Safety Regulation – A Risked Based Approach To Surveillance

Australian Government
Civil Aviation Safety Authority
www.casa.gov.au

safe skies for all

Surveillance function

- CASA's surveillance function as set out in section 9 (1)(f) of the Civil Aviation Act:

Conducting comprehensive aviation industry surveillance, including assessment of safety-related decisions taken by management at all levels for the impact on aviation safety.

What is CASA aiming to achieve through surveillance ?

CASA's Surveillance Objectives

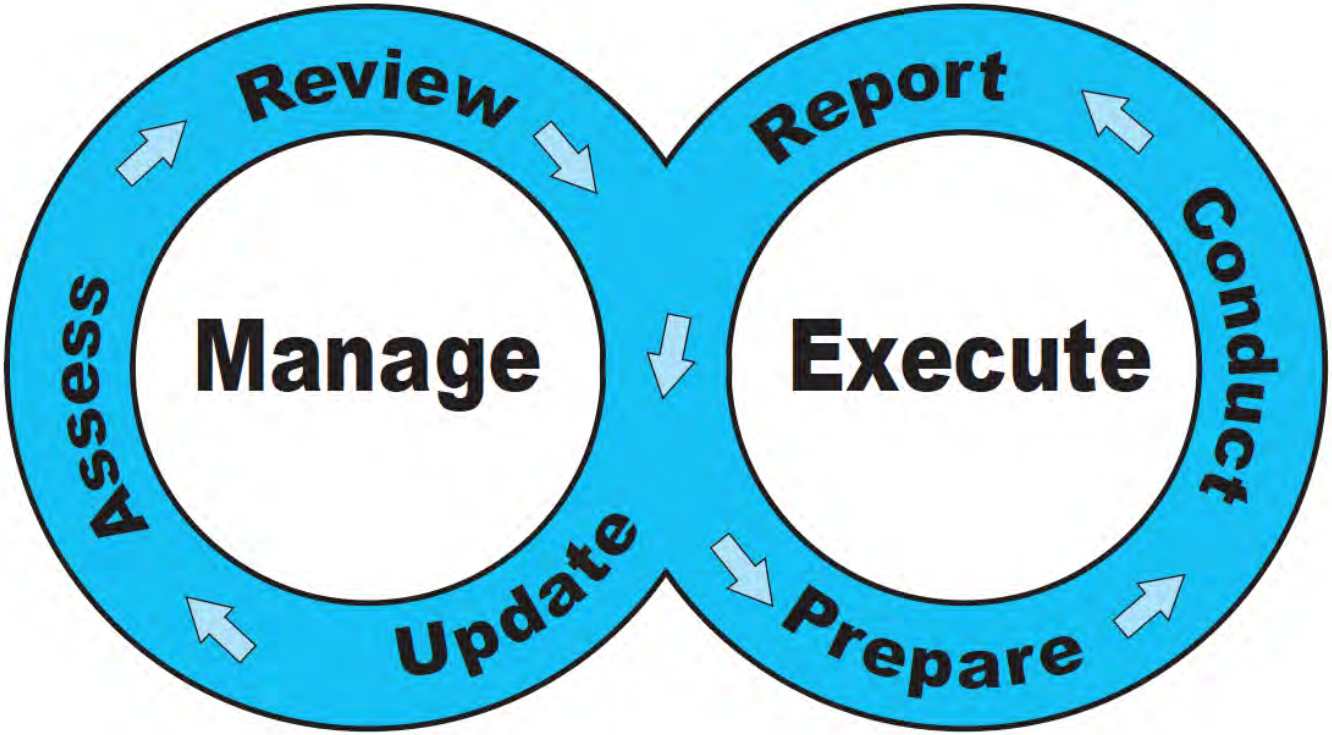
- Surveillance is the mechanism by which CASA monitors the ongoing safety health and maturity of authorisation holders.
- Surveillance comprises audits and operational checks involving the examination and testing of systems, sampling of products, and gathering evidence, data, information and intelligence.
- Surveillance assesses an authorisation holder's ability to manage its safety risks and willingness to comply with applicable legislative obligations.

CASA's surveillance program

Key features:

- Uses a systems and risk based approach
- Requires recording and tracking of surveillance events in the approved IT system
- Involves analysis of results to evaluate authorisation holder's safety performance
- Surveillance program is regularly reviewed and updated

Surveillance Framework



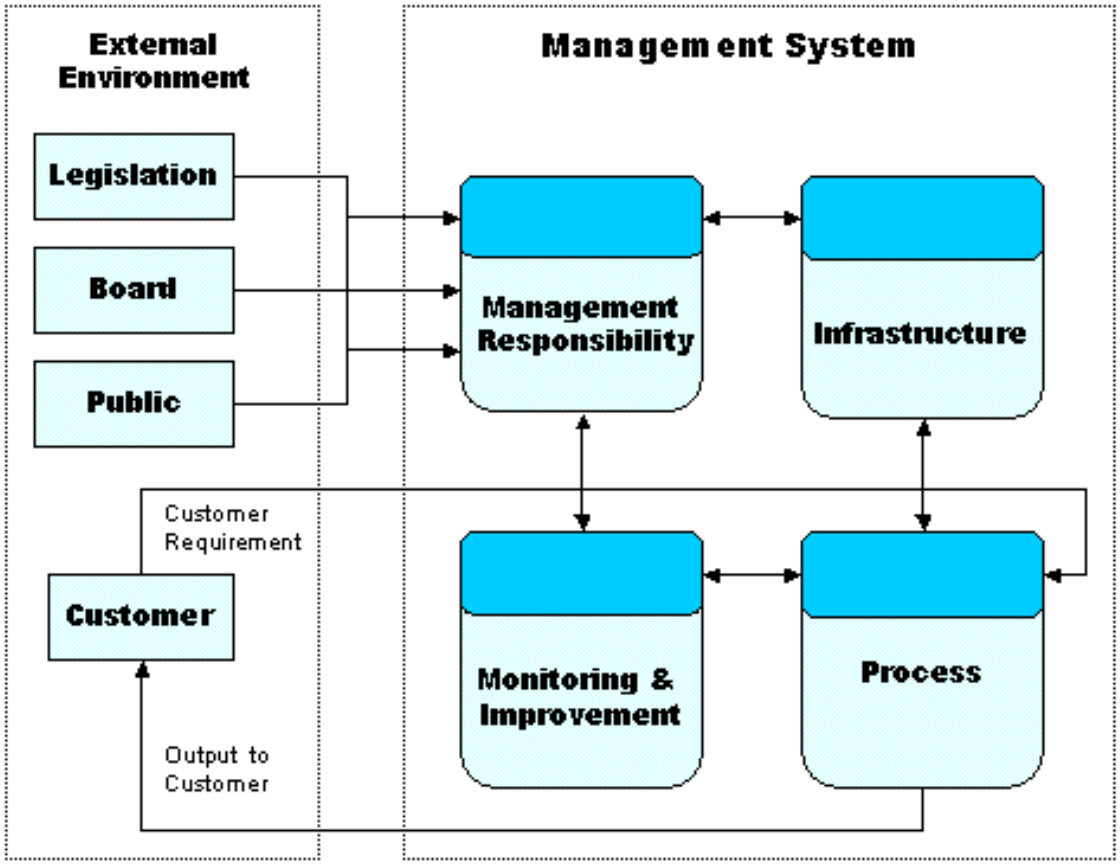
Systems and Risk-Based Approach to Surveillance

- **Aim:** encourage development of authorisation holders' systems and to encourage and guide the aviation industry to assume higher levels of responsibility

- **How:** CASA highlight to industry management

  - management's responsibility for safety under aviation safety legislation
  - deficiencies in existing safety systems
  - areas where more action is required to reduce potential for deficiencies

Management System Model



System Assessment

- Assessing the documented system, comparing against the actual system processes using the MSM
- The system is assessed for compliance and sampling conducted as appropriate.

Systems Risk Assessment

- Assesses the level of system risk mitigation exercised by the authorisation(Airline) against the generic CASA standard system risks
- A list of risks associated with the systems is found within the IT tool Sky sentinel

The Assessment

- The assessment of the system and its risks is achieved by a questioning technique
- Using the four attributes (12 components) of the Management System Model the questions are applied against this system
- Some of the components are further broken down into sub-components to facilitate a more detailed evaluation.

Example Infrastructure -

- Facilities
- Tools, equipment and materials
- Data, information and records
- Personnel

CASA – Approved tools to support Surviellance /Assessment

- The CASA Surveillance Manual (CSM) sets out the policy and procedures to be followed in the surveillance of all authorisation types
- CSM provides CASA with a standardised, consistent and efficient surveillance process
- Supported by a single CASA approved IT tool (Sky Sentinel)

Systems Audit In Practice

- Audit based on a defined scope developed to take into account the specific activities conducted by an authorisation holder ensuring their compliance with regulations and effective control of risks
- Often conducted by multidisciplinary team over multiple days
- Cabin safety Inspectors joins this team
- CASA defines this as a level 1 surveillance event

Level 1

- **Level 1 surveillance event** is a structured, forward-planned, larger surveillance event and covers:
  - Systems audits
  - Health Checks
  - Post-authorisation reviews

AOC Holders – How does CASA describe them?

- The CASA **description** of an AOC consists of five systems incorporating 20 elements and a number of system risks associated with each element.
- The example today is the system **operational personnel** – with an element that specifically deals with Crew Scheduling

The Element - Crew Scheduling

The Risk is that:	**A fatigued Cabin Crew member is rostered for or conducts a flight**

The Questions

		Management System
Fatigued Management Process	Verify Cabin Crew understanding and application of the fatigue management process	**Processes in Practice**
Fatigue reporting process	Walk me through the fatigue reporting process and provide examples. Verify	**Processes in Practice**
Management of fatigue reports	How do you manage the information provided in fatigue reports	**Monitoring and Improvement**
Mechanisms to report fatigue	What reporting mechanisms do you have to report fatigue?	**Monitoring and Improvement**
Training	What training is provided to personnel regarding Cabin Crew fatigue	**Management Responsibility**
Company policy on fatigue	What is the company's policy on Cabin Crew fatigue	**Management Responsibility**
Processes to manage fatigue	What process do you have to manage cabin crew fatigue?	**Management Responsibility**
Scheduling	What fatigue preventative strategies or systems are employed during scheduling (if any)?	**Management Responsibility**
Systems	What systems are in place to support the process	**Infrastructure**
Documented processes of fatigue	Where is it documented?	**Infrastructure**

System Risk Indicator – Likelihood / Consequence

RISK CONTOL – LIKELIHOOD (cont)				
Process in Practice				
Fully Effective *Could only occur under specific conditions and extraordinary circumstances*	**Mainly Effective** *May occur in exceptional circumstances*	**Partly Effective** *Could occur but considered unlikely or doubtful* OR *Might occur some time in the future*	**Ineffective** *Will probably occur*	**No Control** *Is expected to occur in most circumstances*
o Documented procedures cover all significant tasks and fully support the task o Processes meet regulatory requirements and are safe o No evidence that processes vary from documented procedure o Processes safe and appropriate o Safety equipment is used o Staff always attempt to comply with written procedures	⇨	o Significant documented procedures, however many inadequate or do not directly support process in practice o Process is sometimes ineffective or unsafe from not following procedures or given scant regard o Many process undertaken are adequate, however are prone to failing due to lack of personnel, poor infrastructure or lack of training o Evidence that processes are sometimes derived through word-of-mouth and spur-of-the-moment short cuts which vary from written procedures o Staff mostly comply with written procedures, however some staff are unaware of them o Shortcuts are sometimes taken owing to workload or time constraints associated with the task	⇨	o Little or no documented procedures and those that exist are inadequate or do not support process in practice, are ignored or are given scant regard o Procedures that are recorded mostly do not meet regulatory requirements and do not address risk mitigation aspects o Strong evidence that nearly all process derived through spur-of-the-moment decisions and communicated through word-of-mouth o Processes are either unsafe or flawed to the point of negating risk mitigation o Evidence that staff actively avoid using a procedure, if written, in flavour of a self-developed process

System Risk Profile

- The SRP is a table of the most recent mitigated risk results for all assessed risks for an individual authorisation holder with full details of the risk assessments displayed in Sky Sentinel.

- The SRP provides a direct insight into an authorisation holder's ability to manage its systems risks.

- The SRP is also represented as a numeric/colour indicator, the System Risk Indicator (SRI).

The System Risk Indicator score should be interpreted as follows:

• a red (Extreme Risk) SRI score indicates that considerable and significant system risk issues exist within the authorisation holder's systems demanding close attention

• an orange (High Risk) SRI score indicates that a number of system risks within the authorisation holder's systems are being poorly managed and require attention in the medium
Term

• a yellow (Medium Risk) SRI score indicates that, for the most part, the authorisation holder has control over its system risks

• a green (Low Risk) SRI score indicates that the authorisation holder has effective control over its system risks.

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- Manuals
- Surveillance

Thank You, Any Questions