

Development of FRMS Guidance material in the International and National Arenas

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easyJet plc



**OPERATIONS PANEL (OPSP)
MEETING OF THE WORKING GROUP OF THE WHOLE
EIGHTH MEETING
Montréal, 19 to 23 May 2008**

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ACTION BY THE OPSP-WG/WHL



- FRMS provisions are now considered to be mature and ready for presentation to the Air Navigation Commission (ANC) for further review.
- The current paper proposes additional definitions and minor changes to the Standards and Recommended Practices (SARPs) of Annex 6, Part I, and offers a new attachment that provides guidance on FRMS.
- Also appended is a scientific justification and a safety case for to support the paper in its review by the ANC.

From guidance to regulation



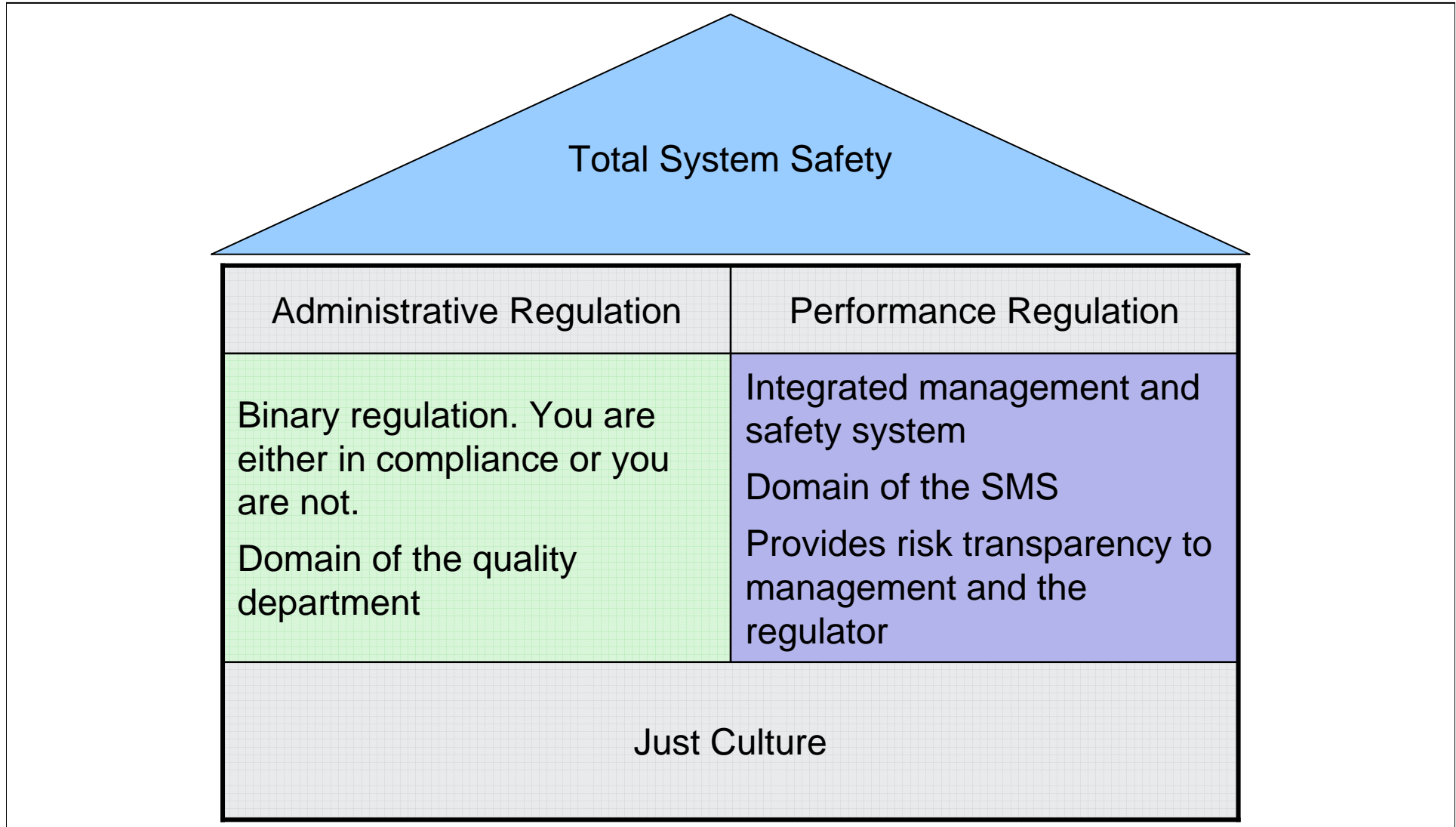
- *An FRMS can be used within the envelope of prescriptive flight and duty time limitations or as an alternative to such prescriptive rules that provides at least an equivalent level of safety.*
- The deficiency of a prescriptive FTL schemes is that it provides a limited and static approach to fatigue risk which does not account for the differing scheduling and operating conditions specific to, or contained within, an individual airline. An FRMS therefore enhances the capability of prescriptive FTL concepts to provide an equivalent or enhanced level of safety based upon the identification and management of fatigue risk relevant to the specific circumstances.'

FRMS Capability



- ✈ An FRMS should be consistent with the management system principles of an operator's established SMS and its capability commensurate with the risk oversight needs of its business model.

Maintaining regulatory compliance and operating safely



FRMS purpose for an operator



- To maintain an acceptable level of safety, through the application of scientific principles based on human physiology and knowledge, determined from data collection, risk investigation and analysis. In doing so it allows greater operational flexibility of crew scheduling, in comparison with prescriptive limitations of flight and duty time. The FRMS forms an integral part of easyJet's established Safety Management System (SMS).
- Fatigue Risk Management applies standard management control principles in order to mitigate fatigue risk in airline operations, through processes based on shared responsibility amongst management and crew members acting within a just culture.

FRMS Functioning



- Operators are responsible and are accountable for their own risk with the overall requirement of achieving a level of risk as low as reasonably practicable.
- The FRMS team must establish a full and robust safety case, supported by scientific research, incident investigations, metrics, and reporting in order to identify risk, prior to implementing each and every roster constraint to the business.
- After identifying the risk, that safety case is put before the FRMS Safety Action Group made up of the relevant post-holders. It is these post-holders who own the risk and it is they who make the decision – not the FRMS team - to implement mitigating strategies in the form of roster constraints in order to maintain an acceptable level of safety

EU Ops compliance is not enough...



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Safety Management System Model



Future EASA requirement- management system



- **1. Safety policy and objectives.**
- a. Management commitment and responsibilities
- b. Safety accountabilities of managers
- c. Appointment of key safety personnel
- d. SMS implementation plan
- e. Coordination of emergency response planning
- f. Documentation
- **2. Safety risk management.**
- a. Hazard identification process
- b. Risk assessment and mitigation process
- **3. Safety assurance.**
- a. Safety performance monitoring and measurement
- b. The management of change
- c. Continuous improvement of the SMS
- **4. Safety promotion.**
- a. Training and education
- b. Safety communication

Operator Fatigue Risk Management



- Identify potential fatigue hazards through task and activity analysis
- Assessment of workload and intensity
- Estimate risk associated with identifiable hazard
- Redesign task/activity in conjunction with stakeholders
- Provide procedures and training
- Monitor reduction of risk

Example easyJet Risk assessment report



- ➔ **Contents**
- ➔ Background.....
- ➔ Methodology.....
- ➔ SAFE/FAID
Analysis.....
- ➔ Roster Risk Index.....
- ➔ Roster Analysis.....
- ➔ Duty and Block Hours Balancing.....
- ➔ Standby Coverage.....
- ➔ Summary of Fatigue Assessment
- ➔ Operational Benefits.....

easyJet Roster Quality Indices-FRMS tool



- RQI's based on :
- Roster Stability
- Use of Commander's Discretion
- 18 – 30 hour rest periods
- Duty transitions
- Long distance Positioning
- Extended time zone transitions
- Days Off notification

Fatigue Risk – systemic responsibilities



- Operator Responsibilities
- Individual Responsibilities
- Regulatory Oversight

The Operators' Role



- Management of Roster planning to achieve sustainable duty patterns
- Provide training and guidance on fatigue countermeasures
- Identify and manage potential fatigue risks

The Crew Members' Role



- Ensure effective use is made of planned rest periods
- Proper accounting of secondary employment
- Duration and timing of Travelling is commensurate with planned duty
- Notify Operator of lack of fitness to operate

The Regulator's Role



- Provide legislative framework allowing effective control of fatigue risk
- Approve and monitor Operators' systems for management of their fatigue risk profile
- Provide best practice guidance on Alertness Management techniques

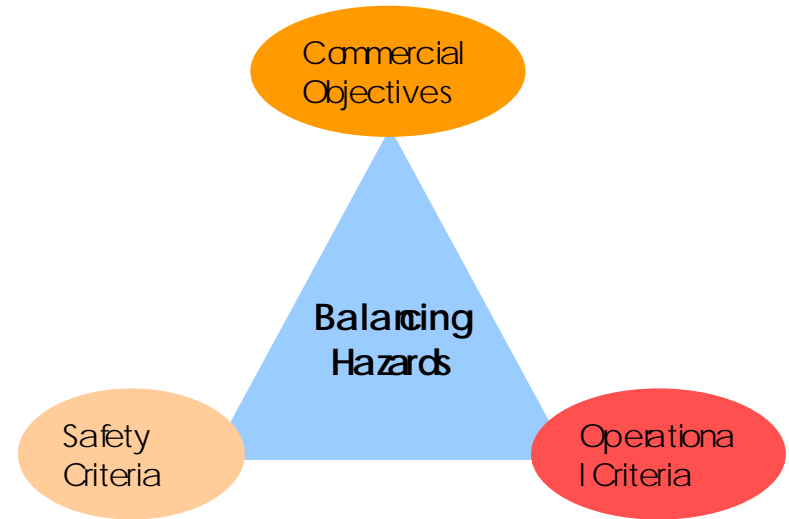
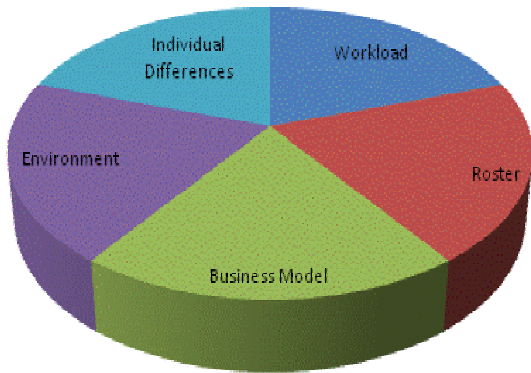
FRMS Objectives



- ✈ Sufficient and Adequately rested crews
- ✈ Freedom from Transient fatigue
 - allowing safe and efficient operations
- ✈ Freedom from Cumulative fatigue
 - allowing longer term Sustainability

Balancing operational criteria and performance criteria in pursuit of commercial objectives

Generic Hazards



Airline Hazards

