

**54th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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AGENDA ITEM 1: THEME TOPIC

*“The Challenge of Managing Outcome Focused and Risk Based
Regulations for Asia Pacific States”*

**UK CAA EXPERIENCE OF BECOMING
A ‘PERFORMANCE BASED REGULATOR’**

(Presented by the United Kingdom)

SUMMARY

The UK Civil Aviation Authority began its journey to become a Performance Based Regulator in 2011. Following a design and development phase, our formal change programme began in 2015. Implementation of initial tools, processes, and training completed in 2016 and continue to evolve. We are now embedding and refining our approach, which will be complete for our core oversight tasks by spring 2018, and we will then fully integrate the system with all parts of the CAA to ensure benefit realisation.

This paper gives an overview of the system, our change programme and the challenges we have faced.

Our ambition is to continually enhance aviation safety performance within both the CAA and across all aspects of the aviation industry by promoting:

- a more open and shared appreciation and awareness of safety risk exposure;
- informed decision making about the focus of oversight and improvement initiatives; and
- securing benefits for CAA, industry, and joint benefits; some directly linked to improvements in the effective management of safety risk performance and others related to efficiency.

This paper gives an overview of the system, our change programme and the challenges we have faced and will face in the future.

UK CAA EXPERIENCE OF BECOMING A ‘PERFORMANCE BASED REGULATOR’

1. INTRODUCTION

1.1 The UK Civil Aviation Authority began its journey to become a Performance Based Regulator in 2011, with a fundamental review of how the organisation wished to deliver regulation in the future. As part of the EASA Regional Safety Oversight Organisation system, the UK CAA’s role is to deliver effective operational oversight and enforcement and this paper describes our journey in designing, implementing and embedding a performance based approach to this role; the role of writing performance based regulations remains with EASA. Following a design and development phase, our formal change programme began in 2015. Initial implementation of initial tools, processes, and training completed in 2016 and continue to evolve. We are now embedding and refining our approach, which will be complete for our core oversight tasks (Flight Operations, Airworthiness, Aerodromes, Air Traffic) by spring 2018, and we will then fully integrate the system with all parts of the CAA to ensure benefit realisation.

1.2 Our ambition is to continually enhance aviation safety performance within both the CAA and across all aspects of the aviation industry by promoting:

- Promoting a more open and shared appreciation and awareness of safety risk exposure;
- Enabling informed decision making about the focus of oversight and safety improvement initiatives; and
- Securing benefits for CAA, industry, and joint benefits; some directly linked to improvements in the effective management of safety risk performance and others related to efficiency.

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2. DISCUSSION

2.1 *The CAA Performance Based Regulation System*

2.1.1 Traditional regulatory oversight systems have focused on finding compliance with relatively prescriptive regulations. However, the implementation of Safety Management Systems (SMS) in aviation has brought the opportunity to expand oversight to assess not just that the SMS is in place, but that it is effective.

2.1.2 The CAA’s early adoption of ICAO’s intent under Annex 19 for safety management at the State level, was also spurred on two other changes. Firstly the UK Government introduced 5 ‘better regulation principles’, which required our regulatory approach to be: *Proportionate to* and *Targeted on* the biggest risks; that we should be clearly *Accountable* for our decision making; and that our oversight must be *Consistent* and *Transparent*. Secondly, and importantly, EASA introduced rules for Authorities that *demand* a performance based approach:

“The oversight programme (EASA ARA/ARO.GEN.305).....must be developed taking into account the specific nature of the organisation, the complexity of its activities, the results of past certification and/or oversight activities...and shall be based on the assessment of associated risks.”

2.1.3 PBR is designed to fully deliver on this requirement and is outlined below.

2.1.3.1 The core principle of the CAA’s approach is that complex organisations, such as airlines, do not work as separate Operations, Maintenance and Training organisations in the way that

the ICAO Annexes and EASA rules (e.g. EASA-OPS and EASA-145) are designed. They are complex, integrated organisations, where risks are ultimately held by the Accountable Manager of the airline. We determined that the same is true of an airport, where ultimately the contracted Air Navigation Service Provider is managing risk on behalf of the airport concerned. We have called the combination of approvals in these complex organisations an ‘entity’, either an ‘AOC led entity’ or an ‘airport led entity’, and our system is based on combining our knowledge across technical domains to determine the focus and volume of our oversight.

2.1.3.2 The key process that underpins everything we do is the *Performance Based Oversight* (PBO) process. Essentially, this involves five stages:

- 1) Assess how complex an organisation or entity is (how big, how varied etc. - if you’re an airline: where do you go and how many fleets do you have to operate; if you’re an airport how many movements do you have, what is the local topography and airspace like?). This immediately gives our managers and their teams the ability to choose a style and baseline volume of oversight that they think is suitable and record it, actively moving resource toward the more complex and away from the less complex.
- 2) Gather together all those who have an insight into that entity and use everything we know and the collective experience of our experts to assess the risks associated with it – this 'Internal Review Meeting' is particularly crucial at this stage as it brings together experts from across our capability teams to share data, intelligence and insights. For example, our aerodrome and air traffic specialists share views on airline performance and vice versa.
- 3) Meet with the Accountable Manager to discuss the risks and performance of the entity, this is an opportunity for the Accountable Manager to share the risks from the entity’s viewpoint with the CAA and to collectively agree the actions. The CAA will determine the level of oversight required; this may or may not vary from our baseline depending on our assessment and it could go up or down.
- 4) Plan for oversight based on those decisions, scheduling staff to help maximise efficiency.
- 5) Deliver the plan. This gives us new knowledge to feed back in to the system during the year at a tactical level as required and importantly at the next Internal Review Meeting.

2.1.3.3 It is important to note that in PBO, compliance with the regulations is still a requirement, but the conversation with the Accountable Manager is fundamentally different covering compliance and risk management from an informed position.

2.1.3.4 Sitting above the PBO process is the Regulatory Safety Management System, or RSMS. This is not an industry SMS, it is there to gather and aggregate the risks we see in the system to create rich data for leaders to decide on the effectiveness of our interventions and our priorities for the future. Appropriate risk intelligence is fed into every level of the organisation to ensure effective governance is in place from the CAA Board to the front line inspector.

2.1.3.5 This RSMS is the ‘SMS of our aviation system’ – using all of the knowledge we have, including the oversight information, Mandatory Occurrence Reports, accident reports, global data – anything that is relevant – and forming a view on where we should put our strategic effort in oversight and on safety improvement projects.

2.2 *Delivering the Change*

2.2.1 Delivering a change of this magnitude, from a mainly compliance based oversight regime with clear delineation between technical teams, to an integrated performance based approach, requires a properly structured change programme covering processes, tools, and of course people.

2.2.2 The processes have been described above. To help our teams manage this new approach we've introduced two key tools across our Safety and Airspace Regulation Group. Firstly a tool for audit planning, delivery and tracking of findings. This standardised approach allows us to schedule our inspectors and surveyors more efficiently and gives them better ways of recording and reporting.

2.2.3 Secondly our 'Entity Performance Tool' which allows colleagues from across CAA to share information and thinking on safety performance and risk for an entity and provides the focus for the Internal Review Meeting discussion. These processes and tools not only help us with improving safety, but are also beginning to produce valuable Management Information to help managers plan more effectively, guide priorities, understand individual's workload and monitor our efficiency more closely.

2.2.4 Our people are the most important part of this process and we have invested considerably in their development to be able to conduct oversight under PBR. This training has included understanding and using processes and tools, but also focused on the 'soft skills' required to be able to interact with our industry in a new way. The competency profile we have developed now influences our recruitment.

2.2.5 By the end of 2016, we had delivered the bulk of the change. We have now set ourselves 3 milestones, the first of which is to *embed* the approach across all core areas of oversight by spring 2018; we are well on the way to achieving this. From this point we will seek to further *refine* and then *fully integrate* our approach across all parts of the CAA to maximise the benefits this approach enables.

2.3 *Benefits*

2.3.1 The benefits of the PBO approach are now beginning to be realised:

2.3.1.1 Inspectors are reporting that they see great benefit in the formalised cross domain working and many tell us they have changed their oversight focus or decisions as a result.

2.3.1.2 We have a better understanding of the risk picture per entity and therefore being able to support the improvement of aviation safety standards where most needed.

2.3.1.3 We have simplified our toolset, and produced common processes for oversight, allowing us to decommission ageing IT systems and become more efficient.

2.3.1.4 We've had hundreds of Accountable Manager meetings in the new format; our teams tell us that they find these interactions more valuable and more satisfying and anecdotally we hear that from industry too.

2.3.1.5 On the RSMS, every level from the CAA Board down now have constructive conversations about safety risk and are able to drive action as a result.

2.4 *Challenges*

2.4.1 The critical challenge for any regulator embarking on such a transition is that it is a *major* change; the UK CAA has therefore experienced the normal challenges of such a change, from shifting inspector behaviours to the potential pitfalls of IT development. We have overcome the challenges to date and will overcome the challenges to come, but a few stand out for reference here:

2.4.2 The change has taken much longer than initially anticipated, the original two years was just the beginning of the journey. States need to factor in much more time.

2.4.3 We initially made the process quite complicated and needed to simplify it to help it embed.

2.4.4 There has been significant misunderstanding of what PBR is, or more importantly what PBR isn't:

- Many believe PBR is a head count reduction exercise: This is not the case.
- Some believe that PBR replaces compliance finding: It doesn't, it complements it.

2.4.5 In light of our experiences and industry feedback we have continued to refine our approach to implementation of risk and performance based oversight. There is still a significant amount of work to do, but we can see the benefits in persevering, not only for us as the regulator, but also more importantly, for the aviation industry and the consumers of services it provides. We are growing in confidence that our ambition to establishing a coherent and enduring approach to continuously decreasing aviation safety risk is within our grasp.

2.4.6 Any regulator embarking on a journey to transition to a more performance based approach needs to understand clearly their current regulatory philosophy, their aspirations and the relationship with their industry. But whatever the starting point, our experience would suggest that there are aspects of PBR that will deliver benefits for any regulator that wants to make the change.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) note the progress made by the UK CAA in becoming a Performance Based Regulator; and
- b) consider and how this experience might inform the 'Challenge of Managing Outcome Focused and Risk Based Regulations for Asia Pacific States'.

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