# Safety Links
## CAD Safety Promotion Newsletter

Safety culture

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### Hong Kong Safety Programme

http://www.cad.gov.hk/reports/HKSP2014-17.pdf

*App. 1- Safety Policy*

*App. 2- SSP Implementation Plan*

*App. 3- HK Safety Indicators*

### Global Aviation Safety Plan

http://www.icao.int/publications/Documents/10004_cons_en.pdf

*Read about ICAO's safety roadmap for regulators and industry.*

## A Newsletter for Aviation Safety Professionals

Welcome to the first issue of Safety Links.
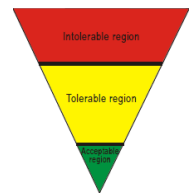
As safety management practice matures, industry and regulators across sectors and borders are more active in sharing information and lessons learnt. Safety Links provides a platform for you to share good safety management practices and actionable insights for enhancing safety.

## CAD's Pledge to Refine Data-Driven Approach in Risk-Based Safety Oversight

The ICAO Global Aviation Safety Plan (GASP) has set a safety roadmap from 2013 to 2027 for the aviation community to coordinate safety tasks, including a target for States to implement a State Safety Programme (SSP). **Hong Kong has taken a proactive step to implement SSP in full by 2017**.
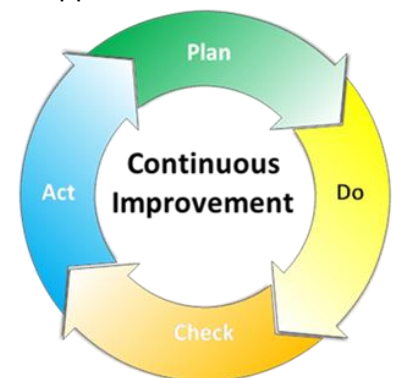
The Plan to achieve this goal is given in Hong Kong Safety Programme. While maintaining an effective compliance-based oversight, we also need to pragmatically introduce performance-based regulatory elements in our surveillance activities to focus on relatively higher risk areas based on safety information, and proactively mitigate those risks.

Relevant guidance can be found in the ICAO Safety Management Manual (Doc 9859) and CAD Safety Management Exposition, Section 1– *CAD Safety Oversight System & Procedures*. Traditionally, "compliance-based" oversight (same checks despite different scale and complexity of entities) was how aviation authorities regulate. But such system is no longer adequate to support the continuous growth of industry. New proactive safety strategies emerged. Since 2009, CAD has progressively refined our safety management capabilities towards a "compliance/performance-based" oversight system.

While **Performance-based oversight** is widely spoken, regulatory practices or interpretation may vary as there is **no "one-size-fits-all" solution** for SSP or SMS. Similar to the flexibility given by the ICAO, regulators should allow organisations to plan and establish their own specific approaches towards meeting the safety objectives.

Feeling lost in jargons and terminologies? Let's go back to the objectives of ICAO Annex 19 - Safety Management. SSP and SMS are **systems to continuously improve safety.** There are different solutions to achieve safety. In Hong Kong, CAD applies a **Plan-Do-Check-Act Cycle** to our safety oversight activities to place focus on continuous safety improvement. To learn more from other regulatory authorities on their approaches, we invited the UKCAA to discuss their strategies.

## UK Safety Programme

http://publicapps.caa.co.uk/docs/33/CAP%201180%20State%20Safety%20Plan%2012814.pdf

*Different systems, same safety objective. Read about how other regulators apply proactive strategies to manage aviation safety.*

*"Transformation of UKCAA into a performance-based regulator is a major change programme requiring top down commitment to succeed. And change is never easy."*

## UK Performance-Based Regulation (PBR) Website

https://www.caa.co.uk/Safety-initiatives-and-resources/How-we-regulate/Performance-based-regulation/

*More on UK's PBO conference or meeting discussions.*

# The Journey to Become a Performance-Based Regulator

*Interview with Mr. Ben Alcott, International Director of Civil Aviation Authority of United Kingdom (UKCAA) on 10 December 2015*

Since 2011, Mr. Alcott has witnessed UKCAA's changes from compliance-based oversight to performance-based oversight (PBO). UKCAA gradually introduced safety management capabilities in their regulatory processes, and engaged industries in PBO discussions, including the identification of "Significant Seven" safety issues and action plans.

We are pleased to have Mr. Alcott sharing UK's journey to PBO and challenges along the way.

**Can regulators and industry benefit from Performance-based Oversight ?**

**Mr. Alcott**: PBO has the full support from UKCAA, and based on the feedback from our conferences and our conversations with Accountable Managers, the industry are in favour too as it enables better regulation, which gives benefits of **reduced safety risks** and **enhanced efficiency**. The PBO process now applies to over 200 service providers which are subject to a complexity assessment by UKCAA. Such assessment has created a sensible baseline of surveillance audits which gives rise to the potential for UKCAA to drive the re-allocation of resources towards areas with more potential risks. For regulators, PBO not only helps to **reduce safety risks** but also allows risks to be tracked over time. We have also seen **efficiency gain** through refocusing regulator's activity on the most significant safety risks which results in smarter compliance checking.

PBO also helps industry stakeholders. The enhanced quality of safety risk conversations with regulators means risk information becomes more accessible for service providers' safety improvement use. They also enjoy the potential for efficiency gain from the use of accurate safety risk and performance information by regulators to vary the audit activities, which also save industry's resources to prepare for "less useful" audits. By using a multi-disciplinary regulatory assessment approach[1], we see each of our large organisations with many approvals as a single entity, helping us be more joined up in the CAA and further improving the conversation with the organisations.

**Is industry involved in the development of safety plan in UK ?**

**Mr. Alcott**: Industry certainly plays an active role. Our CAA/Industry Safety Improvement Advisory Group (SIAG) has about 12 service providers from airports, aircraft operators, air navigation service providers, airworthiness organisations and ground handling organsations. They meet every quarter to contribute sector knowledge in our PBR process to identify top risks.

Also, starting in May 2014, UKCAA established a PBR Industry Group (PBRIG) with about 15 industry members. The group meets every quarter under the chairmanship of industry to ensure changes in UKCAA's oversight and use of risk information introduced through PBR have the greatest potential to enhance safety. The group also discusses UKCAA's oversight capability and processes; benefits and limitations of "total system safety assessment" on service providers; people competencies and skills to make PBO work; and the use and protection of safety data. We also have a wider 'Virtual PBRIG' group of interested industry representatives, who get the agenda's minutes etc of the meetings.

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[1] A team based approach that brings in expertise from across the CAA (e.g. flight operations, airworthiness, ATC and aerodrome inspectors) to discuss an entity's performance. Entities can be multi-approval organisations such as airlines and an aerodrome / ATC provider combination. The decision is down to the CAA to decide what is best to ensure effective risk management.

To reach a wider audience, UK holds an annual PBR Conference.  In Oct 2015, the conference updated over 100 industry participants on PBR implementation and captured industry's perspectives on top safety risks facing the sectors.

### How can regulators and industry build trust ?

**Mr. Alcott**:    The importance of trust to successfully embed the PBR approach must not be underestimated.  Transparency, collaboration and fairness are key to build trust.  The aviation community as a whole must also consider consumers' perspective.  We need to establish trust from consumers that their safety is properly protected; and trust from the industry that the regulator is capable and understands enough about the sector's risks to carry out its role.

### Who implements SSP in UK or prepares risk-based surveillance plan ?

**Mr. Alcott**:  In UKCAA, all safety personnel play a part on SSP implementation.  Individual specialist area, such as airworthiness or flight operations plans its surveillance activities making use of available risk information and data, including those provided by industry, and safety performance of individual organisation.  PBR and risk-based approach ensure the regulator's processes and decision making are focused, proportionate and consistent.  We work with the industry to agree safety improvement projects to tackle the most important risks.

### Does UKCAA collect all industry's data for analysis ?

**Mr. Alcott**:  No.  Such approach does not seem practical as it entails too much data for regulators to process and analyse.  **Our PBR process does not take over industries' risk assessment** but promotes the exchange of information amongst regulators and service providers, including the sharing of main safety concerns at the PBR Conference or PBRIG meetings.  There may be benefits of 'big data' in the future, and EASA is investing in finding out.

### Can subjectivity be eliminated from risk assessment ?

**Mr. Alcott**:  It is very difficult to eliminate subjectivity completely and actually we value expert judgment.  And as there are no harmonised criteria to classify certain occurrences, for example "unstabilised approach" which are specific to airlines' operating procedures, we focus on getting airlines to share their risk analysis with UKCAA rather than raw data.

### What are the challenges and strategies for risk classification ?

**Mr. Alcott**:  Although each organisation's SMS has abundant data, UKCAA only requires industry to report events that meet our reporting criteria for Mandatory Occurrence Report (MOR).  Other non-MOR events are self-managed by individual organisations.   On average, we receive over 14,000 MOR reports a year, and the risk of each report is reviewed and classified by a team of 12 analysts, who are trained on identifying which events the CAA should look at more closely and coding the events effectively so that any statistical work is as accurate as possible.  If clarification is needed, we will contact the reporter.

**Closing by CAD:**  We are thankful for Mr. Ben Alcott and UKCAA's sharing of the journey to become a performance-based regulator.  Their PBO experience and outputs have demonstrated that proactive safety strategies of regulators can drive safety improvement and foster safety partnership which creates a win-win situation for both regulators and industry.  It also shows different regulatory systems or approaches are possible to meet the same objective, which is to manage aviation safety in a more proactive and intelligent manner.

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**5 Key Capabilities Developed by UKCAA for PBO**

- *PBO*
- *Safety & Risk Management*
- *Safety Improvement*
- *Flexible Resourcing*
- *Knowledge Sharing*



**Who is Accountable for Safety ?**

**Do you want data or information ?**

## Conclusion

# Transforming "Data" to "Actionable Insights"

*Safety Actions on "Level Bust" Occurrence*

A safety review in 2014 has identified that altimeter setting errors contributed to some "Level Bust" cases concerning departures. Most of these cases related to foreign general aviation operators. An AIC was subsequently issued to remind pilots of the altimeter setting procedures specific to the Hong Kong Flight Information Region. CAD also took follow up actions with the operators concerned. Such safety actions proved to be effective as "Level Bust" of similar nature dropped significantly thereafter.

*Liaison with States on "Medium-Risk" MORs on Aircraft Defect*

Subsequent to 2 medium-risk MORs relating to the main landing gear of an Airbus A330 aircraft and the tail rotor drive of an EC155 helicopter, CAD followed up with the State of Design and the respective manufacturer. Based on the reported findings, EASA later issued the Airworthiness Directives requiring further maintenance actions on the aircraft concerned. The information was then promulgated to the industry and shared at the International Federation of Airworthiness Forum in November 2015.

*Increase in Loading/Loadsheet MORs*

An increase in the number of loading/loadsheet MORs was observed in 2014. CAD took action with the airlines concerned and organised an industry forum in May 2015 to promote safety awareness amongst operators and ground handling agents.

*Safety Promotion*

To promulgate information on civil aviation cyber security, a safety advisory newsletter to ANSP personnel was issued by CAD in December 2015.

In line with a safety initiative by the ICAO APAC Region to encourage the States and industry to meet its Seamless ATM Plan expectations, CAD promulgates TCAS II Version 7.1 information by Eurocontrol to ATC controllers.

Two Safety Posters were designed to enhance awareness on our safety policy.

*Fostering a Positive Safety and Learning Culture*

"Learning Wednesday" was launched in September 2015. Six talks held by CAD colleagues, including SSP awareness training for CAD and industry personnel in December 2015, helped nurture a learning environment within the aviation community.

## Contact Us

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**What is "Safety Links" and how can I contribute ?**

"Safety Links" provides a platform for aviation professionals to share good safety management practices and lessons learnt with other sectors, such that other entities can learn from your experience and plan for safety improvement. Please contact the Strategic Safety Office to contribute your knowledge and safety suggestions.

**Safety culture**
Our business

The information may be de-identified upon request.