

Issued: 28 April 2014

New Industry Safety Tool – Bowtie Barrier Risk Models

This Information Notice contains information that is for guidance and/or awareness.

Recipients are asked to ensure that this Information Notice is copied to all members of their staff who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	All Aerodrome Licence Holders, All Aerodrome Operators, All Ground Handling Organisations
Air Traffic:	All ATS
Airspace:	All Approved Instrument Flight Procedure Designers
Airworthiness:	All Airworthiness Organisations
Flight Operations:	All AOC Holders
Licensed/Unlicensed Personnel:	All Approved Training Organisations

1 Introduction

- 1.1 This Information Notice has been published to provide awareness of a new industry safety tool (bowtie barrier risk models) applicable to all aviation stakeholders' Safety Management Systems (SMS).
- 1.2 The CAA in collaboration with UK aviation industry specialists have created bowtie barrier risk model templates for organisations to tailor to their operation to assist in understanding their risks and identifying safety improvements.

2 Bowtie Barrier Risk Models – What are they?

- 2.1 Bowtie models highlight a number of specific safety scenarios, which all aviation organisations can use as part of their own SMS. The models will allow organisations to assess their current risk controls and evaluate their exposure to each particular scenario.
- 2.2 Bowtie models are a visual risk tool displaying the causal factors (threats) and outcomes (consequences) for a specific risk (top event) highlighting the controls in place to prevent or recover the risk.

3 Bowtie Models Available to Industry

- 3.1 There are 24 bowtie models available, which cover scenarios such as loading error leading to loss of control, and incorrect runway presence resulting in collision on the ground. These can be accessed, along with bowtie user guidance, on www.caa.co.uk/bowtie.

- 3.2 These bowtie models should be used in a template fashion for organisations to customise to suit their own operations. Completed models can then be fed into SMS as part of hazard identification, risk assessment, risk mitigation, safety assurance and safety promotion.
- 3.3 The bowtie models were created by CAA staff and UK aviation industry specialists and they consider human, technical and environmental factors within the scenarios. Feedback from operators using the models will be actively encouraged and shared (where appropriate) across the industry, further enhancing knowledge and understanding of aviation safety risks.
- 3.4 The aviation industry's use of the models will also ultimately provide the CAA with more sophisticated data and safety performance indicators, allowing the regulator to take an overview of safety risks across all UK operators helping inform future initiatives.
- 3.5 Please note that the usage of bowtie models is not a requirement. The information offered is for assistance and guidance as a potential safety tool for use in your SMS.

4 Queries

- 4.1 Any queries or requests for further guidance as a result of this communication may be answered on www.caa.co.uk/bowtie.
- 4.2 Otherwise, queries should be addressed to the safety.performance@caa.co.uk e-mail address.

5 Cancellation

- 5.1 This Information Notice will remain in force until 1 May 2015.