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COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Accompanying document to the

proposal for a Regulation of the European Parliament and the Council

on occurrence reporting in civil aviation

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ANNEX 1: Summary of the questionnaire sent to EU Member States

A questionnaire has been transmitted to all 27 EU Member States through a letter from DG MOVE Director General Mr Ruete on 7 April 2011. 26 Member States completed the questionnaire and sent their answers to the Commission. One Member State (Slovakia) did not reply. This document summarizes the position of the 26 Member States which replied to the questionnaire.

It has to be taken into account that this paper may not reflect the real situation in EU Member States but is an accurate summary of the written replies by the Member States to the questionnaire sent to them. Some on-site visits have been also performed by the European Commission to confront with the reality and learn about best practices in few EU Member States (France, United Kingdom and Spain). The summary of these visits is not included in this paper but has been taken into account when drafting the Impact Assessment.

1. EU LEGISLATION ON OCCURRENCE REPORTING IN GENERAL

(a) What are the main problems the authorities of your Member State, or operators under the regulatory responsibility of those authorities, encounter in day to day application of the EU legislation on occurrence reporting? Which elements do you think a revision should look at?

Three Member States stated they did not encountered major problems with the application of the legislation on occurrence reporting (Directive 2003/42 and its implementing regulations).

Regarding the issues expressed by the other 23 Member States, they can be categorised as following:

- Lack of personal dedicated to occurrence reporting: six Member States expressed their difficulty to carry out the tasks defined in the legislation due to a lack of sufficient personal.

- Legal nature of the legislative act: the implementation of the Directive into national laws has created differences in its application. Two Member States are suggesting replacing the Directive by a Regulation to ensure a consistent application of the provisions on occurrence reporting.

- Inconsistence with reporting obligations resulting from other EU rules: six Member States stated that the existence of other occurrence reporting obligation in different pieces of legislation (i.e.: Regulation 1702/2003, Regulation 2042/2003, Regulation 859/2008 "EU-OPS" and Regulation 2096/2005) creates confusion. Reporting obligations are not harmonized in terms of notification procedures, delays or addressees, and if the Directive 2003/42 is focusing on reporting by individuals, the other acts are more focusing on reporting obligations by operators. These Member States would like the Commission to harmonise the various reporting obligations in the revision of the Directive or at least regroup them in a single document.

- Scope of the Directive: several Member States found an insufficient clarity on what kind of occurrences should be reported. Two Member States would like to enlarge the scope of occurrences to be mandatory reported (in some Member States all occurrences are mandatory reported) while two other Member States would like to reduce it.

- Insufficient clarity on how to report occurrences and low quality of data: eight Member States expressed their concern with these issues and the lack of harmonisation in the reporting process. They are suggesting that the revision should include a standardisation of occurrence reporting systems and of reporting forms. The establishment of an obligation to report under ECCAIRS format is also proposed by two Member States. Four Member States recommend the Commission to requesting a minimum set of data to be mandatory contained in occurrence reports.

- Just culture: it is the issue mentioned most frequently by Member States. Ensuring the appropriate protection of safety information and of reporters is necessary to reach a good reporting level. The situation is quite diverse between the Member States and some of them stated that their reporting culture is low because individuals are feared to report and to be prosecuted by justice or blamed by their hierarchy. In some cases the just culture is either partially applied or not applied at all by the judicial system because the competent legal authorities are not in general familiar with this notion. Some Member States also expressed that they encounter problem because "gross negligence" is not explicitly defined in the Directive. Several Member States would like the protection of information still given a high priority and ensure that similar just culture level is present in all Member States. A Member State also suggested that "Just culture" should be explicitly defined in the revision of the legislation.

- The legislation does not take into account the existence of EASA: two Member States noticed this issue and stated that roles are not clearly defined, including the place of EASA within the system.

- Lack of provisions on analysis and safety actions: some Member States stated that the current legislation only regulates data collection and storage and does not explain how to use the collected data for safety purposes. Member States are suggesting that the new legislation should include provisions on the analysis of occurrences and develop processes to achieve safety improvement. For one Member State the legislation could also address the effective monitoring of safety performance, the setting of safety targets and the establishment of safety action plans to address safety deficiencies. Some Member States would like the legislation to reflect better the Safety Management System (SMS) philosophy, in taking into account the role of the operator and in addressing analysis and implementation levels.

- Absence of severity risk classification: several Member States suggested that the new legislation should include such a common scheme at European level.

- Reporting of occurrences where a foreign operator is involved: two Member States reported that they were not able to correctly oversee the safety of air transport operated in their airspace as they could not collect occurrences from operators which are operating under their territory but registered in another Member State. A Member State is suggesting establishing specific contact points in every national authority responsible for occurrence reporting to deal with occurrence information between

Member States. Grant an access to all information contained into the ECR could also address this issue.

(b) How many persons are working on occurrence reporting in your Member State, in the organisations referred to in Article 5 of Directive 2003/42/EC? How many of those work on data analysis and quality of the data?

It is difficult to establish an accurate average of the number of individuals working on occurrence reporting in the European Union because in most of the Member States if not all, some persons are only working part time on occurrence reporting tasks (collection, coding, quality check, analysis etc.). Calculate what the equivalent could be in terms of full time occupation for each Member State or estimate a European average would therefore be hazardous and not give a precise picture of the current situation. In addition, due to budget constraints, many Member States are understaffed and their situation does not reflect the number of employees necessary to comply with the obligations imposed by EU legislation. Two Member States admitted that due to lack of personnel no one in their administration was working on data analysis: data are only collected and stored.

What can be determined from the Member States replies to the questionnaire is that in many Member States there are individuals working on occurrence reporting both in the Civil Aviation Authority (CAA) and in the Safety Investigation Authority (SIA). In some Member States these tasks are only performed by either the CAA or the SIA. In one Member State, occurrence reporting tasks are performed within an agency which is independent from the CAA but chaired by the DGAC Director. The number of individuals directly working on occurrence reporting in the Member States (part-time or full-time) goes from one to 24.

(c) Could you please describe the process in your Member State, including the responsibilities of organisations and of the competent authorities, concerning the evaluation and analysis of information on civil aviation occurrences?

According to their replies to the questionnaire, Member States can be divided in three different categories regarding the process established nationally for evaluating and analysing occurrences data collected in application of Directive 2003/42:

Member States relying only on analysis done at operators' level: this is the situation in two Member States where systems are mainly relying on the work done at operators' level and action taken at the authority level is limited. Operators collect occurrences within their entity, analyse issues reported and correct the safety deficiencies where relevant. At national level, some analysis tasks are performed through regular meetings and actions can be taken. These Member States also publish trends and analysis results.

Member States with mature or almost mature system: 8 Member States are in this category. They do not all have the same level of maturity but each of them have established a system for analysing data occurrences and take safety actions to correct deficiencies when it is necessary. Four of these Member States seems to have established a mature/almost mature system which contains all or part of the following elements: mechanisms for collecting, assessing and storing occurrences; quality checks tools and procedures; safety warnings for occurrences which require

immediate actions; meetings on regular basis for reviewing and analysing occurrences and if necessary transmission to operational department responsible for further analysis within their scope; set up of specify study groups; identification of main risk area; development of safety indicators; set up of a strategic action plan or of safety measures; oversight of the implementation of safety actions; publication and circulation of trends, statistics, occurrences summary etc; input to the State Safety Program.

(d) Do you believe that Regulation (EC) No 1330/2007 on dissemination of information on civil aviation occurrences has had a positive impact on aviation safety in your Member State? Please comment.

Member States seem not to be very familiar with the mechanisms established in Regulation 1330/2007 on dissemination of information as on the 26 replies to the questionnaire, 15 replies are totally away from the point.

Regarding the 11 Member States which have actually replied to the question, six Member States never received a request in application of the Regulation, and the five others only received a very low number of requests. Member States results clearly show that Regulation 1330/2007 is very rarely used and not even known in many Member States. For one Member State the Regulation has had a positive impact on safety because it helped the national authority to improve just culture and confidentiality by defining the means and limits for dissemination of information on civil aviation occurrences. For another Member State, its effect has been positive because it has standardised the whole system of disseminating information on occurrences within the EU. A Member State stated that the Regulation 1330/2007 was not fulfilling its initial expectations notably due to the very limited number of requests received. It suggested that the de-identification of occurrences reports (narratives not accessible) make them quite useless from a safety perspective and that could explain the lack of interest in this mechanism.

(e) In what way could EASA best contribute to the improvement of air safety through its involvement in occurrence reporting at the EU level?

Apart from one Member State which would not like to see EASA playing a key role in occurrence reporting and another one which has no suggestion to formulate on this issue, all 24 other Member States stated that the Agency should be part of the occurrence reporting system and thus contribute to the improvement of air safety in a pro-active system.

According to Member States, EASA should perform analysis of the ECR data and use this information notably for developing safety trends. This could allow the identification of major risks at the European level. They also think that EASA could coordinate the work done at national level regarding occurrence analysis. Some Member States suggested that the Network of Analysts which has been created recently within EASA could be an appropriate instrument for this coordination role. It could allow Member States to exchange experiences on occurrences analysis, facilitate their cooperation and monitor the overall safety in Europe. Several Member States also would like EASA to give training and develop guidance on best practices for data exploitation.

Few Member States noticed that the current limited access of EASA to data contained in the ECR is an important curb to the possibility for EASA to play any substantial role in occurrence reporting. If EASA would be given any task in this area, these Member States suggested that the Agency should then have access without restrictions to occurrences data stored in the ECR.

2. EUROPEAN CENTRAL REPOSITORY (ECR) AND EXCHANGE OF INFORMATION

(a) What are, in your view, the strong and weak points of the ECR? Does the ECR help you meet your mandatory obligations? How could the quality of the data in the ECR be improved?

For the majority of the Member States, ECR strongest point is the centralisation in one single database of a huge amount of safety information through the integration of the occurrences collected at national level. Member States stated that the potential benefit of this data is important for safety purpose and that it could provide increased protection to citizens. ECR is seen as a potential very good base for analysis which could lead to substantiated analysis results and actions. But Member States opinion is that ECR cannot be used as it should be mainly because of two factors: the lack of access to occurrences narratives which prevent the possibility of an in-depth data analysis and the lack of data quality in the Repository.

For Member States, the non-access to occurrences narrative (notably due to EU legislation which imposes rules on confidentiality and de-identification) means not only that it dramatically reduces the usefulness of the ECR for meaningful safety purposes but also that the quality of event coding cannot be checked. Moreover, many Member States are pointing out the low quality of the data integrated into the ECR. They said it is notably due to a lack of harmonisation of coding standards between the Member States.

To the last question related to the ways of improving data quality, Member States suggested the following ways of actions:

- harmonise event coding and standardise the occurrence reporting process,
- impose some mandatory data fields to be filled when the occurrence is reported and develop some quality rules to indicate how they should be filled,
- impose the use of the ECCAIRS software to occurrence originators,
- give an access to occurrences narratives and impose on Member States to check that narratives do not contain information such as the names of individuals or operator name to ensure protection of the reporter,
- carry out promotion and sensitisation actions to raise awareness of operators on occurrence reporting,
- organise trainings both at EU and national level,
- develop quality check tools,

- establish an EU common risk severity classification scheme.

(b) Do you use the ECR data? If yes for what purposes?

6 Member States stated that they are using ECR data; 8 used it occasionally and 12 Member States never used it.

The fact that Member States never used ECR data or only on rare occasion is notably due to their lack of access to pertinent data (mainly narrative) and to the fact that the limited information to which they can have access within the ECR cannot be exploited for safety purposes. Some Member States used ECR data in case of accident and serious incident investigation, to find out if an investigation has been done in another Member States in similar cases. It is used also in some specific to determine trends (e.g. laser pointer attacks, volcanic activity reports) and to check the reporting culture.

(c) Are there any restriction or special conditions that you consider necessary to give other Member States and EASA access to all information on civil aviation occurrences that you currently collect?

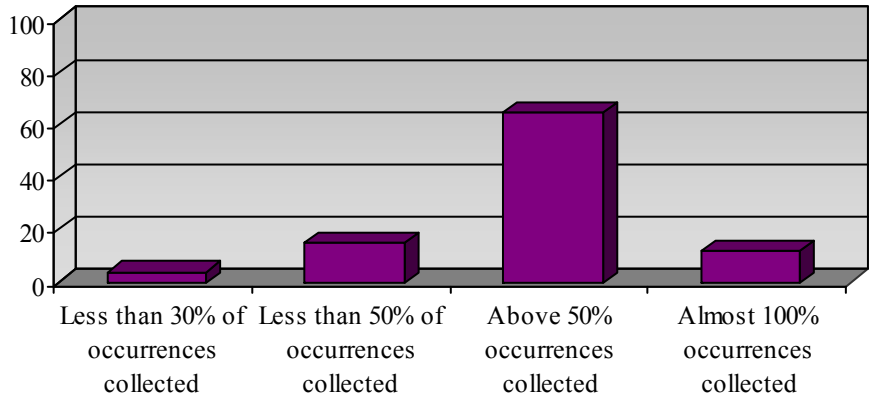
For almost all Member States, the conditions described in the current legislation are sufficient and no supplementary restriction should apply. However the protection given by the legislation is not understood in the same way in all Member States.

For some Member States (4), it means dis-identify information related to the reporter of the occurrence and they consider that it would be sufficient restriction to give EASA and all Member States access to the ECR. For other Member States (6), the de-identification should also cover information related to the operator. Indeed they are worried about the fact that this information could lead for example EASA to increase the number of inspections against an operator identified as unsafe or less safe. According to them, this could push operator to under-report and thus would have a negative effect in terms of safety. And 15 Member States state that no specific restriction would be necessary or that the current situation is adequate without detailing their understanding of the current legislation. Finally many Member States are underlining that data contained in the ECR should only be used for safety purposes only. A Member State is suggesting that a user's charter should be signed.

(d) Please give an assessment of the amount of 'reportable occurrences' that the mandatory occurrence reporting scheme of your Member State currently captures? □ almost 100% □ above 50% □ less than 50% □ less than 30%

The answers given by the 26 Member States which replied to the questionnaire can be classified as following: percentage cannot be assessed: 1 Member State (4%); less than 30%: 1 Member State (4%); less than 50%: 4 Member States (15%); above 50%: 17 Member States (65%) and almost 100%: 3 Member States (12%).

The following chart illustrates Member States' assessment of occurrences collected through MORS in comparison with the total volume of reportable occurrences.



(e) Do you consider that the occurrence information currently required to be collected by Member States under Directive 2003/42/EC is adequate?

18 Member States answered positively to this question, most of them without giving explanations to their reply. However it appears from the more detailed answers that Member States did not all have the same understanding of this question. It is thus difficult to draft any pertinent conclusion from Member States replies to this point.

Two Member States state that the list of occurrences which should be mandatory reported is too large and that it may be better to get less occurrence reports but with better quality. At the same time, one of these Member States is highlighting that some occurrences are not captured in application of Directive 2003/42 (incident from maintenance organisation outside EU operating on EU registered aircraft). Some Member States suggest that occurrence collection according to the Directive could be improved notably with guidance, including criteria to determine if an event should be reportable. For one Member State, Directive 2003/42 is adequate because who should report and what should be reported is well defined in the legislation.

(f) In your opinion, what would be the benefits of the introduction of a formal standardisation process for occurrence reporting at the EU level?

According to 19 Member States out of 26, the introduction of a formal standardisation process would bring important benefits notably in improving data quality and enabling analysis at the EU level. It would also be positive in terms of workload reduction for the authorities which collect, process and store the data. Some Member States also recognised that it would help in identify duplication and improve the quality and the usefulness of the ECR. Some Member States highlighted that standardisation will be a very difficult task to implement and warned against a too detailed or too bureaucratic standardisation process which could cause some people to skip reporting and would require operators to invest financially to adapt their scheme towards a more standardised one.

(g) In your view, what should be the minimum amount of information that each occurrence report (or type of occurrence reports) should contain?

Only 10 Member States answered to this question in enumerating a list of data fields which should be mandatory for them. The 16 other Member States answered more vaguely in stating that standardisation on this matter is positive but that it will be difficult for them to determine which precise data fields should be mandatory.

According to them this is notably due to the fact that it depends of the nature of the event, for example if an aircraft is involved in the occurrence certain type of data (aircraft related information) should be asked but it will not be always the case. Some Member States answered that any data which could help to identify the causes of the occurrence should be transmitted without specifying which ones.

Regarding the 10 Member States which gave a precise list, mandatory data fields suggested the most often can be classified as following:

- Initial information on the occurrence: date (10 Member States); location (10 Member States); UTC Time (8 Member States); information about occurrence category (accident, serious incident or occurrence- 5 Member States); injury to persons (5 Member States); damage to aircraft or to third party (3 Member States).

- Narrative (10 Member States).

- Information relative to the aircraft: aircraft model, registration number, serial number (9 Member States); aircraft category (6 Member States); operator, state of registry (5 Member States).

- Information on the flight: itinerary (departure and arrival – 4 Member States); weather conditions (3 Member States); flight phase (3 Member States); airspace type (3 Member States).

- Reporter's contact details (3 Member States).

(h) In your view, what would be the benefits of a common EU risk severity classification scheme for occurrence reporting?

All Member States supported the proposal to introduce a common EU risk severity classification scheme. According to them, it should notably bring a common standard approach towards Europe. Such a scheme would also lead to the identification of potential risks at EU level and allow the establishment of common safety performance targets. Some Member States advised the Commission to ensure a simple and easy mechanism in order to ensure its applicability and eventually to base such a scheme on the work done in the ATM area (Eurocontrol's Risk Analysis Tool-RAT).

(i) What types of actions are taken by the competent authorities of your Member State in a follow-up of the evaluation/analysis of occurrence reports received?

According to their replies, most of the Member States ' actions are limited to analyse data and disseminate information through internal or public reports including trends. In some Member States outcome of occurrences analysis are also taken into account when oversight/audits tasks are performed. In few Member States (4), the process established goes beyond analysis and information and also includes corrective actions with appropriate follow-up to ensure the effectiveness of actions taken. One Member State would like the new legislation to include clarification on authority's responsibilities in the case where an analysed occurrence has been determined with a high risk of severity.

(j) How do you think the analysis of the ECR data could be best organised at the EU level?

Most of the Member States would like EASA to play a leading role in the analysis of ECR data at EU level. Indeed 16 Member States favour this option and consider EASA would be the most appropriate actor to manage such an analysis. Many Member States specified that this should be done through a network of analysts involving analysts both from EASA and the Member States. Such a structure should notably identify safety concerns, develop action to improve safety where necessary and report to the Commission according to Member States.

Some Member States also referred to the publication of trends at European level based on ECR data. However one Member States underlined that given the low quality of occurrences information contained in the ECR any statistic may not be reliable. Few Member States also mentioned standardisation and improvement of analysis tools as a way of action. One Member State stated that review overall safety performance would be necessary and that a communication strategy should be developed to inform the public about safety information.

(k) How many occurrences do you receive on average annually (we are speaking here of occurrences only, without accidents and serious incidents)?

When dealing with number it is once again very difficult to be truly accurate. Indeed some Member States gave estimation and some others sent a precise number. Moreover, most of the Member States specified the rate for the year 2010 while several States made an average of what they received during the last years. Finally in some cases it is relative to the number of reports received, in some others to the number of occurrences and not specified in many cases.

Taking into account the remarks above, what came out of Member States' replies is that in 2010 around 111,400 occurrences reports were received in 26 Member States, which makes an average of around 4,300 reports by Member States. The level of reports received varies strongly from one State to another and goes from 60 reports a year to 45,000 occurrences.

3. VOLUNTARY OCCURRENCE REPORTING SCHEMES

(a) Is there a voluntary occurrence reporting scheme in your Member State (if, yes, which organisation is tasked with its operation)? If yes, how is the information provided by this scheme is used to improve safety; how the protection of the reporter is ensured in practice, including its de-identification?

Most of the Member States have established a Voluntary Occurrence Reporting Scheme (VORS): 23 States out of 26.

In two Member States the VORS is only dedicated to general aviation. In the others it concerns also commercial air transport and is, in almost all cases, managed identically to the Mandatory Occurrence Reporting Scheme (MORS).This means that voluntary reports are collected by the same authority and that the information is processed and protected the same way than it is in the MORS. In two Member States voluntary reports are through anonymous emails. One Member State specified that

next the VORS established by the authority, a VORS is in place at the operator level. The information on existence or absence of VORS at operator level has not been transmitted by the other Member States. In one Member State, three VORS are established: the one collected by the authority in the same manner than the MORS, a "Whistle blowing" system managed also by the authority and a VORS dedicated to Human Factor type events handled by an independent organisation. Two Member States specified that they established their VORS following an ICAO/USOAP audit as the establishment of VORS is an ICAO Standard. One Member State underlined some inconsistence between ICAO and EU concepts of VORS: according to ICAO VORS are aimed to capture sensitive information while Directive 2003/42 Article 4(2) focuses on voluntary reporting by people not required to report under MORS.

(b) Do you integrate the occurrences from your voluntary occurrence reporting scheme in your mandatory occurrence database?

Out of the 23 Member States which have established a VORS, 14 are integrating the occurrences generated from this scheme into their mandatory occurrence database and 9 do not. Several Member States specified that voluntary reports information is verified and evaluated before it is integrated in the database.

(c) Do you send the occurrences from your voluntary occurrences reporting scheme to the ECR? If yes, how do you ensure that there is no duplication of occurrences reported?

The replies to this question are similar to the previous one: 14 Member States and 9 Member States do not. As usually the same authority manages MORS and VORS in the same database, checking out the absence of duplicate is part of the quality process in many Member States.

4. PROTECTION OF INFORMATION

(a) Please describe what type of measures your Member State has taken to ensure the confidentiality of information on civil aviation occurrence and to ensure that employees who report incidents are not subject to any prejudice by their employers,, in accordance with Article 8 of Directive 2003/42/EC; Do you consider that these measures are sufficient?

Member States stated they have implemented Article 8(2) onto their national legislation and therefore ensured that the identity of the person reporting the occurrence and his personal details are never recorded into the database. In two Member States, confidentiality is reinforced by the disintegration of all original reports (email, fax and so on), only remains occurrences reports within the database without name or personal details from the reporter. In few Member States, persons handling original occurrences reports are required to sign a confidentiality charter.

Regarding Article 8(3) which asks Member States to refrain from instituting proceedings based on occurrences reports except in cases of gross negligence Member States claimed it has been transposed in national law but often without explaining precisely how. One Member State specified that under its national legislation a person can never be prosecuted for reporting under MORS but may be

subject to prosecution for not having reported an occurrence within 72 hours after it occurred.

Article 8(4) imposes on Member States to ensure that employees who report incidents of which they may have knowledge are not subjected to any prejudice by their employer. Member States stated that this provision is also applied under their territory but not always specifying the way it is enforced. In some Member States protection of the employee towards his employer is ensured by Labour law or Aviation Act.

All Member States but one found the measures in place to be sufficient. It is however difficult to assess precisely the level of Just Culture environment based on Member States' replies as they are not enough precise or incomplete.

(b) How many requests a year, on average, do the competent authorities of your Member State receive concerning access to information on civil aviation occurrences?

The situation is quite diverse between Member States in regards to the level of requests for accessing occurrences they receive. Indeed 8 Member States never received such a request while in others the number goes from 1 to more than 500 on average by year. In 2010 around 1.000 requests have been received which gives an average of 40 by Member States if we take into account the 26 Member States which gave the information. However, only 18 Member States received requests and in most of them the average is between one and ten each year.

(c) In how many cases, since the adoption of the Directive, has the information on occurrences been used as evidence in judicial proceedings?

23 out of the 26 Member States which replied to the questionnaire stated that information on occurrence reporting has never been used as evidence in judicial proceeding. One Member State specified that its national legislation does not allow the use of such information in legal proceeding, but only for administrative sanctions in case of gross negligence (which occurred twice). Another Member State underline that according to Just culture principles occurrences reports cannot be used as evidence in absence of obvious negligence or intentional causing of incidents. In three Member States occurrence information has been used as evidence before court. For two of them it has been used in less than 5 instances. The last one specified that such information has been transmitted many times to courts and prosecutor's office but that they do not know precisely how many times.

ANNEX 2: Summary report of the contributions received to the online public consultation on a possible revision of Directive 2003/42/EC on occurrence reporting in civil aviation and its implementing rules

1. INTRODUCTION

The European Commission has organised a public consultation on a possible revision of European legislation on occurrence reporting in civil aviation, which is one of the key initiatives for implementing the Commission Communication on "Setting up a Safety Management System for Europe".

The public consultation was opened on the 24th of June 2011 on "Your Voice in Europe" internet website and closed after 12 weeks on the 15th of September 2011. This public consultation refers to Directive 2003/42/EC on occurrence reporting in civil aviation, Commission Regulation (EC) No 1321/2007 of 12 November 2007 laying down implementing rules for the integration into a central repository of information on civil aviation occurrences and Commission Regulation (EC) No 1330/2007 of 24 September 2007 laying down implementing rules for the dissemination to interested parties of information on civil aviation occurrences.

The aim was to collect the views of relevant stakeholders and the general public to feed an Impact Assessment concerning the possibility of revisions to EU legislation on occurrence reporting. The consultation phase of the Impact Assessment was completed by a questionnaire to Member States and the organisation of a Seminar on the specific issue of Just Culture. The ultimate objective of revising EU legislation would be to improve aviation safety by establishing the context and elements necessary for moving towards an efficient proactive and evidence based aviation safety system. This consultation has allowed the Commission's services to better understand the shortcomings of the current legislation, the position of stakeholders, public authorities and citizens on available options and also to receive suggestions from the mentioned entities.

This report seeks to provide an overview and to present the responses reflecting the major positions of respondents. However, whilst all contributions have been perused and considered, the report does not summarize all the comments received.

2. RESPONDENTS

61 contributions were received by the European Commission further to this public consultation: 13 by public authorities (21.3%), 37 by organisations (60.7%) and 11 by citizens (18%). All respondents agreed to have their views made public in this summary.

The respondents who have classified themselves as citizens, however, do not represent the proportion of society not professionally involved in aviation as 4 of them are pilots and 6 are aviation professionals entrusted with tasks related to aviation safety. Only one of the respondents in this category is not part of the aviation community. This can be explained by the fact that while having direct

impact on citizens' safety the issue of occurrence reporting is rather technical for someone not familiar with aviation safety systems.

Regarding respondents within organisations category, they can be classified as following:

Category of organisation	**Replies**	**% age of category's respondents**
Aerodrome	1	2.7
National unions or associations for aviation professionals	11	29.7
European or international unions or associations for aviation professionals	5	13.5
Airlines	5	13.5
European or international airlines associations	3	8.1
Air Navigation Service Providers	3	8.1
Manufacturers	2	5.4
Manufacturers association	1	2.7
Legal Counsel or firms	2	5.4
Consultants	4	10.8

The vast majority of the respondents is aviation professionals or has at least a minimum knowledge of the subject discussed. They can have divergent points of interest whether they represent regulators, industry or employees but they all had a legitimate interest to reply to the consultation.

3. CONSULTATION

The questionnaire was divided into 30 questions with subtopics as follows:

- Respondent information
- Current functioning of the Directive
- Collection of civil aviation occurrences and protection of reporters
- Completeness and quality of the data
- Analysis of occurrences reported
- Options for revising the legislation
- Additional comments

Some questions requested compulsory replies while for others, the most technical ones, there was no obligation to reply. This aimed to allow citizens' participation in the consultation even if they do not have the technical background to reply to each

single question. There were references to the background documents explaining the context and the objectives sought by the Commission. The comments deviating from the consultation subject have not been taken up in this note.

The opinions presented in this note do not reflect the Commission's official position.

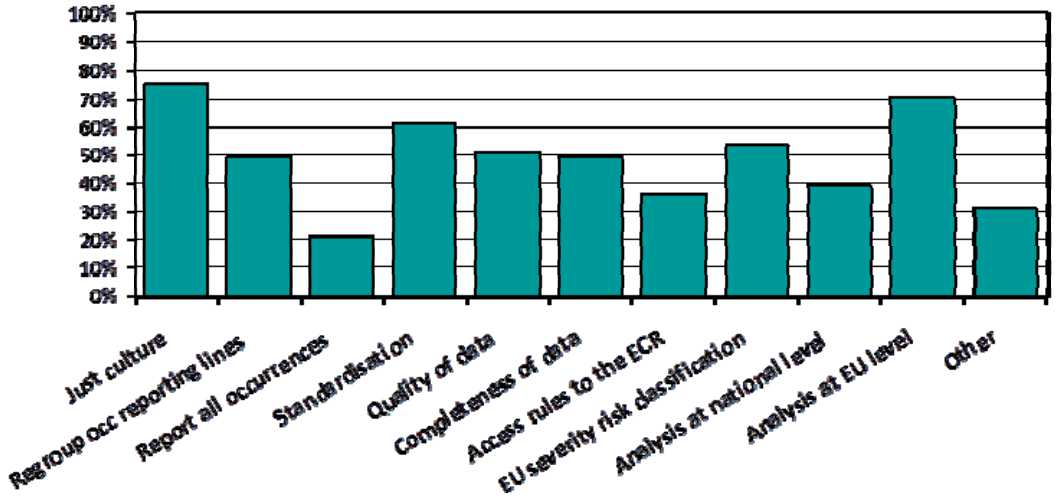
4. PRESENTATIONS OF RESPONSES

4.1. Current functioning of the Directive

↳ The first part of this section focuses on the respondents' assessment of the current European legislation and their opinion on the issues which should be looked at during the revision process.

Most of the respondents are of the opinion that the legislation is incorrectly and ineffectively implemented by most of the Member States and suffers from a number of shortcomings which affect its potential benefit in terms of aviation safety. Some of them also blame the lack of concrete results and of true evidence based approach. They state that the European legislation on occurrence reporting is not working as it was expected. This position is not always shared by public authorities but is widely expressed by stakeholders and citizens. It can be observed that legislation shortcomings identified by respondents broadly correspond with the list of suggested issues which should be addressed by the review.

The figure below illustrates respondents' assessments of the issues that the revision should look at (the possibility was given to choose more than one issue).



It appears that the issues most frequently mentioned are "Just Culture"[1] and "Analysis of occurrences at EU level" (both 70.5%). The issues related to standardisation of data entry process (60.7%), data quality (50.8%) and completeness

[1] Reference to the definition of Just Culture as provided in Regulation (EC) 691/2010 was included in the public consultation: *"Just culture "means a culture in which front line operators or others are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training, but where gross negligence, willful violations and destructive acts are not tolerated.*

(49.2%) are also often pointed out along with the establishment of a European risk classification scheme (54.1%). Regrouping all occurrences reporting lines in a single EU legislation (49.2%) is also an important issue for the respondents.

On the Just culture issue, most of the respondents states that, while the Directive provides some provisions to protect the information and the occurrence reporter, these rules are not correctly applied by Member States or industry. According to their opinion, individuals are afraid to report mistakes as they fear blame or even prosecution. Some of the respondents support their position by giving examples of situation where individuals have been fired following a report they made. This opinion is almost unanimously shared by aviation professionals (pilots, air traffic controllers, technicians) but is also supported by many respondents representing the industry.

Respondents also regret the lack of confidentiality of the data reported and the low level of protection from the judicial authorities. Respondents claim that the Directive provisions regarding the protection of information should be reviewed and notably include elements agreed at international level such as ICAO Annex 13 and its Attachment E in order to create a "no blame" environment to encourage individuals to report safety related deficiencies or mistakes.

Respondents underline that the current legislation is incomplete as it only contains provisions on the collection, storage and dissemination of occurrences but does not explain how safety improvement should be made based on the data collected. It does not contain obligations to analyse and use data collected and therefore is unable to achieve the safety improvement goal. Respondents believe that the revision should go further and introduce a general framework for reporting, collecting, validating, assessing, disseminating, analysing occurrences, taking safety actions and ensuring their follow up to monitor improvements to safety.

The poor data quality is also frequently mentioned and is notably caused, according to respondents, by a lack of standardisation and by the wide variety of data quality between MS. They underline the vital importance of getting reliable data to be able to establish correct safety indicators. They regret the absence of a standard for the content, format or quality of data reported and consider that occurrences data as incomplete, unreliable and unusable. The bad quality of data encoded in national databases subsequently brings about the bad quality of data included in the European Central Repository (ECR - which regroups data contained in all EU MS national databases) and therefore gives a distorted picture of the safety situation. This issue of data quality is also commonly mentioned by public authorities, and many organisations also refer to this problem.

The absence of an obligation to assess occurrence risk level and of a tool allowing this assessment is often evoked by the contributors to the consultation and is considered as a limit to any efficient analysis both at national and European level.

Some respondents consider that the list of occurrences to be reported is incomplete. Suggestions are made to add an obligation to report occurrences related "fatigue" and "contaminated air". Some other respondents, mostly from the air traffic management sector, would like the legislation to impose the reporting of all safety relevant occurrences and also to include safety occurrences detected by automatic tools.

Certain respondents, in particular industry employees, underline that service providers (airlines, ANSP, manufacturer etc…) do not transmit all occurrences collected to the public authorities.

Respondents regret the presence of inconsistent occurrence reporting obligations in several European legislative acts outside of the Directive (mainly EU rules related to EASA competencies) and suggest regrouping them in a single legislation.

Some respondents deplore the lack of data exchange between MS and the absence of full access to the ECR. This creates an incomplete system of safety oversight in some Member States as they only have knowledge of occurrences involving operators registered in their territory but not the ones occurring in their airspace but involving airlines registered in another MS.

In addition to the issues already identified by the Commission and presented above, respondents also raise a number of shortcomings and elements which should, to their opinion, be addressed in the review.

They refer to the important discrepancies and inconsistencies of interpretation and implementation between Member States in the application of the legislation. Respondents suggest that the directive should be replaced by a regulation in order to ensure a better harmonisation in the application of the legislative provisions.

Some respondents, mainly service providers or their representatives, complain about the lack of feedback towards the reporters and the industry on actions taken following an occurrence report. They suggest granting them access to the European Central Repository.

Several respondents, representing the Air Traffic Management (ATM) community, urge the Commission to ensure consistency between the revision of the Directive which covers all operational areas and the work done in the ATM area, notably regarding the list of occurrences to be collected, the risk assessment scheme and the list of mandatory data fields.

Some respondents observe that the European definition of an "occurrence" (safety relevant incident outside of an accident or a serious incident) is not consistent with the international agreed definition of "safety occurrence" contained in ICAO terminology which refers to any event which is or could be significant in the context of aviation safety (including accident and serious incident).

Several respondents, mostly in the organisation or citizens' category, complain about the lack of resources and of expertise within public authorities entrusted with the occurrence reporting responsibility. They consider that MS staff are not trained enough and are not able to correctly assess the occurrence reports they receive.

Finally, certain respondents consider that the directive is becoming outdated by the introduction of certain ICAO obligations such as the State Safety Programme. They also regret that the legislation does not address the operator level and suggest that it should comply with Safety Management System fundamentals as set up by ICAO. According to them the legislation should address each level of the system: service providers, national authorities, European Union.

↳ The second part of this section requests respondents' opinion on whether collection and analysis of occurrences should play a role in the prevention of aircraft accidents. The reply to this question is widely positive as 95% of the respondents support this approach, while 3.3% do not and 1.7% has no opinion on this point. The consultation also includes a question on whether, in addition to the work done at national level, an analysis of civil aviation occurrences should take place at the EU level. On this issue, the support is almost as large, with 88.5% of positive answers from respondents, 8.2% adverse opinion and 3.3% without opinion.

According to contributors the establishment of an analysis obligation at European level along with the appropriate framework for allowing such a task will notably allow the full picture of the safety situation in Europe to be obtained through a large database of occurrences. This much broader data set will help to identify hazards and key risks as well as safety trends which are sometimes not identified by a single MS. The respondents also consider that it could help to define a European-wide vision of emerging trends and issues and that it could allow a better sharing of information between MS. Several respondents suggest that it could be a support for Member States with insufficient human resources. Finally, a few respondents mention that it should inform the European Aviation Safety Plan.

4.2. Collection of civil aviation occurrences and protection of reporters

↳ Respondents were asked to assess if the scope of occurrences required to be collected according to the Directive 2003/42/EC was adequate or not. A small majority of them consider the scope as pertinent (56.1%) while 40.4% consider it as not appropriate.

↳ The next question was related to the functioning of the Mandatory Occurrence Reporting Scheme (MORS) as established by the Directive. The replies indicated that 66.7% of the respondents consider this system as inefficient, 20% expressed their satisfaction with the current scheme and 13.3% have no opinion on this issue. The respondents explained this assessment of the MORS by a number of issues among which: the absence of standardisation in the data entry process, the lack of clarity on what should be reported, an inadequate protection of reporters and the insufficient implementation of Just Culture principles (issue mentioned the most frequently), the lack of data protection rules, the low quality of data, the under allocation of human resources at MS level, the poor level of competencies of persons encoding occurrences reports, the duplication of occurrences, the difficulty in using reporting forms and finally the absence of any feedback.

↳ Participants in the consultation were asked to evaluate whether all reporting obligations should be regrouped in a unique European legislation or if it should remain as it is currently. The vast majority of respondents favour the first option (76.3%); while 13.6% do not wish to change the situation and 10.2% do not have an opinion on this issue.

↳ On the question of the mandatory reported occurrences scope, around 2/3 of the respondents express their satisfaction with the list established within the Directive (65.5%). The rest supported the mandatory reporting of all safety relevant occurrences (31%) or do not expressed their position (3.4%).

↳ Regarding the issue of Just Culture, a wide majority of respondents affirm that occurrence reporters are not sufficiently protected from blame or repressive action in Europe (73.8%) and that Just Culture principles are not correctly implemented and respected in the EU Member States (71.7%). The opinion is notably shared by almost all the respondents from the organisation and citizens categories but not exclusively.

A few respondents, mostly public authorities, affirm that the situation is satisfactory in some MS but the majority of respondents consider that many aviation professionals do not report occurrences as they fear being prosecuted or fired. They considered it is notably due to the fact that Just Culture is a relatively recent concept and that it is still a growing concept, and far from being implemented in all MS. According to respondents, the situation is very different from one State to another and there is a very disparate approach of to Just Culture concept across the EU. They regret a lack of protection in some MS which has led to the transmission of certain occurrence data to Justice in a few cases. In their opinion, the variety of judicial systems and legislation in European Member States effectively override and challenge the protection from blame or repressive actions. They recognise that some mechanisms have been established but regret that they are ineffective as they have no legal value. Respondents also consider that the absence of a "gross negligence" definition contributes to the current situation as there is no clear line defining when the reporter has to be protected and when he should be blamed. They would also like the definition of "Just Culture" to be included in the revised legislation. Some respondents suggested that Directive Article 8, related to the protection of information, should be strengthened to ensure reporter protection. Most of the respondents assess that without an appropriate implementation of the Just Culture concept and protection from blame and prosecution, the goal of the legislation could not be reached as relevant occurrences will not be collected.

↳ In the last part of this section public consultation contributors were asked for their opinion about the potential establishment of a voluntary occurrence reporting scheme managed at European level in order to collect occurrences not included in the list of events to be mandatory reported. 59% of the respondents support this idea and consider that it will bring an added value in terms of safety while 36.1% are opposed to this proposal. According to some supporters of such a scheme, the European Aviation Safety Agency (EASA) should be entrusted with the responsibility to manage it while some others would prefer an independent body without specifying what this entity should be. Several respondents would support the creation of a European Safety Investigation Authority (or Accident Bureau) to manage the European voluntary occurrence reporting scheme. Finally few respondents would prefer giving this responsibility to the European Commission or to Eurocontrol.

4.3. Completeness and quality of the data

↳ Respondents consider that the quality and completeness of data integrated in national databases as well as in the European Central Repository is insufficient. They believe that formal standardisation would help to address, at least partially, this issue. 80.3% of them support the introduction in European legislation of a minimum content of mandatory information to be contained in an occurrence report.

In addition, only 8.5% of the respondents are opposed to the establishment of mandatory data fields. On defining what mandatory data fields should be included in

the legislation, they suggest it should include basic information such as data, location, narrative, occurrence category and then, depending on whether it involves an aircraft, an aerodrome and so on, more specific information. A few respondents suggested that ICAO ADREP core taxonomy or ESARR2 mandatory data fields could be a good starting point for defining the list at EU level. Some respondents suggested organising training to ensure a better harmonisation and quality of occurrence reports. A few respondents express the view that a single reporting form should be introduced. According to the respondents' opinion, without any standardisation, data could be wrong and therefore trend or statistics based on this data would be invalid.

↳ Regarding the issue of risk classification, the establishment of a common European risk classification scheme is widely supported by the respondents (73.8% in favour, 13.1% against, 13.1 without opinion).

4.4. Analysis of occurrences reported

↳ Most respondents (78%) consider that the analysis of occurrences at European level should be done in collaboration with the Member States. Some of them also would like the industry associated with this work or even a group of aviation experts.

↳ Respondents expressed that, in the European Union, occurrences should be analysed at national level and then at European level to identify European key risks areas. Some of them consider full access to the ECR as a necessary condition to perform any kind of analysis at EU level.

↳ According to a majority of contributors the coordination and the management of the analysis of occurrences at EU level should be given to the European Aviation Safety Agency (in collaboration with the MS and the European Commission for some of them). Several respondents even refer to the recently created group within EASA: the "Network of Analysts" which regroups safety analysts from Member States, the Commission and Eurocontrol. However a certain number of respondents would still prefer the creation of a European Safety Investigation Authority or a similar independent entity to be entrusted with this task. Finally a few contributors believe that this responsibility should be given to the European Commission or to Eurocontrol.

4.5. Options for revising the legislation

In this part of the questionnaire the Commission has presented different policy options for the revision of the legislation and submitted them to a preference choice in the public consultation.

As described in the document, the following hypotheses are envisaged:

- Repeal Directive 2003/42/EC and implementing Regulations (EC) N° 1321/2007 and N° 1330/2007 (option A)

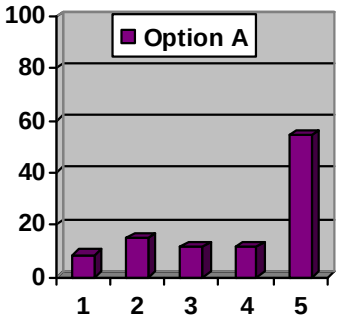
- Maintain current legislation and continue to ensure its proper implementation (option B)

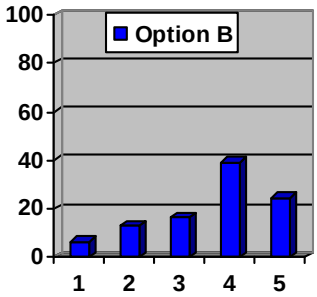
- Provide additional support for the implementation of current legislation (in particular development of additional functionalities to the "ECCAIRS" reporting system, supporting data quality control and analysis, development of additional guidance material, organisation of workshops for the authorities etc.) (option C)

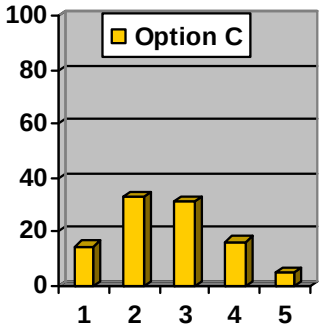
- Launch a substantial revision of the EU legislation on occurrence reporting to address issues such as clarification of the reporting obligations, standardisation of data entry into ECR, more systematic quality assurance processes, revision of the access rules to ECR, the issue of protection and use of sensitive safety information; and establishing a framework and tools for the analysis of occurrences at EU level (option D)

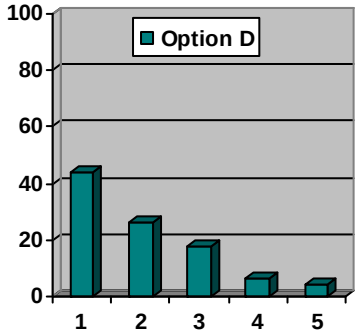
- In addition to option D, create, in an appropriate organisational set-up, a European voluntary occurrence reporting scheme, allowing aviation professionals and organisations to report occurrences directly to an EU-based system on a voluntary basis (option E)

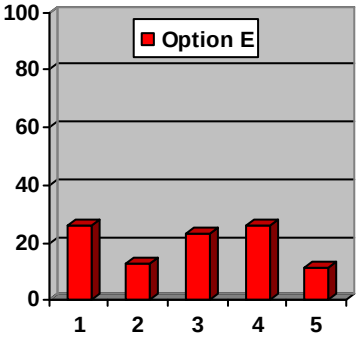
It appears from the replies that option A has been misunderstood by some respondents as they either believe that repealing the legislation means that it will be replaced by a new one, or that this option has to be chosen in coordination with another one (more often D) to ensure that the two legislations will not coexist. As a consequence that option is partly over ranked in comparison with the presumed real intent of the respondents. The Commission would like to clarify the meaning of this option: repealing existing legislation means that this matter is not regulated anymore by European legislation but by national rules alone. Revising the existing legislation at EU level will lead to the repealing of this legislation once the new rules are adopted. The charts below represent, for each option, the percentage of its ranking by respondents. Ranking 1 means it is the favourite option and ranking 5 means it is the least favourite one. For example, the first table should be read as following: 8.2% of the respondents ranked option A as their favourite option, 14.8% in second position, 11.5% in third, 11.5% in fourth and 54.1% of the respondents ranked it at their least favourite option.











It clearly comes out of the respondents ranking that launching a substantial revision of the EU legislation on occurrence reporting (option D) is the preferred option and that the repealing of the existing legislation (option A) is the one with the lowest respondents preference.

Maintaining the current situation (option B) is ranked 4th in terms of favourite options. Regarding option C and E, the opinion of the respondents is not stated as clearly. Indeed 14.8% ranked the option to provide additional support for the implementation of current legislation as their favourite, 32.8 % in second position and 31.1% in third. The option which combines the substantial revision of the legislation with the establishment of a European voluntary occurrence reporting scheme is ranked first by 26.2% of the respondents, second by 13.1%, third by 23%, fourth by 26.2% and fifth by 11.5%.

Respondents notably vouch their choice by the identification of an important number of shortcomings in the current legislation as presented in section 4.1 of this summary. They consider that the European legislation is not efficient enough and that it should be strengthened and completed. Respondents believe that substantial changes are necessary to allow an improvement of aviation safety.

Respondents consider that an effective occurrence reporting is crucial for the establishment of an evidence based safety system inside a comprehensive safety management system in the European Union and its Member States.

ANNEX 3: ENCASIA's opinion concerning the revision of Directive 2003/42/EC

1. INTRODUCTION

On 27 June 2011, the European Commission sent a letter to the ENCASIA Chairman to ask for the Network's opinion on the revision of Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation. This revision process will probably lead to a new Regulation of the European Parliament and of the Council on occurrence reporting.

The Network Members went through the same process as ENCASIA stems from the revision of Directive 94/56/EC on accident investigations. This led to 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. The upcoming revision of Directive 2003/42/EC has been anticipated by Regulation 996 as mentioned in its third recital: "*Reporting, analysis, and dissemination of findings of safety related incidents are fundamentally important to improving air safety. Therefore the Commission should bring forward a proposal to revise Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation before 31 December 2011.*" Directive 2003/42/EC is referred to several times in Regulation 996, especially through Recitals 11 and 12, which deal with the exchange and analysis of safety information. The Regulation has enlarged the role of safety investigation authorities by defining the concept of safety investigations in Article 2(14). It formally deals with proactive data. It is therefore crucial that safety investigators have access to incidents and occurrence databases to encourage safety action and safety recommendations based on all types of occurrence for the prevention of air accidents. Hence, the right balance must be found so that the future Regulation on occurrence reporting will be complementary in the overall European safety scheme.

The ENCASIA opinion will discuss the following topics that are deemed critical in performing its safety mission: 1) Notification of incidents; 2) Incident selection and investigation; 3) Access to databases; 4) National and European environment.

2. NOTIFICATION OF INCIDENTS

Safety investigation authorities are tasked to investigate serious incidents. The guidance to define a serious incident can be summarized in the Appendix of Regulation 996 and in Annex 13, Attachment C, paragraph 2: "*The incidents listed are typical examples of incidents that are likely to be serious incidents. The list is not exhaustive and only serves as guidance to the definition of serious incident*."

This important paragraph provides flexibility to safety investigation authorities to select serious incidents. To carry out such a selection, the safety investigation authorities must be aware of all incidents immediately in order to start an investigation and to preserve key evidence. Article 9 of Regulation 996 already states that: "*Any person involved who has knowledge of the occurrence of an accident or serious incident shall notify without delay the competent safety investigation*

authority of the State of Occurrence thereof." Presently, the notification of incidents is organized at the level of each Member State in line with Articles 4 and 5 of Directive 2003/42/EC. Therefore, the future Regulation on occurrence reporting should ensure that the provisions related to collecting, evaluating, processing and storing occurrences will maintain safety investigation authorities in the loop so that they can start an investigation without delay. It will be necessary to establish a mechanism that will strike a balance between:

- having access to all incidents and
- setting up a selection process at the level of the operators and regulators to avoid data overflow.

It is indeed the prerogative of the safety investigation authority to determine if the incident needs to be investigated or not, in accordance with the Article 5 (4) of Regulation 996 "*Safety investigation authorities may decide to investigate incidents other than referred to in paragraphs 1 and 2 in accordance with the national legislation of the Member States, when they expect to draw safety lessons from them*".

3. INCIDENT SELECTION AND INVESTIGATION

The incident selection process is not an easy one, as it can be influenced by other factors such as resources and workload. Regarding the treatment of incidents, the European Civil Aviation Conference will organize a workshop on the treatment of incidents in May 2012 in Denmark. This workshop will mainly deal with the issues around the handling of incidents, including their selection for investigation and the lessons they held. Its outcome should be very useful for guiding the selection process for ENCASIA Members.

The following paragraphs offer brief and provisional guidance on how incidents could be dealt with by being broken down into three levels:

Level 1: Basic Preliminary evidence shows that the existing safety nets (procedures, systems, etc.) worked as per design. A "basic" incident illustrates successful mitigating actions and provides feedback on previous remedial measures that appeared to be right. A basic investigation can be quickly closed but it is important to store the successful actions in a database in order to have data and some indicators on the resilience of the system. As a matter of fact, the next release of the ECCAIRS database (ECCAIRS 5) will include a new module to code positive factors. This concrete emphasis on what went right should also encourage more reporting.

Level 2: Standard A local investigation can be undertaken by industry when:

- deficiencies are identified whilst applying a given procedure,
- an aviation professional works beyond its field of expertise or its prerogatives.

This type of investigation leads to safety measures that improve the safety management system of an operator. A "standard" incident can be disseminated

locally through a short report and stored into a database so that the effectiveness of the remedial measures can be evaluated.

Level 3: In-depth investigation (serious incidents) If the incident meets the criteria of Regulation 996, then a full investigation should be started by the safety investigation authority as "*the difference between an accident and a serious incident lies only in the result*". We can also say that if the consequences appear to be merely a matter of favorable circumstances, meaning that no safety barriers or mitigations were identified, then the occurrence should be investigated in depth. This loops back with the positive factors that are part of ECCAIRS.

4. ACCESS TO DATABASES

From a technical standpoint, data can be exchanged using the ECCAIRS database. As stated previously, the implementation of release 5 will bring along new modules of high interest for safety investigation authorities such as safety recommendations, positive factors and new features to customize the end-user's interface. In summary, ECCAIRS represents an effective technical solution that covers all types of occurrences and provides increasing flexibility for civil aviation and safety investigation authorities. The recurrent challenge is related to the extensive resources required to implement the new functionalities and to process vast numbers of occurrences in a consistent way with high quality standards.

The various feedback loops at national levels have been organized in accordance with Article 5 of Directive 2003/42/EC that covers the collection and storage of information. It is crucial that the new legislation will ensure easy legal and practical access to all repositories for safety investigation authorities. Access to the safety recommendation database mentioned in Article 18(5) is already included. As an imperative, ENCASIA needs unconditional access to all incidents and occurrences for more effective safety investigations. This also includes access to the central repository established under Commission Regulation (EC) No 1321/2007 of 12 November 2007. Accident and incident reports are more effective if they reference similar cases which may then support safety recommendations. This independent compilation of events also provides more validated data for the risk analysis subsequently performed by regulators. In addition, Regulation 996 (Recital 28; Article 2(15); Article 17(2)) stipulates that safety recommendations can be released after a safety study, thus having a greater evidential basis leading to safety actions.

5. NATIONAL AND EUROPEAN ENVIRONMENT

Regulation 996 already provides a sound environment for independent and effective safety investigations. The revision process that will take place shall strengthen the independence of each national safety investigation authority as well as ENCASIA's independence. The Regulation also contains important provisions on protection of sensitive safety information (Article 14 and 15). The protection of safety information from inappropriate use is essential in ensuring its continued availability, as the use of safety information for other than safety-related purposes may inhibit the future availability of such information, with an adverse effect on safety. ICAO has recently started an ad-hoc task force whose mandate is to enhance guidance on safety information protection. This work will certainly enhance existing ICAO

documentation on the protection of sensitive safety information. This could be of interest for the revision process. For ENCASIA, it is important that the revision process as well as the work carried out by the ICAO multidisciplinary taskforce do not blur or bring doubts on the information that is protected under Regulation 996, especially under Article 14(1). The revision of Directive 2003/42/EC will probably have an effect on the State Safety Programmes (SSPs). An SSP requires the coordination of multiple authorities within a State, to identify safety deficiencies requiring action, to determine mitigation strategies in response to these deficiencies, to implement these strategies and to monitor their implementation and effectiveness. The distribution of those responsibilities, as part of a State Safety Programme, shall maintain the independence of the safety investigation authority with regard to the oversight of NAA functions, as service provider. This shall be the same environment for the European Safety Plan coordinated by EASA.

6. CONCLUSIONS: OPINIONS OF ENCASIA MEMBERS

In Article 2(1) of Directive 2003/42/EC, an occurrence means "*an operational interruption, defect, fault or other irregular circumstance that has or may have influenced flight safety and that has not resulted in an accident or serious incident, hereinafter referred to as 'accident or serious incident', as defined in Article 3(a) and (k) of Directive 94/56/EC*". The ICAO definition encompasses accidents, serious incidents, incidents and all types of reportable events. This revision process should also enhance this definition, which is often confusing when the term "occurrence" is mentioned. It is important to better define the scope of the future Regulation on incidents that also deals with safety so that it is complementary with Regulation 996 and both will be well-understood by the civil aviation industry.

From an editorial standpoint, Regulation 996 refers to Directive 2003/42/EC several times through its recitals and articles. There will also be a practical need to update these provisions when Directive 2003/42/EC will be repealed.

In summary, the key aspects for ENCASIA are:

- Unrestricted and straightforward access to data to enlarge the evidential basis.
- Independence of the safety investigation leading to effective safety actions and safety recommendations.

The revision process should take into account the practical experience gained with Directive 2003/42/EC and should aim at setting up a system that would clarify the various reporting channels while producing feedback to encourage more effective safety reporting.

For the reasons previously mentioned, ENCASIA Members strongly support the revision of Directive 2003/42/EC. A new Regulation on incident reporting will complement Regulation 996, which is already a key pillar of the European civil aviation safety system, and will strengthen this system.

ANNEX 4: Seminar on "Just Culture in the context of Occurrence Reporting schemes"

- Summary of discussions - 19th April 2012, Brussels

The European Commission held a Seminar on the subject of "Just Culture in a context of occurrence reporting schemes" in civil aviation in Brussels on 19th April 2012.

The Seminar was part of the consultation process for the Impact Assessment on the revision of EU legislation on occurrence reporting in civil aviation. It was preceded by a questionnaire sent to Member States and an online public consultation. One of the outcomes of these consultations was that Just Culture was the most frequently mentioned issue and that both stakeholders and Member States expect the Commission to address this issue and improve the current situation in the revised legislation. Therefore the Commission decided to organise a Seminar on Just Culture in order to more closely involve interested parties in the preparation of the legislative proposal and to have an open debate on how this issue could be tackled within the revision.

The Seminar gathered together around hundred participants representing all aviation players, including the following entities: the European Aviation Safety Agency (EASA), Eurocontrol, Civil Aviation Authorities from Member States (MS) and neighbouring countries, Safety Investigation Authorities from MS and neighbouring countries, MS Permanent Representations, Air Navigation Services Providers from Member States, Airports, Engineers associations, Airlines and airlines associations, Pilots and Air Traffic Controllers associations, a major manufacturer, an Air and Space Academy, consultant organisations and an university.

Eckard SEEBOHM, Head of the Aviation safety Unit in the DG MOVE of the European Commission, opened the Seminar by underlining that this initiative and the revision of the EU legislation on occurrence reporting were core elements of the European Aviation Safety system's transition towards a more proactive and evidence based system. He also emphasised the importance of the Seminar for the Commission's preparative work.

Frederik KAMPFE (European Aviation Safety Agency (EASA), Deputy Chief Legal Adviser) presented the "Evolution of Just Culture in occurrence reporting from a legal perspective". He explained how Just Culture principles have been incorporated into different EU legislative texts, notably Regulations No 996/2010 and No 691/2010 where the expression "Just Culture" is explicitly mentioned and defined for the first time. The speaker also explained that, while the provisions ensuring Just Culture principles implementation should be present in legislation, legislation alone could not solve all Just Culture issues. For Just Culture to be fully implemented it should be complemented by initiatives outside of the legislative framework.

Jean-Pol HENROTTE (European Commission, DG MOVE, Single European Sky Unit) made a presentation on "The measurement of Just Culture: a Safety Performance Indicator". He presented the Commission Regulation (EU) No 691/2010 laying down a performance scheme for air navigation services and network function, which is the first legal recognition of the Just Culture concept and definition at EU level. The speaker explained the on-going work for measuring Just

Culture and specified that the legislation did not introduce new requirements for the implementation of Just Culture but only attempted to measure its implementation.

Captain Paul REUTER (European Cockpit Association (ECA) representative) made a presentation on the Just Culture "Perception" by aviation professionals. He began his intervention by explaining that humans and aviation professionals will continue to make errors and that if punishment is beneficial for intentional mistakes it may bring negative effects when applied to unintentional errors or mistakes. The speaker also underlined that the fear of punishment and the consequent low reporting level, could mislead and blind organisations as to their risks. He presented bad examples where reporting led to punishment and consequently decreased the level of reports. Captain REUTER emphasised that Just Culture does not mean immunity and that mistakes should be differentiated from wilful acts. The line between the two is however sometimes difficult to draw with precision and the speaker stated that acceptable and unacceptable behaviours should be defined. Finally he underlined that provisions regarding the relation with judiciary should be clarified in order to offer reporters the appropriate protection.

Captain Giancarlo BUONO (International Air Transport Association (IATA) Assistant Director Safety and Operations for Europe) presented the Industry perspective on Just Culture. He underlined the importance of Just Culture for operators as essential to their Safety Management System and therefore that reporters should be protected. The speaker also stated that protection does not mean immunity and that gross negligence and wilful misconducts should be punished. In addition, he specified that within an SMS environment, an operator should take effective action to mitigate the risk, including, if required, training or re-training of an individual.

Sandra ORUS (French DGAC Legal Affairs Deputy Director) and Fabienne HERLEDAN-REUMOND (French DGAC, Deputy Head of Safety Management Coordination Office) began their presentation by introducing the French occurrence reporting system. It was followed by the presentation of the link between judicial authorities and Just Culture in France. Sandra ORUS specified that if in few cases safety reports have been seized by judicial authorities, they have never been retained at charge in a judicial decision against the reporter. She also explained that in order to raise the awareness of judges to specificities of the aviation world and to promote Just Culture, France has organised exchange sessions between judicial authorities and the CAA which had had a positive impact.

Sean PARKER (Head of Safety Data in United Kingdom Civil Aviation Authority) made a presentation on "Just Culture in UK Civil Aviation" during which he explained how the UK has been able to effectively implement Just Culture principles. To ensure reporters confidence and trust, Just Culture principles had been included in UK legislation and guidance material. In addition the UK CAA has put efforts into publicity and training to complement what could not be achieved through legislation or guidance. Regarding confidentiality, he explained that while the UK CAA receives more requests under the Freedom of Information Act for occurrence reports than for any other information, occurrence reports are currently protected and are exempt from general access to information by citizens.

Captain Régis FUSENIG (Air France, Flight Safety Department) presented the concept of positive safety culture introduced in his company after the accident to

AF447. He explained that all the company, including the higher management levels has committed to ensure Flight Safety. He specified that the ideal of a positive safety culture in order to learn from mistakes and correct deficiencies has been implemented both at individual and corporate levels. He then detailed the processes recently established within his airline in order to achieve this objective.

Job BRUGGEN (Safety Manager at Air Traffic Control the Netherlands) made a dynamic presentation about Just Culture and how this issue has been addressed in aviation in the Netherlands. He presented the "Delta" case in which air traffic controllers had been prosecuted following an incident they had reported and had subsequently been found guilty, but with no sentence imposed. As a consequence of this proceeding the reporting level of ATM occurrences dropped seriously. Following the judgment on the Delta case, a new system had been established within the Netherlands: occurrences which could possibly lead to a prosecution are analysed by a group of persons from both aviation and the judiciary. If this group decide the event may possibly warrant a prosecution, the occurrence in sent to the aviation police who have instructions to not prosecute unless there is evidence of gross negligence or a wilful violation. Since this system has been established no reporter has been prosecuted following an occurrence report. The speaker also mentioned that defining gross negligence in EU legislation may be helpful to draw the appropriate line.

Roderick VAN DAM (Chairman of the Eurocontrol Just Culture Task Force) presented notably the work done by the Just Culture Task Force which gathers together representatives from both aviation and judiciary worlds. He reminded the meeting that the Just Culture concept used errors to improve the system but did not tolerate gross negligence and wilful misconduct. The speaker underlined the difficulty in drawing the line between errors and gross negligence but, contrary to the previous speaker, urged the Commission not to define the term "gross negligence" within the legislation. Roderick VAN DAM emphasised that there are limits to what legislation can do. In that perspective he presented the Model Prosecution Policy developed by the Task Force, inspired by current practices in the Netherlands and the UK, and on which the Commission has been consulted, The Policies should be submitted for endorsement of EUROCONTROL Member States in May 2012. Finally he briefly covered other initiatives and the on-going debate, notably at international level, related to the Just Culture issue.

The Seminar concluded with an open debate focusing on how to improve Safety Culture and how to better implement it through the future EU legislation on occurrence reporting.

It came out of the debate that while occurrences reporters are very unlikely to be prosecuted and convicted on the basis of an occurrence they have reported, the fear that they would be influences the level of reporting. Therefore, and taking into consideration that, according to the Treaties, the European Union has no competence to regulate judicial authorities, this perception by individuals should be addressed in the legislation and beyond in order to ensure a high level of reporting culture. It also came out of the discussions that aviation professionals, the industry and the regulators have all the same understanding of the Just Culture principles i.e. an environment where reporters are not blamed for errors or mistakes they have reported but where gross negligence and wilful misconduct are not tolerated.

Therefore, it shows that all aviation players understand not only the importance of occurrence reporting as an essential element of an efficient safety system, but also that each of them has to respect Just Culture principles in order for the system to be effective.

The conclusions of the Seminar were discussed and adopted and are detailed below:

- Establish and ensure a high level of Just Culture environment across the European Union Member States is essential for an efficient European Safety Management System based notably on the systematic analysis of data including occurrence reports.

- An appropriate Safety Culture in the European Union and its Member States will be an important contributor for reaching the objective to reduce the number of fatalities caused by aircraft accidents

- Despite the introduction of certain provisions in the European legislation Just Culture principles are not equally and appropriately implemented across Member States

- The definition of Just Culture as enshrined in Commission Regulation (EU) No 691/2010 should be included in the revised legislation on occurrence reporting

- The new legislation on occurrence reporting should clarify and reinforce the provisions included in Directive 2003/42/EC Article 8 notably to directly impose rules on employers and to ensure the adequate protection of information contained in operators, national and European databases

- Mandatory and Voluntary Occurrence Reporting Schemes should both be non-punitive except in the case of gross negligence or wilful misconducts and afford protection to the sources of the information

- The new legislation should limit the use of occurrence reports data to safety improvement purposes only

- Guidance material (including on the understanding of gross negligence) and training should be developed to allow a better understanding and implementation of the Just Culture concept

- Consideration should be given to address the access and use of occurrence reports by judicial authorities and to create communication channels between safety authorities and judicial authorities

- Consideration should be given to the potential extension of individuals' personnel data protection from Article 8(2) to organisation databases

- Consideration should be given to pros and cons of the establishment of a focal point at European level allowing individuals to report breach of "Just Culture" principles they have experienced.

ANNEX 5: Study on the establishment of a common risk classification of civil occurrences at EU level

1. INTRODUCTION

The purpose of this study is to review the background, and highlight the issues, of the development and implementation of a common European Risk Classification Scheme as a part of the Impact Assessment on the possible revision of EU legislation on Occurrence Reporting in civil aviation. This existing legislation is focused on the reporting of safety occurrences in the aviation system and could be revised to include the effective analysis of the occurrence reporting data. The proposal to develop a common risk classification scheme will support that analysis activity through the facilitation of risk analysis. The purpose of such a scheme is therefore to be able to classify (or score), in terms of safety risk, occurrences in civil aviation.

Such a scheme should be applicable to all the occurrence data that is part of the legislation, however it would also benefit Member States and the European Union, and particularly the industry and the wider public, if such a scheme was applicable to all safety incident data that forms part of safety management activity within the aviation domain.

2. RISK MEASUREMENT

Risk classification is fundamentally about the measurement of risk and that involves two dimensions:

(1) The severity of the potential outcome – i.e. how bad will it be if the risk is realised

(2) The probability that the outcome will be realised – i.e. how likely is it to happen

The second term can be further considered in two parts: a) the probability that the safety occurrence will occur and b) the probability that the safety occurrence, when it occurs, might progress to the undesired outcome. At this point it is important to draw a distinction between 'Risk Classification', as is being considered by this scheme, and 'Risk Assessment'.

Risk assessment is typically an activity of taking a system and then making judgments about it to predict the risk that it involves[2]. Risk Classification however, as in the case of this exercise, involves the scoring of safety occurrences in terms of risk and then ultimately using those classified/scored safety occurrences to observe the risk manifest within the system. The importance of this distinction is that the risk classification therefore involves the observation of events that have already occurred and hence there is no requirement to determine their probability of occurrence (term 2a above) so the dimension 2 need only be the probability that the safety occurrence might progress to the outcome (term 2b).

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[2] A noteworthy area of confusion here is that some risk assessment activities result in the scoring of the resulting assessment using a 'risk classification'; this is not the same as the activity of risk classifying occurrences.

3. EXISTING TOOLS AND TECHNIQUES

There are various existing tools and activities in progress that have the potential to provide value, and efficiency, to the development of a common European scheme. This section highlights some that have already been discussed in the context of this scheme and the potential role they could play in its development and implementation:

- ECCAIRS 5 - ODA2 risk classification approach – The latest ECCAIRS 5 product has an embedded risk classification scheme that was developed by the ODA-2 working group at the request of the Joint Safety Strategy Initiative steering group. This classification scheme, completed in 2006, is a three step risk classification process that covers a) most probable accident outcome, b) remaining safety barriers & c) frequency of occurrence.

- ARMS Event Risk Classification (ERC) – The ARMS (Aviation Risk Management Solutions working group) was an industry driven follow up activity to ODA-2, focused on developing practical solutions that could be applied across the industry. One of the outcomes of ARMS was the ERC approach to assigning risk scores to occurrences. The ERC (Event Risk Classification) is fundamentally the first two steps of the ODA-2 approach as the ARMS group recognised that the frequency term was a function of data analysis not classification. The ERC approach is being increasingly widely adopted across varied segments of the aviation industry which, along with its JSSI heritage and very close links to the existing ECCAIRS 5 tool, make it a good starting point for the development of a common European scheme.

- Eurocontrol Risk Analysis Tool (RAT) – This is fundamentally a tool for the application of a risk classification to air traffic management incidents. It is not applicable to events outside of the ATM domain but would likely be the method of choice for implementation of a European scheme by air traffic service providers due to its widespread adoption in Europe. It would therefore be logical and beneficial that a European scheme is fully compatible with the RAT approach for ATM events and that the RAT was able, either as is or with minor modifications, to satisfy the requirements of the European scheme.

- Common Risk Classification Framework – This is an activity being pursued by the UK CAA to apply some of the underlying principles of the RAT to the wider aviation domain by using industry recognised techniques for gathering expert judgement. This is therefore, like the RAT, focused at the application/tool end of the spectrum, but being based on some of the ARMS principles offers a valuable insight into how such application might develop and hence how the scheme might be best placed to facilitate that development in the future.

Other schemes in EC Member States - There are likely other areas of work and techniques that will be of benefit to the development of the scheme and these will need to be identified and considered as the development progresses. The UK CAA has an existing risk classification scheme for mandatory occurrence reports but is looking to move it forward to latest practice and hence are actively involved in the development of this common scheme.

4. COMMON SCHEME

The objective of this activity is to develop a common scheme for the aviation system so, by implication, commonality across both national and functional boundaries of the aviation system. Commonality in measurement terms means measuring the same things (the dimensions identified above), to the same point (in this case comparable risk outcomes) using the same, or equitable, scales. The precise method you use to measure it does not necessarily have to be common, an issue that will be covered later.

Common risk outcomes are an important need across the aviation system both within individual organisations and particularly across the wider functions of the aviation system.[3] For a common scheme to function the outcomes need to be common, or at the very least directly equitable with each other. As this legislation is about aviation safety these outcomes also need to be in terms of actual physical loss (expressed in terms of fatalities, injuries and physical damage). Outcomes expressed in terms of human fatality and injury can be directly equated[4] and physical damage can be equated on a financial basis, one significant challenge in developing this scheme will be agreeing if and how to equate the human outcomes with the damage outcomes in financial terms[5]. Comparable outcomes is one dimension of our measurement paradigm, the other is that of the probability of the outcome being realised. Probability is a recognised measurement term and therefore provides a ready basis for common measurement in terms of outcomes per X occurrences. The problem that normally arises in probability terms: 'over what timescales or operating dimension to measure', is not an issue in pure risk classification[6]. With regards to the probability axis the more significant question that the development of a common risk classification scheme needs to consider is how to measure it. By definition risk measurement will always involve the forward projection of an event or scenario into an adverse outcome and therefore the probability is an estimation of how likely that projection is to be realised. A human's ability to estimate a probability is very dependent upon their experience in observing the event and the outcome, so with the very low rate of outcomes experienced in aviation that estimation becomes very difficult. A partial solution to this difficulty that is becoming increasingly popular within the aviation domain (and is part of many of the existing approaches discussed above) is by describing the problem in terms of barriers and using the assessment of the barriers as a direct approximation to the probability.

It is an open question as to the level of common definition of methods or tools for implementation that is necessary, or appropriate, for inclusion in the scheme. The most effective and efficient method of application of the scheme is likely to be very different for example between a small local maintenance organisation and a major international airline operation. The crucial thing is that they are measuring the same

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3 For example risk outcomes might be accidents in the Flight ops domain but for maintenance it would often be the risk of an unairworthy aircraft, furthermore the ANSP might be considering risk of a loss of separation: these are not directly comparable to each other.

4 There is significant experience of equating injuries with fatalities in other industries.

5 There are recognized approaches to the cost of human life, the question is whether this scheme will choose to consider that.

6 The issue of timescales or operating dimension only affects term 2a) – how often the occurrence might occur – i.e. once per day, per 1,000 sectors, per 1M landings… For term 2b) the probability need only be expressed as a probability per occurrence.

thing (dimensions or axis) using comparable scales, the tools they use to do that can be chosen by them as long as they meet the purposes of the scheme. A parallel to this would be in the measurement of distance: it is defined what the measurement principle is and the scale, but how you measure it varies dependent upon the situation. Notwithstanding the above it is also recognised that the legislation of a common method to apply the scheme has the potential to provide a greater level of commonality. It is therefore an area of consideration as to how much focus is applied to this area in the development of the scheme. One possible, and pragmatic, approach would be to define the core basis of the scheme and allow the industry to develop the appropriate methods for application. As 'best practices' start to emerge it would then be an option to encourage widespread adoption of these at a later date. With regards to applicability of the scheme it would logically be assumed that it would be applicable to all the data that is included in the occurrence reporting legislation. It is however also to be noted that many organisations collect occurrence data that goes beyond the requirements of the legislation and it would both be logical and beneficial that the scheme also be suitable for application to such data.

5. EXPECTED BENEFITS OF A COMMON EU SCHEME

The benefit of a risk classification scheme is that it provides a risk measurement basis against which to manage risk. There is much truth in the saying 'you can't manage what you can't measure' and a risk classification scheme works to overcome this limitation.

The industry itself will benefit from a common scheme through each organisation being able to see how they contribute to aviation risk as a whole. Aviation is an increasingly integrated and joined up system and organisations are progressively recognising the need to work together on risk management. The use of a common risk classification scheme will facilitate this through a joined up view of risk performance, enabling organisations to effectively share and compare risk performance information with others to make the most efficient use of their combined resources.

For Member States the application of a common risk classification scheme is vital to enable effective and efficient oversight across the different parts of the aviation domain. Furthermore the scheme will also bring efficiency benefits through the reduction in duplication caused by the application of dissimilar risk classification at many levels in the reporting chain.

At an EU level the application of the scheme across Europe, and the common measure of safety performance it provides, will facilitate effective and proportionate regulation & oversight focused on delivering acceptable levels of risk exposure from aviation for all EU citizens. It should be recognised that such a common scheme is a vital part of great co-operation at EU level in the management of risk in the aviation domain and will be an essential contributor to risk reduction within an expanding European aviation system. Ultimately such a scheme will benefit the EU and its citizens by helping to deliver the necessary cross industry safety benefits that will not be realisable with States and organisations measuring and managing risk in an uncoordinated way.

6. FEASIBILITY, TIMESCALES AND COSTS

The development of a common European Risk Classification scheme will require agreement at an international level of, at the very least, the core risk management principles (the dimensions and scales of risk classification). Building upon existing international work should make it feasible to achieve agreement within a short timescale of less than two years. If the definition of tools and methods is considered a necessary part of the defined scheme then longer timescales will result through the need to develop significant new work and then gain international agreement on it.

From a technical standpoint the development of a scheme at the level of core principles should be relatively straight forward as it will involve only the definition of the terms to be captured and the scales against which to score them. With regards to implementation in occurrence reporting systems; at a Member State level ECCAIRS will be the main platform for implementation so if the scheme developed closely matches that of the ODA scheme already implemented then it will clearly be feasible for implementation in ECCAIRS. If the scheme is applied at a lower level across the industry then it will impact a range of commercial and bespoke incident reporting systems. The commercial systems however often have user configurable risk classification functions, the use of which is already moving towards the best practice that this scheme will seek to define, so the technical impact on those systems will likely be limited. There will be costs incurred in the development of the risk classification scheme including international meetings, direct development work and the publication of documents for consultation. There will also be costs incurred through the implementation of the scheme across the industry including occurrence reporting software changes, procedure changes and training. Taking each of these in turn (assuming a scheme that addresses only the core risk measurement principles) the following provides a very high level estimate of the potential cost implications:

Scheme development – (8 meetings of 10 people – 80 man days, direct development and documentation – 80 man days) – Total of 8 man months 50% divided between participants and 50% to EASA/Commission.

System modification – assuming a solution that is similar to the existing ECCAIRS ODA-2 system then modification to the existing ECCAIRS 5 risk classification function should be limited to less than 1 man month's work. For other systems, where user definability of the risk classification function will not suffice, a similar workload could be assumed. The scope of systems that would be impacted by such a scheme has not been determined but an estimate of about 12 man months total effort should cover the modification of a very wide range of occurrence reporting systems across the European aviation domain.

Procedure changes and training – Again the impact of this will be dependent upon the level to which the risk classification scheme is implemented, at a state level it will clearly impact 27 organisations but beyond that there are potentially many hundreds of others who could be involved in the use of such a common risk classification scheme. Full assessment of the cost implications of procedures and training would again require greater knowledge of the scope of the implementation of the scheme, but an initial estimate is 6-18 man months effort.

ANNEX 6: Occurrence reporting obligations in European legislation

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Directive No 2003/42[1]	Article 4, para.1 a)	The operator or commander of a turbine-powered or a public transport aircraft	Member State competent authority and then the European Central Repository (ECR)	Occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person.	Determined by national implementing measures
Directive No 2003/42	Article 4, para.1 b)	A person who carries on the business of designing, manufacturing, maintaining or modifying a turbine-powered or a public transport aircraft, or any equipment or part thereof, under the oversight of a Member State	Member State competent authority and then the European Central Repository (ECR)	Occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person.	Determined by national implementing measures
Directive No 2003/42	Article 4, para.1 c)	A person who signs a certificate of maintenance review, or of release to service in respect of a turbine-powered or a public transport aircraft, or any equipment or part thereof, under the oversight of a Member State	Member State competent authority and then the European Central Repository (ECR)	Occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person.	Determined by national implementing measures

[1] Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation; OJ L 167, 4.7.2003, p. 23.

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Directive No 2003/42	Article 4, para.1 d)	Air traffic controllers and flight information officers	Member State competent authority and then the European Central Repository (ECR)	Occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person.	Determined by national implementing measures
Directive No 2003/42	Article 4, para.1 e)	A manager of an airport within the Community	Member State competent authority and then the European Central Repository (ECR)	Occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person.	Determined by national implementing measures
Directive No 2003/42	Article 4, para.1 f)	A person who performs a function connected with the installation, modification, maintenance, repair, overhaul, flight-checking or inspection of air navigation facilities for which a Member State ensures responsibility	Member State competent authority and then the European Central Repository (ECR)	Occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person.	Determined by national implementing measures

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Directive No 2003/42	Article 4, para.1 g)	A person who performs a function connected with the ground-handling of aircraft, including fuelling, servicing, loadsheet preparation, loading, de-icing and towing at a European airport	Member State competent authority and then the European Central Repository (ECR)	Occurrences which endanger or which, if not corrected, would endanger an aircraft, its occupants or any other person.	Determined by national implementing measures
Regulation No 1702/2003[2] (Part 21)	21A.3.b)	The holder of a type-certificate, restricted type-certificate, supplemental type-certificate, ETSO authorisation, major repair design approval or any other relevant approval deemed to have been issued under this regulation	The European Aviation Safety Agency (EASA)	Any failure, malfunction, defect or other occurrence of which it is aware related to a product, part or appliance covered by the type-certificate, supplemental type-certificate, ETSO authorisation, major repair design approval or any other relevant approval deemed to have been issued under this regulation, and which has resulted in or may result in an unsafe condition[3]	72h

[2] Commission Regulation (EC) No 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations; OJ L 243 of 27.09.2003, p. 6.

[3] Unsafe condition on all aircraft as per article 4 of basic Regulation No 216/2008.

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Regulation No 1702/2003 (Part 21)	21A.265.f)	Holder of a production organisation approval	The holder of the type-certificate, restricted type-certificate or design approval. EASA and the Member State competent authority	All cases where products, parts or appliances have been released by the manufacturer and subsequently identified to have deviations from the applicable design data, and investigate with the holder of the type-certificate, restricted type-certificate or design approval to identify those deviations which could lead to an unsafe condition[4]	As per 21A.3.b) or as accepted by the competent authority of the Member State

[4] Unsafe condition on all aircraft as per article 4 of basic Regulation No 216/2008

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Regulation No 1702/2003 (Part 21)	21A.265.f)	The manufacturer acting as supplier to another production organisation	The other production organisation	All cases where it has released products, parts or appliances to that organisation and subsequently identified them to have possible deviations from the applicable design data.	As per 21A.3.b) or as accepted by the competent authority of the Member State
Regulation No 2042/2003[5] (Part M)	M.A.202	Any person or organisation responsible under M.A.201 (responsible of continuous airworthiness)	The State of registry, the organisation responsible for the type design or supplemental type design and, if applicable, the Member State of operator	Any identified condition of an aircraft or component that hazards seriously the flight safety	72h
Regulation No 2042/2003 (Part M)	M.A.202	The person or organisation maintaining the aircraft is contracted by an owner or an operator to carry out maintenance, the person or the organisation maintaining the aircraft	The owner, the operator or the continuing airworthiness management organisation	Any such condition affecting the owner's or the operator's aircraft or component	72h

[5] Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks, OJ L 315 of 28.11.2003, p. 1.

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Regulation No 2042/2003 (Part 145)	145.A.60	The organisation [to qualify for the issue or continuation of an approval for the maintenance of aircraft and components]	The competent authority, the state of registry and the organisation responsible for the design of the aircraft or component	Any condition of the aircraft or component identified by the organisation that has resulted or may result in an unsafe condition that hazards seriously the flight safety	72h
Regulation No 2042/2003 (Part 145)	145.A.60	The organisation contracted by a commercial operator to carry out maintenance	The operator	Any such condition affecting the operator's aircraft or component	72h
Regulation No 859/2008[6] (EU-OPS)	1.420 b)	The commander or the operator of an aeroplane	The competent Authority	Any incident that endangers or could endangers the safety of operation; deficiency of technical limitations endangers or could endanger the safety of operation	72h

[6] Commission Regulation (EC) No 859/2008 of 20 August 2008 amending Council Regulation (EEC) No 3922/91 as regards common technical requirements and administrative procedures applicable to commercial transportation by aeroplane; OJ L 254, 20.9.2008, p. 1.

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Regulation No 859/2008 (EU-OPS)	1.420 b)	The operator	The organisation responsible for the design or the supplier or, if applicable, the organisation responsible for continued airworthiness, at the same time as a report is submitted to the Authority	Any failure, malfunction or defect in the aeroplane, its equipment or any item of ground support equipment or which cause or might cause adverse effects on the continuing airworthiness of the aeroplane	72h
Regulation No 859/2008 (EU-OPS)	1.420 d) 1.	The commander	The air traffic service unit concerned and the Member State competent authority	Whenever an aircraft in flight has been endangered by: a near collision with any other flying device; faulty air traffic procedures or lack of compliance with applicable procedures by air traffic services or by the flight crew; failure of air traffic services facilities	Without delay
Regulation No 859/2008 (EU-OPS)	1.420 d) 2.	The commander	The air traffic service unit concerned and the Member State competent authority	Whenever an aircraft in flight has manoeuvred in response to an ACAS resolution advisory	
Regulation No 859/2008 (EU-OPS)	1.420 d) 3.	The commander	The air traffic service unit concerned	Whenever a potential bird hazard is observed	Immediately

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Regulation No 859/2008 (EU-OPS)	1.420 d) 3.	The commander The operator, if the bird strike is discovered when the commander is not available	The Member State competent authority	Bird strike in case of significant damage to the aircraft or the loss or malfunction of any essential service	After landing
Regulation No 859/2008 (EU-OPS)	1.420 d) 4.	The operator	The Member State competent authority and the appropriate Authority in the State where the accident or incident occurred	Dangerous goods incidents and accidents	72h
Regulation No 859/2008 (EU-OPS)	1.420 d) 5.	The commander or, in his/her absence, the operator	The local Authority and to the Authority in the State of the operator	An act of unlawful interference on board an aircraft	As soon as practicable

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Regulation No 859/2008 (EU-OPS)	1.420 d) 6.	The commander	The appropriate air traffic services unit	A potentially hazardous condition such as an irregularity in a ground or navigational facility, a meteorological phenomenon or a volcanic ash cloud is encountered during flight	As soon as practicable
Regulation No 290/2012[7]	ARA.GEN.125	The competent authority	EASA	Safety-significant information stemming from the occurrence reports it has received	
Regulation No 290/2012	ORA.GEN.160	The organisation	The Member State competent authority and to any other organisation required by the State of the operator to be informed	Any occurrence as defined in Directive 2003/42/EC	

[7] Commission Regulation (EU) No 290/2012 of 30 March 2012 amending Regulation (EU) No 1178/2011 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 100, 5.4.2012, p. 1.

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Regulation No 290/2012	ORA.GEN.160	The organisation	The Member State competent authority and to the organisation responsible for the design of the aircraft	Any incident, malfunction, technical defect, exceeding of technical limitations, occurrence that would highlight inaccurate, incomplete or ambiguous information contained in data established in accordance with Part-21 or other irregular circumstance that has or may have endangered the safe operation of the aircraft and that has not resulted in an accident or serious incident.	72h
Draft Cover Regulation laying down requirements and administrative procedures related to aerodromes NPA 2011-20 (B.I)[8]	ADR.OR.C.030	The aerodrome operator and the provider of apron management services	The competent authority, and to any other organisation required by the State where the aerodrome is located	Any occurrence as defined in Directive 2003/42/EC.	As soon as practicable, but in any case within 72 hours

[8] Legislation currently under preparation

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Draft Cover Regulation laying down requirements and administrative procedures related to aerodromes NPA 2011-20 (B.I)	ADR.OR.C.030	The aerodrome operator and the provider of apron management services	The competent authority and to the organisation responsible for the design of aerodrome equipment	Any incident, malfunction, technical defect, exceeding of technical limitations, occurrence or other irregular circumstance that has or may have endangered safety and that has not resulted in an accident or serious incident.	As soon as practicable, but in any case within 72 hours
Draft Cover Regulation laying down requirements and administrative procedures related to aerodromes NPA 2011-20 (B.I)	ADR.OR.D.030	All personnel and organisations operating or providing services at the aerodrome	The aerodrome operator	For the mandatory reporting: any accident, serious incident and incidents; for the voluntary reporting: any defect, fault and potential safety hazard which could impact safety	
Draft Cover Regulation laying down requirements and administrative procedures related to aerodromes NPA 2011-20 (B.II)	AMC1-ADR.AR.C.060 (a)	The competent authority	ICAO	Wildlife strike (or near-misses)	

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Draft Cover Regulation laying down requirements and administrative procedures related to aerodromes NPA 2011-20 (B.I)	ADR.AR.A.025.b)	The competent authority	EASA	Safety-significant information stemming from the occurrence reports it has received.	
Draft Cover Regulation laying down requirements and administrative procedures related to aerodromes NPA 2011-20 (B.I)	ADR.AR.A.030	The aerodrome operator (not explicit)	The competent authority	Safety information	
Annex VIII the draft Commission Regulation on 'Air Operations — OPS' Part-SPO — IR	SPO.GEN.105 Crew responsibilities	The crew member	The pilot-in-command	Any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and any incident that was endangering, or could endanger, the safety of the operation	

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Annex VIII the draft Commission Regulation on 'Air Operations — OPS' Part-SPO — IR	SPO.GEN.106 Task specialists responsibilities	The task specialist	The pilot-in-command	Any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and any incident that was endangering, or could endanger, the safety of the operation.	
Annex VIII the draft Commission Regulation on 'Air Operations — OPS' Part-SPO — IR	SPO.GEN.107 Pilot-in-command responsibilities and authority	The pilot-in-command	The appropriate air traffic services unit	Any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.	As soon as possible
Annex VIII the draft Commission Regulation on 'Air Operations — OPS' Part-SPO — IR	SPO.GEN.107 Pilot-in-command responsibilities and authority	The pilot-in-command	The competent authority and the designated local authority	An act of unlawful interference	Without delay
Annex VIII the draft Commission Regulation on 'Air Operations — OPS' Part-SPO — IR	SPO.GEN.155 Transport of dangerous goods	The operator	The competent authority and the appropriate authority of the State of occurrence in the event	Any dangerous good accident or incidents; the finding of dangerous goods carried by task specialists or crew, or in their baggage, when not in accordance with Part 8 of the Technical Instructions	Without delay

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Annex VI the draft Commission Regulation on 'Air Operations — OPS' Part-NCC — IR	NCC.GEN.105 Crew responsibilities	The crew member	The pilot-in-command	Any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; any incident that was endangering, or could endanger, the safety of the operation	
Annex VI the draft Commission Regulation on 'Air Operations — OPS' Part-NCC — IR	NCC.GEN.106 Pilot-in-command responsibilities and authority	The pilot-in-command	The appropriate air traffic services unit	Any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.	As soon as possible
Annex VI the draft Commission Regulation on 'Air Operations — OPS' Part-NCC — IR	NCC.GEN.106 Pilot-in-command responsibilities and authority	The pilot-in-command	The competent authority and the designated local authority	An act of unlawful interference	Without delay
Annex VI the draft Commission Regulation on 'Air Operations — OPS' Part-NCC — IR	NCC.GEN.150 Transport of dangerous goods	The operator	The competent authority and the appropriate authority of the State of occurrence in the event	The event of any dangerous goods accidents or incidents	Without delay

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Annex VII the draft Commission Regulation on 'Air Operations — OPS' Part-NCO — IR	NCO.GEN.105 Pilot-in-command responsibilities and authority	The pilot-in-command	The appropriate air traffic services unit	Any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft	As soon as possible
Annex VII the draft Commission Regulation on 'Air Operations — OPS' Part-NCO — IR	NCO.GEN.105 Pilot-in-command responsibilities and authority	The pilot-in-command	The competent authority and shall inform the designated local authority	An act of unlawful interference	Without delay
Annex VII the draft Commission Regulation on 'Air Operations — OPS' Part-NCO — IR	NCO.GEN.105 Pilot-in-command responsibilities and authority	The pilot-in-command	The nearest appropriate authority	Any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property	By the quickest available means
Annex VII the draft Commission Regulation on 'Air Operations — OPS' Part-NCO — IR	NCO.GEN.140 Transport of dangerous goods	The pilot-in-command	The competent authority and the appropriate authority of the State of occurrence	Any dangerous goods accidents or incidents	Without delay
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	ARO.GEN.125 Information to the Agency	The competent authority	EASA	Safety-significant information stemming from the occurrence reports it has received	

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	ORO.GEN.160 Occurrence reporting	The operator	The competent authority, and to any other organisation required by the State of the operator to be informed	Any accident, serious incident and occurrence as defined in Regulation (EU) No 996/20102 and Directive 2003/42/EC	Within 72 hours of the operator identifying the condition to which the report relates, unless exceptional circumstances prevent this
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	ORO.GEN.160 Occurrence reporting	The operator	The competent authority and the organisation responsible for the design of the aircraft	Any incident, malfunction, technical defect, exceeding of technical limitations, occurrence that would highlight inaccurate, incomplete or ambiguous information contained in operational suitability data or other irregular circumstance that has or may have endangered the safe operation of the aircraft and that has not resulted in an accident or serious incident	Within 72 hours of the operator identifying the condition to which the report relates, unless exceptional circumstances prevent this.

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	CAT.GEN.MPA.100 Crew responsibilities	The crew member	The commander	Any fault, failure, malfunction or defect which the crew member believes may affect the airworthiness or safe operation of the aircraft including emergency systems, if not already reported by another crew member; any incident that endangered, or could have endangered, the safety of the operation, if not already reported by another crew member	
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	CAT.GEN.MPA.105 Responsibilities of the commander	The commander	The competent authority	Whenever an aircraft in flight has manoeuvred in response to an airborne collision avoidance system (ACAS) resolution advisory (RA),	
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	CAT.GEN.MPA.105 Responsibilities of the commander	The commander	The air traffic service unit	Whenever a potential bird hazard is observed	As soon as flight crew workload allows

EU legislative act	Article, paragraph	Who has to report	Who receives the report	What should be reported	Which delay to report
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	CAT.GEN.MPA.105 Responsibilities of the commander	The commander	The competent authority	Bird strike that results in significant damage to the aircraft or the loss or malfunction of any essential service	After landing
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	CAT.GEN.MPA.200 Transport of dangerous goods	The operator	The competent authority and the appropriate authority of the State of occurrence	Any dangerous goods accidents or incidents; the discovery of undeclared or misdeclared dangerous goods in cargo or mail; or the finding of dangerous goods carried by passengers or crew members, or in their baggage	Without delay
Annexes to the draft Commission Regulation on 'Air Operations - OPS'	SPA.RVSM.115 RVSM height-keeping errors	The operator	The competent authority	Height-keeping errors caused by malfunction of aircraft equipment or of operational nature, equal to or greater than: a total vertical error (TVE) of ±90 m (±300 ft); an altimetry system error (ASE) of ±75 m (±245 ft); and an assigned altitude deviation (AAD) of ±90 m (±300 ft)	Within 72 hours

Acronyms: ADR- Aerodrome; SPO- Specialized Operations; NCO- Non-commercial operations with other-than-complex motor-powered aircraft; NCC- Non-commercial operations with complex motor-powered aircraft; CAT- Commercial air transport operations; SPA- Special Approvals

ANNEX 7: Examples of costs involved by an aircraft accident

(a) Search and rescue and wreckage recovery

In the case of the Air France Flight 447 accident costs involved with the location of the wreckage and its recovery are estimated to be about €114 million. €34.6 million were necessary for underwater operations research and recovery (costs shared between the BEA, the French Safety Investigation Authority, Airbus and Air France) and €80 million for the search and rescue operations (surface research, paid by French and Brazilian Governments[1]).

As another example, during the Swissair Flight 111 accident investigation, which occurred in 1994, costs were estimated by the Transportation Safety Board of Canada around CAD $46.5 million (€35.7 million) for among which CAD $35 million (€27 million) for the activities linked to research and recovery of the wreckage and passengers.

(b) Aircraft physical damage

The costs related to the physical damage to the aircraft can vary depending on the aircraft type. Indeed an old Boing 707 has a value around $1.5 million[2] (€1.12 million) while a brand new Boeing 747 values in excess of $333 million[3] (€262 million).

According to the NLR Air Transport Safety Institute the average value of the western-built jet aircraft in the European fleet is about $25 million (€20 million) and therefore the average insurance value of these aircraft is around $46.25 million (€36.22 million).

(c) Accident Investigation

Investigation costs can vary depending on the difficulty of the process. These costs usually range from €0.1 million to €100 million and the average investigation cost is about €2.5 million[4].

As an example of accident investigation cost, the investigation of the SA 365 Helicopter G-BLUN accident which occurred in Morecambe Bay in 2006 and involved 7 fatalities has cost around £1.6 million (€2 million)[5].

(d) Fatalities

According to the NLR Air Transport Safety Institute: "*Estimating costs associated with fatalities can be difficult and controversial. A person's life is beyond price. It is, therefore, usually accepted that money cannot compensate for the loss of life itself. However, a price may be put on the material impact on others of a person's death*

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1 Information provided by BEA (Bureau d'Enquête et d'Analyse)

2 NLR Air Transport Safety Institute - Accident costs for a causal model of air transport safety (ALC Roelen and JW Smeltink - 2008)

3 http://www.boeing.com/commercial/prices/

4 Idem

5 Source: Air Accidents Investigation Branch (AAIB).

e.g. compensation (indemnity) for loss of support etc., and, separately, on society's assumed desire to reduce the risk of a fatality"[6].

Usually costs associated with fatalities are expressed as a Value of a Statistical Life (VOSL)[7]. This number can tremendously vary depending on the passenger nationality. Thus, in the United States VOSL has been evaluated around €4.54 million per fatality[8]. For Europe, Eurocontrol has estimated in 2011 the VOSL around € 2 million[9].

With an average number of 85.2 passengers per flight and 9 crew members, the average VOSL lost in Europe for a fatal accident where all occupants died in the crash can be evaluated around €188.4 million per accident.

If we take a specific example such as the year 2009, which was a terrible year for European air transport, the number of fatalities due to aircraft accidents of EASA Member States' operators[10] reached 264 and therefore the order of magnitude for the VOSL lost in air accidents in Europe for the year 2009 can be estimated at €528 million.

(e) Insurance

Airline hull and legal liability worldwide losses for the year 2011 were about $1.18 billion[11] (€933 million) which is the lowest incurred cost of airline claims since 2004. In comparison the losses in 2010 were estimated at $2.15 billion[12] (€1.7 billion).

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6 NLR Air Transport Safety Institute - Accident costs for a causal model of air transport safety (ALC Roelen and JW Smeltink - 2008)

7 The VOSL research method does not measure the value of life per se, which is priceless and cannot be monetised. Instead it puts a monetary value on the willingness of individuals to accept slightly higher or lower level of risk.

8 www.faa.gov/regulations_policies/policy_guidance/benefit_cost/

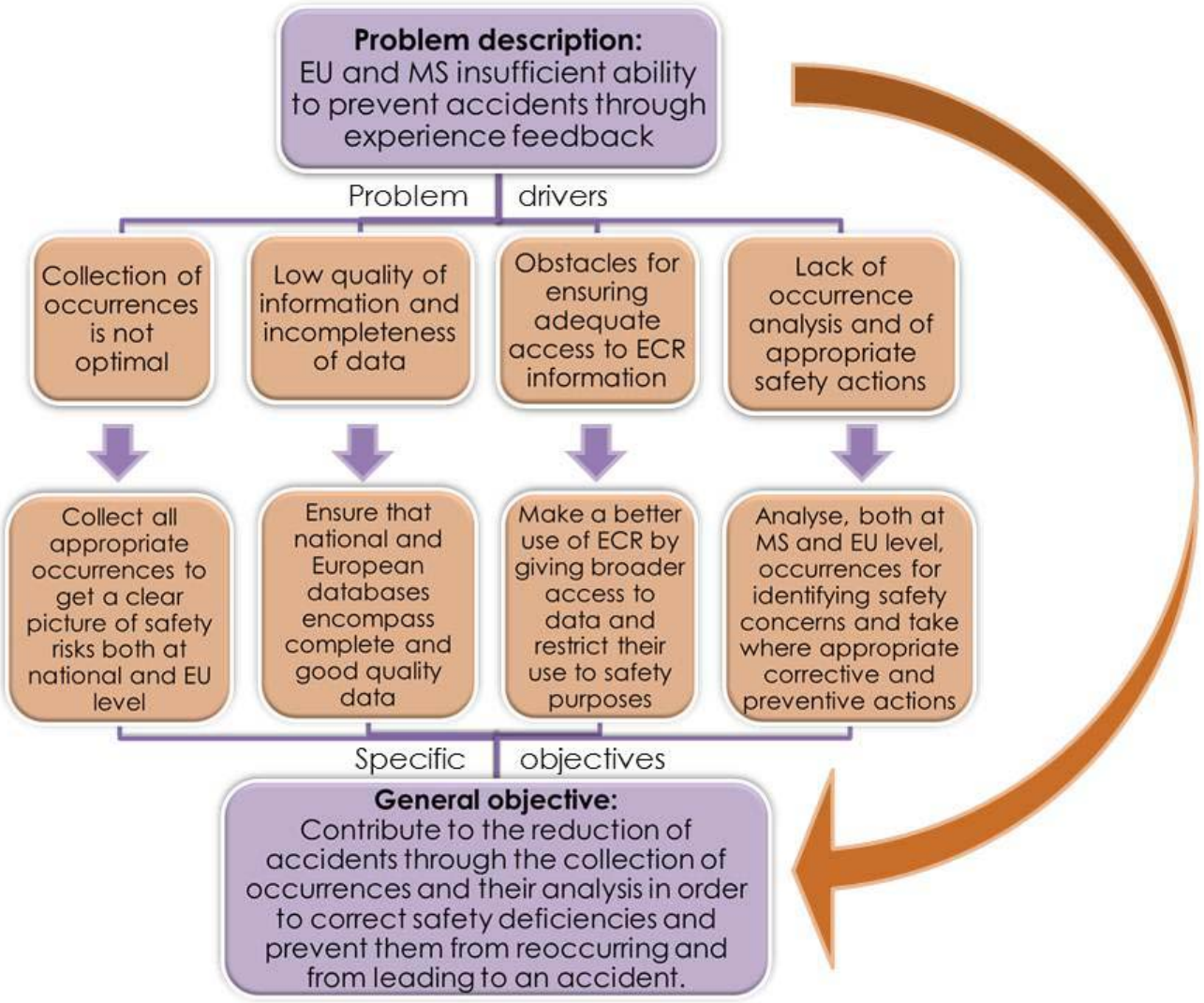
9 https://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/2012-standard-inputs-cost-benefits-analysis.pdf

10 228 fatalities for aeroplanes, 18 for helicopters, 18 for general aviation and aerial work - European Aviation Safety Agency, Annual Safety Review 2010.

11 Ascend Aviation insight – Performance and Safety Review – Special Bulletin 2011.

12 Idem.

ANNEX 8: Specific objectives with corresponding problem drivers



ANNEX 9: Assessment of administrative burdens

1. INTRODUCTION

Administrative burdens are defined as the costs incurred by different stakeholders in meeting legal obligations to provide information on their action or production either to public authorities or to private parties. Information is understood in a broad sense, i.e. including labelling, registration, monitoring and assessment needed to provide information.

The administrative burdens are calculated as changes in costs compared to the baseline scenario.

The identification and assessment of administrative burdens have as far as possible been following the steps in the EU standard cost model and has been presented to the support cell for the calculation of administrative burdens in the Secretariat-General.

2. IDENTIFICATION OF ADMINISTRATIVE BURDENS

The table below summarises existing and foreseen legal obligations to provide information and the expected changes in each policy packages, as well the introduction of new legal obligations and their impact.

Type of information	Baseline scenario	Policy package 1	Policy package 2	Policy package 3	Burdens on …
Safety occurrences in the scope of MORS to be reported by individuals to …	Member States (Dir. 2003/42; Art. 4)	Member States	Organisations and then transmitted to Member States	Organisations (under a unique data format) and then transmitted to EASA	Industry
Safety occurrences in the scope of VORS to be reported by individuals to …	Possibility for Member States (Dir. 2003/42; Art.9)	Possibility for Member States	Organisations and / or Member States	EASA (under a unique data format)	Industry / EU
Exchange of information between MS	MS shall exchange the information collected (Dir. 2003/42; Art.6)	MS shall exchange the information collected	MS shall exchange the information collected	*Abolished*	Member States / EU
Publication of annual safety review	Possibility for Member States (Dir. 2003/42; Art.7)	Possibility for Member States	Obligation for Member States	Obligation for EASA	Member States / EU
Information contained into national occurrence databases transferred by MS to …	The European Central Repository (Reg.1321/2007; Art.2)	The European Central Repository	The European Central Repository	*Abolished*	Member States
Information on accidents and serious incidents to be transferred to …	The European Central Repository (Reg.1321/2007; Art.3)	The European Central Repository	The European Central Repository	The European Central Repository	Member States
Occurrence reports shall contain certain mandatory data fields	/	/	Introduction of new requirement	Introduction of new requirement	Industry/ Member States
Information regarding the risk classification of occurrences	/	/	Introduction of new requirement	Introduction of new requirement	Member States / EU

No additional cost Marginal additional cost Additional costs Savings on existing costs

3. CALCULATION OF ADMINISTRATIVE BURDENS

The occurrence reporting Directive and its implementing Regulations impose information obligation on stakeholders in the aviation industry and on national authorities to collect, transfer, store and disseminate information on safety related occurrences. In the present situation there are reported around 120,000 occurrences annually. The identified policy packages (PP1, PP2 and PP3) operate on 7 different fields of action, where changes in information obligation can potentially influence administrative burdens. These fields are:

- Mandatory occurrence reporting (section 3.1)
- Voluntary occurrence reporting (section 3.2)
- Exchange of information between Member States (section 3.3)
- Publication of annual safety review (section 3.4)
- Transference of information from Members States to the European Central Repository (section 3.5)
- Mandatory fields in occurrence reporting (section 3.6)
- Risk classification of occurrences (section 3.7)

Policy package 1 does not change any information obligation within the occurrence reporting system. The policy package operates primarily through providing better guidance, training and support within the present setup. This means that the policy option will not result in significant changes in administrative burdens compared to the baseline scenario[27] and are as a consequence not analysed further in the following sections.

3.1. Mandatory occurrence reporting

In the current legislation Member States require that mandatory occurrences are reported by individuals (pilots, air traffic controllers, engineers, ground handlers etc.) to the competent Member State authority.

Policy Package 2 changes this requirement so individuals are required to report mandatory occurrences to their organisation which shall then transmit the data collected to the competent Member State authority. This is a codification of the existing practice. Indeed, in most Member States close to all reports (98%) received by the competent authorities are from organisations and not directly from individuals. This means that no additional administrative burden will be caused by this element in PP2.

[27] As a result of better guidance the time consumed by reporting should actually diminish.

In Policy Package 3 individuals shall report to their organisation which shall then transmit the data collected to EASA (European database) under a single data format (ECCAIRS data format). Today several different reporting systems and reporting forms are used among the industry to collect values for the same variables. Sending data to the European central database using a single data format would not necessary require the industry to replace their system by the one used at European level. The preferred option would probably be to develop a conversion program transferring the existing data format into the single format would. This would be less expensive and would not require intensive training. It is estimated by the Commission Joint Research Centre (JRC) that the development of a conversion program will incur, for each system, a cost of €15,000 on average. In addition while there are around 5,000 organisations in Europe receiving reports from individuals JRC estimates that the number of reporting systems used by the industry to collect occurrences is around 20. This gives a total cost of €300,000 for conversion data programs. This is a one-time administrative burden which will fall on the private sector.

3.2. Voluntary occurrence reporting

In the current situation Member States may designate one or more bodies to put in place a system of voluntary reporting to collect and analyse information on observed deficiencies in aviation which are not required to be reported under the system of mandatory reporting.

Policy Package 2 changes this requirement in imposing both on the industry and on Member States to give individuals the possibility to report occurrences outside of the mandatory scheme by the establishment of voluntary reporting schemes. This is also largely a codification of the existing practice. Indeed the means to report already exists within the industry and in the Member States and most industry organisations and as well as Member States (23) have already established voluntary reporting systems. This means that no additional administrative burden will be caused by this element in PP2.

In Policy Package 3 organisations shall establish voluntary schemes and send the data collected to EASA under a single data format (ECCAIRS data format). In addition EASA shall establish a European voluntary reporting scheme where individuals could report directly occurrences beyond the ones collected under the mandatory scheme. The data conversion cost into ECCAIRS data format is already included in the previous section (3.1). The cost for establishing a voluntary occurrence reporting scheme at EU level has been evaluated by EASA around €2,200,000 by year (10 staff × €150,000 and €700,000 for operational costs).

3.3. Exchange of information between Member States

In the current situation Member States shall exchange the data collected and integrated in their national databases. In practice, very few MS (less than five) have established bilateral informal agreements regarding the exchange of occurrence information and the exchange of information between Member States is done through the European Central Repository (ECR) which contains occurrences reports from all Member States and whose operation is supported by the EU budget.

Policy Package 2 will no modify this requirement.

Policy Package 3 by cutting the Member State level will involve savings for the costs related to Member States support with the use of the ECR. This is evaluated yearly around less than €50,000 savings for the EU budget.

3.4. Publication of annual safety review

In the current legislation Member States are encouraged to publish an annual safety review to inform the public about the level of safety.

Policy Package 2 changes this requirement in imposing Member States to publish once a year such a review. In reality 15 Member States already publish an annual safety review including information about the occurrences they have collected. Therefore the additional cost will only concern 12 Member States. The average cost for preparing the review has been evaluated around one man month during 3 months which means 12 men months x 3 months. In the European Union the average agreed normal working week in local government was 37.8 hours[28] which is equivalent to an average of 163.674 hours by month (there are on average 52/12 = 4.33 weeks in a month). Therefore the additional working time by Member State is evaluated to 3 x 163.674 = 491 hours. The average hourly earnings in the EU27 have been evaluated in 2010 around €32.1 for the professionals' category[29]. The additional administrative burden for Member States therefore corresponds to 32.1 x 491 x 12 = 189,133 euros per year.

In Policy Package 3 Member States do not have to publish an annual safety review, instead EASA has to do so. The costs saved by Member States would be equivalent to 15 men months x 3 months every year. EASA already publishes an annual safety review which includes a section on occurrences and the content of the ECR therefore it would not imply additional cost to the EU budget. The saving for Member States is equivalent to 15 persons x 3 working months (i.e. 491 hours) x 32.1 euros = 236,417 euros per year.

3.5. Transference of information from Members States to the European Central Repository

In the current legislation Member States shall transfer into the ECR all occurrences contained in their national database. In addition information on accidents and serious incidents shall be sent to the ECR. This latter obligation is unchanged in each policy package.

Policy Package 2 will no modify the existing requirement.

In Policy Package 3 the cost of transferring occurrences from national databases to the ECR is not present anymore as occurrences are directly sent by organisations or individuals to the European database. This saving is already included is the

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[28] Source: European Industrial Relations Observatory (EIRO)

[29] Source: http://adminburden.sg.cec.eu.int/Manuals%20and%20documentation/Forms/AllItems.aspx

calculation of the economic impact of Policy Package 3 on Member States in the section 5.3.3 of the Impact Assessment.

3.6. Mandatory fields in occurrence reporting

This new requirement imposes that certain data shall be filled in occurrence reports. The number of data fields will be limited around 10/15 fields, will concern basic information (such as date, time and location of the occurrence, narrative etc.) and will vary depending the occurrence category. The cost will be mostly borne by the industry and is similar in both policy packages.

Mandatory data fields already exist in certain organisations notably in the ATM area however it is not possible to evaluate the number of organisations already imposing such an obligation. The extra cost is evaluated around 5 minutes of additional work on average by the number of occurrences collected by year (i.e. 120,000 occurrences every year on average) and therefore is equivalent to 600,000 minutes i.e. 10,000 additional hours of work every year. The additional administrative burdens for the industry in Policy Packages 2 and 3 is evaluated around 10,000 x 32.1 euros = 321,000 euros.

3.7. Risk classification of occurrences

This new requirement imposes that Member States will have to indicate for each occurrence received its level of risk according to a European common risk classification scheme. The development of the common scheme and the necessary training it will require have already been calculated in the section related to EU budget (5.3.6). The additional administrative burdens are corresponding to the additional working time necessary to fulfil the requirement.

In Policy Package 2 the additional work for Member States staff is evaluated around evaluated around 5 minutes of additional work on average for each occurrence received. Therefore it corresponds to 120,000 occurrences x 5 minutes which means 10,000 additional hours of work every year. The additional administrative burdens for the Member States is evaluated around 10,000 hours x €32.1 = 321,000 euros.

In Policy Package 3 this task will be undertaken by EASA and is already included in the evaluation of Policy Package 3 impact on the EU budget in the section 5.3.6 of the Impact Assessment.

4. SUMMARY OF THE ADMINISTRATIVE BURDENS

Table 1: Total administrative burdens in policy packages 2 and 3

	Annual	*One time*
Policy Package 2	+ €831,133	/
Policy Package 3	+ €2,234,585	+ €300,000

Table 2: Administrative burdens on business

	Annual	*One time*
Policy Package 2	+ €321,000	/
Policy Package 3	+ €321,000	+ €300,000

Table 3: Administrative burdens on public authorities

	Annual
Policy Package 2	
Member States	+ €510,133
EU budget	/
Policy Package 3	
Member States	- €236,415
EU budget	+ €2,150,000

Table 4: Overview of the administrative burdens

	Type of obligation	*Description of required action*	*Costs / savings on*	*Rate (euro/hour)*	*Time (hours)*	*Price (per action)*	*Frequency*	*No of entities*	*Total administrative burdens (euros)*
Mandatory occurrence reporting									
Policy Package 2	Report civil aviation occurrences	Industry collect data; data are sent to MS and then to the ECR	Industry/ Member States	/	/	/	/	/	/
Policy Package 3	Report civil aviation occurrences	Industry collect data; data are sent to the ECR in a single data format	Industry/ EU budget	/	/	15,000	One time	20	+ 300,000
Voluntary occurrence reporting									
Policy Package 2	Report civil aviation occurrences	Industry collect data; data are sent to MS and then to the ECR	Industry/ Member States	/	/	/	/	/	/
Policy Package 3	Report civil aviation occurrences	Industry collect data; data are sent to Member States and then to the ECR; a EU VORS is established	Industry/ EU budget	/	/	(10x150,000) + 700,000	Every year	/	+ 2,200,000
Exchange of information between Member States									
Policy Package 2	/	/	/	/	/	/	/	/	/
Policy Package 3	Member States level disappear	Support to MS on the use of the ECR	EU budget	/	/	50,000	Every year	/	- 50,000
Publication of annual safety review									
Policy Package 2	Publish an	Publish an annual safety	Member	32.1	491	/	Every year	12	+ 189,133

	annual safety review	review	States						
Policy Package 3	No annual safety review to publish	No annual safety review to publish	Member States	32.1	491	/	Every year	15	- 236,415
Transference of information from Members States to the ECR									
Policy Package 2	/	/	/	/	/	/	/	/	/
Policy Package 3	Member States level disappear	Cost of sending data to the ECR deleted	Member States	/	/	/	/	/	/
Mandatory fields in occurrence reporting									
Policy Package 2	Mandatory fields	Fill mandatory fields in occurrence reports	Industry	32.1	0.83	/	Every year	120,000	+ 321,000
Policy Package 3	Mandatory fields	Fill mandatory fields in occurrence reports	Industry	32.1	0.83	/	Every year	120,000	+ 321,000
Risk classification of occurrences									
Policy Package 2	Classify occurrences' risk	Classify occurrences according to a common EU scheme	Member States	32.1	0.83	/	Every year	120,000	+ 321,000
Policy Package 3	Classify occurrences' risk	Classify occurrences according to a common EU scheme	EU budget	/	/	/	/	/	/

ANNEX 10: Detailed economic impact examples on the industry

In order to get more information on the implementation of Regulation (EC) No 216/2008 requirements which imposes certain occurrence reporting requirements on the industry and therefore to assess the possible economic impacts of PP2 and PP3 on the industry in comparison to the current situation, the Commission has contacted the major organisations' representatives in the European Union. Unfortunately several organisation representatives did not reply to the Commission and therefore some key information for certain categories of organisations is not available.

In the paragraphs below data regarding certain categories of organisations is presented but it does not represent an extensive study on the impact on every industry player.

(a) Airlines

Commercial air transport in the European Union is mainly operated by major airlines, low cost airlines, regional airlines and business airlines.

The Association of European Airlines (AEA) brings together 34 major European airlines (among which 27 from the EU) which collectively carry 376 million passengers and 6 million tons of cargo each year[1]. All AEA airlines are also members of the International Air Transport Association (IATA). IATA requests airlines to hold an IATA Operational Safety Audit (IOSA) accreditation as it is a pre-requisite of IATA membership and to successfully pass the IOSA audit every two years, in order to maintain a valid membership. The establishment of a Safety Management System (SMS) is incorporated into the IOSA programme[2]. This means that to become a member of IATA each airline has to establish a mechanism to collect occurrences, to analyse them in order to identify safety hazards and deficiencies, to take remedial action necessary to maintain an acceptable level of safety and to provide for continuous monitoring and regular assessment of the safety level achieved.

Regarding low cost airlines, most of them are grouped in the European Low Fares Airline Association (ELFAA) and collectively carry over 160 million passengers every year. Low fares airlines currently account for over 35% of scheduled intra-European traffic[3] shared among 9 airlines (among which 8 are from the EU). Most of them are not members of IATA and the Commission has not received information regarding an obligation to implement an SMS for these airlines. However, the major low fares airlines, such as Easyjet[4] and Ryanair[5], have established strong Safety Management Systems.

Regional airlines are grouped in the European Regions Airline Association (ERAA) which represents 57 intra-European airlines carrying 70.6 million passengers to 426

1 http://www.aea.be/
2 http://www.iata.org
3 http://www.elfaa.com
4 http://2011annualreport.easyjet.com/performance-risk/principle-risks.aspx
5 http://www.ryanair.com/doc/investor/SafetyRecord.pdf

destinations in 61 European countries every year[6]. 20 of those airlines are member of IATA and therefore have established a SMS. The Commission has not received the requested information for the other members.

No information is available regarding business aviation.

Overall, regarding European commercial air transport, the economic impact of PP2 and PP3 compared to the baseline scenario will vary from zero to moderate as most of EU airlines have established at least a basic occurrence reporting system including analysis of data.

Regarding general aviation, the obligation to report occurrences is already included in the existing legislation and the additional requirement of analysis and corrective actions would be carried out by either Member States authorities (PP1 and PP2) or by EASA (PP3). Therefore, compare to the baseline scenario, none of the three policy package will have an economic impact on the non-commercial air transport in the EU.

(b) Airports

Regarding airports, the Commission did not receive the requested information. But one could assess that most European airports have established a system to collect and assess occurrences. Indeed ACI (Airport Council International), which represents over 400 airports in 46 European countries and account for over 90% of the commercial air traffic in Europe[7], have launched a new safety advancement initiative that aims to ensure that airports contribute proactively to the demands of a safe and secure air transport system through management systems[8].

(c) Air Navigation Service Providers (ANSPs)

Eurocontrol has evaluated SMS costs[9] for ANSPs to be 1,357,943 euros (1.7% of the total cost base of an ANSP) for the overall development and implementation and to 1,154,987 euros (1.7% of the total cost base of an ANSP) for the overall maintenance and day-to-day operations. Costs related to occurrence reporting systems[10] as established in PP2 and PP3 are around 28% of the overall development and implementation costs and around 38% of the overall maintenance and day-to-day operations costs. However as the Common Requirements regulation requires all ANSPs to have a SMS to obtain a certificate[11], it can be determined that none of the policy packages will involve additional economic costs on ANSPs compared to the baseline scenario.

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6 http://www.eraa.org

7 http://www.aci-europe.org/

8 http://www.airports.org/cda/aci_common/display/main/aci_content07_banners.jsp?zn=aci&cp=1-4612-4615^40215_725_2__

9 Eurocontrol Cost-Model for the development, maintenance and day-to-day operations of a Safety Management System, February 2009.

10 This includes costs relative to mandatory reporting system voluntary reporting system, investigation of safety occurrences, management of safety related changes and risk assessment and mitigation.

11 Information provided by the Civil Air Navigation Services Organisation – CANSO.

ANNEX 11: Detailed data on the economic impact on the European Union budget

The EU budget would be affected by policy packages 1, 2 and 3 compared to the baseline scenario. Regarding the European Central Repository, in the current situation, the Commission is already supporting the technical tool (ECCAIRS) allowing the collection of occurrences. The amount yearly allocated to this tool is on average around €500,000 and would be slightly increased in all three packages by between €50,000 and €100,000. On the development of the common EU risk classification scheme, its economic impact in all policy packages is the same and would be around € 90,000 for the development of the scheme, the support and the organisation of training and would not be renewed every year. It would be allocated for a period of 18 months.

In Policy Package 2, the formalisation and development of the EASA analysis coordination role would notably require additional human resources which are estimated at two persons (€300,000 per year including 2 x €130,000 on the budget line "staff expenditure" and 2 x €20,000 on the budget line "infrastructure and operating expenditure"). An additional mission budget of €40,000 would be used to support Member States on-site and €25,000 would be used to support outreach activities such as workshops and seminars across Europe. Therefore the estimated budget costs would amount to €365,000.

In Policy Package 3 in order to ensure the completion of its tasks, the safety analysis section of EASA would necessitate four Safety Data Units (unit 1: large aeroplanes/operators; unit 2: small aeroplanes and rotorcraft; unit 3: ATM, aerodromes and ground occurrences; unit 4: processing, publications, translations, quality and administrative support). Each unit would have to coordinate the reception and evaluation of occurrences and the dissemination of information and be composed of one Head of Unit plus 9 officers and technical assistants. To ensure that the 4 units provide a comprehensive and reliable service they would be managed by a Head of Department, Deputy and staff. In addition 4 staff would be need for managing the interface stakeholders and the various national, EU and international authorities, and 4 additional staff to manage IT contractors and service providers, websites and maintenance of specialised software tools. A few additional experts would be needed to work on various issues. Therefore in Policy Package 3, 54 new posts would be created among which 44 new temporary agents which would cost approximately € 6.6 million every year (44 x €130,000 on the budget line "staff expenditure" and 44 x €20,000 on the budget line "infrastructure and operating expenditure") and 10 new administrative posts which would cost approximately € 1 million per annum (10 x €90,000 on the budget line "staff expenditure" and 10 x €10,000 on the budget line "infrastructure and operating expenditure"). In addition IT tools, workflow tools, research developments, licenses, insurances and contacted services would need in the order of € 4 million and an additional mission budget of € 200,000 would be used to support Member States and industry on-site. Finally a budget of €100,000 would be used to support information sharing and outreach meetings across Europe. The total estimated budget costs would amount to €11.9 million.

In summary, in comparison to the baseline scenario, the impact on the EU budget would be increased by around €165,000 in PP1, €530,000 in PP2 and €12.065 million in PP3.

ANNEX 12: Rate of fatal accidents per 10 million flights per world region

The figure below represents the rate of fatal accidents per 10 million flights per world region (2002 – 2011, scheduled passenger and cargo operations)[1]

[1] Source: European Aviation Safety Agency, Annual Safety Review 2011.

ANNEX 13: Acronyms and abbreviations

ADREP	→	Aviation Data Reporting Program
ANSP	→	Air Navigation Services Provider
ARMS	→	Aviation Risk Management Solutions
ATM	→	Air Traffic Management
CAA	→	Civil Aviation Authority
CAST	→	Commercial Aviation Safety Team
DG MOVE	→	European Commission Directorate-General for Mobility and Transport
EASA	→	European Aviation Safety Agency
ECCAIRS	→	European Coordination Centre for Accident and Incident Reporting Systems
ECR	→	European Central Repository
ENCASIA	→	European Network of Civil Aviation Safety Investigation Authorities
ESSAR2	→	Reporting and Assessment of Safety Occurrences in ATM
EU	→	European Union
IA	→	Impact Assessment
IAB	→	Impact Assessment Board
IASG	→	Impact Assessment Steering Group
ICAO	→	International Civil Aviation Organisation
JRC	→	European Commission Joint Research Centre
MORS	→	Mandatory Occurrence Reporting System
MS	→	Member States
PD	→	Problem Driver
PP	→	Policy Package
RAT	→	Risk Analysis Tool
SARPs	→	ICAO Standards and Recommended Practices
SIA	→	Safety Investigation Authority
SMS	→	Safety Management System
SO	→	Specific Objectives
TFEU	→	Treaty on the Functioning of European Union
US	→	United States of America
USOAP	→	Universal Safety Oversight Audit Programme
VORS	→	Voluntary Occurrence Reporting System
VOSL	→	Value of a Statistical Life

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