



**EASA**  
European Aviation Safety Agency

# PRACTICAL GUIDE

Management of hazards related to  
new business models of  
commercial  
air transport operators

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# 1. Introduction

Upon the request of the Member States, in its Meeting of 7 October 2014 the Rulemaking Advisory Group (RAG) tasked EASA to assess the developments in the area of the business models used by airlines and to identify hazards and assess related risks. EASA, therefore, set up a working group of 11 NAA representatives to identify hazards and assess risks stemming from the development of business models and to propose possible mitigating measures. The Working Group (WG) delivered a set of recommendations in the form of actions for further analysis, which were included in the European Plan for Aviation Safety (EPAS)<sup>1</sup>.

Two of the EPAS actions (**EPAS Member State Task MST.022 and EPAS Safety Promotion Task SPT.073**) relate to the capability of operators to **capture new hazards within the operator's management system**.

The purpose of this document is to share practical guidance on how operators' management systems may capture specific hazards that could be introduced by **new business models**.

To prepare the guide, EASA established an **Industry Safety Action Group**, which reviewed present and emerging threats that could potentially introduce new hazards. The group studied how the existing framework addresses these hazards and proposed a set of proportionate mitigating measures.

The Industry Safety Action Group took account of the EPAS recommendations stemming from the Working Group on New Business Models, as well as of the work already carried out by operators and National Authorities.

The Action Group, that developed this practical guide, was composed of operator representatives and personnel of operators who have already begun to use their management system to identify and these hazards and manage related risks. Group members were composed of representatives from the following operators: Ryanair, Norwegian Air Shuttle, Aer Lingus, Luxair & a representative from the European Cockpit Association. EASA staff from the Flight Standards Directorate, Air Operations, acted as secretary and provided the necessary support.

One meeting took place in Cologne, at EASA headquarters. Members also participated in several WebEx conferences.

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1 For the latest version of EPAS please see <https://www.easa.europa.eu/easa-and-you/safety-management/safety-management-system/sms-europe>



## 2. Objective

The group assessed how the operator's management system can capture new hazards introduced by the following:

- a) outsourcing of safety critical services,
- b) leasing agreements,
- c) interoperability, where several AOC holders belong to the same parent company or holding,
- d) different employment models within an individual operator,
- e) increased mobility & turnover of pilots.

During 2016 and early 2017, participants shared their methodologies and exchanged data and information. The Group evaluated existing methodologies and developed a common approach on potential mitigating measures and indicators that operators can adopt within their SMS.



## 3. Recommended practices

### 3.1 Outsourcing of safety critical services and wet lease-in agreements

**Outsourcing activities**, including outsourcing of safety-critical activities such as flight planning and Nav-charts, may have advantages, notably when the services rendered by the service provider are of a better quality than if provided in-house. Often this might be the case for medium sized and small operators with limited resources.

The **operator is ultimately responsible also for the outsourced activity**. In some cases, where the operator makes use of an 'off-the-shelf' product, the operator might have little influence on the quality of the outsourced activity, e.g. outsourcing of flight documentation might not be tailored to the operation or such tailoring might be too costly. Depending on the size of the operator and the service provider, the operator might have little leverage to request a change in the services provided.

Operators must be aware that outsourcing may introduce new operational safety risks that should be managed in accordance with ORO.GEN.205 and the related AMC/GM of ORO.GEN.205. In some cases of outsourcing, the operator might not have the in-house knowledge/expertise to exercise sufficient control over the outsourced activity of a non-certified service provider. Therefore, the organisation's management system should include an assessment of the contracted activities.

A **wet lease-in** agreement is a special type of contracted activities, where one "Airline" or aircraft operator (the lessor) provides an aircraft, complete crew/only cockpit crew, maintenance, and insurance (Hull and third party liability) to another airline or aircraft operator (the lessee). This means that part of operation is outsourced to another operator. **Short-term** wet lease-in agreements enable operators to cater for unforeseen needs, whereas **longer-term** wet lease-in agreements are based on business and commercial reasoning allowing the operator to increase their operating capacity. Some operators are also specialised in providing long-term wet leasing operations. While the passenger is not flying with the operator who sold the ticket (the lessee) but with the wet leased-in operator (the lessor) who is flying with its own crew and under its own standard operating procedures (SOPs), the lessee has the overall responsibility to ensure that the flight is conducted safely.

Therefore, especially for **longer term** wet lease-in agreements where the operation of the lessor becomes more integrated into the operation of the lessee, the lessee should aim to obtain integrate safety relevant information on the lessor's management system and include this information into its own management system.

This guide recommends operators to consider the following with regards to outsourcing of safety-critical services rendered by certified or non-certified service providers and with regards to longer-term wet lease in agreements:

- a) The contracted safety-related activities relevant to the agreement should be included in the operator's safety management and compliance monitoring programmes.
- b) Special attention should be paid to provisions of services from non-certified service providers, who might provide services in certain safety-critical areas, e.g. runway performance, load calculation, navigation charting, ground handling, de-icing etc.
- c) Operators may want to consider the possibility of pooling audits of (non-certified) service providers.
- d) In some cases and depending on the size of the operator, the service provider might be of such a size, that a small operator might not have enough leverage to adapt the outsourced activity to its needs.
- e) Without in-house expertise, it is difficult to assess if the service is provided in accordance with the operator's safety standards.

In addition to the applicable rule and related AMC/GM of ORO.GEN.205, the following focus areas for hazard identification and safety risk management should be taken into account by the operator's management system with regards to contracting of safety-critical services and wet lease agreements:



<b>ServProv 1</b>	When assessing service providers, be aware that their hazard identification measures might not suit the needs of your operator's management system.
<b>ServProv 2</b>	When assessing performance of service providers via compliance monitoring audits, use simple but pertinent indicators, e.g. such as the turnover rate of safety critical personnel. A turnover rate of more than 30% can be considered a significant change in the service provider's organisation and should require a notification from the service provider to the operator.
<b>ServProv 3</b>	In the case of wet lease-in agreements for commercial reasons to increase capacity, assess the reporting culture of the lessor and consider evaluation of data, e.g. average number of reports, e.g. for ground handling agents, refuelling companies. In addition, ensure regular exchange of information between safety managers of the lessor and the lessee.
<b>ServProv 4</b>	Be aware that the outsourced service provider may either be certified themselves or not required to have a certificate, e.g. flight planning, engine servicing, navigation chart providers, de-icing.
<b>ServProv 5</b>	Assess, if there are different levels of sub (sub)-contracting.
<b>ServProv 6</b>	Try to involve the Safety Manager during negotiations with the service provider and before the operator signs the contract with the service provider. In the case of so-called agreed 'service level agreements' between the operator and the service provider, ensure that they include safety elements.
<b>ServProv 7</b>	Where they exist, include an analysis of hazard identification logs and internal audits into the service provider's evaluation.
<b>ServProv 8</b>	Liaise with the compliance, or equivalent, - manager of the service provider.

### 3.2 Interoperability

Interoperability refers to those cases where a holding or parent company wants to **streamline its operations across several different AOCs of several Member States belonging to the same holding or parent company** and to exchange aircraft and possibly crews freely. Interoperability requires good cooperation between national competent authorities, via so-called cooperative oversight.

If aircraft and/or crews are exchanged between the different AOCs, it must always be **clear under which AOC each flight is operated** and when the handover occurs between the AOCs. There should never be any doubt on which operator is responsible at any time of the operation. It must also be clear that each NAA is fully responsible for the AOCs established in its territory, even in the case of interoperability between several AOCs.

The following focus areas for hazard identification and safety risk management can assist operators' management systems to assess the impact of interoperability arrangements on safety:

<b>INT 1</b>	Establish functioning reporting channels between the different AOCs belonging to the same parent company or holding, aiming to combine the different AOCs' management systems and share safety risks assessment results.
<b>INT 2</b>	Establish an overview of applicable FTL (flight and duty time limitation) schemes and assess the impact on the operator's FRM (fatigue risk management).
<b>INT 3</b>	Assess human factors and CRM (crew resource management) issues
<b>INT 4</b>	Assess impacts on flight crew training
<b>INT 5</b>	Assess impacts on approvals (e.g. SPA approval, pilot training approvals)
<b>INT 6</b>	Manage notification of changes to the relevant competent authority

### 3.3 Different contractual arrangements amongst crews

An operator's management system may not systematically capture the **correlation between the operator's various employment types** (e.g. temporary employment models, employment via employment agencies, pay-to-fly employment schemes, self-employed) and the number of reports of occurrences obtained by the operator. Different employment models within one operators might have a potentially negative impact on the operator's **safety culture**. When focussing on areas for hazard identification and safety risk management related to



different employment models within the operator, the operator should consider the merits of **monitoring** the following **by type of contract or category of staff**:

- a) levels of voluntary/mandatory occurrence reporting to the operator,
- b) impact on fatigue reporting,
- c) impact on sickness reporting,
- d) turnover rate of different categories of safety-critical staff.
- e) flight data monitoring events
- f) actual Flight Data Monitoring (FDM) data versus occurrence reporting data by category of staff (for instance for unstabilised approaches)
- g) levels of cabin crew reporting versus occurrence reporting data

Since there is no quantitative evidence to date that there is a direct link between different employment models and occurrence reporting rates, the Group suggested the following areas for hazard identification and safety risk management to assess the relationship between employment models and reporting numbers:

<b>EMPL.1</b>	Assess underreporting of occurrences by different categories of staff
<b>EMPL.2</b>	Assess underreporting of fatigue by different categories of staff
<b>EMPL.3</b>	Assess working despite being unfit by different categories of staff
<b>EMPL.4</b>	Assess higher turnover rate by different categories of staff
<b>EMPL.5</b>	Assess higher FDM events by different categories of staff
<b>EMPL.6</b>	Assess misalignment of FDM data with similar occurrence reporting data, leading to missing safety critical events (e.g. with importance for maintenance)

### 3.4 Increased mobility of flight crew

Increased mobility of flight crew, **moving from one airline to another airline at a faster pace**, can create an increased demand on the training department within an operator.

The workload of the training personnel is likely to increase and there might be more pressure to qualify flight crew at a faster pace. It might be more challenging to establish a safety culture in this environment. The operator will most likely rely on detailed standard operating procedures (SOPs) as an important risk mitigating measure.

Overall, increased mobility of flight crew could result in a **reduction in experience levels** and adversely affect the efficiency of recurrent training. Indeed, applicable recurrent training requirements for flight crew as defined in ORO.FC.230 (Regulation (EU) 965/2012), particularly the training of all major failures over a 3-year period. Where pilots are more likely to leave the operator after less than 3 years, flight crew training and in particular the operator's conversion course of the subsequent operator should be adapted.

Therefore, the Group suggested the following areas for hazard identification and safety risk management to address increased mobility of flight crew and to assess the safety impact of a **higher turnover rate** of flight crews:

<b>MOB.1</b>	Assess possibility of insufficient training of operator operating system
<b>MOB.2</b>	Assess failure to consolidate training
<b>MOB.3</b>	Assess diminished or reduced overall operator experience base
<b>MOB.4</b>	Assess lack of qualified candidates for command courses
<b>MOB.5</b>	Assess if training is adequate for new inexperienced flight crew joining the operator



## 4. References

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- (3) *Commission Staff Working Document, Fitness Check – Internal Aviation Market , Report on the suitability of economic regulation of the European air transport market and of selected ancillary services, 6 June 2013*; [https://ec.europa.eu/transport/sites/transport/files/modes/air/internal\\_market/doc/fitness\\_check\\_internal\\_aviation\\_market\\_en\\_commission\\_staff\\_working\\_document.pdf](https://ec.europa.eu/transport/sites/transport/files/modes/air/internal_market/doc/fitness_check_internal_aviation_market_en_commission_staff_working_document.pdf)
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- (7) *Ghent University study on atypical employment in aviation, commissioned by ECA, ETF and AEA, members of the EU sectorial social dialogue committee for civil aviation*. <https://biblio.ugent.be/publication/8513862>

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