Easier access of General Aviation (GA) pilots to instrument flight rules (IFR) flying

RMT.0677 — ISSUE 2 — 18.12.2015
1. **Issue and reasoning for regulatory change**

The major goal of the Agency’s GA road map is to work towards simpler, lighter and better rules for GA. During the 2014 EASA Safety Conference on General Aviation the topic of ‘easier access of GA pilots to IFR flying’ was identified by the GA community as a concrete measure that will improve safety.

2. **Objectives**

The general objectives of the European Union in the field of civil aviation are defined in Article 2 of Regulation (EC) No 216/2008 (the Basic Regulation). The European General Aviation Safety Strategy, adopted by the EASA Management Board in 2012, identifies the key rationales that make it necessary to adopt a new specific approach for GA. This new approach is seen by the GA community as an urgent necessity in order to assure a sustainable development of the sector in Europe.

In line with the strategic direction of the European General Aviation Safety Strategy, the Agency committed at the 2014 EASA Safety Conference to apply an interdisciplinary approach with the aim to create a holistic view or common understanding of the complex, cross-boundary issues that hinder access of GA pilots to IFR flying. The aim is to prepare, define and synthesize the desired outcome relevant to each technical discipline into a comprehensive action plan for an increased access of GA pilots to IFR flying. Designing and finding optimal integrated solutions to these multifaceted issues requires involvement of specialists from diverse disciplines, relevant to the problem, to work together in a collaborative manner. The importance of clearly formulating and assigning different actions to the core technical discipline for the delivery of the solution is emphasised.

Because of time constraints and the need for prioritisation and assignment of the actions from the comprehensive plan to each core technical discipline, this task will address the actions assigned to the ‘aircrew and medical’ discipline at first stage. Further tasks will be planned in the other technical disciplines upon delivery of the comprehensive plan. In this context, it is expected that the comprehensive action plan will contain recommendations for changes of the aircrew, airworthiness, ATM, and aerodrome, etc. requirements.

The overall aim is to increase the number of GA pilots with IFR flying qualifications in Europe.

3. **Activities**

During the analysis and development of this rulemaking task (RMT), the following activities will be considered:

a. to collect issues hindering access for GA pilots to IFR flying;

b. to review the existing requirements in the different technical fields for IFR flying by GA pilots;

c. to investigate where the rules can be better adapted to the GA community;

---


d. to reorganise and improve the structure and balance between implementing rules and acceptable means of compliance and guidance material (AMC/GM);

e. to take into account input received from the ‘GA IFR flying task force’ on targeted improvements;

f. to switch from prescriptive to performance-based rulemaking, as appropriate;

\[ \text{g. to modify the existing requirements and propose other associated non-regulatory measures taking into account points a. to f. above.} \]

4. Deliverables

Due to the urgency and the limited time frame, the RMT.0677 will be pursued by the Agency with the support of the ‘GA IFR flying task force’. The expected products of this RMT.0677 are:

a. a concept paper that will set out the proposed approach and the plan;

b. an NPA containing proposals for modifying the existing requirements in the Aircrew and other affected regulations, as appropriate;

c. an opinion to modify the existing requirements in the Aircrew and other affected regulations, as appropriate;

d. decisions containing associated AMC/GM related to the modified requirements;

e. other associated non-regulatory measures which will increase access to IFR flying for GA pilots;

f. a comprehensive action plan.

The detailed drafting of the corresponding amendments of the requirements will be done by the Agency. The Agency shall ensure coordination with other regulatory tasks impacting this work and interface with the Agency’s technical disciplines. The Agency will provide updates on the progress of the work to the Agency’s advisory bodies. The Agency will consider the organisation of a public workshop with stakeholders and national aviation authorities to consult widely with interested parties on the envisaged changes.

Although the detailed drafting will be done by the Agency, the final sessions must be organised by the Agency in order for the ‘GA flying IFR task force’ members to have the opportunity to check the final wording of the Opinion.

5. Profile and contribution of the task force

As indicated above, the Agency pursues this work with the support of a task force, named ‘GA IFR flying task force’. The ‘GA IFR flying task force’ members have been identified and invited by the Agency on the basis of inputs received from the GA Sub-SSCC and GA roadmap NAA group.

Due to the multidisciplinary and cross-boundary issues, the members’ profile is:

a. relevant in-depth knowledge, expertise and experience of the GA IFR operations, rules, methods, tools and concepts;

b. areas of expertise: certification, air operations, licensing, aerodromes, and ATM;

c. from the GA industry, competent authorities and GA user community;

d. role, responsibilities and duties of the task force members specific to this task:
• to create a holistic view or common understanding of the multifaceted issues hindering access to IFR flying;
• to find optimal solutions to the complex issues through collaborative effort across fields;
• to assist the Agency in the development of the draft regulatory deliverables and regulatory requirements.

6. Annex I: Reference documents

6.1. Affected regulations


6.2. Affected decisions


— Decision No 2003/001/RM of the Executive Director of the European Aviation Safety Agency of 17 October 2003 on acceptable means of compliance and guidance material for the airworthiness
and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (‘AMC and GM to Part 21’).


6.3. **Reference documents**


7. **Annex II: Concept paper**
European Aviation Safety Agency

CONCEPT PAPER

RMT.0677

Easier access for General Aviation pilots to instrument flight rules flying
EXECUTIVE SUMMARY

This concept paper (CP) is designed to address the issue of increased access for General Aviation (GA) pilots to instrument flight rules (IFR) flying, which is one of the key objectives of the European Aviation Safety Agency (the ‘Agency’) GA road map. It is based on the output of the task force established by the Agency to pursue this goal.

Further to this objective, a selection of different issues has been identified for improvement or resolution. The key proposal of this concept paper is the basic instrument rating ‘Basic IR’ which would constitute an IFR qualification more accessible to GA pilots of aeroplanes. The training for the rating would be modular and competency-based, focused on the needs of GA pilots.

In addition, issues relating to the regulation of the existing flight crew licensing (FCL) are also highlighted, as well as others across the different regulatory domains, such as airworthiness certification, aerodromes (ADR), and air traffic management (ATM), many of which have different impacts on the GA IFR flying community.

This CP has been designed for a wide audience within the Agency and the aviation community and developed to share ideas about the issues identified and about the proposed approach.
# TABLE OF CONTENTS

1. **BACKGROUND** ................................................................................................................. 9

2. **KEY ISSUES** ....................................................................................................................... 9
   2.1 FLIGHT CREW LICENSING AND TRAINING ........................................................................ 9
   2.2 PROPOSED ‘BASIC IR’ QUALIFICATION ............................................................................. 10
   2.3 CERTIFICATION OF AIRCRAFT AND EQUIPMENT .......................................................... 12
   2.4 AERODROMES, ATM ROUTES AND PROCEDURES .......................................................... 12
   2.5 AERONAUTICAL INFORMATION AND DATA .................................................................... 13

3. **IMPACTS AND BENEFITS** .............................................................................................. 13
   3.1 GA COMMUNITY AND INDUSTRY ................................................................................... 13
   3.2 AERODROMES AND ATM ................................................................................................. 14
   3.3 SAFETY IMPACT ................................................................................................................ 14
   3.4 ENVIRONMENTAL IMPACT .............................................................................................. 15
   3.5 SOCIAL IMPACT .................................................................................................................. 15
   3.6 ECONOMIC IMPACT .......................................................................................................... 15
   3.7 IMPACT ON REGULATORY COORDINATION AND HARMONISATION ........................... 15

4. **CONCLUSION** ..................................................................................................................... 15
1. **Background**

At the 2014 EASA Annual Safety Conference in Rome, one of the key commitments made was to improve access to IFR flying for GA pilots.

Both the Agency and GA stakeholders are in agreement that encouraging more GA pilots to gain instrument flying qualifications and to fly under IFR is an important initiative for improving the safety and flexibility of GA flying.

To pursue this issue, a task force has been established to support the regulatory task (RMT.0677) in developing solutions to improve the current situation. The associated Terms of Reference (ToR RMT.0677 — Easier access of General Aviation (GA) pilots to instrument flight rules (IFR) flying) have been consulted with the EASA Advisory Bodies and published by the Agency. Since IFR flying encompasses many different aspects, the task force has a broad remit to identify issues and to propose possible solutions across all the relevant domains of EU regulations.

In accordance with the ToR, the immediate focus of the task force will be to propose a new instrument qualification and associated training path for GA pilots who wish to obtain the privilege to fly under IFR. This will be the subject of a Notice of Proposed Amendment (NPA) to be issued in 2016/Q2. Other key issues that are important to the overall facilitation of GA IFR flying will be identified for future consideration by the relevant rulemaking groups.

2. **Key issues**

Historically, there has been a relatively low level of GA IFR activity in Europe, compared to a much higher level in the USA. While this disparity can be explained to an extent by factors not directly related to specific regulations, there are undoubtedly areas of EU aviation regulations that, if made more proportionate, would achieve an increased facilitation of GA IFR activities.

2.1 **Flight crew licensing and training**

A relatively low number of GA pilots in Europe hold a qualification permitting them to fly under IFR — the proportion is much lower than in the USA. Since being qualified for flying under IFR is one of the most obvious prerequisites for it, finding more proportionate and relevant training solutions for GA pilots would likely be an effective way to address this issue.

Amendments to Regulation (EU) No 1178/2011 of 3 November 2011 (the ‘Aircrew Regulation’) to enable more flexible training for the EASA instrument rating (IR) via the competency-based (CB) route have substantially improved the situation. However, feedback from the GA community indicates that more proportionate solutions are still required to further increase uptake of instrument qualifications.

It is important that GA pilots have access to proportionate and flexible training that is tailored to their needs, at training organisations that they are familiar with.

In particular, the following issues have been identified:

- the level and relevance of required theoretical knowledge training and examinations compared to the current instrument qualifications is disproportionate; in order to facilitate uptake, future qualifications must contain simpler and more tailored requirements;

- access to flexible IFR training courses provided by organisations and instructors focused on GA customers is still limited in many areas and could be improved;
— the current IFR flight time prerequisites for instructors who wish to gain the privilege to teach IFR flying may also be in excess of what is necessary the required competencies and experience of instructors teaching GA pilots IFR flying should be carefully considered;

— the cost and certification requirements of flight training simulation devices used for IFR flying instruction are a barrier to GA training organisations obtaining these kinds of training aid; and

— the requirement to demonstrate language proficiency in English discourages uptake of qualifications for GA pilots who are not sufficiently proficient in English to meet the requirements for the current IR. It may be appropriate to require proficiency only in the language to be used for the flight.

Some of these issues will be addressed while developing the requirements of the proposed ‘Basic IR’ qualification; others will be identified for the future resolution.

It is important that interfaces with the existing Aircrew Regulation provisions are also considered, so that any proposed changes remain compatible with the existing and evolving regulatory structure and can be integrated as much as possible.

2.2 Proposed ‘Basic IR’ qualification

To address some of the issues identified in 2.1, the ToR — issued with the support of the task force — provides that the immediate focus of the group should be on a new IR qualification and the associated training path, which is adjusted to the needs of GA pilots. The target market for the IR will be pilots flying typical GA aeroplanes, for example SEPs and MEPs.

The main benefits of the proposal would be to provide a flexible, proportionate approach to IR training, more appropriate to the time and financial considerations which GA pilots are often constrained.

The task force have completed work on the initial structure of the training and the associated privileges. The following principles are fundamental to the concept:

— the training will be modular and competency-based;

— the training will be focused on the real-world instrument flying needs of GA pilots, with particular emphasis on practical application of threat and error management;

— the privileges granted will be appropriate to the competencies achieved;

— where appropriate, there will be flexibility in terms of the sequence in which different competencies may be achieved; this will be reflected through having different training modules; and

— despite the focus on GA needs, practical training and examination standards will be similar to those of the ICAO IR, particularly with regard to interaction with other airspace users. It is very important that GA pilots flying under IFR have the required competencies for this.

2.2.1 Training structure

The task force will conduct a training needs analysis to establish the optimum content of the possible individual modules of training. This will include identification of all competencies in existing instrument qualifications and determination of how they could be logically ordered into a flexible and modular system.
The details of this analysis will be included in the NPA associated with the task, however, the broad outline will likely be based on the following concept:

— Core instrument flying module — this module must be completed first and lays the foundation for instrument flying competencies. It does not have standalone privileges, although a course completion certificate will be issued after an acceptable standard has been reached; and

— Applied instrument flying modules — they will be established on the basis of the training needs analysis and will build on the competencies gained in the core instrument flying module. The applicant may choose to undertake all of the available applied instrument flying modules, or only some of them, depending on their particular needs and ambitions. The content and sequence of the training modules will be appropriate to the particular privileges sought by the applicant — depending on the modules completed and competencies gained, the applicant may be awarded different sets of privileges.

The applied instrument flying modules will contain departure, holding, approaches, and en route navigational procedures, including performance-based navigation (PBN).

Although it may be proved possible to remove any formal 'hours-based' training requirements in favour of fully competency-based approach, it is unlikely that a sufficient breadth of training experience will be achieved in less than 30 hours for the full privileges of the rating. However, intermediate levels of privileges could be obtained in fewer than that.

2.2.2 Theoretical knowledge

To ensure a greater level of proportionality than is the case for the current competency-based Instrument Rating (CB IR) theoretical knowledge requirements, it is proposed that each IFR training module is supported by an exam incorporating the relevant learning objectives. The exams should be administered under the same provisions as are applicable to private pilot licence (PPL) exams. The questions could be taken from the European Question Bank (EQB), but with translations into national languages being permitted.

Learning objectives will not duplicate topics already examined at PPL level, but will focus only on objectives appropriate for the safe operation of GA aircraft under IFR. The scope and depth of knowledge should be broadly similar to that required for the FAA IR.

2.2.3 Privileges

The concept built by the task force to date involves the applicant gaining the relevant privileges as the modules are completed.

For example, completion of the core instrument flying module and the relevant applied instrument flying module could give the applicant the privileges to fly approach procedures. Alternatively, if only the core instrument flying module and modules covering en route flying have been completed, en route flight under IFR would be permitted — similar to the current en route IR.

This flexibility would appeal to a GA pilot who, perhaps for reasons of either time or financial constraints, would otherwise be unable or unwilling to take a complete instrument flight training course as a single event.
On completion of all the training modules, the final privileges would be similar to those of the IR, but limited in the following manner:

— limited to single-pilot aeroplanes for which class ratings are required, excluding those classified as high-performance or for which operational suitability data (OSD) has determined that additional training is required; and

— the minima for instrument procedures would be higher, for example 200 ft above published approach minima, down to an absolute minimum height of 500 ft. A 600 ft cloud base and visibility of at least 1500 m would be required for arrival and departure, to ensure that a visual 'bad weather' circuit will always remain a viable option.

Revalidation could be achieved by alternating between an annual training flight with an instructor holding instrument training privileges and a proficiency check with an examiner.

2.2.4 Relationship with ICAO IR

There should be a proportionate upgrade path to the full IR privileges via the CB IR route. Applicants for the CB IR, who hold the proposed ‘Basic IR’, could be credited for their previous instrument training and experience in accordance with the existing CB IR provisions — for example, if 10 hours at an approved training organisation (ATO) have been conducted during training for the ‘Basic IR’, this would be credited for the purposes of the CB IR.

Appropriate credit for ‘Basic IR’ holders towards the theoretical knowledge requirements of the CB IR should also be carefully considered. For example, credit could be given in a similar manner to that agreed for the conversion of the third country IR holders, as an oral assessment conducted by the examiner during the skill test.

2.3 Certification of aircraft and equipment

It is important that certification requirements, both for the entire aircraft and installed equipment, are proportionate for the intended operation. The demand for increased instrument flying qualifications will not substantially increase if the availability of aircraft appropriately certified and equipped for flight under IFR in the relevant airspace does not exist. To this end, the following issues should be taken into account:

— proportionate requirements for the initial certification of light aircraft for flight under IFR; and

— consistent and proportionate requirements for matching the reasonable capabilities of avionics and their associated installations with appropriate performance-based navigation (PBN) airspace specification requirements.

2.4 Aerodromes, ATM routes and procedures

In order for GA pilots to take practical advantage of the privilege to fly under IFR, the routes between aerodromes and the associated approach and departure procedures must be accessible and address the performance profile of the relevant aircraft.

Specifically, the following issues should be addressed:

— Proportionate requirements for instrument approach procedures (IAPs) should facilitate their increased development at aerodromes serving primarily GA traffic. For example, IAPs to non-instrument designated runways at aerodromes currently lacking instrument flight procedures.
This should be supported by more proportionate requirements for air traffic service (ATS) provision and metrological reporting equipment;

— The design of the ATS route network does not always accommodate the needs of GA. For example, crossing terminal areas often requires altitudes in excess of the capabilities of typical GA aircraft, and in some parts of Europe, minimum en route altitudes do not accommodate typical GA levels, even if they are not actually limited by terrain. The free route concept should be considered for lower level airspace;

— Simple access to and from the ATS system from outside of it should be enabled, particularly if GA pilots exercising privileges that do not include the ability to follow published departure or arrival procedures are to be accommodated — for example under the en route IR or a partially completed ‘Basic IR’; and

— IFR flight planning for GA pilots should be simple and straightforward. The route planned and that actually flown should normally be similar, with pilots being able to submit flight plans reflecting the simple ATS routing that is often experienced in flight. This would be in contrast to the convoluted routes often required for acceptance by the European flight planning system.

2.5 Aeronautical information and data

IFR flight requires supporting aeronautical data in order to be conducted safely. Navigational data, including departure, arrival and approach procedures, are key.

In recent years, more sophisticated software has become available for ‘electronic flight bags’ (EFBs), which has the potential to revolutionise the cost and simplicity of IFR operation. However, such applications still rely on the cost-effective availability of the source data. The European AIS database (EAD) goes some way towards meeting this need, but it falls well short in the coverage of data available, and in the technical means by which it is delivered. States do not appear to share data in interoperable formats that can be used by applications aimed at GA.

Further, the Aeronautical Data Quality initiatives (ADQ-1 and ADQ-2), though well intended, have the potential, if implemented disproportionately and without regard to the overall objective of improving safety, to stifle innovation in GA IFR tools and techniques.

A cost-effective (preferably public-domain), central database of all the aeronautical information required for GA IFR flight (including flight procedures), accessible through modern IT architectures and technologies would be a desirable outcome to address this issue.

In addition to this, the in-flight availability of information, particularly relating to weather, is an important safety enhancement for flight under IFR, and should be facilitated as much as possible.

3. Impacts and benefits

3.1 GA community and industry

Against the baseline of ‘do nothing’, developing solutions to the issues identified has the potential to increase the number of GA pilots that hold an instrument rating qualification, and the overall level of GA IFR activity. This will be positive for GA both in terms of safety and economic activity. Implementing the ‘Basic IR’ proposals in particular will be a major improvement for the GA community.
For the other issues described, as the interfaces with other rulemaking activity are identified, it will become clearer which are most beneficial to focus on, given the available time and resources.

The main beneficiaries of improved access to GA IFR flying will be GA pilots and organisations involved in their training, such as flying schools, clubs, and instructors. Organisations supporting the maintenance and operation of GA aircraft certified for IFR flight would also benefit, as would organisations involved in the manufacture of IFR certified aircraft and the production of components and equipment for IFR flight.

Specifically, increasing GA IFR flight may also increase the overall level of GA activity, because it is less weather-dependent than flight restricted to VFR.

3.2 Aerodromes and ATM

GA aerodromes would benefit from the increase in activity. Some stakeholders have identified possible ATM issues associated with increased GA IFR traffic, such as impacts on capacity of terminal airspace and the difficulty of integrating traffic of a different performance profile to that of commercial air transport aircraft.

While these are important considerations, even in the most positive outcome, the overall increase in GA IFR activity is likely to be quite small when compared to the total volume of commercial air transport (CAT) activity. It is also anticipated that any such increase would be primarily at aerodromes that already serve mostly GA traffic, and that have limited CAT operations.

Increasing the amount of IFR traffic, that would otherwise have flown under VFR, would generally increase the predictability of the overall ATM system, allowing greater ATC knowledge of the intentions and likely trajectory of GA of traffic.

3.3 Safety impact

The intention is to provide for training and an IFR system that meets an acceptable level of safety for GA operations, while protecting the safety of CAT and other airspace users. To that end, competencies that relate to operating safely in environments with other airspace users in a safe and efficient manner will be emphasised.

Overall, this is anticipated to have a positive effect on safety. Increasing the number of GA pilots undertaking instrument flight training will improve the skills of GA pilots and make them less vulnerable to risks associated with flight in poor weather conditions, such as continued VFR flight into IMC. The majority of IFR flight in fact takes place in Visual meteorological conditions (VMC) — often allowing access to better en route weather than would be possible under VFR minima, for example by flying above the weather. Flight under IFR also brings benefits such as greater integration with the ATM system and reduction in the risk of mid-air collisions. In addition to this, bringing more GA pilots back into the training environment will boost their overall skill level and flying discipline.

Nonetheless, the risk picture associated with IFR flight is sometimes different to that of VFR flight, and presents a different set of risks to be managed by the pilot. For example, a flight that would not be possible under VFR due to weather, may be possible under IFR with careful evaluation of the associated risks. It is therefore important that training focuses on the relevant risk management considerations. Overall, however, there are often less operational ‘unknowns’ when flying under IFR, so risks can be easier to predict and manage.
3.4 **Environmental impact**

Although these changes may lead to an increase in IFR flights, the environmental impact will be negligible. For example, the total activity by CAT in Europe is approximately one billion flight hours per year and rising. This is juxtaposed with a total of about four million flight hours by GA aeroplanes per year. There may, in fact, be some minor environmental benefits, for example aircraft under IFR tend to fly higher and therefore create less noise for those on the ground. However, this would need to be considered against a possible minor increase in noise from flights that would otherwise not take place due to poor weather. Nonetheless, these considerations are very minor indeed.

3.5 **Social impact**

GA flying is generally a recreational activity that individuals conduct for enjoyment. Flying clubs and schools are places of social interaction, and flight training is an activity that involves learning new skills and obtaining proficiency in a complex activity. It could, therefore, be considered to be of positive social impact. It also encourages travel and the free movement of people.

3.6 **Economic impact**

Overall, this will be of positive economic benefit, increasing GA activity and helping organisations involved in supporting it.

3.7 **Impact on regulatory coordination and harmonisation**

The relevant amendments to the Aircrew Regulation will have to be integrated into the existing and evolving structure, as appropriate. The task force has a mandate to consider and propose how this is achieved. While the proposed GA-adapted instrument rating will not be strictly follow the ICAO standards, the proposal contains specific additional risk mitigations, such as increasing minima and special emphasis and particular GA risks (single engine, icing, etc.), allowing an equal level of safety.

4. **Conclusion**

One of the key activities of the Agency’s GA road map is to review the applicable safety regulations in the various technical fields to provide GA pilots with easier access to IFR flight.

This paper outlines the proposed ‘Basic IR’, which will constitute a considerably more accessible qualification for GA pilots to access IFR flight. It will be modular and competency-based. Combined with improvement of the other identified issues, there is the potential here for a significant enhancement in the safety and scope of GA activity.

The task force will continue to develop the structure of the GA-adapted instrument rating qualification with a view to publish an NPA in 2016/Q2. Rulemaking activity and associated interfaces must also be identified to address the other issues raised in the paper.