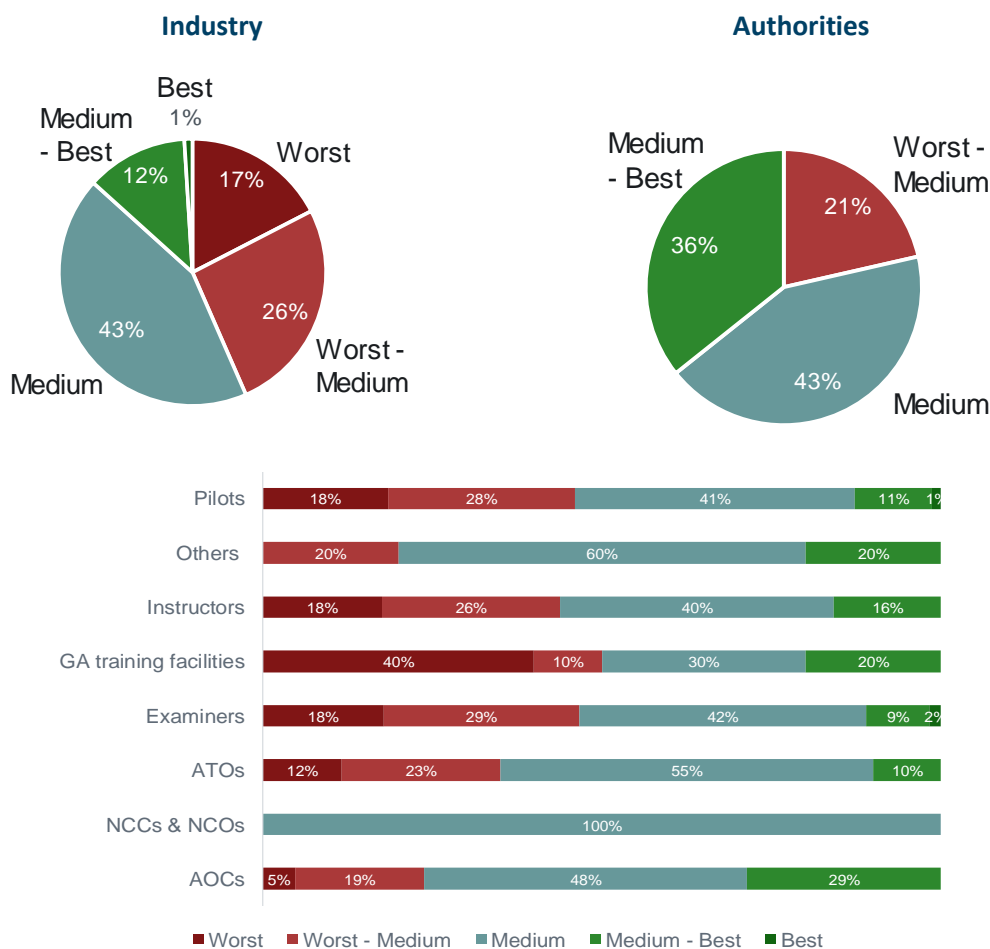


Figure 47: How would you consider the proportionality of the current regulation in a scale of 1 (Worst) to 5 (Best)?



3.8.1.1 GA

The survey respondents think that the proportionality could be improved, especially by better considering the needs of GA, DTOs and small ATOs and aero clubs, since currently the regulatory burden is perceived to be excessive for them.

The disproportional complexity of the rules for private pilots is indicated as a possible entry barrier for young people approaching aviation. This is perceived to create unnecessary costs, preventing non-commercial pilots from getting an entry-level private licence. The modular implementation of the LAPL and/or the PPL (e.g. PPL(A) to be an add-on to microlights, LAPL with short, simple, specified add-on module requirements) is also indicated by several respondents as a possible improvement in this sense.

3.8.1.2 CAT

The CPL modular course proves to be the most popular choice to become a commercial pilot — 46 % of the PPL holders chose it to start a professional career. Instead, the ATPL integrated course is chosen by 26 % of the new commercial pilots. The MPL is rather undertaken by only 2 % of the new commercial pilots; however, this is a new type of licence and it is expected that the number of MPL holders will keep increasing in the next years. A considerable number of pilots hold a military licence and initiate a career in CAT by converting it into a CPL.

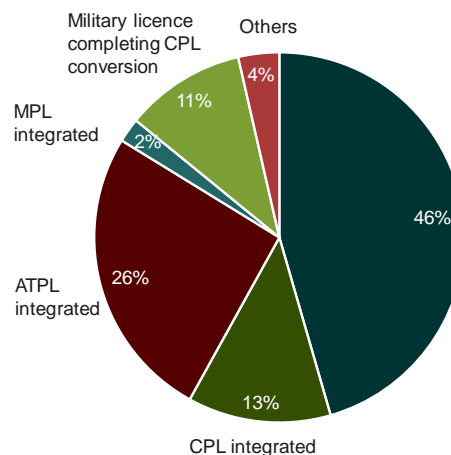


Figure 48: Distribution of pilot career paths

The choice of a CPL modular course is typically made by people that combine a regular job with their pilot training. This allows the time and economic investment to be more gradual although ultimately higher than starting upfront with an ATPL course. This might create economic difficulties for people to finance their professional licence, due to the high costs.

In particular, many respondents from commercial aviation identify in the cost of performing flying hours a major burden in economic terms. Although both training and checking in FSTDs and real aircraft is considered of the utmost importance to guarantee safety, a significant cost reduction in the part of flight training is considered necessary to support pilots in acquiring it through, e.g., tax-free fuel for training aircraft.

3.8.2. Interviews

The Regulation is generally perceived to reflect the natural pilot career path. It is proportional to the type of stakeholders and type of aviation: the PPL is usually the first step, and the ATPL follows.



Many interviewees, however, notice that some requirements within the current Regulation create unnecessary costs, for example due to the unnecessary paperwork for recurrent training as imposed by Part-FCL Appendix 9.

New technologies for course delivery are generally perceived to be an additional feature to support training, but ultimately the common sense of the instructor plays a key role. The introduction of computer-based theoretical training has allowed to reduce the costs for students to physically attend classroom lessons. Otherwise the main advantage of introducing new tools into training is to enhance safety, not to reduce costs.

Computerised learning management systems are recognised as a valid support for instructors and examiners, and enable higher standardisation among trainers.

On the other hand, keeping up with new systems and procedures on board is deemed to be an additional cost for ATOs. For ATOs, the requirements to open a new pilot school are very strict, thus causing a remarkable entry level barrier, especially for small ATOs.

In terms of proportionality, there is a general agreement as regards the consideration that the PPL should be separated from the commercial path to become a pilot, since they are very different worlds.

3.9. EQ9 Coherence and consistency of the rules

Evaluation question 9: To what extent do the rules in the Aircrew Regulation and the Air Operations Regulation ensure synergy and a holistic approach in pilot's career, e.g. consistency in the overall training (initial/recurrent), testing and checking?

Judgement criterion: Interfaces and degree of collaboration among authorities, training organisations, operators; inconsistencies between the two Regulations.

Answer:

The relationship among stakeholders depends mainly on efforts at their level rather than on consistent formal agreements across Europe. Whilst the MPL courses are becoming more popular, they still represent a minority of pilot training paths. There is, therefore, still much room to improve collaboration and synergies among the different aviation stakeholders.

On the other hand, some overlaps are identified between the different regulations, mainly caused by provisions that are sometimes dispersed over different documents, but only a few inconsistencies are ultimately detected.

Justification:

3.9.1. Survey

The majority of the respondents do not have an opinion on the consistency between the regulations regarding pilot training, testing and checking. However, one third of the surveyed population does believe that the regulations are inconsistent, implying that inconsistencies have been found when applying the regulations.

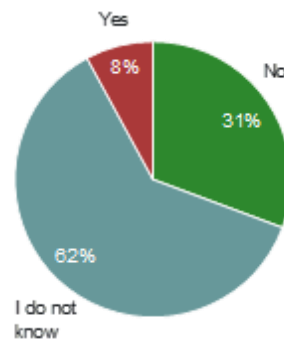


Figure 49: Do you think that there are inconsistencies between the Aircrew and the Air Operations Regulation?

The main internal inconsistencies between the two Regulations that affect industry are as follows:

- inconsistencies in the training approval for aeroplanes without OSD;
- inconsistencies between the Aircrew Regulation and national air operations regulations in terms of instructors and how to endorse flight hours in the logbook;
- inconsistencies in the translation of the regulations into the national languages of the MSs.

On the other hand, a lot of work has been done to bring ATOs, airlines and authorities closer.

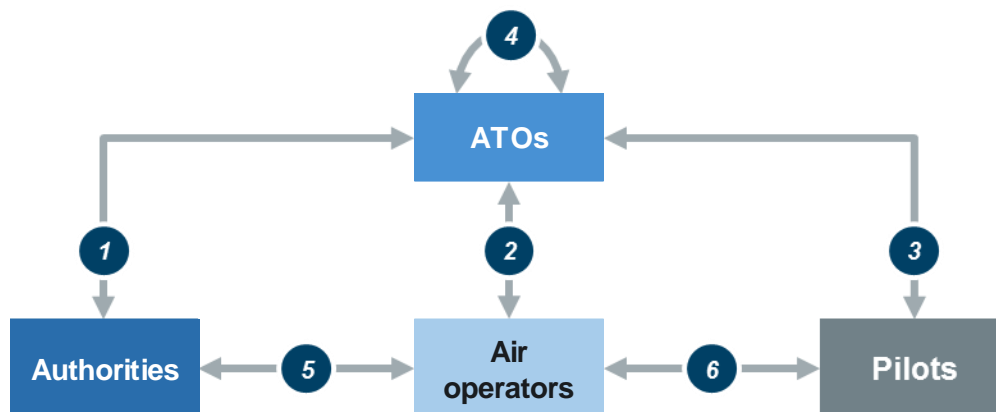


Figure 50: Relation among the stakeholders

- **78 %** of the ATOs exchange regularly information with their CAs. The interaction between them occurs in both directions. The CAs develop workshops in order to explain to the national ATOs new regulations, new AMC and procedures. The ATOs send questions and raise their concerns to the CAs to ensure fulfilment of the Regulation.
- **50 %** of the ATOs exchange regularly information with the air operators. The interaction is mainly focused on supplying faster airlines with well-trained pilots. The relation between ATOs and airlines becomes necessary to put in place an MPL programme; this licence is becoming increasingly popular in Europe and already almost 10 % of the pilot schools have established an MPL programme.



3.9.2. Interviews

- The interaction between ATOs and pilots is focused on improving the quality of the training and aligning the training to the pilots' needs based on their feedback. This is considered a key tool to ensure monitoring of the instructors' performance and to guarantee a constant improvement of the quality of the training.
- The interaction among the ATOs is not as fluent as it could be. Some interviewed pilot schools propose to organise workshops at State or European level to exchange best practices among pilot schools that could help a lot in sharing lessons learned and improve training quality. However, the competition among ATOs in the pilot training market is sometimes identified to be a blocking factor.
- Airlines/air operators are constantly exchanging information with their CAs. The information exchange occurs in both directions. The CAs develop workshops in order to explain new regulations, AMC and procedures to the national air operators, and airlines send questions to their CAs in order to ensure that they are aligned with the applicable regulations.
- Currently, airlines/air operators have a vital necessity for new pilots due to the growing market demand. However, airlines/air operators are sponsoring only 12 % of the new commercial pilots according to the survey responses, mainly through MPL courses.

3.9.2.1 Inconsistencies among the regulations

There are some gaps in and inconsistencies between Part-FCL and Part-ORO/-ARA of the Regulation: in some cases it is not clear how the Regulation must be implemented by the air operator; for instance, it was reported that the requirements for Test Pilot Ratings are not consistent for all the categories or that there are differences in the training and checking requirements for 2D approaches.

There are some inconsistencies between the Air Operations and the Aircrew Regulation: e.g. CATII/III operations are described in the Air Operations Regulation but the requirements are provided in Part-FCL of the Aircrew Regulation. Instructors are addressed in Part-ORO, but not in Part-FCL.

3.10. EQ10 EU added value of the rules

Evaluation question 10: To what extent do the EU rules on pilot training, testing and checking still need to be addressed at EU level?

Judgement criterion: Need to maintain the rules at EU level

Answer:

The current Regulation is considered to be a major contributor in creating a single EU market for pilot training. Despite the fact that different national interpretations of the Regulation are identified sometimes as a negative factor, it covers the needs of both commercial and non-commercial pilots.

Justification:

According to the EASA standardisation reports, a statement that is recurrent over the years and analysed is that, in general, the inspected CAs have demonstrated the commitment and the ability to take enforcement actions to safety concerns (CE 8), as stated clearly in 2015 and then echoed in 2017 (referring to a more proactive approach, based on earlier intervention and closer cooperation with the CAs, that has led to encouraging progress in the resolution of findings).



Although the MS sample selected for inspections varies over the years, the number and severity of the findings is consistent and evolves without significant deviation. This allows to deduct that the Regulation contributes to the establishment of a uniform level of aviation safety in Europe.

The standardisation activities conducted by EASA also show that the sharing of common best practices among the MSs is a key tool to continuously improve results, thus corroborating the conclusion that the rules have achieved something that the national rules alone have not.

There is, however, the need for further convergence of the national authorities and systems into an EU system which is more and more harmonised, as highlighted in EQ2 'Capacity of the rules to facilitate the free movement of people' and EQ3 'Capacity of the rules to facilitate the level playing field' already.





4. Conclusions and recommendations

The current rules for pilot training, testing and checking generally cover the needs of the different categories of stakeholders, although their evolution in terms of structure, clarity and usability is considered to be important in view of the continuous growth of both commercial and non-commercial aviation in Europe.

The quality of the training should continuously improve through the evolution of the system towards the development and assessment of competencies, not only for pilots but also for instructors, examiners and CA staff. The evolution of the rules from the current prescriptive-based format to a performance-based spirit represents an important driver in ensuring that the whole pilot training and assessment system remains aligned with the real needs of the market and leveraging the most modern and effective tools and technologies.

Key to achieving a truly performance-based, uniform system in Europe is also the open and efficient collaboration among all stakeholders, making use of information sharing and sorting out all the different interpretations of and gaps in the rules that may create problems in their effective implementation.

The specific conclusions are listed hereafter, according to the level of gravity of the issues identified during the evaluation and followed by the recommendations made by the survey respondents and interviewees.

4.1. Ensure a high uniform level of safety and meet the current needs by producing the expected results

Although commercial air transport in Europe is generally considered safe, there are growing concerns raised by different stakeholders about the reduced quality of pilot training, which could negatively affect safety due to the following reasons:

- The availability of sufficient, well-prepared national CAA staff to efficiently oversee training organisations and programmes.

This is one of the few concerns that were reported by both survey respondents and interviewees and was confirmed by desk research. It is a fact already well known to EASA as reported in the EASA Standardisation Annual Report for 2017:

‘The issue of insufficient budget and shortage of qualified inspecting staff was a contributing factor to many findings raised in Critical Elements 6 and 7, including all those subject to Supplementary Reports. Unfortunately, the outlook for 2018 is not positive, as more competent authorities are struggling to resolve the shortcomings identified in the 2015-2016 cycle and achieve sufficient oversight capability. In such cases, the involvement of the State’s government is needed to find long-term, systemic solutions.’

- The scarcity of qualified instructors and examiners reported by some interviewees, since the employment conditions offered by training organisations are in many MSs worse than those offered by airlines to pilots.
- The different criteria applied by the instructors to assess the competencies of the applicants to recommend them for the exam and of the examiners for their assessment (i.e. individual interpretation of the checklist) due to a certain degree of interpretability of the rules.
- The absence of a standardised common system for initial pilot screening and selection.





- The increasing demand for new pilots.
- The increasing commercial pressure on airlines to lower costs to be able to face fierce competition.

The above-mentioned reasons constitute a dangerous combination of risk factors potentially leading to the introduction into commercial air transport operations of licensed pilots that have not received a sufficient level of theoretical or practical preparation to ensure the highest level of safety. This risk has been echoed by the Aircrew Training Policy Group, which has raised concerns about the quality of the training programmes offered by certified pilot schools.

To ensure that all the necessary measures are taken to reduce the residual risk ‘as far as reasonably practicable’, a number of recommendations have been defined.

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Improve the standardisation of examiners	Publish GM that defines clear criteria and competencies for examiners, depending on the different qualifications needed for different licences, and based on CA and industry needs to improve harmonisation and standardisation across MSs	<ul style="list-style-type: none">— EASA to coordinate— CAs to contribute to and disseminate the GM— Industry to participate	Safety promotion through a standardisation manual	Short term

The conclusion is agreed by both industry and CA representatives with the following remarks:

- Work of the examiners manual taskforce is in progress in EASA; however, relevant reference material is pointed out:
 - the UK CAA has already published the Flight Examiners’ Handbook but is linked to UK procedures;
 - the IATA Instructor and Examiner Handbook has been recently published, including best practices;
 - the different types of examiners need to be acknowledged: there is no one-size-fits-all;
 - agreement on the content needs to be found first.
- The GM might not be enough: prospective candidate examiner integrity screening should be strengthened through the use of more AMC.
- Standardisation is not fully representative of the needs:
 - the selection of examiners must also be considered;
 - the standards of examining is not the main issue, but rather the training of examiners;





- it is not about their qualification, it is about the application of the same standards as required by their CAs; CAs have to be tackled first and then industry;
- standardisation needs to be complemented with more performance-based measures, such as tracking examination failure rates at national and European level.

Industry actors should also be involved on a regular basis.

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Increase the standardisation of initial screening and selection of pilots (entry into pilot school and entry into air operator)	Publish GM that defines standard criteria for the initial screening and selection of pilots, based on existing best-in-class industry standards and recommendations	<ul style="list-style-type: none">— EASA to coordinate— CAT pilot representation bodies to contribute— Air operators to adopt/align	Safety promotion through sharing of best practices	Short term

The conclusion is agreed by both industry and CAs.

The GM should, however, differentiate the criteria for entry into the pilot school or into the air operator.

Industry best practices exist already (initial selection and assessment) with recommendations:

- the IATA aptitude test has been recommended as an option to support the funding of pilot training;
- ‘sphair.ch’ has been pointed out after the workshop as a standard for pilot preparation in Switzerland.

Even if not regulated, there are ATOs that already use aptitude tests to keep passing rates higher. It is generally believed, therefore, that aptitude tests should not be regulated.

Instead, a feedback process from operators to pilot schools should be established to ensure that the training meets their requirements.

Dedicated events to attract good candidates to aviation are considered to be an important tool, together with better education about aviation and wider sharing of information about pilot careers to young people at schools.



Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Evaluation of the performance of instructors and examiners	Implement a data-centred oversight system for the performance of instructors and examiners, extending the personal feedback from students with more objective data analysis to establish their risk profile combining different sources Lessons learned from the CAs that already apply such systems in Europe could provide a solid baseline	<ul style="list-style-type: none">— EASA to coordinate— CAs for examiners' performance— Training organisations for instructors' performance	Safety promotion through sharing of best practices	Medium term

The conclusion is largely agreed by the CAs and the industry, provided that a clear distinction is made between instructors and examiners. The recommendation related to examiners is for the CAs, whereas the recommendation related to instructors is more for the training organisations.

A more objective analysis of data should allow to move away from the subjective system that is based only on student feedback, since it is not always fully trustable. It should be weighted when determining risk profiles.

There should be more focus on ensuring that instructors achieve all the competency standards in line with point FCL.920 'Instructor competencies and assessment'. This is not always done.

4.2. Adequacy to modern aviation opportunities and challenges

In the past it took time to introduce innovations in the rules and the process for doing this was somewhat cumbersome (e.g. the PBN Regulation²⁰ makes extensive use of exemptions to manage deadlines). This past experience causes concerns for the future both within the industry and the national CAAs.

On the other hand, most of the ATOs that participated in the survey or were interviewed reported that they have adopted innovative methods and tools for the provision of training, such as computer-based training, which increases the quality of training and to a certain extent reduces the costs for trainees, but imposes additional costs to the ATOs to equip. In Europe, the technology used for courses is part of the differential training offer provided by different ATOs that compete on the market.

The low level of proficiency of the CA staff probably represents the biggest problem according to several survey respondents and interviewees. CA staff are perceived as often lacking the sufficient preparation to understand the real challenges and opportunities of modern aviation, often reducing

²⁰ Commission Implementing Regulation (EU) 2018/1048 of 18 July 2018 laying down airspace usage requirements and operating procedures concerning performance-based navigation (OJ L 189, 26.7.2018, p. 3) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1578496464865&uri=CELEX:32018R1048>).





the supervisory role to a mere checking of numbers on a checklist. This can represent an obstacle to progress. This is a general, increasing concern for the CAs: whilst they should be on the first line to justify and explain the new technologies and procedures covered by the rules, they are instead increasingly losing expertise and missing the background of the new amendments to the rules.

The same concern is shared by the industry: if the national authorities' expertise on new systems and procedures gradually diminishes, the implementation of new technologies will not be adequately overseen by the CAAs. This fact is corroborated by the analyses made in the EASA standardisation reports, pointing out that the issue of insufficient budget and the shortage of qualified inspecting staff was a contributing factor to many findings raised in CE 6 and 7, and adding that the outlook for 2018 is not positive as more CAs are struggling to achieve sufficient oversight capacity.

At the same time it is generally agreed that a deep understanding of the functioning of technical systems on board by the pilot is a fundamental element of the training in order to ensure pilot situational awareness in the flight crew compartment in case of malfunctioning.





The following conclusion and recommendation can be therefore formalised:

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Increase the standardisation of competencies of CA staff	Implement regular training workshops for CA staff on technical topics as well as administrative processes and regulatory compliance These workshops should preferably be organised at regional level at locations other than at EASA, could include the participation of CA staff from other MSs upon invitation to attend examiner standardisation courses or observe inspections, or even regular rotation of inspectors/CA staff	<ul style="list-style-type: none">— EASA to coordinate and contribute— CAs to participate— ATOs to share relevant information	Safety promotion through standardisation workshops	Short term

The conclusion is agreed by both CAs and the industry.

However, the definition of the competencies for CA staff should be addressed first, focusing on experts that are assigned to audits.

Coordination with EASA is key, since it has more information on the different MSs. The concept of standardisation is also open to interpretation and should be defined more clearly.

Again, the role of EASA is considered key as regards also the sharing of best practices among all CAs based on observations it has made during standardisation visits. Also, the sharing of information from ATOs would improve standardisation.

Another suggested measure is for inspectors/CA staff with long-term careers to rotate positions every 5 years, to increase motivation and foster standardisation.





To be noted that EASA is already working on best practices as regards language proficiency assessment methods and examiner oversight.

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Introduce competency-based training for all licences and ratings through a performance-based regulation (PBR)	Ensure that the right competencies are acquired by pilots commensurate to the privileges of their licences, in line with the evolution of on-board technologies and making full use of the most modern training methods and tools Moving to PBR would imply ensuring that pilot competencies are guaranteed independently of the technologies used and thus allowing the regulation to be future-proof, independently of specific new technologies	<ul style="list-style-type: none">— EASA to launch rulemaking activity— CAs to engage in the rulemaking process	Rulemaking	Long term

The conclusion and its linked recommendation are agreed by both industry and CAs.

There is already a sophisticated framework for competency-based training and assessment (CBTA) for commercial aviation which is very good, but it must be taken into account that for GA the competencies are different (this is well reflected in the text of the recommendation already). Therefore, the definition of the competencies is crucial: they need to be the same and measurable for each licence category.

It is underlined again that the feedback from operators to training organisations is crucial in guaranteeing that pilots are trained to acquire the right competencies.

It is noted that CBTA is far more advanced in other regions and that EU regulations should advance to ensure that Europe maintains its leadership worldwide in aviation matters: the faster, the better!

A fully PBR and risk-based oversight is, therefore, required. Otherwise, CBTA will remain at the level of subjective fight between supporters and opponents.

Marketing may become a problem for training organisations: how much is training going to cost if the flight hours are not determined ex ante? This, however, should be a matter for ATOs and DTOs to resolve.





4.3. Clarity of the rules and level of complexity

There is a common concern about the clarity and accuracy of the rules, registered through both the online survey and the interviews. In particular, a recurrent issue identified is that the same rule is open to interpretation, a fact that is attributed in particular to the following:

- the legal language which is difficult sometimes to be clearly understood by operational people who are not familiar with air law;
- the translations of the regulations from the original English version into the national languages, which are sometimes incorrect.

A number of measures have already been put in place to enhance the clarity of the rules, notably:

- AltMoCs of a clarification nature, although these are a minority according to our desk research;
- technical expert board meetings organised by EASA, although the room for manoeuvre when clarifying is limited, according to what has been reported during the interview;
- an FAQ section on the EASA website which can be used as a direct communication channel between EASA and users/stakeholders to register their issues for clarification and provide clarity where needed.

In addition to the issues on clarity, the overall structure of the FCL rules and their dispersion over different documents and chapters is generally considered by industry stakeholders (in particular pilots, instructors, examiners and GA training facilities) to be an issue that renders rules even more complex.

A number of measures have already been put in place to reduce this complexity, notably:

- the publication of consolidated versions of regulations, including in the same document the initial regulation complemented with all the subsequent amendments that have been issued;
- the publication by EASA of the Easy Access Rules for the Aircrew and the Air Operations Regulations;
- the yearly update by EASA of the *What's new in Aircrew* publication;
- additional private initiatives that consolidate all the regulatory material published by EASA into a single electronic, well-structured repository that fits and serves users' needs (e.g. www.part-aero.com).

Additional effort to be made in this direction by EASA is considered very efficient in order to enhance the understandability of the regulations and rules, as recommended below.

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Clarify the regulatory structure and provide customised access to the	Develop, publish and publicise an EASA online portal built on enterprise architecture principles and best practices from the industry (e.g. www.part-aero.com)	<ul style="list-style-type: none">— EASA to develop and publicise the online portal— CAs to promote the	Communication	Short term



regulations and rules	aero.com) to provide users with: <ul style="list-style-type: none">— a clear structural representation of the existing regulations and rules;— a temporal perspective of how the regulations and rules have evolved over time;— a user perspective for each stakeholder category to easily access all the relevant applicable regulations and rules from different documents applicable to each stakeholder category.	use of the online portal		
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The conclusion is agreed by both industry and CAs.

The Easy Access Rules for Aircrew are very well perceived by all since they ensure a better understanding and higher transparency. However, it is considered that stronger communication campaigns should be undertaken when such documents are published to explicitly inform the industry about their availability and with a clear indication of what has changed in the subsequent amendments of the Aircrew Regulation.

The Q&A section on the EASA website also needs to be updated, based on the evolution of the Aircrew Regulation.

The inherent conceptual complexity of the Regulation is considered to be great, without a clear reason and justification. For example, there are different ways to revalidate and renew the LAPL and the PPL; crediting of different hours is also over-complicated; etc.

4.4. Promote cost-efficiency and proportionality

GA stakeholders usually perceive the rules for pilot training, testing and checking as not very much reflecting the real conditions of the wide array of differences as regards non-commercial pilots.

In particular, the administrative burden imposed by the current Regulation on aero clubs and GA users in general is perceived to be excessive given the nature of the operations they perform, thus generating unnecessary extra costs. This in turn is considered to impose an entry barrier for young people that approach aviation with an entry-level pilot licence, such as the LAPL.

Some notable results have been achieved recently in Europe in this direction, e.g. through the implementation of the LAPL and the DTOs, aiming to alleviate the administrative burden and promote safety for GA. The EASA GA Roadmap shows, however, that all the main tools are already available and it is now more a matter of applying them through safety promotion and implementation support activities.



On the other hand, the cost to become a pilot (both commercial and non-commercial) remains generally high in Europe, especially when compared to equivalent licence costs in other regions (e.g. USA). This is considered to constitute also an entry barrier for young people, since only the wealthier can afford the costs, especially to become professional pilots. This fact is reinforced by the conclusions of the Ricardo Study²¹, highlighting that in general airlines nowadays are not paying any more for the training of their pilots, contrary to what was the case in the past, except for a few cases.

The following conclusion and recommendation can be therefore formalised:

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Increase the modularity of non-commercial pilot licences	Define short, simple and well-specified add-on module requirements for the licence upgrades, the extension of privileges, and strengthen the crediting system (e.g. for similar aircraft types)	EASA to develop new requirements	Rulemaking	Long term

The conclusion and its linked recommendation are fully agreed by both industry and CAs.

It is fully aligned with the approach applied to include the modular LAPL into the Aircrew Regulation.

Whilst modularity is perceived positively, it is the level of granularity of the Regulation that seems to be too high today.

The crediting of previous flight time could also be simplified, because for instance the period of validity of military flight time is too restrictive.

²¹ Ref.: DG MOVE/E1/2017-556, available at <https://www.eurocockpit.be/sites/default/files/2019-04/Study%20on%20employment%20and%20working%20conditions%20of%20aircrew%2C%20EU%20Commission%202019.pdf>.



However, the crediting of flight time could be solved by evolving to CBTA, both for GA and CAs.

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Implement fully digital processes	Remove unnecessary routine and administrative burden by increasingly removing paper-based reporting and moving fully to digital reporting	EASA to develop new requirements	Rulemaking	Long term

The conclusion and its linked recommendation are fully agreed by both CAs and the industry.

It is generally acknowledged that considerable investments upfront will be needed and, therefore, the scope and road map of the digitalisation should be agreed at the beginning. It is also considered, however, that in the long term the digitalisation of processes will likely reduce the required resources, therefore ultimately the benefit-to-cost ratio should be high, although maybe a social impact could also materialise due to job losses.

The digital process to collect data to support performance-based oversight is considered an inevitable requirement that would ultimately increase safety, enabling the standardisation of processes and forms.

It is also remarked that the EU legislation on electronic identification (eIDAS Regulation²²) already enables cross-border recognition of electronic IDs and allows citizens and businesses to share their identity data when necessary. This could provide a good regulatory support for digital pilot licences.

EASA confirms that work on the digitalisation of licences and use of electronic signatures is under way.

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Implement measures for the promotion of CAT pilot training	Promote pilot career opportunities through dedicated public events, fostering the closure of gender gap that exists among pilots and promoting the use of incentives and tools for the financial support of the training of commercial pilots (for example, through dedicated scholarships between airlines	Air operators/ airlines and training organisations to agree/adopt/ align	Communication and sharing of best practices	Medium/long term

²² Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC (OJ L 257, 28.8.2014, p. 73) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590667090591&uri=CELEX:32014R0910>).



	and training organisations, deferment options, etc.)			
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The conclusion and its linked recommendation are agreed by both industry and CAs.

However, it is also remarked that the industry already takes due care of the subject by implementing at various levels all the measures mentioned in the recommendation.

Section 11 'Financial Aspects' of the IATA Pilot Aptitude Testing manual already strongly suggests to use initial selection as a tool to support decisions for the funding and sponsoring of ab-initio students, in order to avoid wasting limited training resources.

It is mentioned that a similar quality certification could be considered by ATOs by combining their pass rates with the acceptance from the industry. However, this could constitute a criterion for the financial support of student pilots, and not by EASA for the purpose of certification.

Tax reduction for pilot training was available in the UK long time ago, but it could be considered as State aid. It is rather considered that equating pilot training schools with universities would help in receiving support from the State for education (like it is done in Scandinavia). This is pinpointed as a systemic issue in aviation in the EU: besides Switzerland or Scandinavia, pilot training in other MSs is regulated by the ministry for transport rather than for education. Investing in their training would allow MSs to ultimately support the training of highly educated tax payers.

Campaigns and events would also be useful in raising awareness of people about pilot career opportunities. The discrepancy in the number of male and female pilots today is huge: this constitutes a very important area to advance. Besides public communication, it is also a matter of support to maternity. Ensuring the presence of female pilots at public events testifying about their experience could help a lot in this direction.

4.5. Facilitate the level playing field

In order to guarantee the necessary degree of flexibility to ensure the applicability of the rules to different users of different nature throughout Europe, several mechanisms are in place such as exemptions and derogations. This flexibility, however, needs to be carefully traded off with the need to ensure that a level playing field is established in Europe regarding pilot training, testing and checking. This is still partially dependent on the specific national application of the FCL rules that are still subject to:

- the different interpretation of some requirements, especially regarding administrative processes; this may sometimes voluntarily or involuntarily facilitate national users with respect to the same category of users in another MS that interprets the same rule more strictly;
- the different criteria applied by inspectors during audits, depending on the subjective interpretation of the rules.



The following conclusion and recommendation can be therefore formalised:

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Promote the common interpretation of the rules	<p>Enhance and promote the use of the Q&A section about the FCL rules on the EASA website to ensure that questions raised from the industry are clearly answered without prejudice to the prerogative of the CAs as regards the final interpretation.</p> <p>The clarification process should be run in two tiers:</p> <ul style="list-style-type: none">— Tier 1: Finding agreement between EASA and the CAs concerned and then converted into guidance in Tier 2 to ensure that all stakeholders may benefit from the European view. Minimising the time to answer is considered an essential aspect in order to ensure timely response to the needs from the stakeholders and to increase reliance on the process.	<ul style="list-style-type: none">— EASA to engage in Tier 1 and to implement Tier 2— CAs to participate in Tier 1	Communication	Short term

The conclusion and its linked recommendation are agreed by both CAs and industry.

It should be considered as a short-term action first, to become later a long-term one.

The recommendation is also agreed, but some indicated that the CAs have the prerogative to make the final interpretation of the rule. Many, however, responded that if the majority of the CAs and EASA agree on a particular interpretation (for instance, during a TeB meeting), this becomes the European view and thus should be followed by all CAs.

A cooperative process needs to be implemented, possibly supported by adequate tools for the follow-up process. It could be implemented as a two-tier process: EASA–MSs and MSs–users. In this system, EASA and the MSs agree on an interpretation which is then converted into guidance to ensure all CAs and stakeholders may benefit from the European view.

The ultimate safety outcome is considered positive, although depending on the availability of resources from the CAs. The reduction of overtime to answer stakeholder questions would reduce workload.





Comments are then raised on translations and linguistic errors, which may lead to diverging interpretations within certain MSs. The European Commission generally deals with the rectification of notified errors in translations.

Article 62(11) of the Basic Regulation was also highlighted in the discussions, according to which stakeholders can request EASA to resolve diverging interpretations.

4.6. Facilitate the free movement of people

The current Regulation is generally considered to foster the free movement of professionals in Europe, although some practical barriers are identified by the respondents, in particular:

- language barriers, since the theoretical training (in particular for the PPL) is often delivered in the national language where the training organisation is located;
- administrative barriers, since it is usual practice to require the national conversion of pilot and instructor licences in the MS where the air operator/airline or the training organisation mainly operates, thus creating an administrative burden on licence holders and generating extra workload for the national CAAs involved; this has become especially relevant in 2019 due to the increasing number of requests to convert UK licences in view of Brexit.

The mutual recognition of licences, certificates and privileges therein is still not always automatic among the different MSs: language proficiency and exam differences are the two more recurrent examples pointed out by the survey participants and interviewees that hinder the free movement of professionals.

Different interpretations of the Regulation by different national CAAs may also potentially affect negatively the free movement of people by creating other technical or administrative barriers to their free movement.

The data reported through the online survey corroborate these conclusions: the vast majority of professionals exercise the privileges of their licence/rating in the same MS where it was originally issued: 83 % for pilots, 93 % for instructors, and 92 % for examiners.

The following conclusion and recommendation can be therefore formalised:

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Differences exist in the MSs' administrative processes that hinder the free movement of people	MSs to agree on common administrative processes and forms with the aim to reduce the conversion of pilot licences and certificates/acceptance of examiners in other MSs	<ul style="list-style-type: none">— EASA to coordinate— CAs to propose and agree on a common process— EASA to review	Administrative processes	Short term



4.7. Coherence and consistency of the rules

The relationship among stakeholders is a key enabler to guarantee the consistent application of the rules for the benefit of pilots throughout their entire career.

In this respect, the interactions among ATOs and between ATOs and air operators/airlines appear to be more scattered, depending more on individual initiatives than on an institutionalised framework.

Increasing the communication among stakeholders would be beneficial as regards exchanging best practices and sharing lessons learned, and would close the gap which is widely recognised today in Europe between the quality of training that CAT pilots receive at some ATOs and the real competencies required by the air operators/airlines.

Also, increasing the communication among stakeholders would be beneficial as regards exchanging best practices and sharing lessons learned in order to increase the overall quality and standardisation of pilot training.

The following conclusion and recommendation can be therefore formalised:

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Organise regular regional workshops on pilot training	Organise regular training workshops for industry and CAs on technical topics as well as administrative processes and regulatory compliance. These workshops should preferably be organised at regional level at locations other than at EASA, to foster participation of staff from different geographically neighbouring CAs and to facilitate two-way information exchange.	EASA to coordinate CAs and industry to participate and share best practices	Safety promotion through standardisation workshops	Short term

The conclusion and its linked recommendation are fully agreed by both CAs and industry.

In particular, the industry has noticed that CAs, training organisations and air operators/airlines need to join in order to ensure full and in-depth discussions. The priority of the workshop thematic is considered by CAs to be on regulation challenges and safety standards. Pilots are mainly interested in administrative processes or regulations when they interfere with/affect their licences. These events should anyway be future oriented. The industry working group agrees that administrative processes should be well covered.

Representatives from EASA should be invited to present specific topics, and they should always be the same staff members to ensure consistency and continuity.

Another important aspect is to ensure that the participants from the CAs communicate the outcomes to their authorities.



Electronic means or internet (e.g. EASA website) will be required to ensure adequate promotion and then to inform stakeholders about the outcomes. The suggestion from the CAs is for EASA to create and maintain a dedicated 'European events' webpage.

In the past, CAs were organising similar workshops and managing the invitations:

- in Austria, workshops are organised every year with very good results (best practice);
- in the UK, different events for different stakeholder categories are facilitated by the UK CAA but they are organised by the industry;
- in France, sessions are already organised and delivered in French.

Language is considered to be a barrier in regional workshops.

4.8. Resume of the conclusions and the related recommendations

The complete list of the final conclusions and recommendations, as established after the workshop, is presented in the table below.

Conclusion	Recommendation	Who is responsible?	Suggested type of activity	Suggested time frame for implementation
Improve the standardisation of examiners	Publish GM that defines clear criteria and competencies for examiners, depending on the different qualifications needed for the different licences, and based on CA and industry needs to improve harmonisation and standardisation among MSs.	<ul style="list-style-type: none">— EASA to coordinate— CAs to contribute and disseminate the GM— Industry to participate	Safety promotion through a standardisation manual	Short term
Increase the standardisation of initial screening and selection of pilots (entry into the pilot school and entry into the air operator/ airline)	Publish GM that defines standard criteria for the initial screening and selection of pilots, based on existing best-in-class industry standards and recommendations.	<ul style="list-style-type: none">— EASA to coordinate— CAT pilot representation bodies to contribute— Air operators/ airlines to adopt/align	Safety promotion through sharing of best practices	Short term
Evaluation of the performance of instructors and examiners	Implement a data-centred oversight system for the performance of instructors and examiners, extending the	<ul style="list-style-type: none">— EASA to coordinate	Safety promotion through	Medium term



	personal feedback from students with more objective data analysis to establish their risk profile combining different sources. Lessons learned from the CAs that already apply such systems in Europe could provide a solid baseline.	<ul style="list-style-type: none"> — CAs for examiners' performance — Training organisations for instructors' performance 	sharing of best practices	
Increase the standardisation of competencies of CA staff	Implement regular training workshops for CA staff on technical topics as well as administrative processes and regulatory compliance. These workshops should preferably be organised at regional level at locations other than at EASA, could include the participation of CA staff from other MSs upon invitation to attend examiner standardisation courses or observe inspections, or even regular rotation of inspectors/CA staff.	<ul style="list-style-type: none"> — EASA to coordinate and contribute — CAs to participate — ATOs to share relevant information 	Safety promotion through standardisation workshops	Short term
Introduce competency-based training for all licences and ratings through a performance-based regulation (PBR)	<p>Ensure that the right competencies are acquired by pilots commensurate to the privileges of their licences, in line with the evolution of on-board technologies and making full use of the most modern training methods and tools.</p> <p>Moving to PBR would imply ensuring that pilot competencies are guaranteed independently of the technologies used and thus allowing the Regulation to be future-proof, independently of specific new technologies.</p>	<ul style="list-style-type: none"> — EASA to launch rulemaking activity — CAs to engage in the rulemaking process 	Rulemaking	Long term
Clarify the regulatory structure and provide customised access	Develop, publish and publicise an EASA online portal built on enterprise architecture principles and best practices from the industry (e.g.	<ul style="list-style-type: none"> — EASA to develop and publicise the online portal 	Communication	Short term



to the regulations and rules	www.part-aero.com) to provide users with: <ul style="list-style-type: none"> — a clear structural representation of the existing regulations and rules; — a temporal perspective of how the regulations and rules have evolved over time; — a user perspective for each stakeholder category to easily access all the relevant applicable rules from different documents applicable to each stakeholder category. 	— CAs to promote the use of the online portal		
Increase the modularity of non-commercial pilot licences	Define short, simple and well-specified add-on module requirements for the licence upgrades, the extension of privileges, and strengthening the crediting system (e.g. for similar aircraft types).	— EASA to develop new requirements	Rulemaking	Long term
Implement fully digital processes	Remove unnecessary routine and administrative burden by increasingly removing paper-based reporting and moving fully to digital reporting.	— EASA to develop new requirements	Rulemaking	Long term
Implement measures for the promotion of CAT pilot training	Promote pilot career opportunities through dedicated public events, fostering the closure of gender gap that exists among pilots and promoting the use of incentives and tools for the financial support of the training of commercial pilots (for example, through dedicated scholarships between air operators/airlines and training organisations, deferment options, etc.).	— Air operators/airlines and training organisations to agree/adopt/align	Communication and sharing of best practices	Medium/long term
Promote the common	Enhance and promote the use of the Q&A section about the FCL rules on the EASA website to	— EASA to engage in Tier 1 and to	Communication	Short term



interpretation of the rules	<p>ensure that questions raised from the industry are clearly answered without prejudice to the prerogative of the CAs as regards the final interpretation.</p> <p>The clarification process should be run in two tiers:</p> <ul style="list-style-type: none"> — Tier 1: Finding agreement between EASA and the CAs concerned and then converted into guidance in Tier 2 to ensure that all stakeholders may benefit from the European view. Minimising the time to answer is considered an essential aspect in order to ensure timely response to the needs from the stakeholders and to increase reliance on the process. 	<p>implement Tier 2</p> <ul style="list-style-type: none"> — CAs to participate in Tier 1 		
Differences exist in the MSs' administrative processes that hinder the free movement of people	MSs to agree on common administrative processes and forms with the aim to reduce the conversion of pilot licences and certificates/acceptance of examiners in other MSs.	<ul style="list-style-type: none"> — EASA to coordinate — CAs to propose and agree on a common process — EASA to review 	Administrative process	Short term
Organise regular regional workshops on pilot training	Organise regular training workshops for industry and CAs on technical topics as well as administrative processes and regulatory compliance. These workshops should preferably be organised at regional level at locations other than at EASA, to foster participation of staff from different geographically neighbouring CAs and to facilitate two-way information exchange.	<ul style="list-style-type: none"> — EASA to coordinate — CAs and industry to participate and share best practices 	Safety promotion through standardisation workshops	Short term





5. Annexes

5.1. Annex 1: Face-to-face interviews

5.1.1. Scope

This questionnaire is part of the impact assessment launched by EASA in 2018 on the evaluation of the applicable rules for initial and recurrent pilot training, testing and checking. All the requirements referenced by the study are stipulated in Annex I (Part-FCL) to Commission Regulation (EU) No 1178/2011 and in Annex III (Part-ORO) to Commission Regulation (EU) No 965/2012 and the related AMC and GM, as well as in the related NPAs (refer to Section 1.3 'Evaluation methods').

5.1.2. Objectives

This questionnaire is intended to support the face-to-face interviews, to be conducted by the consultants that support EASA in the study, in the formulation of questions and structuring the collection of answers. It explores the role of each stakeholder in the frame of the Regulation, investigates the interaction among the stakeholders and gathers any issue/remark or problems valuable for the assessment.

5.1.3. User classification

This questionnaire is addressed to stakeholders from all the EU MSs, Iceland, Norway, Liechtenstein and Switzerland, and countries and stakeholders from non-EASA MSs for which EASA acts as the competent authority, distinguishing them into:

- competent authorities (CAs),
- training organisations (TOs),
- GA pilots/GA pilot representation bodies,
- CAT pilots/CAT pilot representation bodies,
- air operators/airlines,
- instructors, and
- examiners.





5.1.4. List of questions

Authorities (CAs)

1. What is the number of examiners/instructors/pilots licences/certificates/ratings issued by your organisation during the last 8 years (i.e. since Regulation (EU) No 1178/2011 entered into force)?

	Total number at MS level	Average number of licences issued yearly (2011–2017)	Average number of licences revalidated yearly (2011–2017)	Average number of licences renewed yearly (2011–2017)	Average number of licences revoked yearly (2011–2017)	Average number of licences that have been adapted to local format for foreign ²³ professionals yearly (2011–2017)
Examiners						
Instructors						
GA pilots						
CAT pilots						
Student pilots		-----	-----	-----	-----	-----
Type ratings						
Class ratings						

1. How many examination hours does your organisation require by entry level senior examiners?
2. A) How many Training Organisations do your organisation has to oversee per year (2011-2017)?

B) How many Training Organisations' oversight processes (audits) do you run per year (2011-2017)?

C) How many Level 1 findings and Level 2 findings, related to the requirements, do your organisation found per year (2011-2017)?

D) What are the recurrent findings issued as a result of the oversight of Training Organisations, since the implementation of Part-ORA/-ARA?

²³ 'Foreign' in this context means an EASA Part-FCL licence or certificate which has been issued by a national aviation authority other than the one being your competent authority.



3. How many additional requirements to Part FCL does an Examiner/Instructor/Pilot holding a foreign² licence/certificate/ratings need to meet to work/exercising the privileges of their licences/certificate/ratings in your country?

Nº of additional requirements for Examiners _____

Nº of additional requirements for Instructors _____

Nº of additional requirements for Pilots _____

Please specify the areas of the additional requirements:

4. A) Does the authority have the necessary resources to tackle new technologies and procedures?

B) In your experience, how long does it take to introduce the new amendments and exceptions due to new technologies in the regulation since the first certification of the new technology at EU level?

C) In your opinion, the introduction of new technologies have been facilitated by the FCL regulations since its implementation in 2011 by adding amendments and exemptions?

☐ Yes

☐ No

Please, if YES, indicate how and an estimation of how many. If NOT, indicate how the regulation should facilitate the introduction of new technologies

5. Could you provide a reasonable value of the average turnover of your organisation related to pilot training?

Training Organisations (TOs)

1. What is the indicative average number of hours typically required for a student pilot within your Training Organisation to achieve the level demanded for following licences/certificates/ratings:

	Classroom Hours	Simulator Hours	Flight Hours	Computer Based Training Hours	Total length of the course
PPL					
CPL					
ATPL					
MPL					
Type Rating					





Class Rating					
Instrument Rating					
Night Rating					
Mountain Rating					

2. How many instruction hours does your Training Organisation require by entry level instructors?
3. How many instructors are in your organisation?
4. From these, how many instructors in your organisation are working in the same country where they hold their licence/certificate?
- [TOT N° instructors holding a foreign¹ certificate_____]
5. Please describe briefly the approach taken by your Training Organisation for:
 - A) Designing the content and developing the courses (e.g. in terms of setting out training objectives, identifying trainee's needs, defining training content and choosing training tools and environments):
 - B) Training Management System with respect to guaranteeing compliance with minimum regulatory requirements:
 - C) Assessing and examining the competency (e.g. in terms of examinations preparation and questions database volume):
 - D) Documenting the process and making periodical reviews with the examiners:
 - E) In your opinion, has the regulation facilitated the implementation of the performance based concept and competency based training?
☐ Yes
☐ No
Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate the implementation of the Performance-based concept.
 - F) In your opinion, has the regulation facilitated the implementation of the competency based training concept?





☐ Yes

☐ No

Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate the implementation of the Competency-based concept.

6. Has your Training Organisation introduced new training areas or subjects due to technologies within the last 8 years (e.g. PBN)?

A) Which ones?

B) In your opinion, has the regulation facilitated the introduction of new training areas or subjects due to technologies? Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate this.

7. Has your Training Organisation introduced technology innovations to enhance course delivery within the last 8 years (e.g. computer-based training, assessing competency, carrying out flight instruction in aircraft or in flight simulators and other training devices, checking the progress/monitoring the development of the pilot's competencies, oversight of the training delivery, oversight of training organisation performance and compliance)?

A) Which ones?

B) In your opinion, has the regulation facilitated the introduction of the technologies to enhance course delivery? Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate this.

C) Have these innovative training tools contributed in reducing the cost of your Training Organisation? How much?

8. How the pilots in your organisations become commercial pilot? Please provide the percentage for each category.

☐ Pilots completing ATPL licence/certificate training directly, ____%

☐ Pilots completing MPL licence/certificate training directly, ____%

☐ Pilots completing CPL licence/certificate training directly, ____%

☐ Pilots holding a previous PPL licence/certificate and then completing CPL adaptation training, ____%

☐ Pilots holding a Military pilot licence/certificate and then completing CPL licence/certificate conversion or adaptation training, ____%

☐ Other ____%





9. Could you provide a reasonable value for the individual cost of initial training for CPL, PLL licence/certification within your organisation?

Certificate ATPL Initial Training _____ €

Certificate MPL Initial Training _____ €

Certificate CPL Initial Training _____ €

Certificate PPL Initial Training _____ €

10. Could you provide a reasonable value of the cost for type and class ratings initial training and recurrent training within your organisation?

Type rating initial training cost _____ €; Type rating recurrent training cost _____ €

Class rating initial training cost _____ €; Class rating recurrent training cost _____ €

11. Does your Training Organisation have regular information exchanges with the CA? And with the Airlines? Of which nature?

12. What is the % of ab initio trainees sponsored by an Airline in your Training Organisation? Are there any mentoring programs in place by Airlines for your student pilots?

13. A) What is the average success rate of your students?

Success rate one year after completing the training for CPL licence/certificate and associated ratings if applicable ____%

Success rate one year after completing the training for PPL licence/certificate and associated ratings if applicable ____%

B) What is the employment rate for your students holding CPL licence/certificate with associated ratings one year after completing the initial training? (*Instructors/Examiners, Training Organisations*)

% Employment rate after one year ____%

14. Could you provide a reasonable value of the average turnover of your organisation?





GA pilots/GA pilot representative bodies/CAT pilots/CAT pilot representative bodies

1. What is the indicative average number of hours typically required for a student pilot within your Training Organisation to achieve the level demanded for following licences/certificates/ratings:

	Classroom Hours	Simulator Hours	Flight Hours	Computer Based Training Hours	Total length of the course
PPL					
CPL					
ATPL					
MPL					
Type Rating					
Class Rating					
Instrument Rating					
Night Rating					
Mountain Rating					

2. A) How many pilots are in your organisation?

B) Out of this number, how many pilots in your organisation are working/exercising the privileges of their licences/certificate/ratings in the same country where they hold it?

- [TOT N° pilots holding a foreign²⁴ licence/certificate ____]

3. In your opinion, to what extent have the rules for pilot's initial and recurrent training, testing and checking met the initial needs and objectives of the original FCL regulation in terms of facilitating a free movement of people, services and level playing field?

- ☐ Completely met
- ☐ Met
- ☐ Somewhat met
- ☐ Do not met at all

Please justify your answer:

²⁴ 'Foreign' in this context means an EASA Part-FCL licence or certificate which has been issued by a national aviation authority other than the one being your competent authority.





4. A) How did you become a pilot? Could you briefly describe your career's path for obtaining and maintaining you licences/certificates/ratings?

5. A) Could you provide a reasonable value for the individual cost of initial training for CPL, PLL licence/certification within your organisation?

Certificate ATPL Initial Training _____ €

Certificate MPL Initial Training _____ €

Certificate CPL Initial Training _____ €

Certificate PPL Initial Training _____ €

6. Could you provide a reasonable value of the cost for type and class ratings initial training and recurrent training within your organisation?

Type rating initial training cost _____ €; Type rating recurrent training cost _____ €

Class rating initial training cost _____ €; Class rating recurrent training cost _____ €

7. Could you provide a reasonable value of the average extra training costs for ATPL and MPL licence/certificate holders to become an Airline pilot (bridging training)?

8. How would you assess the following aspects of the regulation?

Scale 1 (worst) to 5 (best)

- a. Complexity ____ (scale 1-5) Justify your answer and provide examples.
- b. Clearness and easy to understand ____ (scale 1-5) Justify your answer and provide examples.
- c. Proportionality for each stakeholder ____ (scale 1-5) Justify your answer and provide examples.
- d. Adequate to modern aviation challenges ____ (scale 1-5) Justify your answer and provide examples.

9. How would you assess the following aspects in terms of rules cost-efficiency?

Scale 1 (worst) to 5 (best)

- a. Initial training cost and requirements ____ (scale 1-5) Justify your answer and provide examples.
- b. Recurrent training cost and requirements ____ (scale 1-5) Justify your answer and provide examples.
- c. Medical certificate requirements ____ (scale 1-5) Justify your answer and provide examples.





d. Licence administrative procedures ____ (scale 1-5) Justify your answer and provide examples.

10. How would you assess the following aspects in terms of proportionality²⁵?

Scale 1 (worst) to 5 (best)

a. Initial training cost and requirements ____ (scale 1-5) Justify your answer and provide examples.

b. Recurrent training cost and requirements ____ (scale 1-5) Justify your answer and provide examples.

c. Medical certificate requirements ____ (scale 1-5) Justify your answer and provide examples.

d. Licence administrative procedures ____ (scale 1-5) Justify your answer and provide examples.

Air Operators

1. A) How many pilots are in your organisation?

B) Out of this number, how many pilots in your organisation are working/exercising the privileges of their licences/certificate/ratings in the same country where they hold it?

- [TOT N° pilots holding a foreign²⁶ licence/certificate ____]

2. How many flight hours does your airline typically require by entry level pilots?

3. A) How many pilots are in your organisation?

B) Out of this number, how many pilots in your organisation are working/exercising the privileges of their licences/certificate/ratings in the same country where they hold it?

- [TOT N° pilots holding a foreign²⁷ licence/certificate ____]

4. In your opinion, to what extent have the rules for pilot's initial and recurrent training, testing and checking met the initial needs and objectives of the original FCL regulation in terms of facilitating a free movement of people, services and level playing field?

☐ Completely met

²⁵ Proportionality in this context means that rules can sustain diversified development of aviation.

²⁶ Foreign in this context means an EASA Part FCL licence or certificate which has been issued by a National Aviation Authority other than the one being your Competent Authority.

²⁷ Foreign in this context means an EASA Part FCL licence or certificate which has been issued by a National Aviation Authority other than the one being your Competent Authority.





- ☐ Met
- ☐ Somewhat met
- ☐ Do not met at all

Please justify your answer:

5. Could you provide a reasonable value of the cost for type and class ratings initial training and recurrent training within your organisation?

Type rating initial training cost _____€; Type rating recurrent training cost _____€

Class rating initial training cost _____€; Class rating recurrent training cost _____€

6. What is the average success rate of your students?

Certificate CPL licence/certificate recurrent training success rate _____ %

Certificate CPL rating training success rate _____ %

Instructors

1. What is the indicative average number of hours typically required for a student pilot within your training organisation to achieve the level demanded for following licences/certificates/ratings:

	Classroom Hours	Simulator Hours	Flight Hours	Computer Based Training Hours	Total length of the course
CRI					
FI					
SFI					
TRI					
Ground and Refresher Training Instructors					
CRM instructors					

2. How many instructors are in your organisation?
3. From these, how many instructors in your organisation are working in the same country where they hold their licence/certificate?

- [TOT N° instructors holding a foreign¹ certificate _____]





4. In your opinion, to what extent have the rules for pilot's initial and recurrent training, testing and checking met the initial needs and objectives of the original FCL regulation in terms of facilitating a free movement of people, services and level playing field?

☐ Completely met

☐ Met

☐ Somewhat met

☐ Do not met at all

Please justify your answer:

5. Does your Training Organisation have regular information exchanges with the CA? And with the airlines? Of which nature?

6. What is the % of ab-initio trainees sponsored by an airline in your training organisation? Are there any mentoring programs in place by airlines for your student pilots?

7. A) What is the average success rate of your students?

Success rate one year after completing the training for CPL licence/certificate and associated ratings if applicable ____%

Success rate one year after completing the training for PPL licence/certificate and associated ratings if applicable ____%

B) What is the employment rate for your students holding CPL licence/certificate with associated ratings one year after completing the initial training?

% Employment rate after one year ____%

Examiners

1. What is the indicative average number of hours typically required for a student pilot within your training organisation to achieve the level demanded for following licences/certificates/ratings:

	Classroom Hours	Simulator Hours	Flight Hours	Computer Based Training Hours	Total length of the course
CRE					
FE					
FIE					
SFE					





TRE					
IRE					
SE					

2. How many instructors are in your organisation?
3. From these, how many instructors in your organisation are working in the same country where they hold their licence/certificate?

- [TOT N° instructors holding a foreign¹ certificate_____]

4. In your opinion, to what extent have the rules for pilot's initial and recurrent training, testing and checking met the initial needs and objectives of the original FCL regulation in terms of facilitating a free movement of people, services and level playing field?

- ☐ Completely met
- ☐ Met
- ☐ Somewhat met
- ☐ Do not met at all

Please justify your answer:

5. Does your training Organisation have regular information exchanges with the CA? And with the airlines? Of which nature?
6. What is the % of ab-initio trainees sponsored by an airline in your training organisation? Are there any mentoring programs in place by airlines for your student pilots?

7. What is the average success rate of your students?

Success rate one year after completing the training for CPL licence/certificate and associated ratings if applicable ____%

Success rate one year after completing the training for PPL licence/certificate and associated ratings if applicable ____%

8. What is the employment rate for your students holding CPL licence/certificate with associated ratings one year after completing the initial training?

% Employment rate after one year ____%

All

1. Do you have any comment or remarks regarding the regulation? (E.g. Requirements too lax, too strict or totally missing, Gaps and inconsistencies between the Aircrew and OPS regulations, wrong implementations...) (All)





5.2. Annex 2: Online questionnaires

5.2.1. Authorities questionnaire

PART 1 — General information about the respondent

1. Please identify your country

- ☐ Austria
- ☐ Belgium
- ☐ Bulgaria
- ☐ Croatia
- ☐ Cyprus
- ☐ Czech Republic
- ☐ Denmark
- ☐ Estonia
- ☐ Finland
- ☐ France
- ☐ Germany
- ☐ Greece
- ☐ Hungary
- ☐ Iceland
- ☐ Ireland
- ☐ Italy
- ☐ Latvia
- ☐ Lithuania
- ☐ Luxembourg
- ☐ Malta
- ☐ Netherlands
- ☐ Norway
- ☐ Poland
- ☐ Portugal
- ☐ Romania
- ☐ Slovakia
- ☐ Slovenia
- ☐ Spain





- ☐ Sweden
- ☐ Switzerland
- ☐ United Kingdom
- ☐ Other (please identify)

Name of your organisation

Your first, family name

Your position

* Your Email

Note: Information about the respondents will be kept confidential.

PART 2 — Specific questions

1. How does your authority select senior examiners?
2. Do the current rules enable the competent authority to perform effective oversight over the training organisation (even in terms of number of training organisations versus the authority own capability)?
 - Yes
 - No
 - PartiallyPlease explain

3. What is the current number of certificates/ratings issued by your authority vis-a-vis the number of certificates/ratings when the regulation entered into force?

	Year 2011	Year 2018
Instructors		
Type Ratings		
Class Ratings		

4. Are your human resources trained enough to face the future challenges as regards pilot training, checking and testing?





- Yes
- No

If NOT, please specify the gaps and areas for further training.

5. In your Member State has the introduction of new technologies been facilitated by the FCL regulations since its implementation in 2011?

- Yes
- No

Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate the introduction of new technologies

6. Does your organisation perform oversight based on a risk assessment?

- Yes
- No

If YES, please shortly describe your system:

7. What are the major recurrent findings issued as a result of the training organisation oversight in your Member State, since the implementation of FCL regulations?

8. In your opinion, to what extent have the rules for pilot's training, testing and checking met the initial needs and objectives in terms of facilitating a free movement of people, services and level playing field?

- Completely met
- Somewhat met
- Did not meet at all

Please justify your answer.

9. In your opinion, has the regulation facilitated the implementation of the performance based concept (performance based regulations are those regulations where the implementing rules focus on desired, measurable outcomes, rather than on defining prescriptive means and conditions for achieving compliance with the requirements)?

- Yes
- No
- I do not know

If YES, please indicate how.

If NOT, indicate how the regulation should facilitate the implementation of the performance-based concept.

10. Could you provide an estimated value of the average budget of your authority related to activities performed in the personal licences /aircrew domain?

Year	2011	2018
Average estimated budget of the authority for activities in the		





personal licences/aircrew domain (in EUR)		
---	--	--

11. How would you assess the following aspects of the regulation in the scale 1 (worst) to 5 (best)?

	1 (worst)	2	3 (medium)	4	5 (best)
Complexity					
Clearness and easy to understand					
Proportionality for each stakeholder					
Adequate to modern aviation challenges					

Please justify your answer and provide examples.

12. How would you assess the following aspects in terms of rules efficiency (rules achieve maximum results with minimum costs) in a scale 1 (worst) to 5 (best)?

	1 (worst)	2	3 (medium)	4	5 (best)
Initial training requirements					
Recurrent training requirements					

Please justify your answer and provide examples.

13. How would you assess the following aspects in terms of proportionality (rules can sustain diversified development of aviation) in a scale 1 (worst) to 5 (best)?

	1 (worst)	2	3 (medium)	4	5 (best)
Initial training requirements					
Recurrent training requirements					

Please justify your answer and provide examples.

14. Do you think that the training rules should be changed to improve the safety level?

- Yes





- No
- I do not know

If YES, please specify which improvement is needed.

15. Do you think that there are inconsistencies between Aircrew Regulation and Air Operations Regulation?

- Yes
- No
- I do not know

If YES, please identify the major inconsistencies that you have noticed.

16. Do you think that there are superfluous requirements in the rules, regulating pilot training, testing and checking?

- Yes
- No
- I do not know

If YES, please identify the major superfluous requirements that you have noticed.

Part 3- Other comments

17. Do you have any comment or remarks (e.g. requirements too lax, too strict or totally missing, wrong implementations...) regarding the applicable rules, regulating pilot training, testing and checking?

5.2.2. Industry questionnaire

PART 1 — General information about the respondent

2. Which stakeholder category do you represent?

- Pilots (not having an instructor/examiner certificate)
- Pilots Representative Bodies
- Approved training organisation (ATO)
- GA training facilities/ training clubs/ declared training organisations and other recognised training facilities
- Instructors (not having an examiner certificate)
- Examiners
- Air Operators – Commercial air transport CAT (Airline)
- Air Operators – Non-commercial air transport (NCC&NCO)
- Other – please identify

1a. Please identify the licence(s) you hold (here might be a multiple choice):

- LAPL (Light Aircraft Pilot Licence)
- SPL (Sailplane Pilot Licence)
- BPL (Balloon Pilot Licence)
- PPL (Private Pilot Licence)





- CPL (Commercial Pilot Licence)
- MPL (Multi-crew Pilot Licence)
- ATPL (Airline Transport Pilot Licence)

3. What is your main focus country?

- ☐ Albania
- ☐ Andorra
- ☐ Armenia
- ☐ Austria
- ☐ Azerbaijan
- ☐ Belarus
- ☐ Belgium
- ☐ Bosnia and Herzegovina
- ☐ Bulgaria
- ☐ Croatia
- ☐ Cyprus
- ☐ Czech Republic
- ☐ Denmark
- ☐ Estonia
- ☐ Finland
- ☐ France
- ☐ Georgia
- ☐ Germany
- ☐ Greece
- ☐ Hungary
- ☐ Iceland
- ☐ Ireland
- ☐ Italy
- ☐ Kazakhstan
- ☐ Kosovo
- ☐ Latvia
- ☐ Liechtenstein
- ☐ Lithuania
- ☐ Luxembourg
- ☐ Macedonia





- ☐ Malta
- ☐ Moldova
- ☐ Monaco
- ☐ Montenegro
- ☐ Netherlands
- ☐ Norway
- ☐ Poland
- ☐ Portugal
- ☐ Romania
- ☐ Russia
- ☐ San Marino
- ☐ Serbia
- ☐ Slovakia
- ☐ Slovenia
- ☐ Spain
- ☐ Sweden
- ☐ Switzerland
- ☐ Turkey
- ☐ Ukraine
- ☐ United Kingdom
- ☐ Other

Name of your organisation, if applicable

Your first, family name

Your position

* Your Email

Note: Information about the respondents will be kept confidential.





4. Please identify the size of your organisation (airlines, ATO, DTO, pilot associations)

Number of people	No of pilots	No of pilots who are working/exercising the privileges of their licences/ratings in the same Member State where originally issued	No of instructors	No of instructors who are working/exercising the privileges of their certificate in the same Member State where originally issued
1-10				
11-25				
26-50				
51-100				
101-250				
251-500				
501-1000				
>1001				

PART 2 — Specific questions

5. Do you provide/get more training hours, than the minimum required training hours in the applicable regulation, to achieve the level of competence for a licence/certificate/type rating (pilots/associations/training organisations/instructors/examiner)?

- Yes
- No

You may provide additional information here, if needed.

If yes, go to question 5 -9.

6. How long did you get your licence/certificate/type rating? (pilots/instructors/examiners)

7. What is the indicative percentage of total extra training hours typically needed to achieve the level of competence for a licence/certificate/type rating compared with the minimum requirements in the applicable regulation (pilots/associations/training organisations/instructor/examiner)?

% of total extra training hours	<5%	6-10%	11-20%	21-30%	31-40%	41-50%	>50%
LAPL							
PPL							





SPL							
BPL							
CPL							
MPL							
Type Rating							

You may provide additional information here, if needed.

8. What is the indicative percentage of extra training hours typically needed to achieve the level of competence for a private pilot licence (PPL) compared with the minimum requirements in the applicable regulation (pilots/associations/ATO/DTO/instructors/examiners)?

	% Extra Theoretical Hours	% Extra Simulator Hours	% Extra Flight Hours
<5%			
6-10%			
11-20%			
21-30%			
31-40%			
41-50%			
>50%			

You may provide additional information here, if needed.

9. What is the indicative average percentage of extra training hours typically needed to achieve the level of competence for a commercial pilot licence (CPL)/a multi-crew pilot licence (MPL)/a type rating compared with the minimum requirements in the applicable regulation (pilots/associations/ATO/instructors/examiners)?

CPL	% Extra Theoretical Hours	% Extra Simulator Hours	% Extra Flight Hours
<5%			
6-10%			
11-20%			
21-30%			
31-40%			
41-50%			
>50%			



MPL	% Extra Theoretical Hours	% Extra Simulator Hours	% Extra Flight Hours
<5%			
6-10%			
11-20%			
21-30%			
31-40%			
41-50%			
>50%			

Type rating	% Extra Theoretical Hours	% Extra Simulator Hours	% Extra Flight Hours
<5%			
6-10%			
11-20%			
21-30%			
31-40%			
41-50%			
>50%			

You may provide additional information, if needed.

10. If students typically need extra training, please explain what are the needs, how you detect the needs, how you solve shortcomings of your students (instructors/ATO/DTO)?

11. Do you exercise the privileges of your instructor certificate in the same Member State where it was originally issued (instructor)?

- Yes
- No

If not, please clarify the reason and if you transfer your rating/certificate from the Member State that issued your certificate to the National Aviation Authority of the Member State where you are exercising your privileges

12. How many flight hours does your air operator typically require by entry level pilots (air operators)?

13. How do you select instructor(s) and examiner(s) (air operators)?

14. How does your training organisation select instructors and examiners (ATO/DTO)?





15. In your opinion, are the competent authority officers trained enough to face the future challenges as regards pilot training, checking and testing (ATO/DTO/airline)?

- Yes
- No
- I do not know

If NOT, please specify the gaps and areas for further training:

16. Do you exercise your examiner certificate privileges in the same Member State where it was originally issued (examiner)?

- Yes
- No

If not, how was your familiarisation with the Examiner differences document assessed by the competent authority?

17. In your opinion, to what extent have the rules for pilot's initial and recurrent training, testing and checking met the initial needs and objectives of the original FCL regulations in terms of facilitating a free movement of people, services and level playing field? (all)

- completely met
- somewhat met
- did not meet at all

Please justify your answer:

18. What are the recurrent findings resulting from the oversight of your training organisation, since the implementation of FCL regulations? (ATO/DTO)

19. Did you encounter any difficulties to obtain the Operational Suitability Data (OSD) established in accordance with Part-21, for developing the training programmes for the type rating courses provide? (ATO)

- Yes
- No
- I do not know

If Yes, please specify?

20. Does your training organisation design the content and develop the courses in terms of setting out training objectives, identifying trainee's needs, defining training content and choosing training tools and environments (ATO/DTO)?

- Yes
- No

If YES, please describe briefly the approach taken by your training organisation

21. Does your training organisation have a management system in order to guarantee the compliance with minimum regulatory requirements (ATO/DTO)?

- Yes
- No

If YES, please describe briefly the main features of system





22. Does your training organisation assess the quality of examinations preparation and questions (ATO/DTO)?

- Yes
- No

If YES, please describe briefly the process for quality of examinations preparation

23. Please describe briefly the approach taken by your training organisation for documenting and integrating feedbacks from the examiners (ATO/DTO)

24. Has your training organisation introduced new training areas or subjects due to technologies within the last 8 years (e.g. PBN) (ATO/DTO)?

- Yes
- No

If YES, Which ones?

25. In your opinion, has the regulation facilitated the introduction of new training areas or subjects due to technologies (ATO/DTO)?

- Yes
- No
- I do not know

Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate this

26. Has your training organisation introduced technology innovations to enhance course delivery within the last 8 years?

(e.g. computer-based training, assessing competency, carrying out flight instruction in aircraft or in flight simulators and other training devices, checking the progress/ monitoring the development of the pilot's competencies, oversight of the training delivery, oversight of training organisation performance and compliance) (ATO/DTO)

- Yes
- No

If YES, which ones?

27. In your opinion, has the regulation facilitated the introduction of the technologies to enhance course delivery (ATO/DTO)?

- Yes
- No
- I do not know

Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate this.

28. In your opinion, has the regulation facilitated the implementation of the competency based training concept (i.e. knowledge, skills and attitude in forms of objective targets/objectives)? (ATO/DTO)

- Yes
- No
- I Don' know





Please, if YES, indicate how. If NOT, indicate how the regulation should facilitate the implementation of the competency-based concept

29. Have innovative training tools contributed to reducing the cost of your training organisation? (ATO/DTO)

- Yes
- No
- I do not know

If YES, please could you provide as a reasonable value of the reduction.

30. How did you become a pilot? Could you briefly describe your career path for obtaining and maintaining the licences/certificates/ratings that you hold (pilots/instructors/examiners)?

31. How do pilots within your organisation become commercial pilots? Please provide the indicative percentage for each category (e.g. 80–90 %, above 90 %, etc.) (ATO/pilot representative bodies/air operators).

Category	% of pilots
Pilots holding PPL and then completing CPL modular training	
Pilots completing CPL integrated training	
Pilots completing ATPL integrated training	
Pilots completing MPL integrated training	
Pilots holding a Military pilot licence and then completing CPL conversion training	
Other	

32. How did you become an instructor? Could you briefly describe your career path for obtaining and maintaining the instructor certificates that you hold (instructor)?

33. How did you become an examiner? Could you briefly describe your career's path for obtaining and maintaining the examiner certificate that you hold? (examiner)

34. Could you provide a reasonable value for the **initial training cost** of the licence(s) and the rating(s) that you hold (pilots/instructors/examiner)?

Category	Amount in EUR
PPL initial training	
CPL initial training	
MPL initial training	
Instrument rating (IR) initial training	
Type rating initial training	

You may provide additional information, if needed.





35. Could you provide a reasonable value for the **recurrent training cost** for the following rating(s) and certificate(s) that you hold (pilots/instructor/examiner)?

Category	Amount in EUR
Type rating recurrent training cost	
Instrument rating (IR) recurrent training cost	
Instructor certificate	
Examiner certificate	

You may provide additional information, if needed.

36. Could you provide a reasonable value for the individual cost for **initial training** for a pilot in your organisation (ATO/DTO/associations)?

Category	Amount in EUR
PPL initial training	
CPL initial training	
MPL initial training	
Instrument rating (IR) initial training	
Type rating initial training	

You may provide additional information, if needed.

37. Could you provide a reasonable value for the individual cost for **recurrent training** for a pilot for the following rating(s) and certificate(s) within your organisation (ATO/DTO/air operators)?

Category	Amount in EUR
Type rating recurrent training cost	
Instrument rating (IR) recurrent training cost	
Instructor certificate	
Examiner certificate	

You may provide additional information, if needed.

38. Could you provide a reasonable value for the average extra training costs for the frozen ATPL holders until they are hired by an air operator? Please identify the type of costs. (CAT pilots/associations/instructor/examiner)

39. Do you have regular information exchanges with the competent authority (ATO/DTO/instructors/examiner)?

- Yes
- No

If YES, is the relationships productive, in term of solving questions and doubts? What type of questions and doubts does your training organisation typically have (i.e. gaps between Parts FCL/ORA/ARA)?



40. Does your training organisation have regular information exchanges with the air operators (ATO/DTO)?

- Yes
- No

If YES, of what nature? Are the relationships with them productive (in term of training design and management)?

41. What is the % of ab-initio trainees sponsored by an air operator in the training organisation (ATO/instructors)?

42. Are there any mentoring programmes in place by airlines for your student pilots (i.e. MPL programs) (ATO/instructors)?

- Yes
- No

Please provide additional information.

43. What is the % of ab-initio trainees sponsored by your air operator? Have you implemented a mentoring program for your future pilots? Have you developed an MPL program? (air operator)

44. What are the average success rate of your students for the licences/ratings that you provide? (e.g. 95-97%, above 99% ...) (ATO/DTO/instructor)

Category	in %
Success rate one year after completing the training for MPL and associated ratings if applicable	
Success rate one year after completing the training for CPL and associated ratings if applicable	
Success rate one year after completing the training for PPL associated ratings if applicable	
Success rate one year after completing the training for Instrument rating if applicable	
Success rate one year after completing the training skill test if applicable	

You may provide additional information, if needed.

45. What is the employment rate of your students holding the following licences with the associated ratings one year after completing the initial training (ATO/instructors)?

Category	in %
Employment rate after one year holding a CPL	
Employment rate after one year holding a 'frozen ATPL'	
Employment rate after one year holding a MPL	



You may provide additional information, if needed.

46. What are the average success rates of your applicants/pilots during screening/selection process and the type rating recurrent training (air operator)?

Category	in %
Applicants success rate during the screening/selection process	
Type rating recurrent training success rate	

You may provide additional information, if needed.

47. What are the three most common reasons for failure during the screening/selection process (air operator)?
48. Could you provide a reasonable value of the average economic turnover in EUR of your training organisation, related to service/training provided (ATO/DTO)?

49. How would you assess the following aspects of the regulation in the scale 1 (worst) to 5 (best)? (all)

	1 (worst)	2	3 (medium)	4	5 (best)
Complexity					
Clearness and easy to understand					
Proportionality for each stakeholder					
Adequate to modern aviation challenges					

Please justify your answer and provide examples.

50. How would you assess the following aspects in terms of rules efficiency (rules achieve maximum results with minimum costs) in a scale 1 (worst) to 5 (best)? (all)

	1 (worst)	2	3 (medium)	4	5 (best)
Initial training requirements					
Recurrent training requirements					



Please justify your answer and provide examples.

51. How would you assess the following aspects in terms of proportionality (rules can sustain diversified development of aviation) in a scale 1 (worst) to 5 (best)? (all)

	1 (worst)	2	3 (medium)	4	5 (best)
Initial training requirements					
Recurrent training requirements					

Please justify your answer and provide examples.

52. Do you think that the training rules should be changed to improve the safety level? (all)

- Yes
- No
- I do not know

If YES, please specify which improvement is needed.

53. Do you think that there are inconsistencies between Aircrew Regulation and Air Operations Regulation? (all)

- Yes
- No
- I do not know

If YES, please identify the major inconsistencies that you have noticed.

54. Do you think that there are superfluous requirements in the rules, regulating pilot training, testing and checking? (all)

- Yes
- No
- I do not know

If YES, please identify the major superfluous requirements that you have noticed.

Part 3 — Other comments

55. Do you have any comment or remarks (e.g. requirements too lax, too strict or totally missing, wrong implementations...) regarding the applicable rules, regulating pilot training, testing and checking?





5.3. Annex 3: Safety occurrences

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CAT	Runway Excursions	0	0	0	1	1	1	0	1	3	1	0
	Fire (pre-accident)	0	0	0	0	0	1	1	1	2	1	0
	A/C pressurisation	0	0	0	0	0	0	0	0	1	2	0
	Upset	0	1	1	0	1	4	3	5	4	3	0
Non-CAT	Runway Excursions	0	0	0	0	1	0	5	14	11	12	6
	Fire (pre-accident)	0	0	0	0	1	1	4	6	2	3	0
	A/C pressurisation	0	0	0	0	0	0	0	3	0	0	1
	Upset	0	1	0	2	1	6	12	21	22	25	7
Unknown		5										

Table 2: Number of events per key safety area and year

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CAT	Accident	0	1	0	1	1	2	5	3	6	3	0
	Incident	0	0	0	0	0	0	0	1	3	1	0
	Serious Incident	0	0	1	0	1	6	5	4	10	4	1
	Others	0	0	0	0	0	0	0	1	1	1	2
Non-CAT	Accident	2	2	0	2	1	8	27	31	39	37	12
	Incident	0	0	0	0	0	0	0	1	0	0	1
	Serious Incident	0	0	1	0	0	0	1	2	3	8	1
	Others	0	0	0	0	0	0	0	0	0	1	0
Unknown		14										

Table 3: Number of events per severity and year



6. References

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