

Guidance for National Aviation Authorities

Setting up a national Flight Data Monitoring forum

10 October 2012

Version 1

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Note

This document was produced by the members of the European Authorities coordination group on FDM (EAFDM). Information on the EAFDM can be consulted at <http://www.easa.europa.eu/safety-and-research/european-authorities-coordination-group-on-flight-data-monitoring-EAFDM.php>

The EAFDM is a voluntary partnership between the European Aviation Safety Agency (EASA) and National Aviation Authorities of EASA Member States, with the following objectives:

- to foster actions by NAAs which contribute to improving the implementation of FDM Programmes and to making FDM programmes more safety effective
- to contribute to a high and uniform level of safety in Europe
- to contribute to a better overview of air transport operational safety in Europe

The experts that contributed to this document were from the following authorities:

- Austro Control (Austria)
- TraFi (Finland)
- DGAC (France)
- ULC (Poland)
- INAC (Portugal)
- AESA (Spain)
- FOCA (Switzerland)
- CAA (United Kingdom)
- EASA

According to its terms of reference, the EAFDM is a voluntary and independent safety initiative. **Therefore this document should not be considered as an official guidance of any of the authorities taking part to the EAFDM.**

This document is intended to be regularly revised by the EAFDM as the experience with national FDM forums develops. If you would like to give your comments or a feedback on this document, please write to EAFDM@easa.europa.eu.

Executive Summary

This document is a guidance intended for European National Aviation Authorities on establishing a national forum dedicated to Flight Data Monitoring.

Flight data monitoring (FDM) can be a powerful tool for an operator to improve and monitor its operational safety. Although it is only required by European air operation rules for large aeroplanes (over 27 000 kg maximum certificated take-off mass), it has proved to be very beneficial for operators of lighter aeroplanes and operators of helicopters.

National Aviation Authorities (NAAs) of EASA Member States are responsible for the oversight of their national aircraft operators including their FDM programme. Beyond this oversight function, NAAs should play a decisive role in the promotion of FDM at their national level. In addition, FDM data contain a wealth of information which could help a NAA better assess safety issues of national concern.

This is why several NAAs have put in place regular safety meetings or forums dedicated to FDM with their national operators. An open safety dialogue on FDM-related matters involving operators' safety experts and NAA safety experts has proved to be beneficial for all parties. This has been recognised in the **European Aviation Safety Plan**, which recommends that: *"States should set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes with the objectives of:*

- *Promoting the operational safety benefits of FDM,*
- *Fostering an open dialogue on FDM implementation that takes place in the framework of just culture,*
- *Encouraging operators to include in their FDM programmes FDM events relevant for the prevention of RE, MAC, CFIT and LOC-I, or other issues of national concern,*
- *Agreeing with operators, on a voluntary basis, regular reporting of standardized FDM events related to SSP top priorities."*

The **European Authorities coordination group on FDM (EAFDM)** would like to promote the creation of a national FDM forum in each EASA Member State, and therefore it decided to gather the experience of its members and make it available to NAAs.

This guidance is intended to help a NAA in building up, step-by-step, a national FDM forum. It aims at addressing the main questions that may arise during this process. It is intended to be regularly revised by the EAFDM as experience with national FDM forums develops.

Definition of terms

The following definitions are provided for the acronyms that are used in this document:

CFIT	Controlled flight into terrain
EAFDM	European Authorities coordination group on Flight Data Monitoring
EASA	European Aviation Safety Agency
FDM	Flight Data Monitoring
LOC-I	Loss of control in flight
MAC	Mid-air collision
MCTOM	Maximum certificated take-off mass
NAA	National aviation authority of an EASA Member State
RE	Runway excursion
SOP	Standard operating procedure
SSP	State Safety programme

I. A platform for a dialogue with operators on FDM – what for?

1. Background

Flight Data Monitoring (FDM) is a proactive, non-punitive tool to identify hazards found in routine flight operations. Together with a reporting system it is a vital part of a well-functioning Safety Management System (SMS) and acts as one of the main sources for the collection of data on hazards and risks in order to improve safety in the flight operations domain.

The data collected by the FDM-system are primarily of benefit to the operator. From another perspective it is desirable to use that data in a wider context in order to share the benefits among the aviation community. A better understanding of known or new top level issues identified by operators' FDM programmes would also be beneficial for the **National Aviation Authorities of EASA Member States (NAAs)** and other stakeholders. This could become a powerful safety enhancement opportunity in future interactions between stakeholders' SMS and NAAs' **State Safety Programmes (SSP)**.

With this objective in mind, the **European Authorities coordination group on FDM (EAFDM)** encourages the NAAs and industry to create a permanent (national) dialogue around FDM to share such important information in order to improve aviation safety. In the following, this permanent dialogue is designated with the terms “**national FDM forum**”.

2. General concept of a national forum on FDM

The general idea behind a national FDM forum is that of a regular dialogue between a NAA and its national aircraft operators in order to:

- improve and promote the implementation of FDM programmes, with the objective to bring safety benefits to participating operators, and
- allow the NAA to better achieve its national safety objectives, and therefore to better manage its SSP.

The forum should be moderated by one or several designated NAA staff members (could be co-moderated together with an operator). Participation should be submitted to signing a confidentiality agreement.

3. Expected benefits for the NAA, operators and other stakeholders

From the perspective of the NAA, it is very important to get data on the evolution of the main national safety issues. Information coming from the national FDM forum could (in accordance with the confidentiality agreements of the forum) complement the safety analysis of mandatory occurrence reports that are received under the framework of European

Directive 2003/42/EC (mandatory reporting). This information could be beneficial for the SMS of other stakeholders (such as airports, Air Navigation Service Providers, maintenance organisations, etc.), and for the European Aviation Safety Plan (see also Annex 4).

In addition to that, a national FDM forum would be beneficial for the operators taking part to further explore analysis techniques and to share best practice on proper integration of FDM with the SMS and with the flight crew training programme.

As the participants from NAA and operators alike are expected to be safety analysts and FDM experts, it would be a good opportunity for them to gain additional experience about analysis techniques, statistical knowledge, data mining principles, data process schemes.

On the longer term, provided an agreement is reached between the forum participants to monitor and report, in a standardised way, summaries of their FDM events, these summaries could be aggregated into statistics, for the benefit of participants. For instance, these statistics would provide to operators a means to monitor their safety performance relative to other operators. The statistics could also be used by the NAA to better monitor its national safety indicators. However the difficulties of implementing sharing of FDM event summaries is not to be underestimated and this should only be contemplated when the national FDM forum is well established. Recommendations on sharing FDM event summaries are provided in Chapter VI.

4. The “safety culture” presupposition

In the field of Flight Data Monitoring, a good **safety culture**¹ is of utmost importance. The atmosphere of trust in which people are encouraged to share safety information is the major key for a functioning safety improvement process.

A good safety culture is also essential for a successful national FDM forum. The promotion of a safety culture at highest level of the NAA (for instance demonstrated by an official statement²) creates a favourable framework for the development of safety promotion initiatives such as a national FDM forum.

In addition some precautions need to be taken:

- The independence of the NAA staff moderating the forum from NAA oversight functions has to be guaranteed.
- The meetings shall be held under agreed confidentiality conditions. The documents and data exchanged inside the forum shall also be protected by a confidentiality agreement.
- The information shared should not be used for oversight purposes, unless in exceptional cases (for instance in the case of a serious safety threat when a pre-prescribed decision and action path should be followed: see Annex 1).

¹ According to ECAST SMS working group, “Safety Culture is the set of enduring values and attitudes regarding safety issues, shared by every member of every level of an organization. Safety Culture refers to the extent to which every individual and every group of the organization is aware of the risks and unknown hazards induced by its activities; is continuously behaving so as to preserve and enhance safety; is willing and able to adapt itself when facing safety issues; is willing to communicate safety issues; and consistently evaluates safety related behaviour.” (refer to “Safety Culture Framework”, <http://easa.europa.eu/essi/ecast/wp-content/uploads/2011/08/WP1-ECASTSMSWG-SafetyCultureframework1.pdf>)

² An example of official statement can be consulted in UK CAA document CAP 382 “The mandatory occurrence reporting system”

II. Definition of the project

1. Resources needed

As any other safety promotion initiative, a national FDM forum requires some human resources and means. The EAFDM recommends checking that the following general conditions are met:

- This project has been endorsed by the NAA management
- The NAA team responsible for the SSP is involved;
- At least one NAA staff member is clearly identified as the **project manager(s)**;
- Meeting facilities are available for meetings with all participants, or alternatively telecommunication means to allow for organising teleconferences in a convenient way
- If the activity resulting from the forum is foreseen to require the constitution of a project team, the NAA staff are identified (depending on the number of airlines and the amount of analysis/preparation resulting from the forum)

2. The project manager

Care in the choice of the project manager need to be taken:

- Such a safety promotion initiative induces workload for the project manager, especially at the start and also in maintaining the effectiveness of the meetings. Based on experience of currently running FDM forums, it is recommended to allocate sufficient resources. The working time needed to run this project will depend on the forum size and activity and on the administrative and technical support by other NAA functions.
- As safety experts (flight safety officers, FDM programme managers) are expected to represent operators in the national FDM forum, the project manager needs to have a technical professional background (professional pilot, aviation engineer, researcher, etc.) and he/she should have a good understanding of FDM and of safety risk management. If needed, he/she should undergo training³ on FDM or on safety risk management before starting the project.
- As the trust of operators is essential to a successful national FDM forum, the project manager position with regards to NAA oversight function must be clearly defined in order to guarantee that information shared will not be used against them. The EAFDM recommends that:
 - the project manager does not belong to the oversight function of the NAA, or
 - for this particular project, the project manager only responds to the top management of the NAA, or
 - for this particular project, a statement by the top management (circular, decision, etc.) states that the project manager is not required to report

³ Information on trainings on Flight Data Monitoring can be provided when contacting the EAFDM at EAFDM@easa.europa.eu.

findings made during forum activities to the NAA oversight function, except when a serious safety threat is identified (see Annex 1). This statement should not prevent the project manager from reporting on the general progress of the national FDM forum, nor from sharing safety teachings with other NAA functions, however the information passed to the outside of the forum should not allow identification of an operator.

3. Infrastructure and equipment

The EAFDM recommends checking early for the availability of adequate meeting facilities, even if nothing prevents the meeting from being hosted by an operator.

As the participants are likely to have busy agenda and travel expenses should be as low as possible available remote communication means could complement face-to-face meetings. These could be:

- Virtual meeting tools, including conference call numbers or tools to display documents remotely, when the number of participants is small (less than 15).
- A secure, confidential workspace accessible through the internet, reserved for the participants to the forum, for sharing documents etc.

Access to specific software such as flight data analysis software is not necessary to a successful national FDM forum. In addition maintaining a flight data analysis capability requires regular practice, which implies more human resources.

4. The participants

It is advised to carefully assess who will be eligible to take part to the national FDM forum before sending a call for participation.

There are ways of opening this initiative to a variety of organisations while maintaining the level of confidence necessary to maintain trust.

These could be for instance:

- Restrict participation initially to aircraft operators and have them decide what other type of organisation they would let in;
- Submit the admission of any new member to the approval of the group.

In any case, all participants should sign a confidentiality agreement before being entitled to attend meetings and receive copies of forum documents.

Aircraft operators

Primarily these should be national operators required to have in place a FDM programme according to EU OPS 1.037 (operators of aeroplanes operated for commercial air transport and with a maximum certificated take-off mass (MCTOM) in excess of 27000 kg).

National commercial air transport operators of aeroplanes with a MCTOM in excess of 5700 kg should be invited too. Indeed, the obligation to maintain an accident prevention and flight

safety programme (see EU OPS 1.037) applies to all aeroplanes operated for commercial air transport, regardless of their weight, and all aeroplanes of a MCTOM over 5700 kg must be equipped with a flight data recorder (refer to EU OPS 1.715, 1.720 and 1.725) and therefore could deliver data to a FDM programme.

National commercial air transport operators of helicopters with a MCTOM in excess of 3175 kg should also be invited, for the same reasons (see JAR OPS 3.037, 3.715 and 3.720).

Any national aircraft operator voluntarily running a FDM programme should be invited, whatever the category of aircraft it is operating.

Flight Crew Associations

It is usually recommended that flight crew representatives take part to the definition and implementation of an operator's FDM programme. In the same manner, flight crew associations should be invited to appoint a representative to the forum.

NAA staff

Other NAA staff may assist the forum manager, for instance if the workload induced by the forum activity is high or if a particular expertise is needed for a forum activity. For example, the participation of experts in the field of aircraft performance, flight crew training, airworthiness, ATM procedures, weather would be beneficial in certain discussions.

The participation of a staff member of the NAA team responsible for the SSP is also recommended, as the forum is expected to contribute to the SSP.

Air operation inspectors and other NAA staff involved in the oversight of air operations may have a conflict of interest between their duties and the confidentiality agreement under which the national FDM forum takes place. In order to prevent this conflict of interest, this confidentiality agreement should also be submitted to their management for approval, and if necessary to NAA top management.

It is advised that confidentiality agreements running the FDM forum be endorsed at the highest appropriate level of the NAA, in order to reinforce their values, to prevent any conflict with professional obligations for the NAA staff taking part in the forum, and to display to participating operators a commitment by NAA upper management to respect these agreements.

Other organisations

Other organisations may benefit from the lessons learnt exchanged in a national FDM forum to improve their knowledge of some safety issues and/or their safety. These could be:

- Airport operators and Air Navigation Service Providers (ANSPs): many operational safety issues have implications in the service provided by airport operators and ANSPs;
- Maintenance organisations servicing aircraft of operators participating to the forum;
- Military organisations, as they share the airspace (and some airports) with commercial air transport operators;
- Safety investigation authorities, who may have a genuine interest in better understanding day-to-day operational safety issues.

- Aircraft operators for which the State of the operator is not represented by the NAA, but who have significant operations or bases in the State represented by the NAA.

5. Interface with other safety promotion initiatives

Questions may arise on how a national FDM forum would interact with other safety promotion initiatives, either run by the industry or by the NAA.

A national FDM forum could be run as part of a larger safety initiative, as far as:

1. this is compatible with the general concepts of the national FDM forum defined in I.2 (FDM promotion toward operators, and better monitoring of national safety objectives by the NAA),
2. control is kept on who is eligible to take part to the national FDM forum (see II.4),
3. control is kept on the confidentiality of discussions and data shared inside the national FDM forum, and
4. control is kept over the work programme of the national FDM forum.

There may also be some benefit to exchange information between the national FDM forum and other safety initiatives. Existing safety initiatives should be reviewed to check for possible cooperation/coordination with the national FDM forum. A few FDM promotion initiatives are mentioned in Annex 4.

6. Terms of reference

Drafting terms of reference is essential for the launch of a national FDM forum. Indeed, this exercise requires defining the objectives and the fundamental principles that should govern it.

Draft terms of reference should cover at least the following topics:

- The fundamental objectives of the national FDM forum
- What organisations are entitled to take part
- The main topics envisioned to be addressed
- The internal rules regarding confidentiality and protection of information (Confidentiality rule, what information is retained/ not retained, etc.)
- How the forum is organised (Who chairs? Who convenes the meetings?)
- How issues are added to the agenda
- Logistical and financial aspects (Place of meetings, expected frequency of meetings,).

An example of draft terms of reference is provided in Annex 2.

7. Work programme

It is advised not only to identify the topics which could be addressed in the framework of the national FDM forum, but also to explore them in order to make concrete proposals at the start of the project and be able to explain what the intended benefits are and how you plan to reach your objectives.

Hence the drafting of a work programme is recommended. In order to make it more relevant, a few aircraft operators could be involved in the drafting of this work programme.

An example of a work programme is provided in Annex 3.

III. Launch of the project

1. The call for participation

Depending on the context, the call for participation to the national FDM forum may be more or less formalized. However, it is advised that the call for participation is sent by the NAA top management and include a statement on the application of safety culture and on confidentiality principles inside the forum.

As the national FDM forum is a voluntary safety initiative, operators need to be convinced of the benefits of taking part, therefore it is recommended to enclose to the invitation message documents detailing the project and its objectives.

For instance, draft terms of reference and a draft work programme would give the recipient a good idea of what is aimed through such an initiative. In addition, draft agreements of confidentiality, covering the information exchanged during meetings and the documents and data shared with the forum, would address the confidence issue.

2. Keys to a successful first meeting

Set the expectations

The expectations should be established as soon as possible. They should be reasonable for the industry or the NAA in terms of scale of effort required and likelihood of benefit for operators and the NAA.

- Make clear to operators what benefit they can expect from participation, for instance:
 - Sharing of technical experience between operators
 - Safety information and statistics coming from other sources, that can be used to improve their FDM programmes (i.e. analyses on mandatory occurrence reporting, etc.)
 - First-hand information on NAA activity in the FDM area (regulatory, oversight, research, statistics)
 - Possibility to advise on NAA activity in the FDM area
- Ask for the expectations of operators. Operators logically expect some safety “return-on-investment” on the time and resources they give for such an initiative. Therefore, operators’ expectations shall be taken into account in defining the forum objective and the work programme.
- Make clear what workload and constraints the participation implies. These should remain reasonable, as the forum is a voluntary safety initiative. You should address as a minimum:
 - The number of face-to-face meetings envisioned per year and their location
 - Other commitments (such as teleconferences)
 - Who pays for what (meeting room, travel expenses, etc.)

Agree on the terms of reference

Terms of reference are essential to frame the activity of a working group. An example of terms of reference is provided in Annex 2.

The terms of reference should include the confidentiality agreement, or at least its main principles.

- Review the draft terms of reference and, and if possible, have the forum adopt them.

Establish trust

It is essential for the success of the national FDM forum to make clear that it is a genuine safety promotion initiative.

In addition, all participants should be reminded the confidentiality agreement, including confidentiality during and between meetings:

- Explain the principles of the proposed confidentiality agreement and review it carefully with participants.
- If possible, have participants adopt and sign the confidentiality agreement.

IV. A typical FDM forum meeting

1. Meeting planning

The meeting should be long enough to make the presentations and reserve time for group discussions and enough time should be given to operators to raise FDM related issues of concern/interest. Depending on the number of participants a meeting usually lasts between 4 hours and a whole day.

The invitations should be sent well in advance with couple date / time alternatives to choose. It is good practice to send the date of the next meeting with the current meeting agenda. This may be discussed at the meeting if there are major conflicts in schedule.

The agenda should be sent to the participants beforehand with request to confirm whether they are giving a presentation.

Opportunity should be given to participants to bring additional topics. Topics that are in the scope of the forum and of interest for operators should be given priority.

2. Essential milestones of a meeting

It is recommended that a meeting contains at least the following elements:

- Debriefing of operators on their recent developments in FDM. This may constitute a major part of the meeting agenda.
- Debriefing of NAA on the trends of top national operational safety issues, and the developments of the SSP
- Debriefing of NAA on the trends of FDM events summaries provided by operators
 - This debriefing should relate to the analysis of aggregates of FDM events summaries and should not allow identifying operators, unless with the explicit consent of involved operators
 - No operator should have access to the FDM event summaries provided by other operators
- Debriefing of NAA on any regulatory change that may have an impact on FDM programmes

3. Example of a meeting agenda

It is important to make a good agenda and to get every participant to prepare a presentation / some information to share in the meeting beforehand to get them involved.

An example of an agenda:

1. Opening of the meeting.
2. Introduction of the participants.
3. Signing the confidentiality agreement.
4. Checking the minutes or the summary of the last meeting.

5. Debriefing of NAA of a few significant operational safety issues revealed by recently published accident investigation reports, safety studies, etc. (possibly followed by a discussion on how to monitor this issue in the FDM data).
6. FDM issues / operators:
 - a. Every operator gives a presentation about (for example):
 - i. Current news and situation with FDM in the company;
 - ii. List of current "Safety interest"- themes in the company ("Operator's top 5");
 - iii. Changes / actions done in the company based on FDM-analyses results after the last meeting;
 - iv. FDM-data / analyses done after the last meeting (few topics can be common for all the operators and agreed beforehand or the topics can be freely chosen by the operators).
7. Debriefing of NAA on the trends of FDM events summaries provided by operators.
8. Discussion on one specific topic (to be announced and prepared well before the meeting).
9. NAA information on regulation developments, bring to discussion draft regulations.
10. Presentation on new technologies and use, upcoming conferences.
11. Date of the next meeting.
12. Closing the meeting.

4. Possible topics of discussion

Discussions, tutorials and demonstrations of analytical methods, process development and regulatory environment, should be combined with the exchange of safety issues. This will form the basis of an evolving, productive activity for all participants.

Experience has shown that a wide range of topics can usefully be discussed at a FDM forum. Some suggestions include:

Issues

- Aggregated FDM data overviews
- Top safety issues based on FDM
- Top safety issues based on mandatory occurrence reporting in relation to FDM
- New safety issues revealed by accident investigation reports
- Specific case studies - for example resulting in or from SOP changes
- Comparison between different or same aircraft types, fleet/x-fleet comparison
- Underlying Human Factors aspects of FDM
- Technical issues and solutions with FDM data capture and new technologies

Analytical Methods

- Flight data validation, reliability and interpretation
- Event severity classification

- Common sets of FDM events and standardization of trigger values
- Statistical techniques

Process Development

- FDM integration within a Safety Management System
- The role of flight crew representatives,
- The benefits of FDM - both safety and economic
- Operator's best practices

Regulatory Environment

- European FDM developments – regulations and advisory material
- National developments – oversight methods
- Ensuring a functioning safety culture

V. Confidentiality and communication to the outside

The objective of the forum is safety promotion, and it is important that the forum manager puts in place the framework needed for the development of a safety culture inside the forum. Ensuring the confidentiality of discussions and documents is essential to the development of trust.

A good way to address is to define a **confidentiality agreement**. This confidentiality agreement should:

- state the exceptional circumstances under which it would not apply, such as an immediate and serious threat for safety (see Annex 1); and
- contain a clear notice that signing this agreement is a pre-condition to taking part to the forum meetings and teleconferences, and to having access to the forum documents and data .

1. Confidentiality of discussions taking place during meetings

One example of a well-used and respected confidentiality agreement is the Chatham House Rule of Confidentiality. The agreement originated in June 1927 at the Royal Institute of International Affairs (Chatham House). It is now used internationally, and the basic principle is that:

“Participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant may be revealed; nor may it be mentioned that the information was received at this meeting. Where information is required to be passed outside the meeting this must be agreed, in advance, by a majority of those present and with the agreement of the information provider.”

2. Handling and protection of forum documents

In addition to the agreement on the confidentiality of discussions, an agreement addressing the confidentiality of documents and data exchanged during or between meetings should be prepared.

This agreement should address at least the following questions:

- What forum members are entitled to do with the documents shared with the national FDM forum?
- Where are the documents and data shared with the forum physically stored, and who has access to this repository?
- What legal protection is offered to the forum documents and data against third party request (such as Freedom-of-Information-Act type request)?
- What are the rules applicable to meeting minutes?

An example of such an agreement is provided in Annex 1.

3. In practice

It is recommended that a draft of such an agreement be submitted to the NAA top management for approval prior to first meeting of the forum, since NAA staff taking part needs to be freed of the conflict of interest between their professional duties and the compliance with this agreement.

It is recommended that such a confidentiality agreement be:

- Either acknowledged by all participants at each meeting by introducing a sign-in list at the start of each meeting that is headed with the agreement.
- or only acknowledged by new participants to a meeting, in which case only they will be requested to sign the sign-in list. In this case the meeting moderator should at the beginning of each meeting or each teleconference, remind participants of this agreement.

4. Relationship with NAA oversight functions

NAA flight operations inspectors have to be informed of the FDM forum objectives in case someone will get in contact with them concerning this topic. NAA flight operation inspectors may get conclusions of the forum that are of general interest for their mission, but these conclusions should be de-identified.

Note:

In the (rare) case where there is a serious safety threat, the forum manager may have to inform the NAA oversight function or the competent safety investigation authority (see Annex 1). This case should be addressed in the confidentiality agreements of the national FDM forum.

Also it should be made clear that taking part to the forum in no way removes the obligation of an operator's responsibility with regards to operational safety (e.g. reporting occurrences through the normal channels such as Mandatory Occurrence Reports).

VI. Lessons learnt from existing FDM Forums

This section gives an insight into practical aspects of running a national FDM forum and how various issues have been addressed.

1. Participation in the forum

- Attendance and active participation of all members is sometimes difficult to ensure. This may be due to either the fact that topics proposed for discussion are not felt relevant for some operators. All members should be asked to give at least a summary of their operations since the last meeting. Questions from other members can often elicit useful information. In addition, the project manager should try and involve members in the preparation of the meeting agenda
- The choice of a meeting date is essential for a high attendance. Participants should be consulted for their availability and the meeting date should be elected early enough (usually more than three months in advance for a face-to-face meeting)
- It is advised to offer to members the possibility of electing a deputy to allow for more flexibility and a better follow-up. However the choice of the deputy should be substantiated (person knowledgeable on FDM) and permanent (do not accept deputies changing at each meeting).
- When the turn-around of the flight safety officer position or of the FDM programme manager position is high at an operator, the follow-up by this operator is more difficult. When an operator delegate is leaving the forum because of a change of position, it is advised to identify as soon as possible his/her successor for a smooth passing over of representation.
- It is important to make the best use of resources within NAA and participants. The difficulty of this is not to be underestimated.
- In the case of a State where only a very small number of operators are performing FDM, a partnership with the NAA of another State should be investigated to get a FDM forum of a larger size. Joining an already existing FDM forum managed by another NAA could be another solution.

2. Ensuring all participants benefit from the meetings

- The variation of knowledge between the participants/companies has to be taken into account and the agenda should contain elements that satisfy the expectations of participants.
 - A survey may help in better assessing the knowledge of each participant and adapt the topics accordingly.
 - For operators which are new in the FDM field, specific support by the project manager may be beneficial. For instance, a dedicated session could be organised that includes presenting the applicable requirements and how they are checked by NAA oversight functions, advising about useful guidance material and training, advising on practical questions.
- Some Operators may have contracted the processing of flight data to an external company (**FDM service provider**) and they may wish to bring representatives of this company to the meeting. However, the responsibility of analysing FDM data and integrating them into their SMS lies with the operator and this requires the Operator's representative to be sufficiently knowledgeable to present their FDM views to the Forum. There are cases where there exists a proven symbiotic arrangement with between Operator and service provider and it may be appropriate that both parties may attend the meetings. An example is when, as well as a full analysis and interpretation service, the third party is providing confidential debriefs and feedback to crews on behalf of the Operator.
- In general the project manager should not accept FDM service providers as permanent forum members. On occasions, a FDM service provider may be admitted to take part in a meeting, for instance:
 - If the FDM service provider is performing the FDM data replay and analysis for an operator, then a delegate of the FDM service provider may be occasionally needed to support results presented by the operator at the forum meetings: or
 - If the FDM service provider is invited as a technical expert to address a specific topic of the meeting agenda.
- On occasion, reaching consensus and making democratic decisions with a large group has been difficult. As a moderator, the project manager can be encouraging and persuasive but he/she has to abide by the meeting view.

- Differences in opinion or in an operator's operation mean that a standardised approach can be hard to achieve, thus making it difficult for the project manager to gather industry intelligence that can be used for improving aviation safety. For instance, many business operators don't have scheduled operations, and this makes their contribution to reporting on standardised FDM events challenging, as their data cannot be easily compared nor de-identified. However, the general principles underlying the safe operation of the operator and the foundations of their SMS should be similar.

3. Collecting FDM event summaries to build statistics

- It would be useful for the forum to get operators monitoring a set of standardised FDM events, and report on them through FDM event summaries. Such summaries should be aggregated into forum statistics, for the benefit of all participants.
- Producing FDM event summaries could require additional workload for operators. However, it is envisaged that simple summaries such as those intended here would be within the capability of any effective FDM analysis system and require minimal effort. This is essential as FDM event summaries would be collected on a voluntary basis. The events should be carefully chosen with logical justification and relevance to operators. The safety priorities of operators should be ascertained when making the selection, especially to demonstrate the benefits of such a programme. The selection could then be expanded to include standardised FDM events reflecting wider issues that may not be the top safety objective of a particular operator.
- In addition, meaningful analysis/aggregation of data can be challenging if the data are submitted in different formats and with varying degrees of completeness. A trade-off has to be found between operators' safety priorities and the interest of standardising the FDM events for safety analysis. The data format, including wherever possible standard FDM event definitions, should be agreed before any collection of data starts. This would enable the delivery of meaningful statistics from the FDM event summaries, which would allow each operator to compare their safety performance with an aggregated view of the rest of the group.
- In any case FDM events summaries should be de-identified to the extent possible before sharing inside the national FDM forum. Participants should guarantee that the FDM event summaries will be kept confidential.

4. FDM promotion

- In addition to promoting more effective use of FDM data the forum may also be used to encourage the take-up of FDM on aircraft that fall outside current OPS requirements , for example aeroplanes with a certificated take-off mass below 27000 kg, aeroplanes not operated for commercial air transport and helicopters. Such operators may be encouraged to consider voluntary FDM if observers are invited to attend FDM forum meetings.
- Agreement on the dissemination of lessons learnt beyond the group can be difficult but this may be eased by careful preparation of the text to highlight the safety issue without too much identification. Even so it is sometimes difficult to de-identify contributors as particulars such as the route or aircraft type can make certain operators readily identifiable. Another possible route is to encourage the operator(s) concerned to submit a Mandatory Report (s) and inform Industry through the existing reliable processes already in place. The important point is that significant safety issues raised through any source must be promulgated to those affected.

Annex 1 – Example of confidentiality agreement

This Annex displays examples of confidentiality agreement for a national FDM forum. It will need to be adapted to the national context. It may need to be written in the NAA working language.

1. Example of agreement

“We the undersigned agree with the following document confidentiality rules:

- 1. Participants to meetings and teleconferences of the FDM forum are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant may be revealed; nor may it be mentioned that the information was received at this meeting.*
- 2. Where information communicated at a meeting or teleconference of the FDM forum is required to be passed outside the forum this must be agreed, in advance, by a majority of those present and with the agreement of the information provider.*
- 3. The documents and data shared inside the FDM forum are stored [by/at ... specify where the data or documents are retained physically, and who has access to them].*

[Indicate if the documents are protected from third party request, such as Freedom of Information Act type request.].

- 4. Where a document or data are required to be passed outside the FDM forum this must be agreed, in advance, with the agreement of the document or data authors and of the providers of the information recorded by the document or the data.*
- 5. Exceptions:*
 - a. In the case where a threat to aviation safety would be identified which is serious but does not fall into category 5.b or 5.c, the FDM forum manager should request that the involved participants take corrective action to address this safety threat and report to him/her. In the absence of an appropriate and timely response by involved participants, the FDM forum manager would have to pass over the information needed for addressing this safety threat to the responsible NAA staff. Examples of such safety threats are:*
 - i. An occurrence, the severity of which should be considered “Major” according to ICAO Document 9859, but which is not qualified as a serious incident according to Regulation (EU) 996/2010.*
 - ii. A non-compliance with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules, with the organisation’s procedures and manuals or with the terms of an approval which could lower safety (corresponding to a “level 2 finding” in air operation rules).*

- b. *In the exceptional case of an occurrence in flight which is qualified as an accident or a serious incident, the competent safety investigation authority would need to be informed without delay, in accordance with Regulation (EU) 996/2010. In this case, the rules of the safety investigation would prevail.*
 - c. *In the exceptional case where a significant non-compliance would be detected with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules, with the organisation's procedures and manuals or with the terms of an approval which lowers safety (corresponding to a "level 1 finding" in air operation rules), the FDM forum manager would be responsible for passing over the information needed for addressing this safety threat to the responsible NAA staff.*
 - d. *In any case, the FDM forum manager would transmit only the information relevant to address the safety threat, only to those responsible for addressing it.*
6. *Participation to meetings and conference calls as well as reception of internal documents are preconditioned by the signature of this confidentiality agreement."*

2. Note on the exceptions to confidentiality agreements

The exceptions to the general confidentiality rules refer to the cases where a serious safety threat arises and regulation requires acting without delay. The severity of safety threat is not always easy to assess, however the EAFDM would like to propose the following elements to help in decision-making:

Safety threats arising from one or several occurrences in flight

Regulation (EU) 996/2010 on the investigation and prevention of accidents and incidents in civil aviation requires informing without delay the competent safety investigation authority in the case of an **accident or a serious incident**:

„Article 9

Obligation to notify accidents and serious incidents

- 1. *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."*

Table 1 relates the occurrence severity classification proposed by ICAO document 9859, the provisions of Regulation 996/2010 and the framework of a national FDM forum.

It comes out that:

- Catastrophic and hazardous occurrences correspond to accidents and serious incidents and must be notified without delay to the competent safety investigation authority if not done already. The rules of the safety investigation prevail over any confidentiality agreement.
- A major occurrence:

- may fall in to the definition of a serious incident, in which case it must be notified without delay to the competent safety investigation authority; or
- may not fall in to the definition of a serious incident, in which case its inherent risk should be assessed. However this corrective action is usually less urgent and could be monitored by the forum manager without involving immediately the NAA oversight function.

ICAO Document 9859 provides guidance on the safety risk assessment of occurrences. The two dimensions of risk are, according to ICAO Document 9859:

- its **severity** (“possible consequences of an unsafe event or condition, taking as reference the worst foreseeable situation”), ranging from “negligible” to “catastrophic”;
- its **probability** (“likelihood that an unsafe event or condition might occur”), ranging from “frequent” to “extremely improbable”.

ICAO Annex 19 is expected to provide more information on safety risk management..

Severity of occurrence	Meaning	Applicability to confidentiality inside a FDM forum
Catastrophic	<ul style="list-style-type: none"> Equipment destroyed Multiple deaths 	A catastrophic occurrence is an accident and is subject to a safety investigation as defined by Regulation (EC) 996/2010. The rules of the safety investigation prevail (Exception 5.b in the example of agreement).
Hazardous	<ul style="list-style-type: none"> A large reduction in safety margins, physical distress or a workload such that the operators cannot be relied upon to perform their tasks accurately or completely Serious injury Major equipment damage 	A hazardous occurrence usually falls in to the definitions of an accident or a serious incident according to Regulation (EC) 996/2010 and must be notified without delay to the competent safety investigation authority of the State of Occurrence thereof. The rules of the safety investigation prevail (Exception 5.b in the example of agreement).
Major	<ul style="list-style-type: none"> A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of increase in workload, or as a result of conditions impairing their efficiency Serious incident Injury to persons 	<p>A major occurrence that falls in to the definition of a serious incident according to Regulation (EC) 996/2010 must be notified without delay to the competent safety investigation authority of the State of Occurrence thereof.</p> <p>A major occurrence that does not fall in to the definition of a serious incident according to Regulation (EC) 996/2010 should be considered a serious threat. However, there is no need to pass the information to outside the FDM forum if the FDM project manager can monitor the corrective actions (Exception 5.a in the example of agreement).</p>
Minor	<ul style="list-style-type: none"> Nuisance Operating limitations Use of emergency procedures Minor incident 	A minor occurrence should not be considered a serious threat. It should not be communicated to outside of the forum.
Negligible	<ul style="list-style-type: none"> Little consequences 	A negligible occurrence should not be considered a serious threat. It should not be communicated to outside of the forum.

Table 1: Safety risk severity classification and applicability to confidentiality inside a national FDM forum

Safety threat corresponding to a non-compliance with basic obligations

The air operation rules in preparation (EASA Opinion 04/2011) contain general provisions with regards to findings of significant non-compliance with basic obligations of an organisation.

It appears that level 1 findings require immediate action by the NAA. A level 1 finding is of such significance that it should be an exception to confidentiality rules of a national FDM forum.

A level 2 finding could, among certain agreed conditions, not be immediately communicated to NAA staff responsible for the oversight, and be temporarily monitored by the FDM forum manager, to whom the operator should report. If appropriate corrective action is taken by the operator, then it is preferable that the level 2 finding remains under the confidentiality agreement of the national FDM forum.

“ARO.GEN.350 Findings and corrective actions — organisations

(a) The competent authority for oversight (...) shall have a system to analyse findings for their safety significance as part of the safety plan.

*(b) **A level 1 finding** shall be issued by the competent authority when any significant noncompliance is detected with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules, with the organisation’s procedures and manuals or with the terms of an approval or certificate or with the content of a declaration which lowers safety or seriously hazards flight safety.*

The level 1 findings shall include:

(1) failure to give the competent authority access to the organisation's facilities as defined in ORO.GEN.140 during normal operating hours and after two written requests;

(2) obtaining or maintaining the validity of the organisation certificate by falsification of submitted documentary evidence;

(3) evidence of malpractice or fraudulent use of the organisation certificate; and

(4) the lack of an accountable manager.

*(c) **A level 2 finding** shall be issued by the competent authority when any non-compliance is detected with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules, with the organisation’s procedures and manuals or with the terms of an approval or certificate or with the content of a declaration which could lower safety or hazard flight safety.*

(d) When a finding is detected during oversight or by any other means, the competent authority shall, without prejudice to any additional action required by Regulation (EC) No 216/2008 and its Implementing Rules, communicate the finding to the organisation in writing and request corrective action (...)

*(1) **In the case of level 1 findings** the competent authority shall take immediate and appropriate action to prohibit or limit activities, and if appropriate, it shall take action to revoke the certificate or specific approval or to limit or suspend it in whole or in part, depending upon the extent of the level 1 finding, until successful corrective action has been taken by the organisation.*

*(2) **In the case of level 2 findings**, the competent authority shall:*

(i) grant the organisation a corrective action implementation period appropriate to the nature of the finding that in any case initially shall not be more than 3 months. At the end of this period, and subject to the nature of the finding, the competent authority may extend the 3 month period subject to a satisfactory corrective action plan agreed by the competent authority; and

(ii) assess the corrective action and implementation plan proposed by the organisation and, if the assessment concludes that they are sufficient to address the noncompliance(s), accept these.

(3) Where an organisation fails to submit an acceptable corrective action plan, or to perform the corrective action within the time period accepted or extended by the competent authority, the finding shall be raised to a level 1 finding and action taken as laid down in (d)(1).

....”

Annex 2 – example of terms of reference

This Annex displays an example of terms of reference for a national FDM forum. It will need to be adapted to the national context. It may need to be written in the NAA working language.

Terms of Reference of the national FDM forum of [State Name]

Objectives and scope

1.1 The national FDM forum is a partnership between [NAA name] and aircraft operators. Its fundamental objectives are:

- a. to foster an open dialogue between [NAA name] and aircraft operators on FDM implementation that takes place in the framework of safety culture,
- b. to promote the operational safety benefits of FDM through open discussions and the sharing of experience between aircraft operators
- c. to contribute to a better overview of air transport operational safety in [State Name].

1.2 The national FDM forum is a voluntary safety initiative supported by [Name of the department or function in the NAA to which the forum manager belongs.]

Composition

2.1 The members of the national FDM forum shall come from the following aviation components:

1. [NAA name]
2. Aircraft operators [Mention here what type of aircraft operators: aeroplane, helicopters, only those required to have a FDM programme (MCTOM over 27000 kg) or not, etc.]
3. [Mention other stakeholders if needed and approved by aircraft operators]

2.2 Experts and observers external to the group may be occasionally invited to join a meeting. In that case, the members must be informed in advance.

Chairmanship

3.1 The national FDM forum is managed by a representative of [NAA name]. [He/she could be assisted by an aircraft operator]

Tasks

4.1 The national FDM forum determines its activity programme taking into consideration the operational safety issues identified in the State Safety Plan and other topics of interest for its members.

Confidentiality

5.1 All participants to the national FDM forum, be they Members or not, commit themselves to respect the following confidentiality rules:

5.1.1 Participants to meetings and teleconferences are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant may be revealed; nor may it be mentioned that the information was received at this meeting. Where information is required to be passed outside the meeting this must be agreed, in advance, by a majority of those present and with the agreement of the information provider.

5.1.2 Where a document or data are required to be passed outside the meeting this must be agreed, in advance, by the document or data authors and by the providers of the information recorded by the document or the data.

5.1.3 Exceptions:

1. In the exceptional case of an occurrence in flight which is qualified as an accident or a serious incident, the FDM forum manager would have to inform without delay the competent safety investigation authority, in accordance with Regulation (EU) 996/2010. In this case, the confidentiality rules of the safety investigation would prevail.
2. In the exceptional case where a significant non-compliance would be detected with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules, with the organisation's procedures and manuals or with the terms of an approval or certificate which lowers safety or seriously hazards flight safety (corresponding to a level 1 finding in air operation rules), the FDM forum manager would be responsible for passing over the information needed for addressing this safety threat to the responsible NAA staff.
3. In the case where a threat to aviation safety would be identified which is serious but does not fall into category a. or b., the FDM forum manager should request that the involved participants take corrective action to address this safety threat and report to him/her. In the absence of an appropriate and timely response by involved participants, the FDM forum manager would have to pass over the information needed for addressing this safety threat to the responsible NAA staff. In any case, the FDM forum manager would transmit only the information relevant to address the safety threat, only to those responsible for addressing it.

5.1.4 Participation to meetings and conference calls as well as reception of internal documents are preconditioned by the signature of corresponding confidentiality agreements.

5.2 Meeting minutes

- a. Meeting minutes should be produced for a better follow-up of discussions and actions; they are reserved to members of the forum.
- b. Meeting minutes may indicate the list of participants/affiliates. Meeting minutes may also contain an indication on the identity or affiliation of any participant expressing an opinion or making a presentation unless the participant explicitly requests de-identification.

5.3 The forum manager may produce summaries for the outside. A meeting summary may contain general information on the meeting attendance and on the topics addressed.

5.4 The forum manager may ask participating operators to provide, on a regular basis, reports on a small number of standardised FDM events.

- These FDM event reports shall be used for monitoring main operational risks identified by the State Safety Plan and not for performing oversight functions.
- FDM event reports, with the agreement of the members, may be used for analysis/research tasks formally approved by the members.
- No forum member shall have access to the reports of any other member.
- Provided FDM events reports are made available by a few operators, the forum manager may aggregate them into a “national FDM event report”. This report shall not allow identification of the individual results provided by any participating operator. The properly de-identified national FDM event report may be presented to the forum participants and used by the NAA for its national safety indicators.

Logistics and organisation of the work

6.1 A minimum of one face-to-face meeting per year is envisioned. The meetings shall take place in [Recommended: a location easy to access].

6.2 [NAA name] will offer, to the extent possible, to host meetings (Meetings may be hosted by a member organisation if desired). Travel and accommodation costs are supported by the participants.

6.3 The group coordination between meetings is conducted through distant communication means (phone, dedicated extranet workspace, emails, etc.).

6.4 Actions and minutes should be distributed to members between meetings. Requests for corrections/clarification should be provided prior to the subsequent meeting.

These terms of reference have been agreed upon and signed by members of the forum (hereafter mentioned):

Member name and delegation	Date and signature
XYZ	
XYZ	
XYZ	
XYZ	

Annex 3 – Example of initial work programme

This Annex presents an example of an initial work programme for a national FDM forum. This will need to be adapted, taking into account the NAA safety priorities and operators' expectations. Safety objectives set by the European Aviation Safety Plan and recommendations of the EAFDM should also be taken into account. The forum manager will be responsible for drafting and updating the forum programme.

- Make an inventory of problems encountered by operators in the implementation of their FDM programmes. Identify practical solutions for each problem.
- Make an inventory of measures taken by operators to ensure that a safety culture applies to their FDM programmes. Identify practical solutions to issues raised.
- Establish a comparative between the operational safety issues monitored by the FDM programmes of forum members. Identify those safety issues which are top priority for a majority of operators or for the NAA, called below “common FDM priorities”.
- Make an inventory of techniques and methods used by operators to monitor the common FDM priorities.
- Define standard FDM events relevant for the monitoring of common FDM priorities, which could be programmed by operators for producing FDM event summaries.

Annex 4: Regulation and guidance related to Flight data monitoring and safety management

1. International regulation and guidance

FDM requirements on aeroplanes operators

ICAO Annex 6 to the Convention on International Civil Aviation, Operation of aircraft Part I: International Commercial Air Transport – Aeroplanes (ninth edition July 2010):

“3.3.5 Recommendation - *An operator of an aeroplane of a certificated take-off mass in excess of 20 000 kg should establish and maintain a flight data analysis programme as part of its safety management system.*

3.3.6 An operator of an aeroplane of a maximum certificated take-off mass in excess of 27'000 kg shall establish and maintain a flight data analysis programme as part of its safety management system.

Note.— An operator may contract the operation of a flight data analysis programme to another party while retaining overall responsibility for the maintenance of such a programme.

3.3.7 A flight data analysis programme shall be non-punitive and contain adequate safeguards to protect the source(s) of the data.”

FDM requirements on helicopter operators

ICAO Annex 6 to the Convention on International Civil Aviation, Operation of aircraft Part III: International Operations – Helicopters (seventh edition July 2010):

“1.3.5 Recommendation.— *An operator of a helicopter of a certified take-off mass in excess of 7 000 kg or having a passenger seating configuration of more than 9 and fitted with a flight data recorder should establish and maintain a flight data analysis programme as part of its safety management system.*

Note.— An operator may contract the operation of a flight data analysis programme to another party while retaining overall responsibility for the maintenance of such a programme.

1.3.6 A flight data analysis programme shall be non-punitive and contain adequate safeguards to protect the source(s) of the data.”

State Safety Programmes (SSP)

ICAO Annexes

ICAO Annexes 1, 6, 8, 11, 13 and 14 include the requirement for States to establish a State Safety Programme (SSP), in order to achieve an acceptable level of safety in civil aviation. A SSP is a management system for the management of safety by the State.

ICAO Doc 9859: Safety Management Manual (SMM) (Second edition 2009):

ICAO Doc 9859, Safety Management Manual (SMM) provides guidance for the development and implementation of a SSP in accordance with the international standards and recommended practices (SARPs). In the appendices of the document are different practical examples on how to link a safety management system with the state safety programme of a NAA.

Additional guidance

CAA UK CAP 739: Flight Data Monitoring, A guide to good practice (AUG-2003)

This document outlines good practice relating to first establishing and then obtaining worthwhile safety benefits from an operator's Flight Data Monitoring (FDM) programme.

U.S. Department of Transportation, FAA – Advisory Circular No: 120-82:

This advisory circular (AC) provides guidance on developing, implementing, and operating a Flight Operational Quality Assurance (FOQA) program that is acceptable to the Federal Aviation Administration (FAA).

2. The current European regulatory context

Air operation rules

According to Commission Regulation 859/2008 (EU OPS), paragraph OPS 1.037:

“(a) An operator shall establish and maintain an accident prevention and flight safety programme, which may be integrated with the quality system, including:

[...]

4. a flight data monitoring programme for those aeroplanes in excess of 27 000 kg MCTOM. Flight data monitoring (FDM) is the pro-active use of digital flight data from routine operations to improve aviation safety. The flight data monitoring programme shall be non-punitive and contain adequate safeguards to protect the source(s) of the data;”

Related guidance can be found in JAA Temporary Guidance Leaflet 44 (TGL 44), ACJ OPS 1.037(a)(4)⁴.

⁴ It contains guidance for aircraft operators on:

- Use of FDM information
- Flight Data Monitoring Analysis Techniques
- Flight Data Monitoring Analysis, Assessment and Process Control Tools
- Education and Publication
- Accident and incident data requirements
- Company occurrence reporting scheme
- Data recovery strategy
- Data retention strategy
- Data Access and Security policy
- Procedure Documentation
- Airborne systems and equipment

The provisions pertaining to flight data monitoring in EU OPS and TGL 44 have been transposed into the draft European air operation Regulation (EASA Opinion 04/2011), in Part ORO, paragraph ORO.AOC.130 Flight data monitoring — aeroplanes.

European Aviation Safety Plan

The sharing of roles between the European Union and the Member States makes it impossible for the Member States to alone take full responsibility for an SSP. There is a need for a European Aviation Safety Programme to complement what is done by the Member States which encompasses the powers transferred to the European Union.

The proposed approach for European aviation safety is based on three elements:

1. A set of policies and objectives from political authorities (*the strategy*)
2. An integrated set of regulations and activities aimed at improving safety (the European Aviation Safety Programme).
3. A high level safety issues assessment and related action plan (the European Aviation Safety Plan).

The Plan proposes actions to address the high level safety issues identified at the European level. It is a rolling 4 years plan which is updated annually.

On the advice of the EAFDM, the following actions were included in the Plan for the period 2012-2015:

“States should set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes with the objectives of:

- Promoting the operational safety benefits of FDM,
- Fostering an open dialogue on FDM implementation that takes place in the framework of just culture,
- Encouraging operators to include in their FDM programmes FDM events relevant for the prevention of RE, MAC, CFIT and LOC-I, or other issues of national concern,
- Agreeing with operators, on a voluntary basis, regular reporting of standardized FDM events related to SSP top priorities.”

3. Initiatives related to the promotion of Flight Data Monitoring

A number of safety initiatives are promoting FDM; a NAA that would like to set up a national FDM forum may want also to establish contact with some of them. The list below is indicative and not exhaustive.

- The **European Aviation coordination group on FDM** (EAFDM) is a voluntary partnership between EASA and NAAs. Participation is normally reserved for NAAs and EASA, but observers may be allowed under certain conditions.
- The **European Operators FDM forum** (EOFDM) is an independent industry-led safety initiative placed under the aegis of the European Commercial Aviation Safety Team (ECAST). The EOFDM is steered by European Operators, but NAAs are entitled to request participation
- The **Global HFDM** is a voluntary safety initiative with a mission to “improve helicopter safety through provision of focus and leadership on issues concerning the manufacture, provision, support and operation of HFDM systems”.