

# Regulation, oversight and risk assessment in aviation

Claudio Trevisan

Programme Manager - Digitalisation of aviation

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**Your safety is our mission.**

# What is EASA?

An Agency of the European Union 

*Mission: to promote and achieve the **highest common standards of safety and environmental protection in civil aviation***

Main tasks:

- **Rulemaking**
- **Product Certification**
- **Organisations' Approval and Oversight**
- **Standardisation of EASA Member States**
- **International Cooperation**
- *And much more...*

Established  
**2002**

**18 years+**  
*in operation*

**800+**

aviation experts  
& administrators

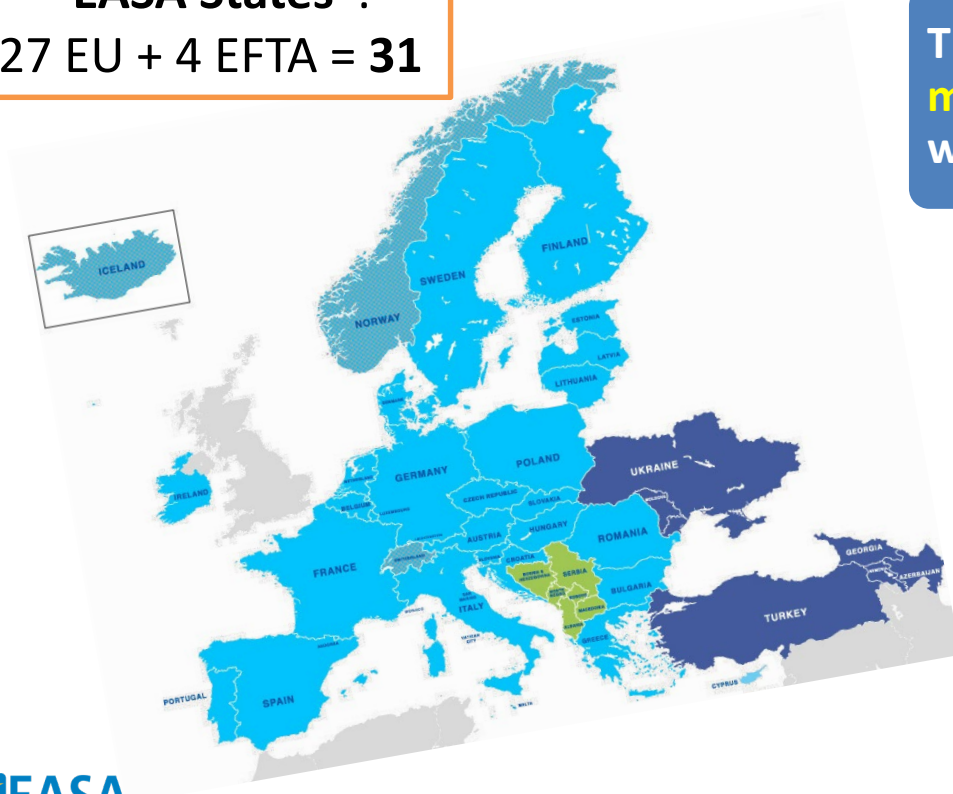
Headquarters in  
**Cologne**  
Office in  
**Brussels**

**31** EASA member states  
= 27 + 4  
EU + Switzerland, Norway  
Iceland, Liechtenstein

# EASA and the EU aviation single market

**“EASA States”:**

27 EU + 4 EFTA = **31**



The four **freedoms of movement** (P, G, S, €) within the EU

Air transport: the **EU aviation** single market

**Standardisation:** EASA monitors the uniform application of EU rules

# Cooperation in supervision: Standardisation

- A **continuous monitoring** system of all National Aviation Authorities
- Based on **inspections** and **data-driven assessments**
- To enable that:
  - Passengers can **fly safely** across the European Union
  - The EU aviation industry benefits from a **level playing field**
  - Certificates issued by EU National Authorities are **mutually recognised** and trusted
  - The EU system is recognised by **international** partners

## Some numbers:

EASA States

31

Inspections

± 100/year

Findings

± 500/year

EASA Staff

40+

EU Auth. Staff

100+

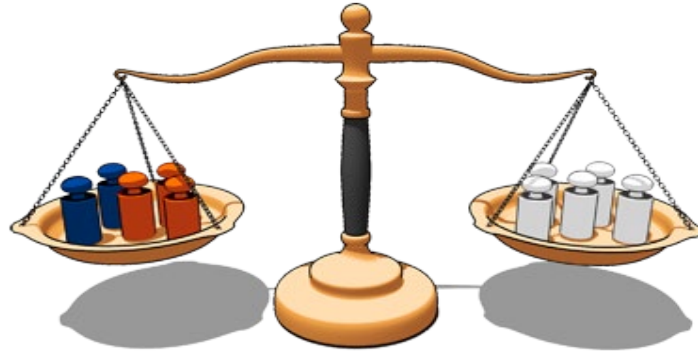
Field mandays

1000+/year

# The enabler: common EU aviation safety rules



# Aviation safety rules: prescriptive vs. performance-based



## Prescriptive regulations

Specify **how** to achieve **compliance**

- + Easier to develop/fulfil/oversee
- One size does not always fit all
- Hardly future-proof

## Performance-based regulations

Specify the required **outcomes**

- Harder to develop/fulfil/oversee
- + Allows different solutions to comply
- + Potentially future-proof

# Examples



## CAT.POL.A.210 Take-off obstacle clearance

Regulation (EU) No 965/2012

- (a) The net take-off flight path shall be determined in such a way that the aeroplane clears all obstacles by a vertical distance of at least 35 ft or by a horizontal distance of at least 90 m plus  $0,125 \times D$ , where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available (TODA) or the end of the take-off distance if a turn is scheduled before the end of the TODA. For aeroplanes with a wingspan of less than 60 m a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m, plus  $0,125 \times D$  may be used.

## UAS.OPEN.020 UAS operations in subcategory A1

Regulation (EU) 2020/639

UAS operations in subcategory A1 shall comply with all of the following conditions:

- (1) for unmanned aircraft referred to in point (5)(d), be conducted in such a way that a remote pilot of the unmanned aircraft does not overfly assemblies of people and reasonably expects that no uninvolved person will be overflown. In the event of unexpected overflight of uninvolved persons, the remote pilot shall reduce as much as possible the time during which the unmanned aircraft overflies those persons;



# Oversight of prescriptive rules



Requirement



Comparison



YES/NO



# Oversight of performance-based rules

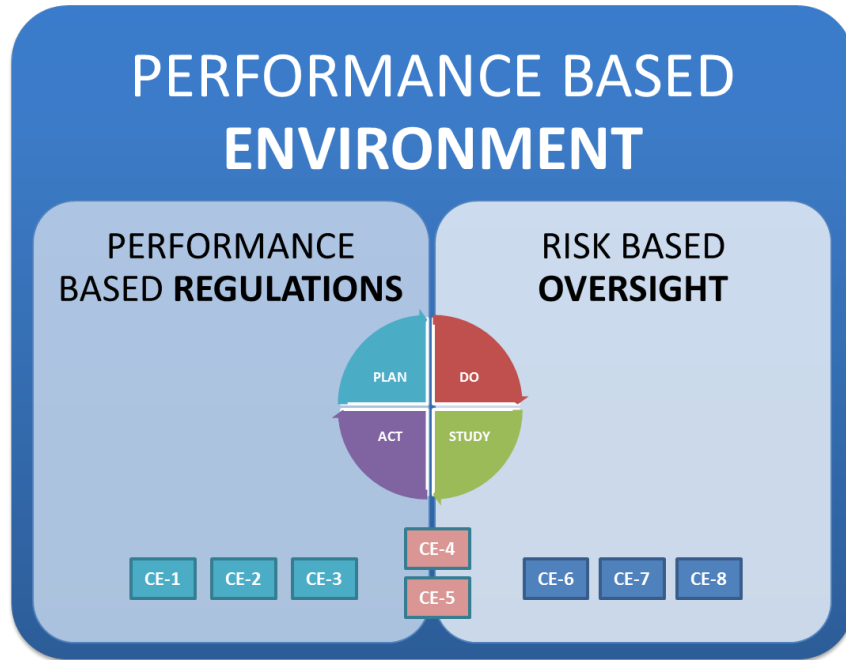


Understand

Challenge

Decide

# Oversight: Compliance based vs. Risk based



## Oversight

The function by means of which an Authority **ensures** that the applicable **requirements** are **met** by the regulated entities.

## Risk Based Oversight

A way of performing oversight, where:

- **planning** is driven by a combination of **risk profile** and **safety performance**; and
- **execution** focuses on the **management of risks**, besides ensuring compliance.

# RBO Planning: risk profile + safety performance

## Risk profile

Elements of risk that are **inherent** to the **nature** and the **operations** of the regulated **entity**

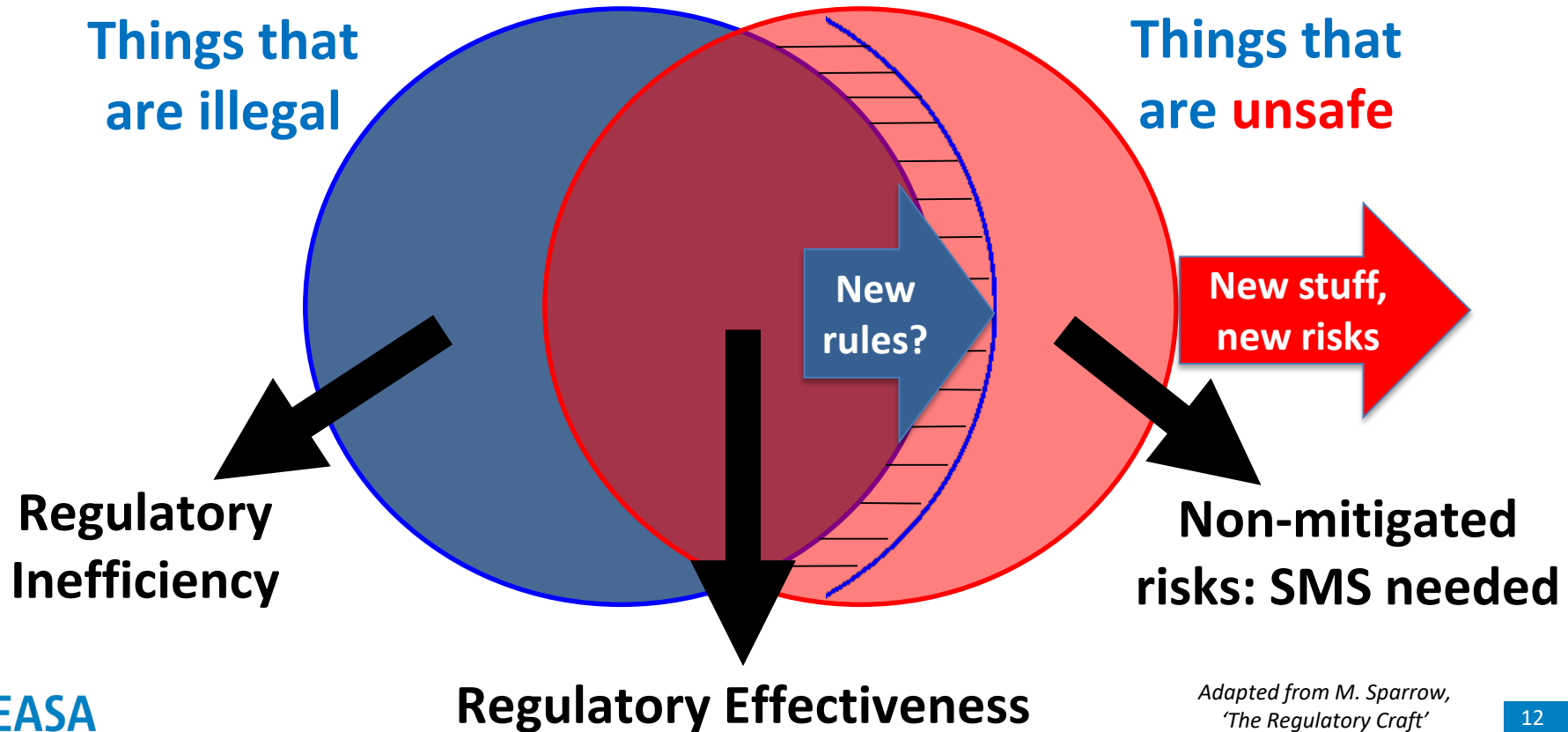


## Safety performance

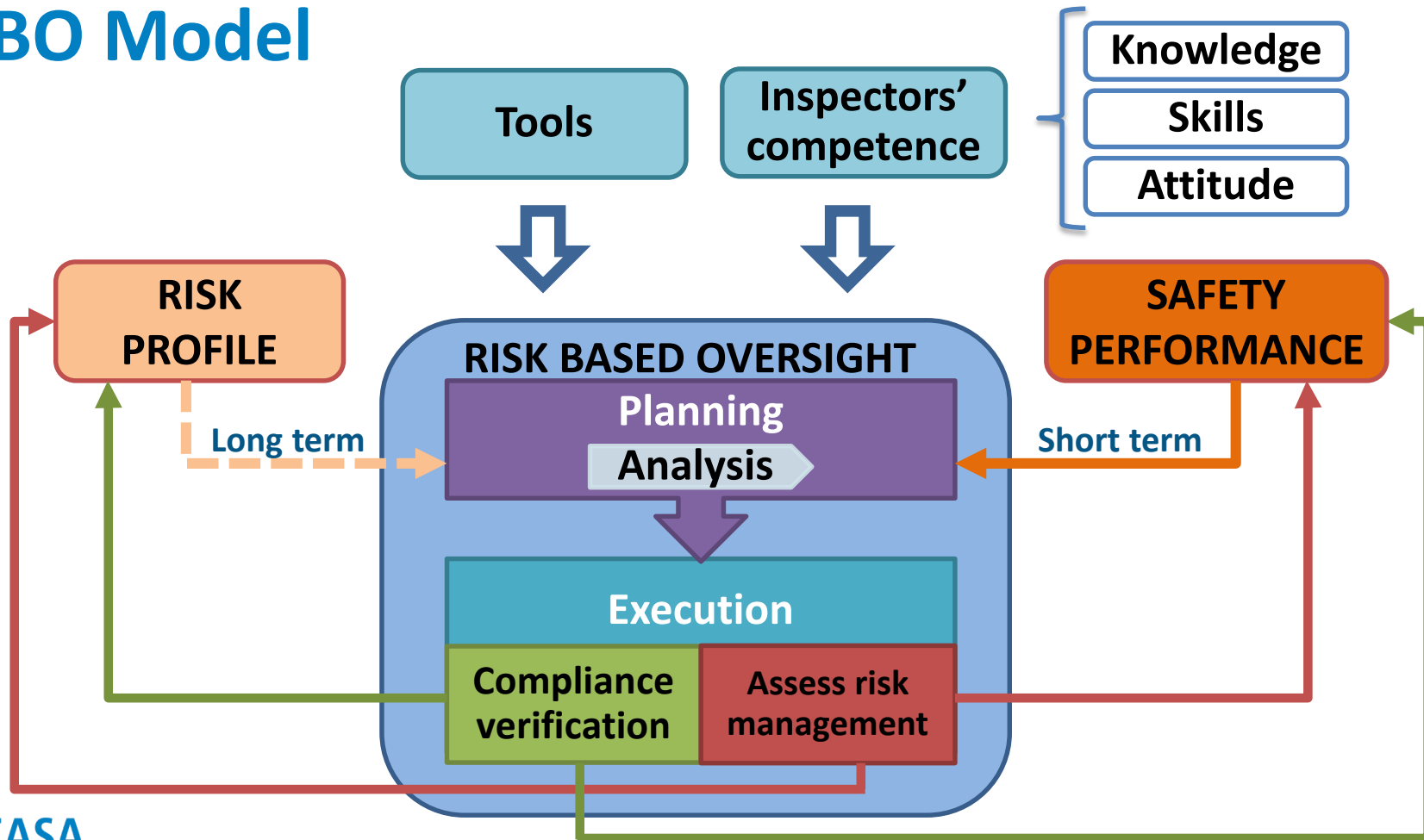
The demonstration of **how effectively** can a regulated entity **mitigate its risks**



# RBO Execution: focus on management of risks



# RBO Model



# RBO and Safety Management Systems

**SMS is the ability to address four questions**

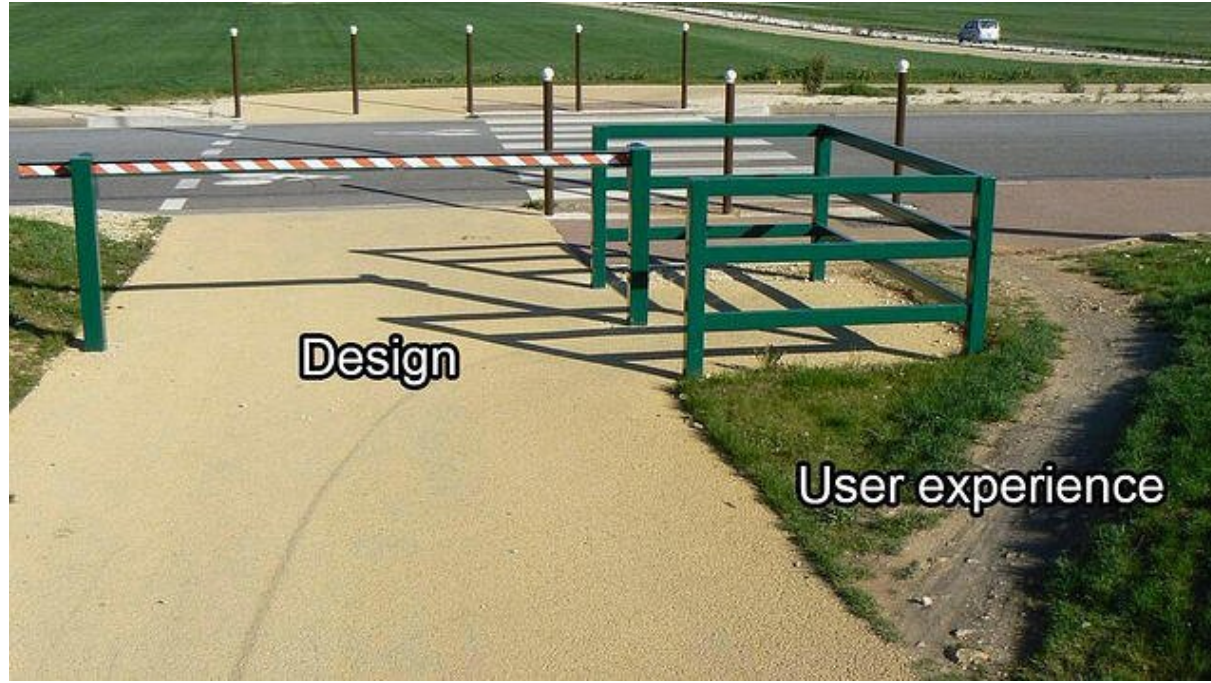
- Very easy to answer if you have an effective SMS
- Impossible to answer if you don't

1. What is most likely to be the cause of your next accident or serious incident?
2. How do you know that?
3. What are you doing about it?
4. Is it working?

*Bill Voss, AeroSafetyWorld, May 2012*



# PBR/RBO Challenge #1: theory vs. practice





# PBR/RBO Challenge #2: the pace of innovation





# Way forward: cooperation in supervision

- A **cooperative approach** amongst all actors:
  - EC, EASA, Member States, approved organisations
- The “right mix” of **rules**:
  - **Prescriptive** when needed
  - **Performance-based** when appropriate
- **Risk-based** oversight:
  - Planning driven by **risk profile** and **safety performance**
  - Execution focussing on **effective risk management**
- Inspectors’ **competence**:
  - Knowledge, Skills, Attitude
- **Tools** and **enablers** (including a Just Culture)



# Many thanks for your attention!

Hope to see you soon in Cologne...



[easa.europa.eu/connect](https://easa.europa.eu/connect)



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