



**EASA**  
European Aviation Safety Agency

# EASA Management System Assessment – Toolbox

## Practical case on follow-up of mitigations

Owen Healey and Jean-Pierre Arnaud  
13 February 2019

**Your safety is our mission.**

An agency of the European Union





# Management System Assessment – EASA toolbox

- ICAO safety oversight manual (Doc 9734) and Annex 19
  - Qualified technical personnel (ICAO CE-4)
  - Provide technical guidance, tools & provision of safety-critical information (ICAO CE-5)
- EASA guidance available for EU MS:
  - EASA training;
  - Aviation Inspector competencies – <https://www.easa.europa.eu/sites/default/files/dfu/EASA%20Aviation%20Inspector%20Competencies%20Report.pdf>
  - Management system assessment tool – <https://www.easa.europa.eu/document-library/general-publications/management-system-assessment-tool>



Flight Standards Directorate

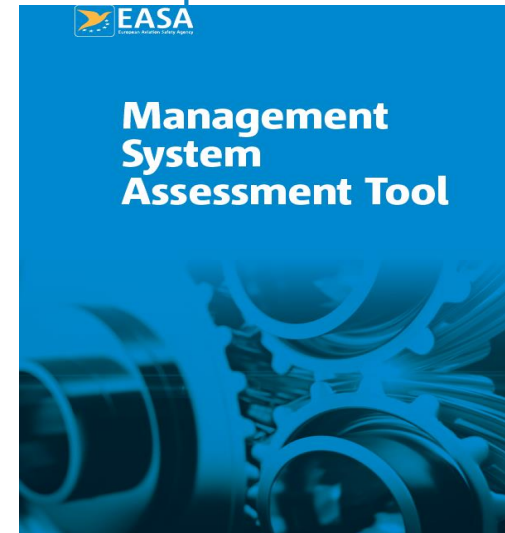
## REPORT

Proposal for a Competency Framework for  
the Competent Authorities' Inspectors

*Working Group established following WPO6 of EASA MB 03-2015*



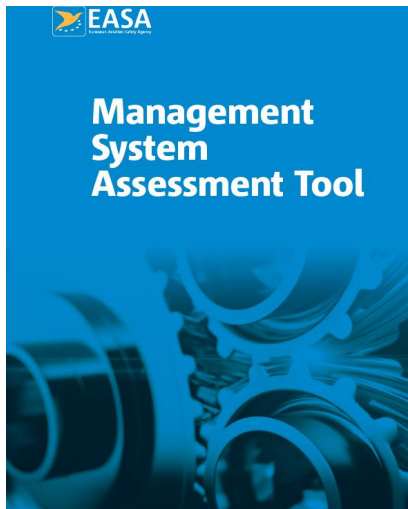
## Management System Assessment Tool





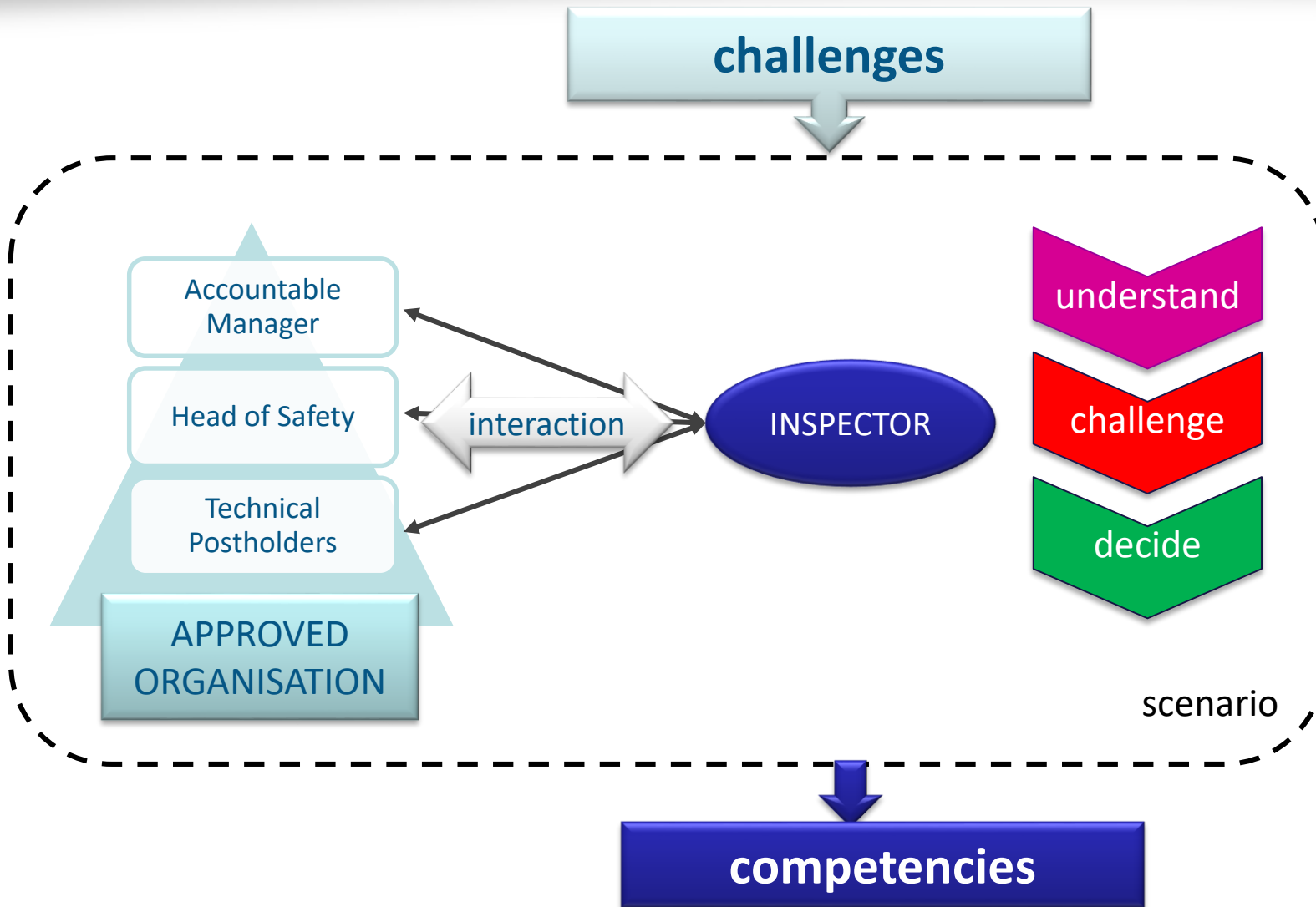
# EASA Training & Development

- Management system assessment training course is being developed
- Using the EASA Management System Assessment Tool
- Based on realistic practical scenarios
- Course available to CA's after summer 2019



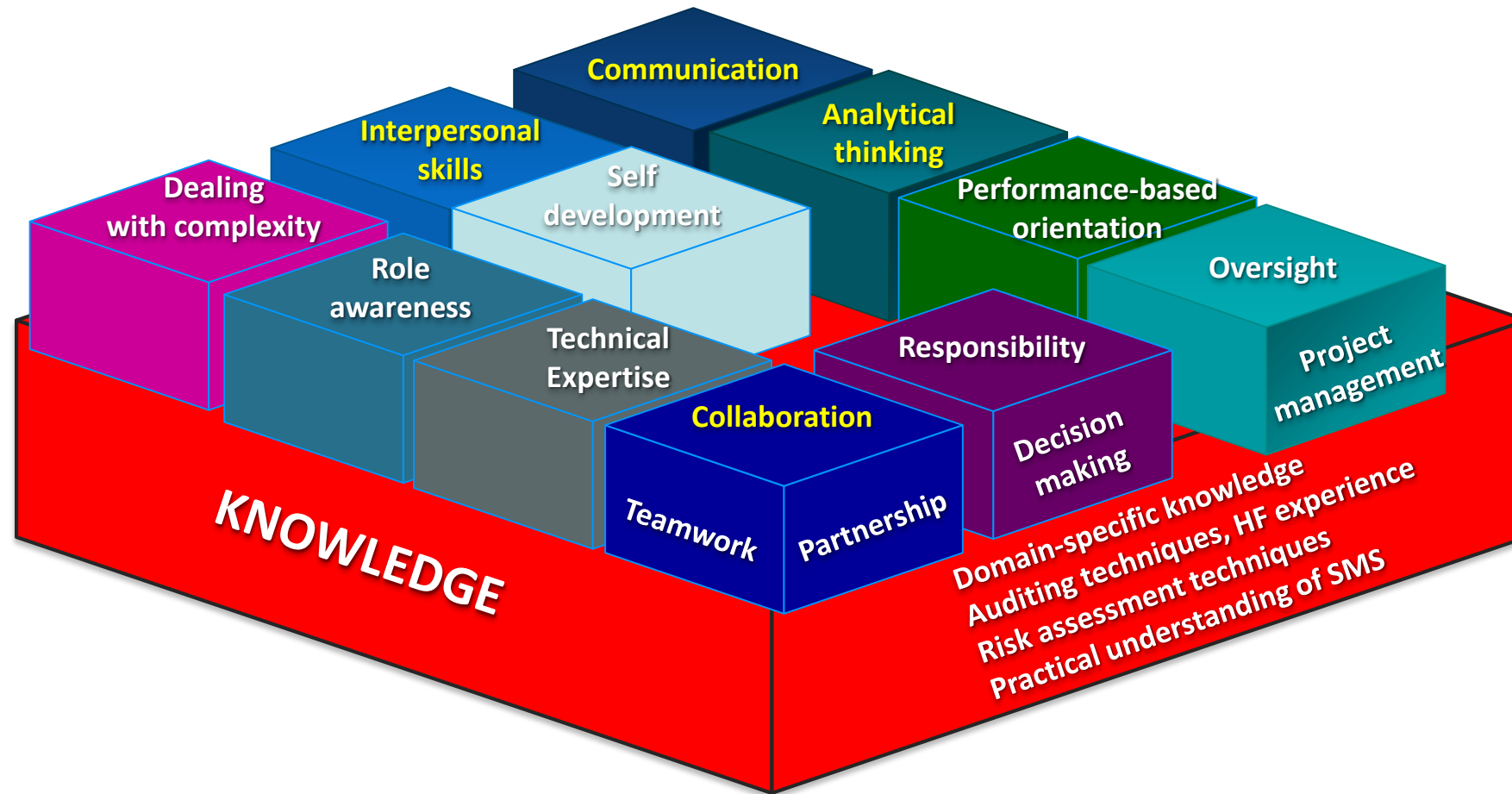


# Inspector Competencies





# Knowledge and competencies



Flight Standards Directorate

REPORT

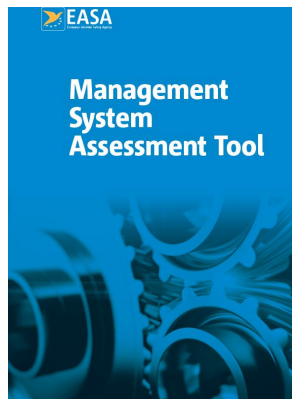
Proposal for a Competency Framework for  
the Competent Authorities' Inspectors

Working Group established following WP16 of EASA MSB 03 2013



# EASA Management System Assessment Tool

- Based on SMICG document [https://www.skybrary.aero/index.php/Category:SM\\_ICG\\_Guidance/Tools](https://www.skybrary.aero/index.php/Category:SM_ICG_Guidance/Tools)
- Edited version available on request at [safety.management@easa.europa.eu](mailto:safety.management@easa.europa.eu)
- **Help to evaluate the effectiveness of the SMS**
  - **Not only compliance with the rules but also the safety performance of the organisation**
- Validated September 2017 with a number of recommendations:
  - Help the CA to determine the planning cycle (AR.GEN.305)
  - Measure how the assessment tool is being used by NAA's and how training has been delivered
  - MS should make use of the EASA tool and provide feedback to EASA for continuous improvement (EPAS action MST.026)

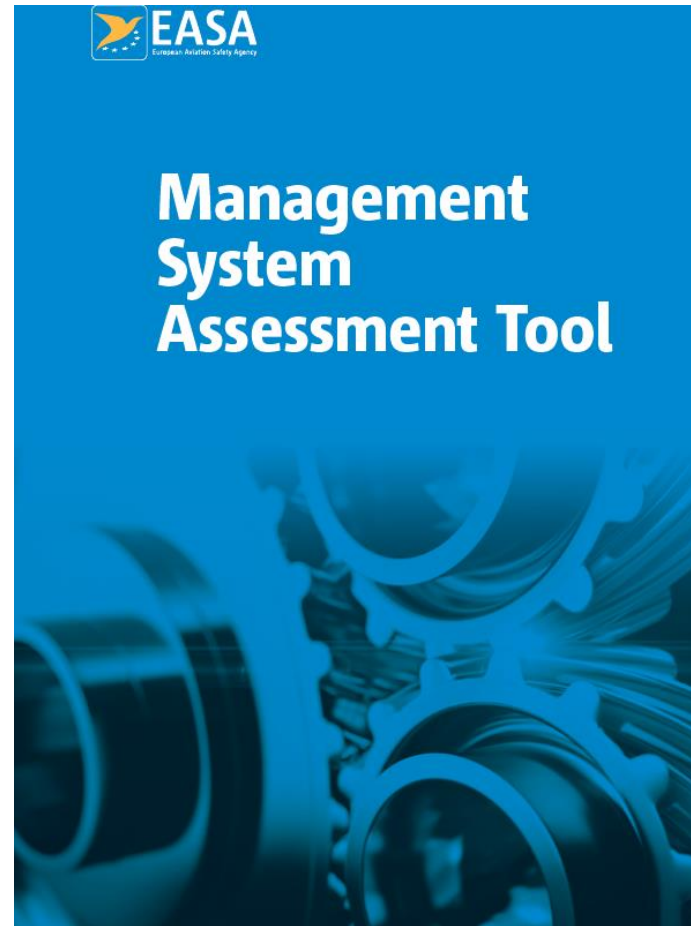




# Continuous improvement of the tool

Your constructive feedback on the tool is welcomed.

- Do you use the tool?
- Do you find the tool useful?
- What areas of improvement would you suggest?





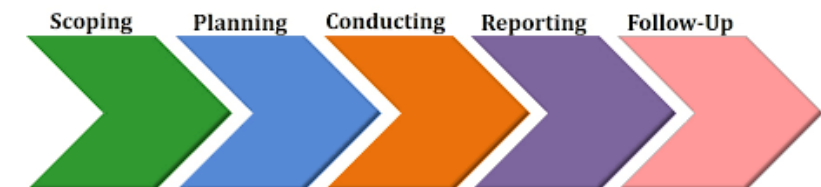


# EASA Management System Assessment Tool

{ Initial certification/implementation } = COMPLIANCE



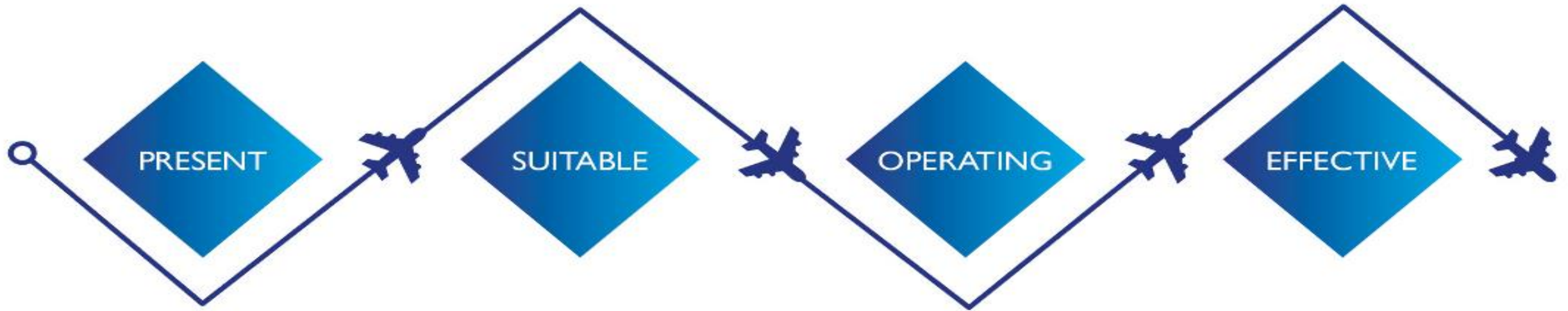
{  
Organisation complexity  
Continuing oversight  
Extending the oversight cycle  
Management of change  
} = PERFORMANCE  
(game changer)







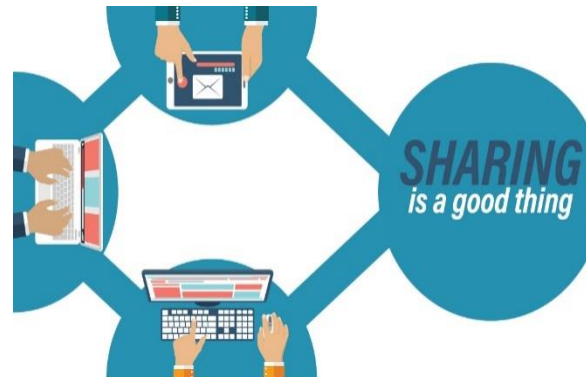
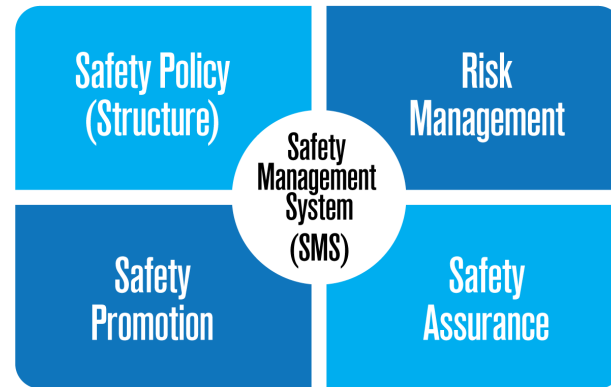
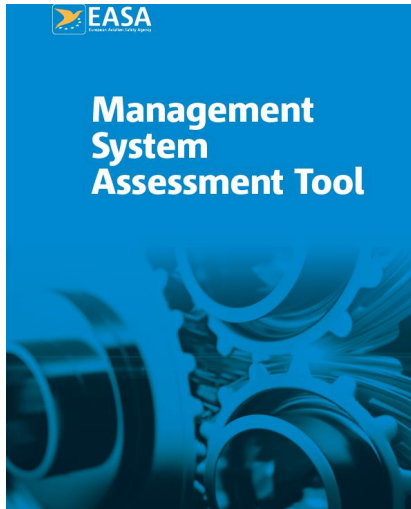
# Definitions used



Present	There is evidence that the feature is documented within the organisation's Management system/SMS Documentation.
Suitable	The feature is suitable based on the size, nature, complexity of the organisation and the inherent risk in the activity.
Operating	There is evidence that the feature is in use and an output is being produced.
Effective	There is evidence that the feature is achieving the desired outcome and has a positive safety impact.



# Assessing the holistic SMS





# Practical Case on Follow-up and Mitigations (SRM)

## Annex 19 reference & text

2.2.2 The service provider shall develop and maintain a process that ensures [analysis, assessment and] **control** of the safety risks associated with identified hazards.

PRESENT	SUITABLE	OPERATIONAL	EFFECTIVE
The organisation has a process in place to decide and apply the appropriate risk controls.		Appropriate risk controls are being applied to reduce the risk to an acceptable level including timelines and allocation of responsibilities.  Human Factors are considered as part of the development of risk controls	Risk controls are practical and sustainable and applied in a timely manner and do not create additional risks.  Risk Controls take into consideration Human Factors.

### What to look for

- Risk controls consider human and organisational factors.
- Evidence of risk controls being actioned and follow up.
- Aggregate risk is being considered.
- Look at whether the risk controls have reduced the residual risk.
- Risk controls clearly identified.
- Review the use of risk controls that rely solely on human intervention.

### Corresponding EU/EASA Requirements

Air Operations	Aircrew	Aerodromes	ATM/ANS	ATCO Training Organisations
AMC1 ORO. GEN.200(a)(3) 'Management system' point (b)	AMC1 ORA.GEN.200(a) (3) 'Management system' point (b)	AMC1 ADR.OR.D.005(b)(4) 'Management system'	ATS.OR.200(2)(i)	ATCO.AR.B.001 Management system, (a)(4);  Furthermore, ATSP provisions apply.



Management  
System  
Assessment Tool





# Risk Conversations & Mitigation Measures



Loss of control



Mid air collision



Design & Maintenance



Runway safety  
(Incursion or Excursion)



Ground safety



Controlled flight into terrain



Fire, smoke & fumes

A wider collaborative cross-domain perspective may be necessary



# Have you experienced a similar request?

## Exercise example:

- Following recent inspection discussion outcomes, Buzzy Bee Airline have identified an increase in runway incursions over recent months
- Reported occurrences are mainly Flight-ops centric, some have aerodrome and ATS connotations
- As the airline Flight OP's inspector, the Busy Bee Accountable Manager has invited you to its Beehive premises to attend the upcoming Safety Review Board (SRB) meeting
- The main agenda item is "runway incursion mitigation measures"

*Lets consider our constructive two-way meeting about runway incursion risk mitigation*





# Holistic considerations

- Collaboration, support, stakeholder engagement & partnership
- Regulator interest – Industry implementing & monitoring effective risk mitigation
- Knowledge of causation, associated mitigation measures and trends
- Two way exchange of information, lessons learned and good practices shared
- Flight Ops specific understanding of runway incursion mitigation measures
- Aerodrome & ATS specific mitigation measures
- Multi domain, risk approach may be necessary
- Total risk picture, addressing the interfaces



# Aircraft Operator mitigation examples

- Training and assessment for pilots regarding aerodrome signage, lighting & markings
- Avoid being “head down” to ensure a continuous external watch is maintained when taxiing
- Ensure a means to indicate receipt of landing / line up / take off / crossing clearances in the cockpit
- Awareness of current safety significant airport information







# Aerodrome Operator mitigation examples

- Signs, markings and lights are clearly visible, adequate and unambiguous
- Aerodrome construction work arrangements
- New infrastructure and changes to existing infrastructure designed to reduce the likelihood of runway incursions
- Consider the need for elevated stop bars and LED technology to improve conspicuity and clarity





# Air Navigation Service Provider mitigation examples

- Ensure air traffic control communication messages are not over long or complex
- Issue line-up and/or take-off clearances when the aircraft is at or approaching the runway holding point
- Avoid issuing premature landing clearances
- Utilize standard taxiway routes and clear standard route designators to minimise the potential of confusion, on or near the runway

*(EAPPRI) cross domain mitigation recommendations within!*

<https://www.eurocontrol.int/publications/european-action-plan-prevention-runway-incursions-eappri-v30>

European Action Plan for the  
Prevention of Runway Incursions

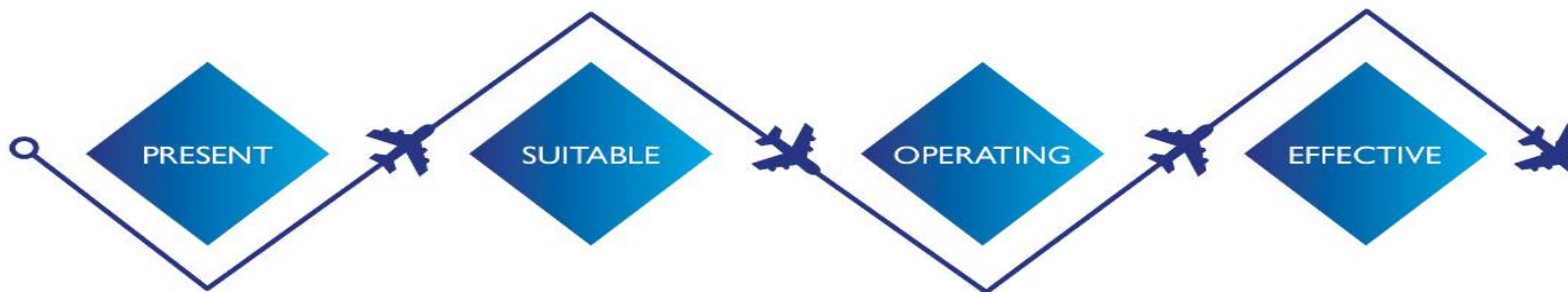
EAPPRI V3.0 – Released Issue





# Runway Safety Teams – Good collaboration example

- Aircraft Operators, Aerodrome Operator, Air Navigation Service Provider (ANSP) etc.
- Raise awareness of runway safety matters (potential hot spots)
- Exchange of lessons learned and good practice
- Cross domain perspective
- Joint training
- Continued collaborative assessment of effectiveness.



Does the smartest compliance monitoring system alone = effectiveness?

What else may be necessary for the SMS to become fully “operating” and “effective” (interfaces)?



Ceisteanna?  
ερωτήσεις?  
Pytania?  
Frågan?  
**Questions?**  
Fragen?  
Preguntas?  
Questiones?

