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Federal Office of Civil Aviation FOCA



# Occurrence Reporting Safety Culture

**Marc Keusch, Head SRM at FOCA**

6 May 2022, Bern Zentrum Paul Klee (ZPK)



# In brief



## Marc Keusch

Airline pilot,  
lic. oec. publ. University of Zürich  
Executive MBA from University of St. Gallen (HSG)

Since 2017 FOCA, Head of Safety & Risk Management  
2007 – 2017 Zurich Airport Safety Office  
2005 – 2006 FOCA, Flight Operation Division  
1997 – 2004 Airline pilot (MD83, Fokker100, GLF-IV)



# Agenda



## A. Data – information – knowledge

- ▶ from single occurrence reports to a Swiss Aviation risk register



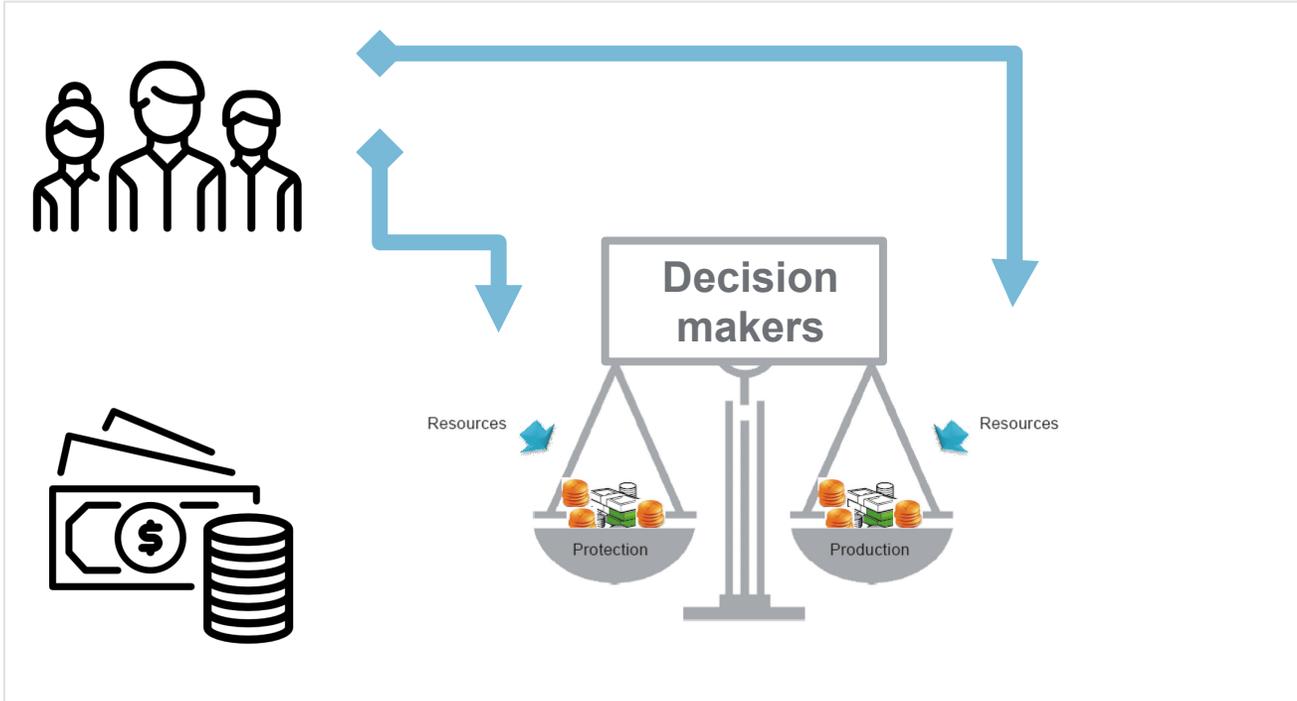
## B. Safety culture

- ▶ Safety as an attitude





# Equilibrium - Are we still in balance?



 Today?  
Will we still be  
tomorrow?

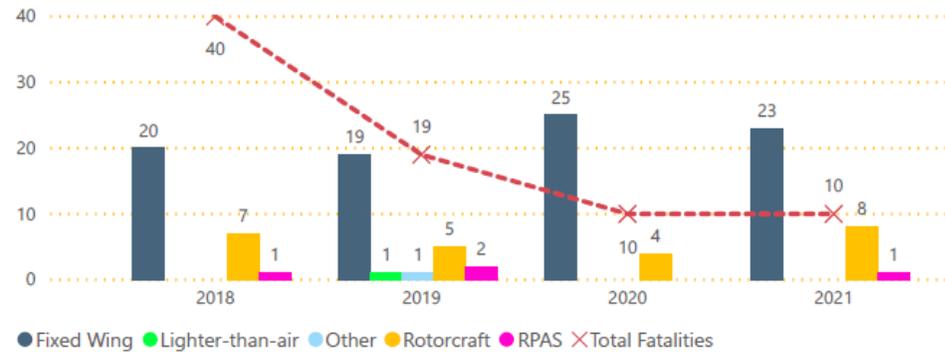
▶ **Safety first», mission first – safety always, safety as an attitude**



# Number of accidents and serious incidents 2018-2021 (ONLY HB-registered)



Breakdown by ACFT Category

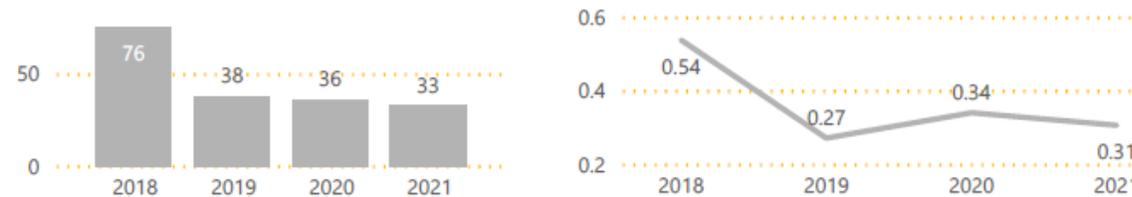


Are we doing better?

- Just coincidence?
- Results of efforts?
- Law of small numbers?

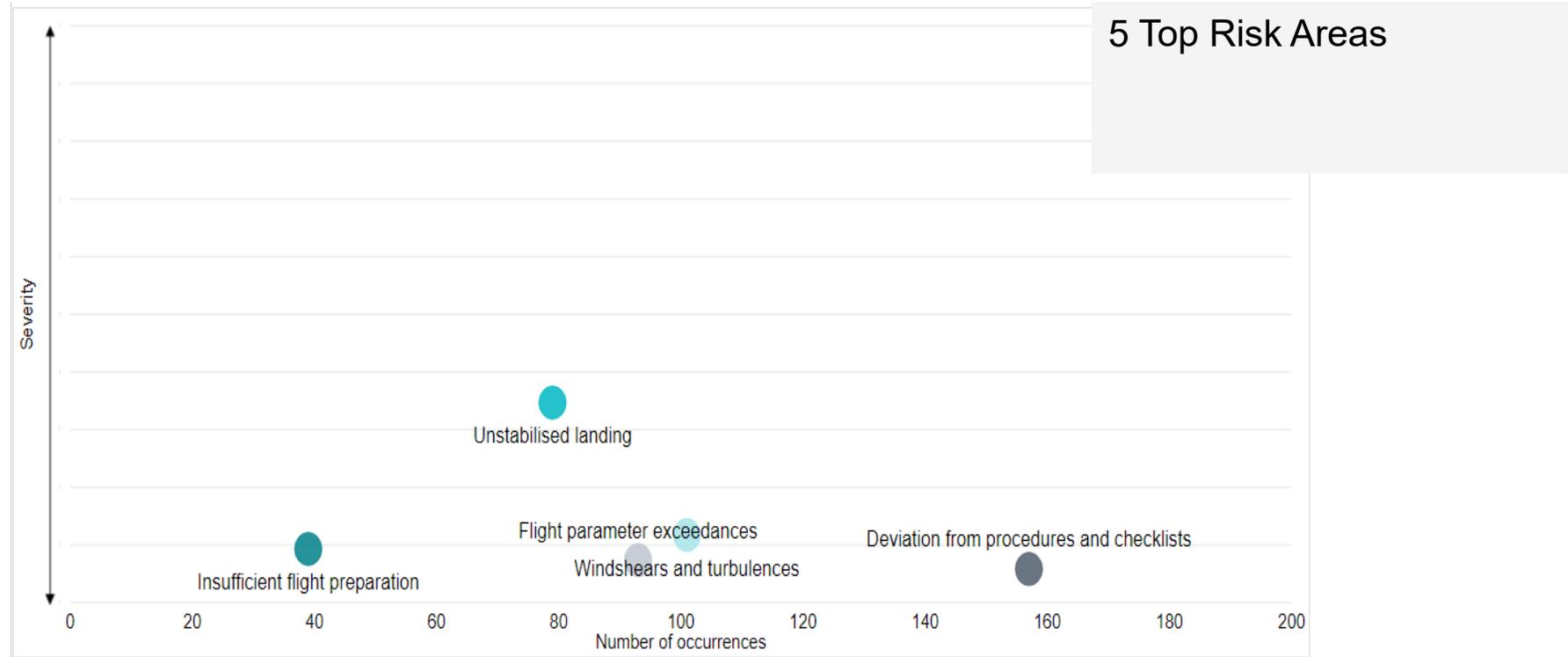


Number of serious incidents per 10'000 Movements



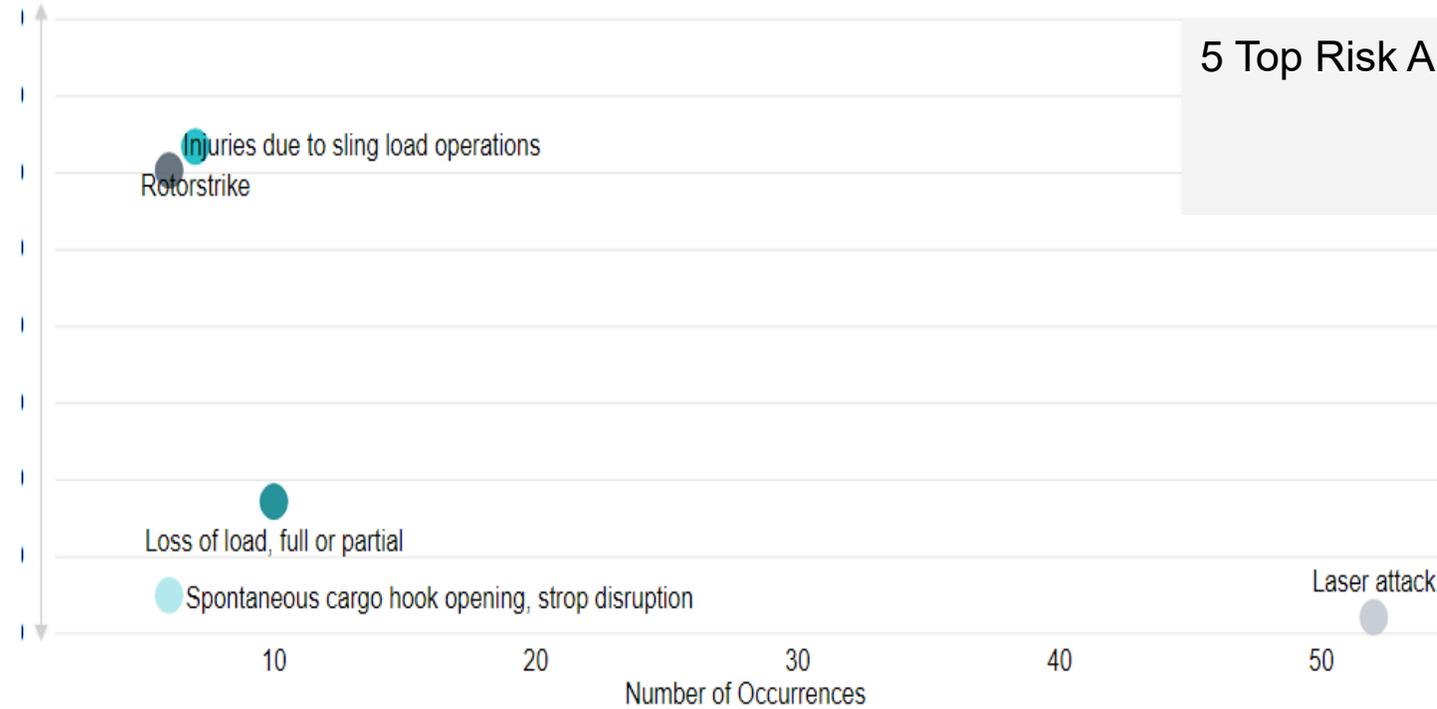


# Safety issues with aeroplane ops





# Safety issues with helicopter ops



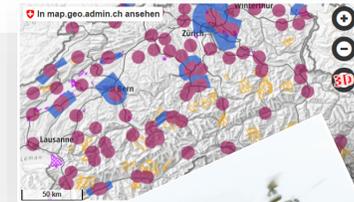


# Use of Data I



## Data to promote safety:

- leaflets
- YouTube videos (Delta airspace / RPAS)
- new aviation charts
- safety conferences



## Basic safety documents:

- State Safety Programme (SSP) = Strategy
- Swiss Aviation Safety Plan (SASP) = Roadmap
- Annual Safety Report

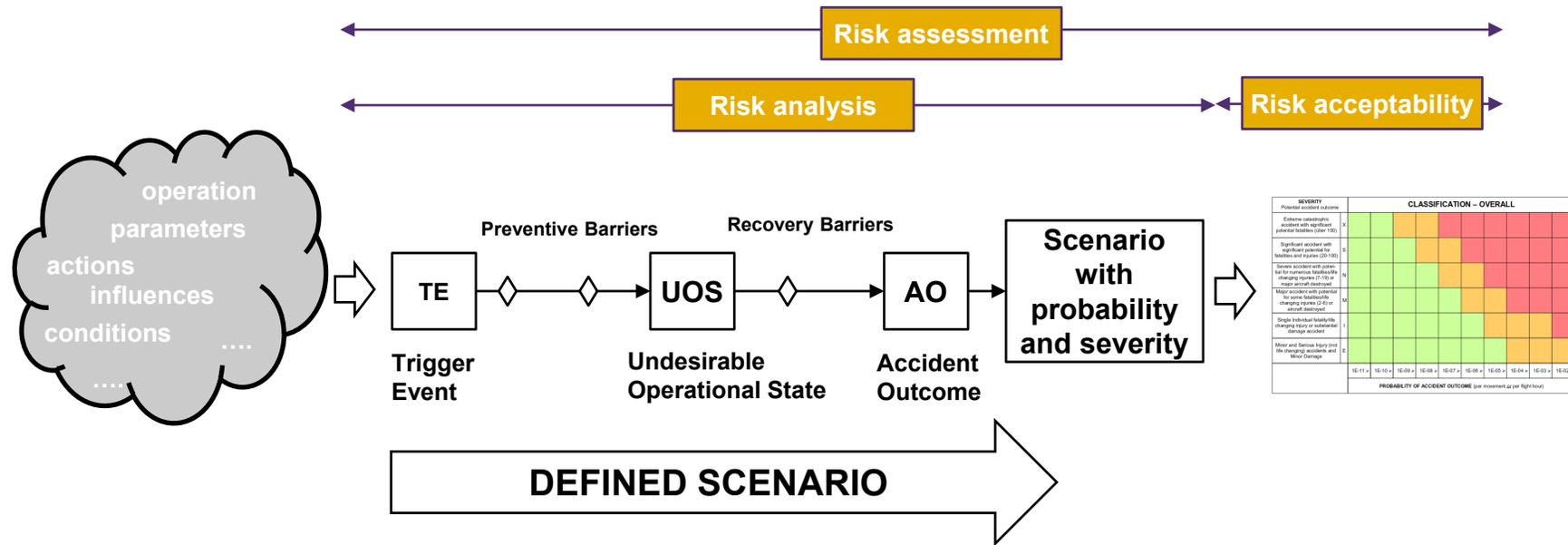




# Use of Data II

## Data for Risk Analyses

The occurrences reported help us to evaluate the robustness of preventive and reactive safety barriers  
Basis for the Hazard and Risk Register (HRR), afternoon session





# The FOCA Hazard and Risk Register



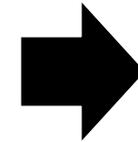
- Mid-Air Collision TMA ZRH
- Mid-Air Collision: specific hotspots identified (in Delta and Echo airspace) and due to general high complexity
- Ground Collision at Zurich Airport (Runway 28/16 or with taxiing aircraft)
- RWY Excursion
- Specific hotspots (GRE, Martigny, WIL)
- Cyber threats (GPS Jamming)
- COVID19 Risk Portfolio issues





# B – Safety Culture

## Elements of Safety Culture



- Dependencies between elements
- Slow and gradual development
- lasting impact on safety level
- **Personal conduct and behavior**



# 4 Ps - Culture in an organisational context

## Philosophy

- Mission Statement, code of conduct, vision, strategy

## Policies

- Regulations, directives,
- Policy manuals

## Procedures

- Procedures, work Instructions
- SOP

## Practice

...the way things are done when nobody is watching...



# Ju-52 accident, 4 August 2018

## Lessons learnt for the FOCA



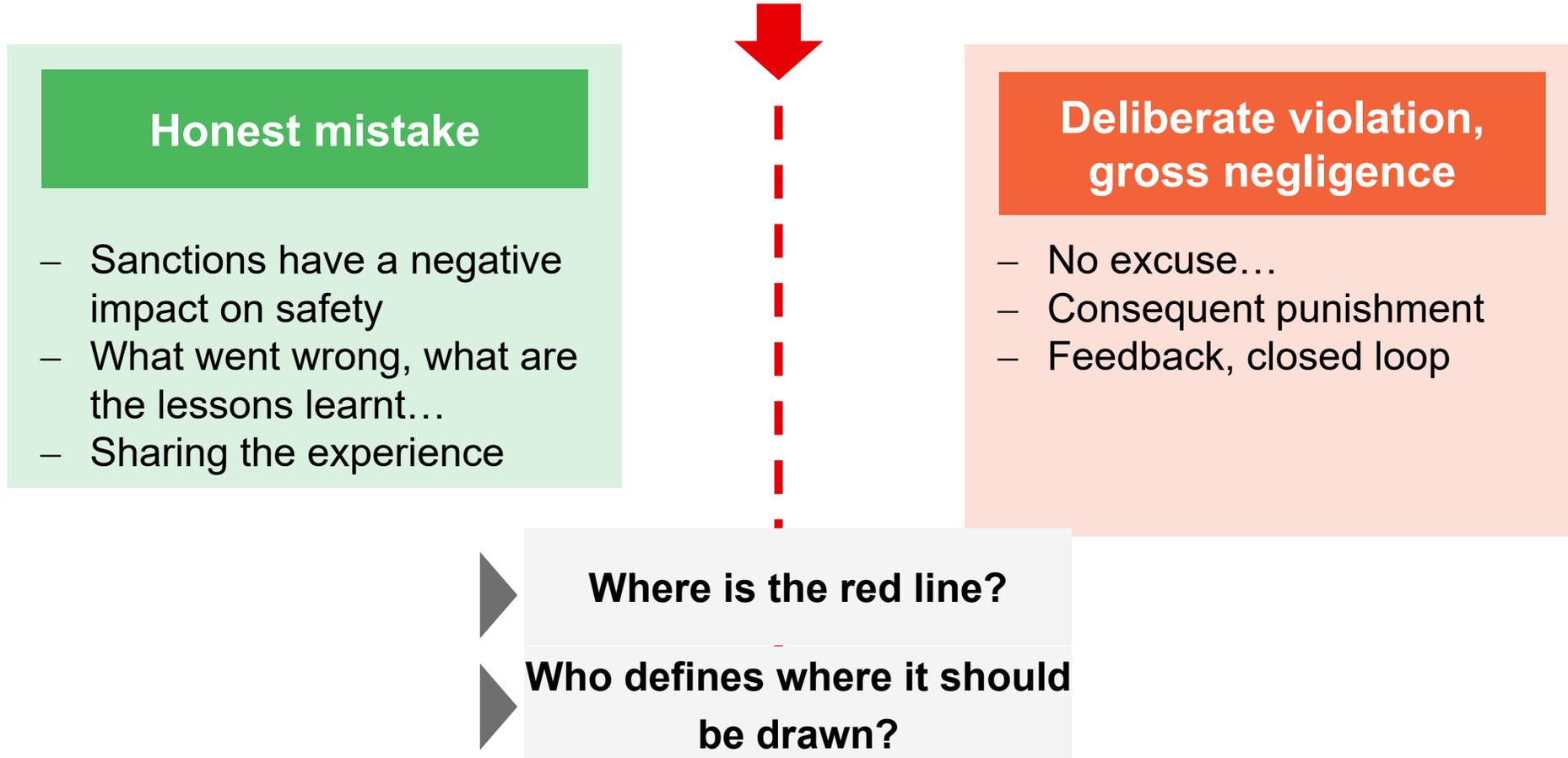
- 4 Ps: strong in the evaluation of manuals (Policies, Procedures), weak in monitoring philosophies (leadership, learning culture) and practises
- Assessment of SMS/safety culture maturity
- still very much compliance-based and not risk-based
- Lack of information to the regulator from outside or inside the company
- «Wrong» EASA set-up for this type of operation, including technical specifications/exemptions (no flight data monitoring)

Source: AAIB-Report, published NLR-Report with recommendations



# Just Culture

## Non-punitive vs. enforcement

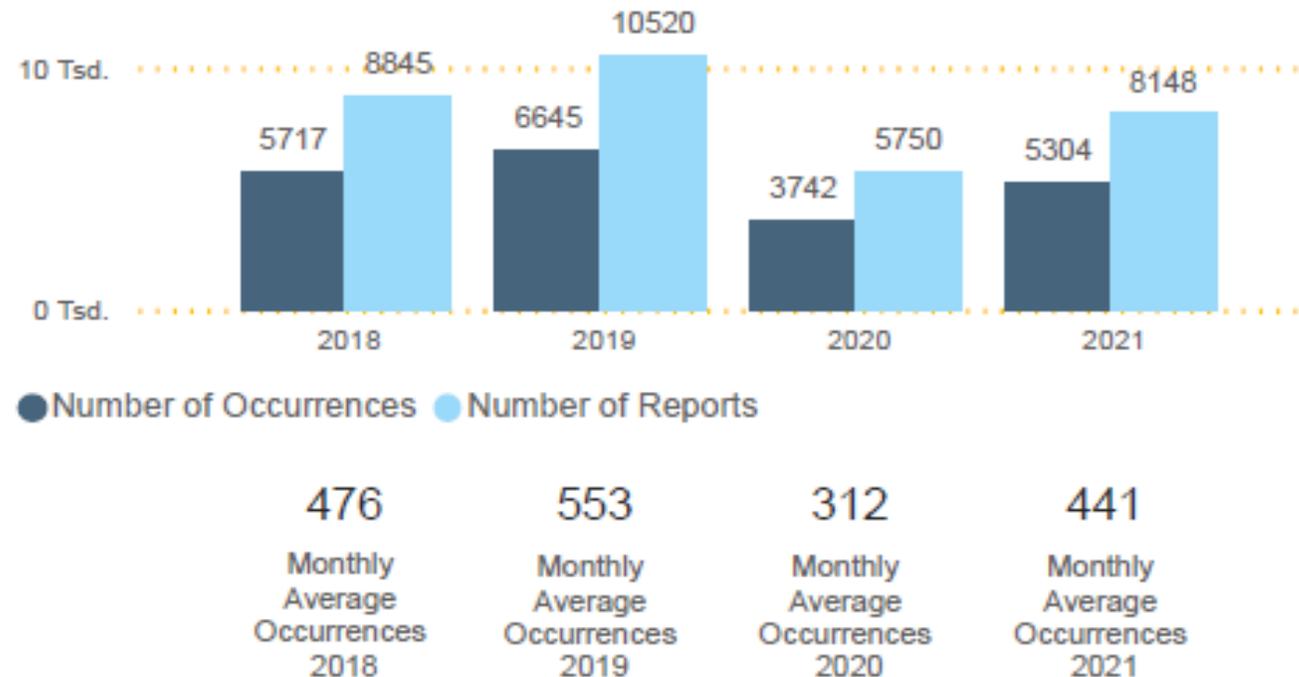




# Just Culture in reality



Number of reported Occurrences & Reports per year



Fewer than 10% of all cases with a “bad outcome” are tracked under criminal investigation (mostly triggered by AAIB reports or police reports).

Source: FFAC/HSG study

Majority of unsafe acts are without any fear of criminal investigation; protection measures according to EU 376/2014.



# Just Culture – latest news



- **FFAC study** of 2022 related to Just Culture
- Just Culture **white paper** by Aerosuisse
  
- Ongoing **Motion** for Council of State (*Ständerat Motion*) with three main elements:
  - Definition of a **High Reliability Organization (HRO)**
  - Protection mechanism for **various industries** (aviation, medicine, power plants, railway, ...)
  - New article in the **Swiss Code of Criminal Law**



It's going to be a long (and political) journey...



# Looking ahead - Afternoon workshop and technical discussions



Both these topics (Occurrence Reporting/Risk Management and Safety Culture/Just Culture) will be discussed in the afternoon session (workshop)



SRM will conduct technical discussions (Fachgespräche) with safety managers in the coming months

