

# **DAeC Safety Concept for pilot-clubs and -associations**

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**Global context**

**Motivation**

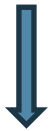
**5 puzzle stones - Human factor**

**3 steps modell**

ICAO: Global Aviation Safety Programme



EU-Comm.: European Aviation Safety Programme (EASP)



↳ **EASA: Europ. Plan for Aviation Safety (EPAS)**

D: German Aviation Safety Programme (GASP)

↳ **LBA: German plan for Aviation Safety (GPAS)**



**DAeC Plan for Aviation Safety (DPAS)  
in your ATO and: in your club/association (locally)**

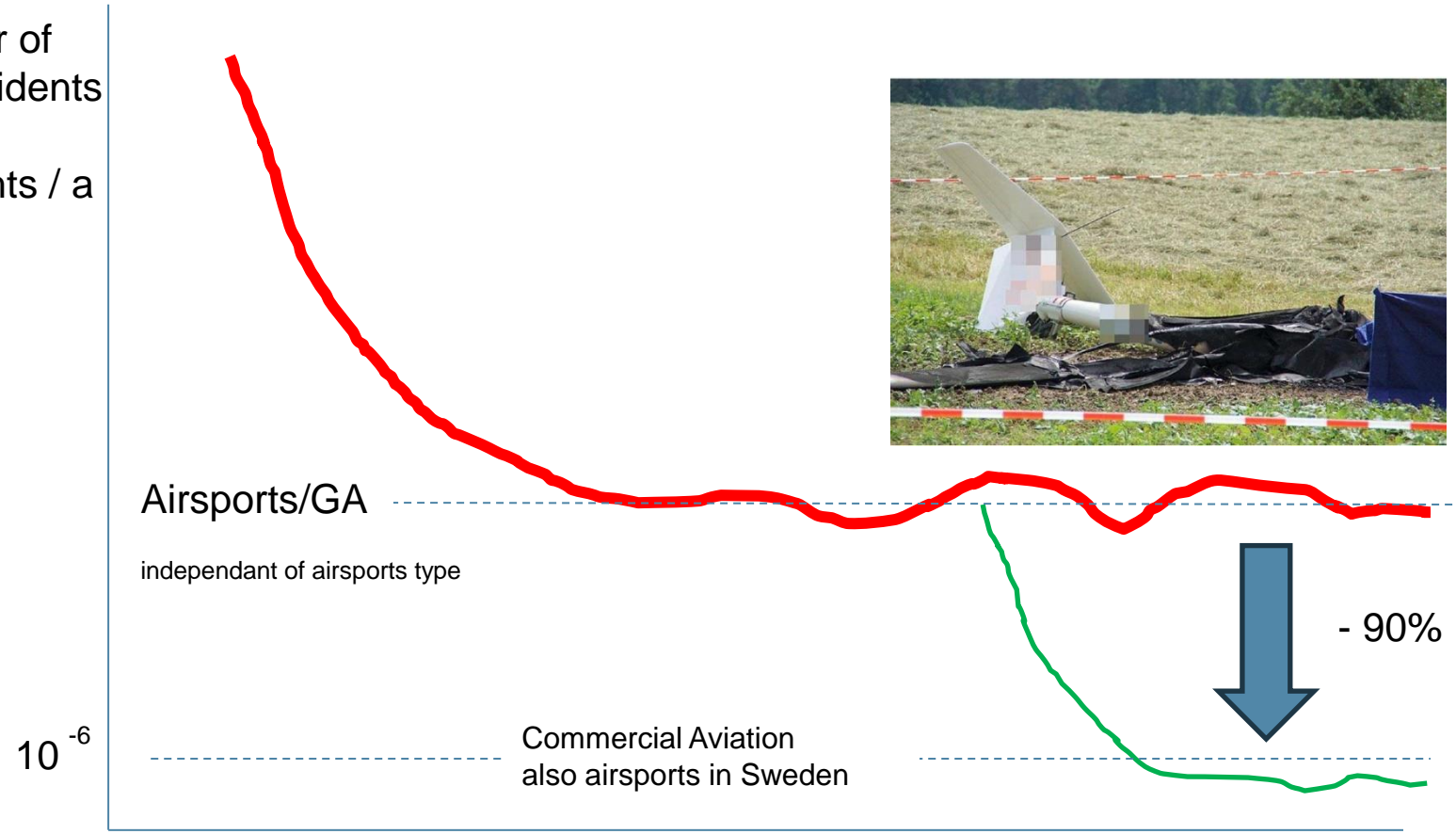
5 puzzle-stones

- Organisation, systems, targets
- Technical Equipment
- Communication incl. event recording
- Training/continuous education, sensitization
- Human factor

# Motivation

## EASA statistics - accidents

Number of heavy accidents per 1 Mio flights / a



Number of heavy accidents since years on the same unacceptable level

We have to intensify our efforts !

## Why do we want to intensify all efforts ?

Nobody wants to be parts of an accident  
(personel concern)

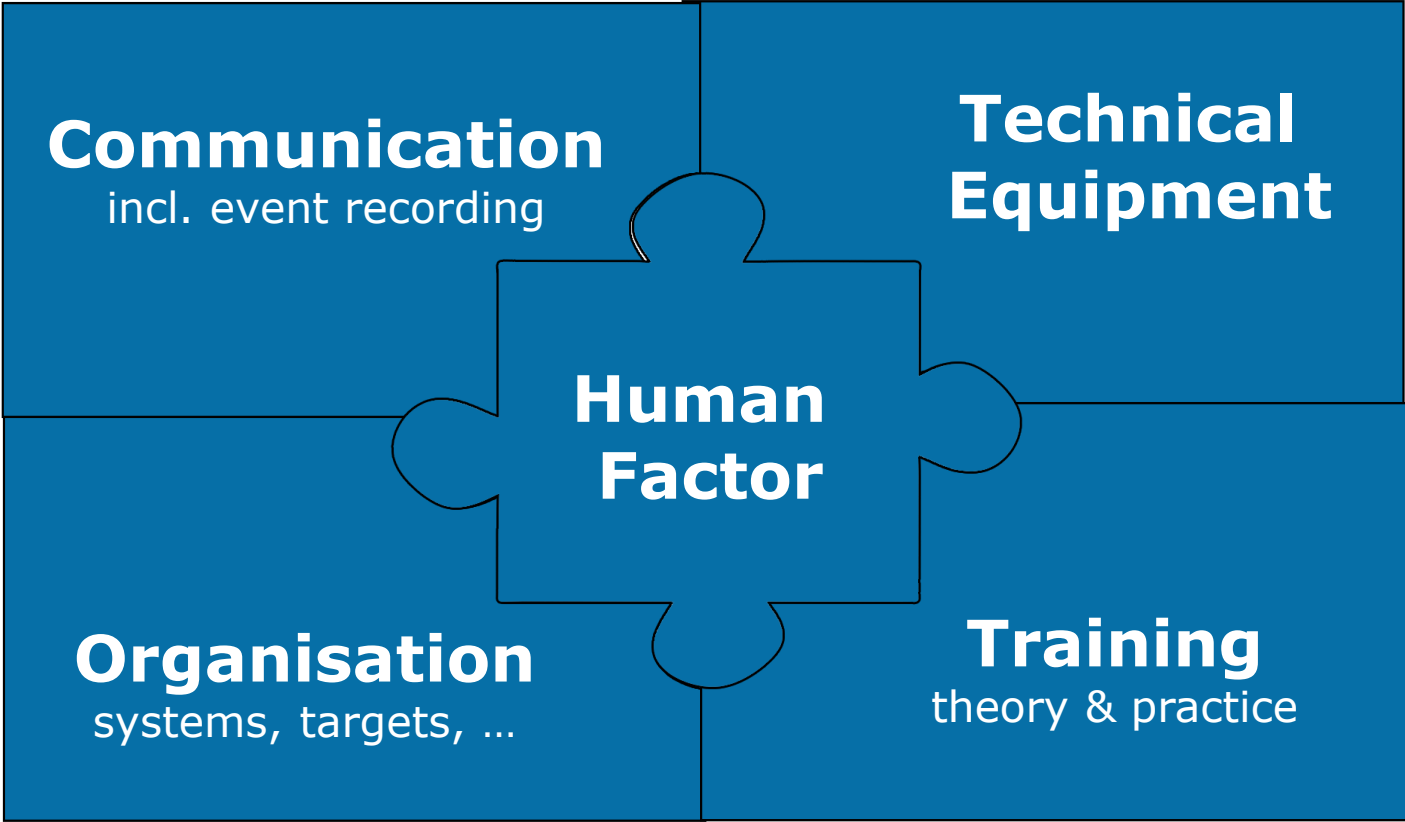
Each single accident is bad for airports reputation  
(concern of each airports-pilot)

President/Management of clubs and associations  
have to ensure/enable a safe flight operation  
(club management concern)

As Fight Instructors we have to sensitize and train  
our student pilots more intensive on flight safety  
(concern of training and continuous education)

ALL persons involved, confronted with a large number  
of heterogenous, complexe and uncertain risk-situations  
have to be integrated in safety work  
(raise all potentials, teamwork)

# 5 puzzle-stones for safety improvements



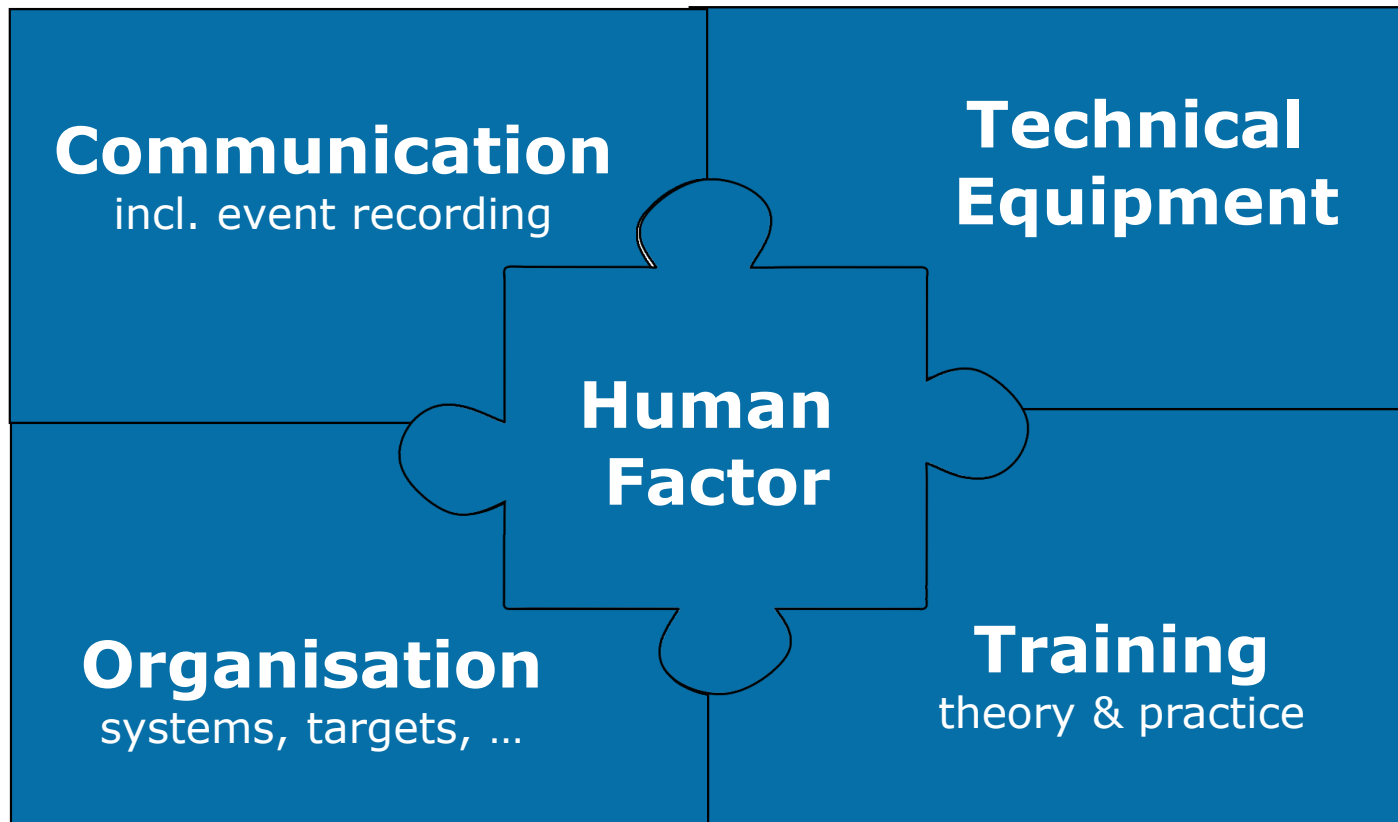
**Key issue: human factor – human behaviour**

# 5 puzzle-stones for safety improvements

## keywords

*Just Culture, Dialogue technics  
Modul vereinsflieger, club-FS-data*

*Equipment: XPDR, FLARM, ADS-B....  
Total-Rescue-System, Maintenance*

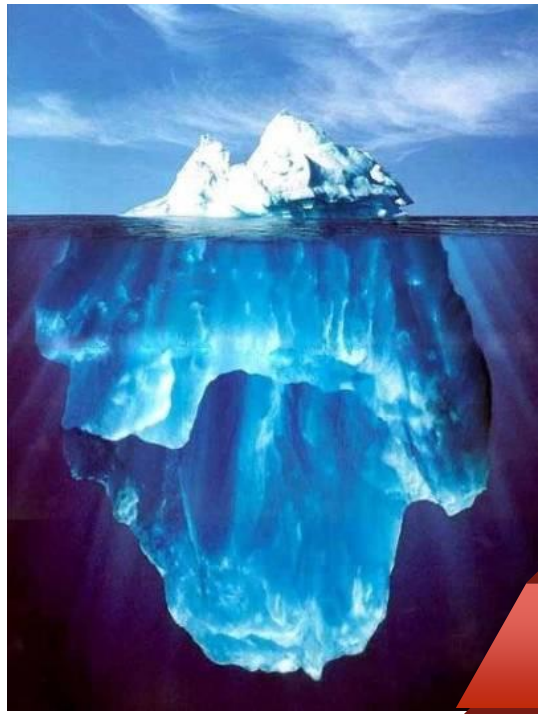
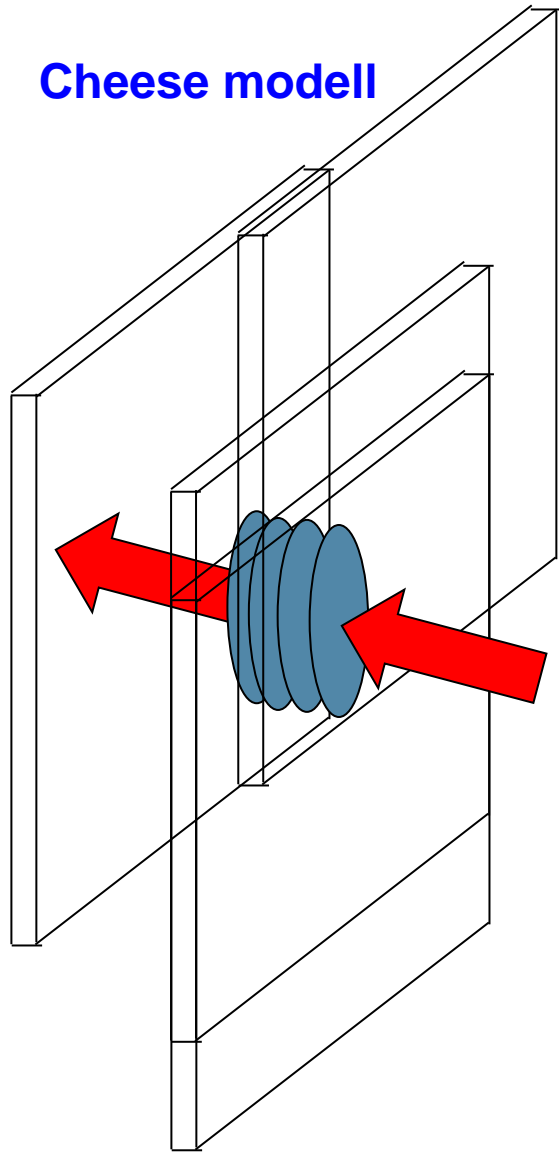


*SMS-Handbook, Regulations,  
Checklists, actions plans,  
annual targets, ...*

*Training plans and regulations  
Practical training,  
Annual safety training,  
Training- weekends, ...*

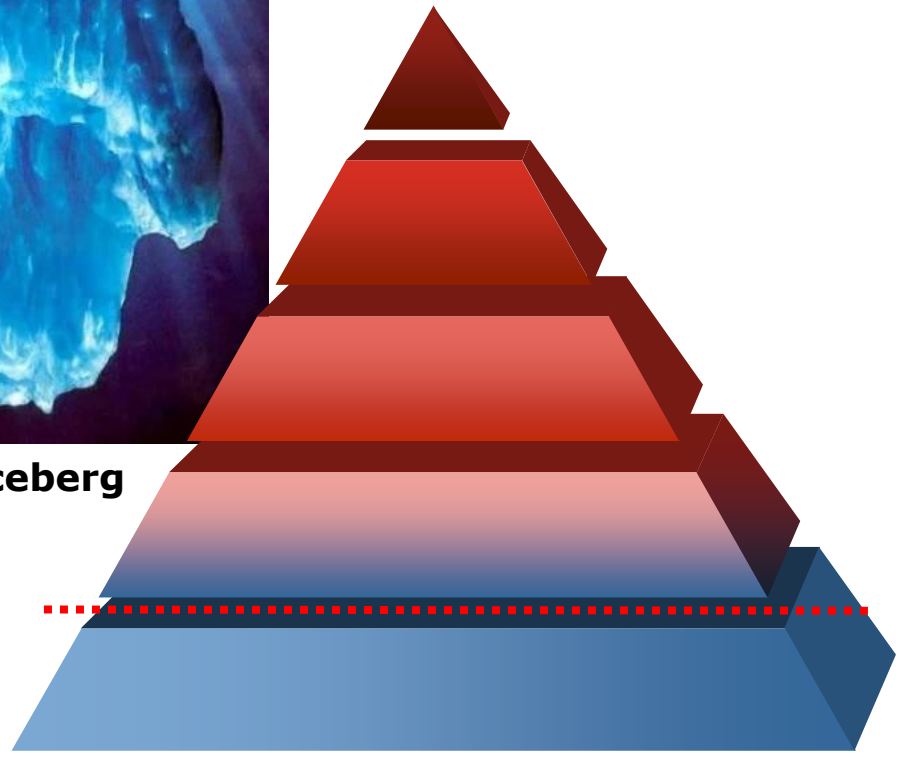
# Human factor Keywords

## Cheese modell



Top of the iceberg

Existing Knowledge:  
Safety events are seldom technical driven,  
but nearly 100% human factor driven.



*„99 times all was fine“*



## EASA: Reasons for High Risk Events (Riskmatrix)

Flying in marginal weather conditions

Bad pre-flight preparation

Low training level

**=> the pilot (m,f) is one important human factor !**

## Optimisation

Improve the know-how and competence

Improve the decision making process during flight

Improve pre-flight preparation

and

**YOU HAVE TO FLY MORE OFTEN !**

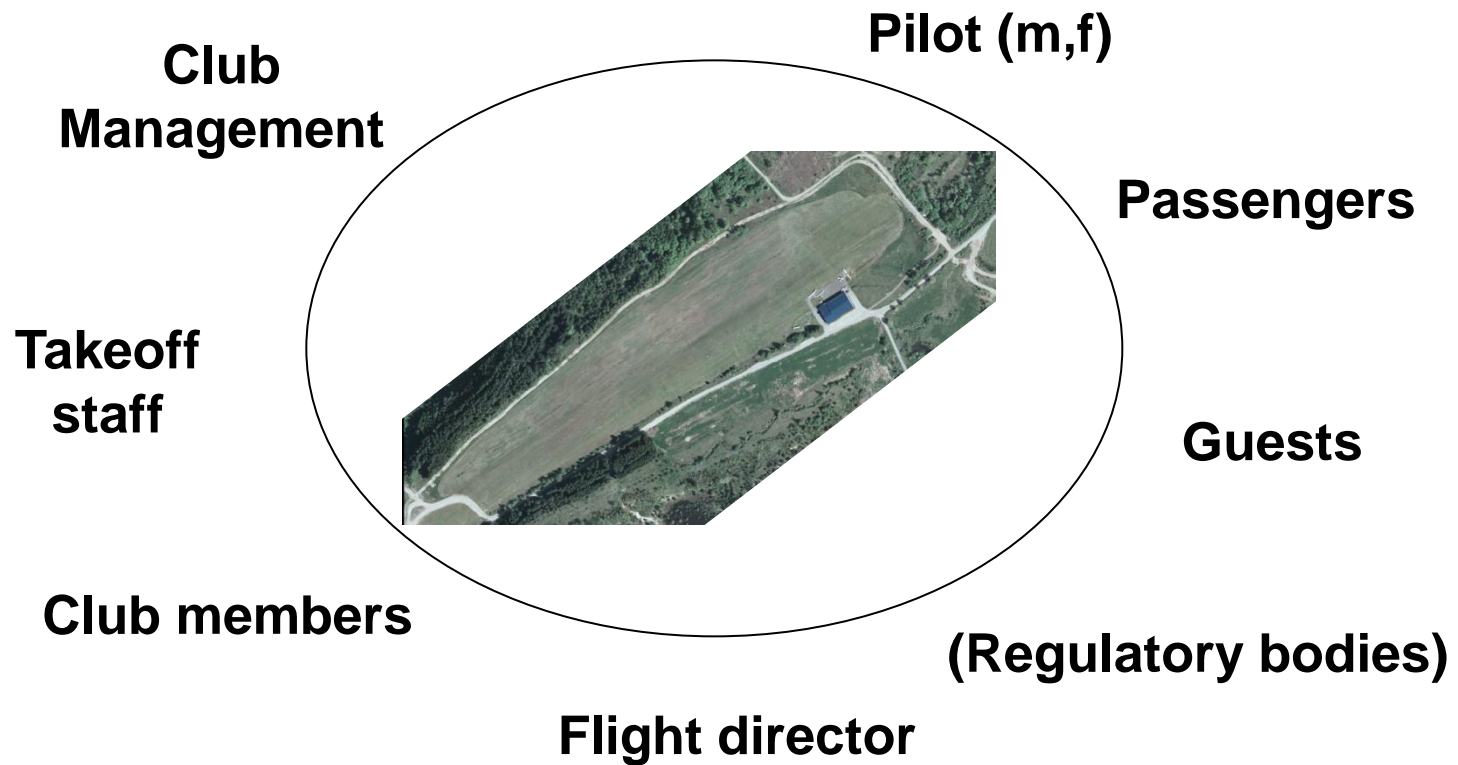
(Improve your training level)

# Human factor – in the club/association

**During flight:** Pilot (m,f), Crew, Passengers

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**On the airfield:** many persons involved !



**Don't get lost: do not approach them all at once for takeoff !**

## Step 1

### Safe pilots & Safe Flight Operations

#### Mandatory in ATOs

- Pilot-Training (Theory & Practice)  
(Details-Tuning)
- Flight-Instructors-Training  
(Details-Tuning)

## Step 2

### Safe Club Operations

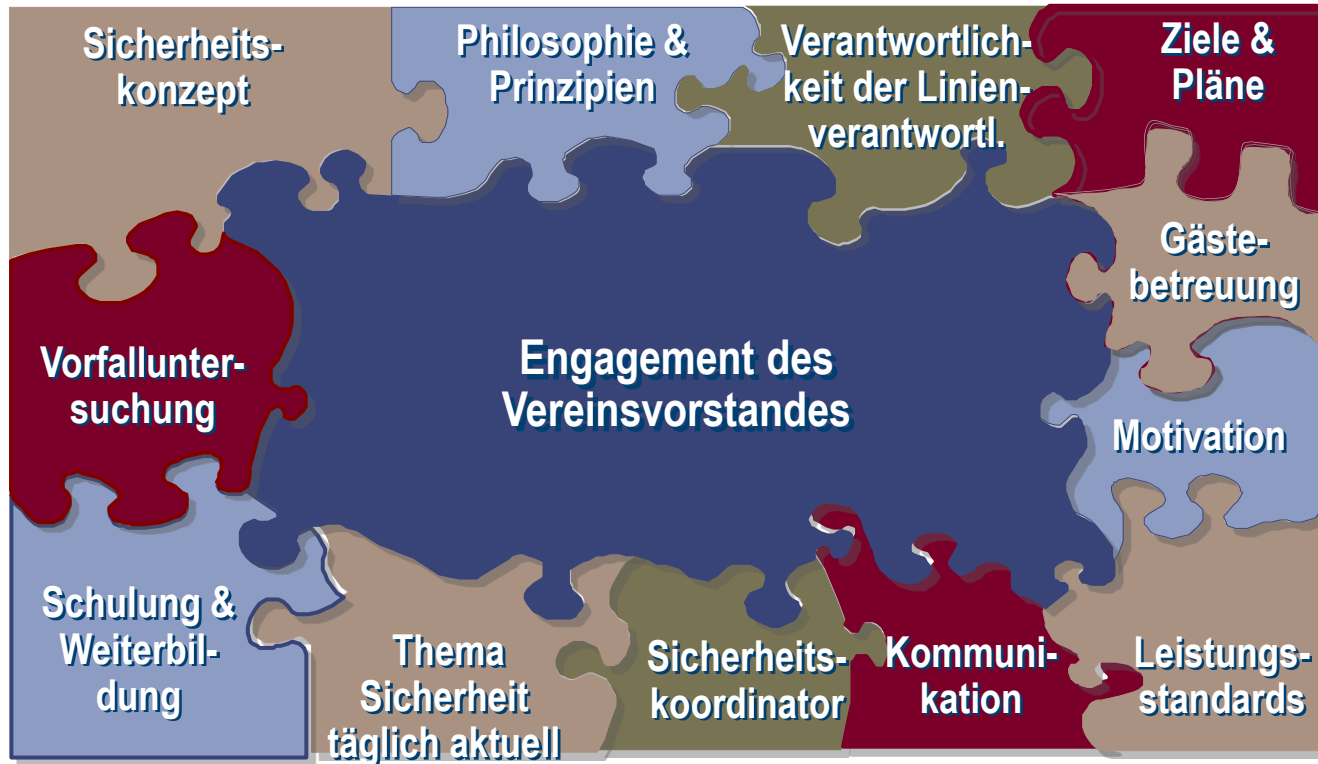
Find a safety-Carer/-Ambassador/-Manager  
Club Management & FIs together have to push safety  
Professional-adapted methods, Use Modul Flusi in vereinsflieger  
Extended practical training

## Step 3

### The Club and ALL involved

Training seminars

## Step 2: Detailed puzzle-stones



- Typical for a Puzzle: you need all puzzle stones !
- Commitment of the Club Management and the FIs is mandatory !
- All individual puzzle stones are interdependent !
- No puzzle stone can be seen in an isolated way.
- Effect on safety is only effective, if you push it permanently !

**Without a Safety-Carer/-Ambassador/-Manager you are lost !**

## **Documentation for your personal use**

- Example of Club-SMS-Handbook
- Example Checklists
- Docu for Training

## **Weekend Training HF by experts (before step 2)**

- e.g. 2 days
- Club Management and FIs
- Topics: Create a base for step 2
- If needed: accompany step 2 in the club

## **Training of Safety-Carer/-Ambassador/-Manager**

- e.g. 1 weeks course by professional trainers
- regional or central seminars
- certificate

Start: autumn 2024

**Open question: how to integrate individual pilots ?**

**Safety starts between your ears !**

**Thanks for your attention !**

**Questions ?**

**and: don't forget 2 Fun-events im 2024 !**



AERO-CLUB SAAR e.V.

# Marpingen Flight Safety Days 2024

## 16. and 17. March 2024

Leistungszentrum Segelflug  
Am Segelflugplatz 1, 66646 Marpingen

Official FI refresher seminar

***Be a part !***  
***Get in touch: [info@aeroclub-saar.de](mailto:info@aeroclub-saar.de)***

*Airsports  
inspires!*



# Programme

## Saturday, 16. March 2024

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- 10h00 Welcome adress**  
R.Hubo, AeCS, Marpingen
- 10h15-11h15 Ident-Systems and airspace 2024**  
H.Brune, DAeC-BAUL, Braunschweig
- 11h15-12h15 DAeC Concept for flight safety**  
5 Puzzlestones  
T.Kreimeier, DAeC-BA Flusi, Braunschw.
- 
- 12h30-13h30 Lunch break
- 
- 13h30-14h15 Ramstein Midair Awareness Campaign**  
Capt. N.Donnely, Dep.Chief of Fl.Safety,  
Ramstein Airbase, Ramstein
- 14h15-15h30 Flight sayfety in practice at Luxair**  
P.Kremer-T.Wiegant, Airline Safety  
Management, Luxair, Luxemburg
- 
- 15h30-16h00 Coffee break
- 
- 16h00-17h00 PGSG in AeCS\*\***  
N.Gerasimova, R.Hubo, AeCS, Marpingen

\*\* Prävention gegen Sexualisierte Gewalt

## Sunday, 17. March 2024

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- 10h00-10h20 Safety of aircraft/HF in Maintenance**  
R.Hubo, CAO Südwest, Marpingen
- 10h20-11h30 Crossing approved & FIS help for flights under bad weather conditions**  
C. Kästner, DFS, Langen
- 11h30-12h30 Common use of airspace – cooperation Luftwaffe and civil airspace users**  
Oberst i.G. V.Engelmann, Luftwaffe
- 
- 12h30-13h30 Lunch break
- 
- 13h15-14h15 „All Flight safety“ – actual topics of 5 Puzzlestones, EASA, EAS, DAeC**  
Mike Morr, DAeC Referent Flugbetr., BS
- 14h15-15h30 Flight safety in an ATO**  
O.Henke, ATO-Saar, Marpingen
- 
- 15h30-16h00 Kaffeepause
- 
- 16h00-16h30 Flight safety for glider pilots**  
J.Preusser, DAeC-Buko Segelflug
- 16h30 Closing**  
R.Hubo, AeCS, Marpingen





AERO-CLUB SAAR e.V.

# 2024: 75 Jahre

Aero-Club Saar.

Luftsport beflügelt !

**20th July 2024:**

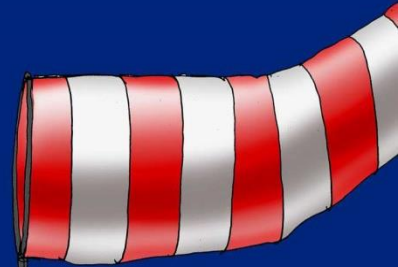
**International Fly-In**  
**Marpingen (EDRC)**  
**75 aircraft around Saarland**

**21st July 2024:**

**Saarluftig Convention 2024**  
*The biggest airshow in southwest Germany*  
aerobatics, airforce-parachutes,  
oldtimers, model-aircrafts, ...,  
food and beverages, .....fun !

***Be a part !***

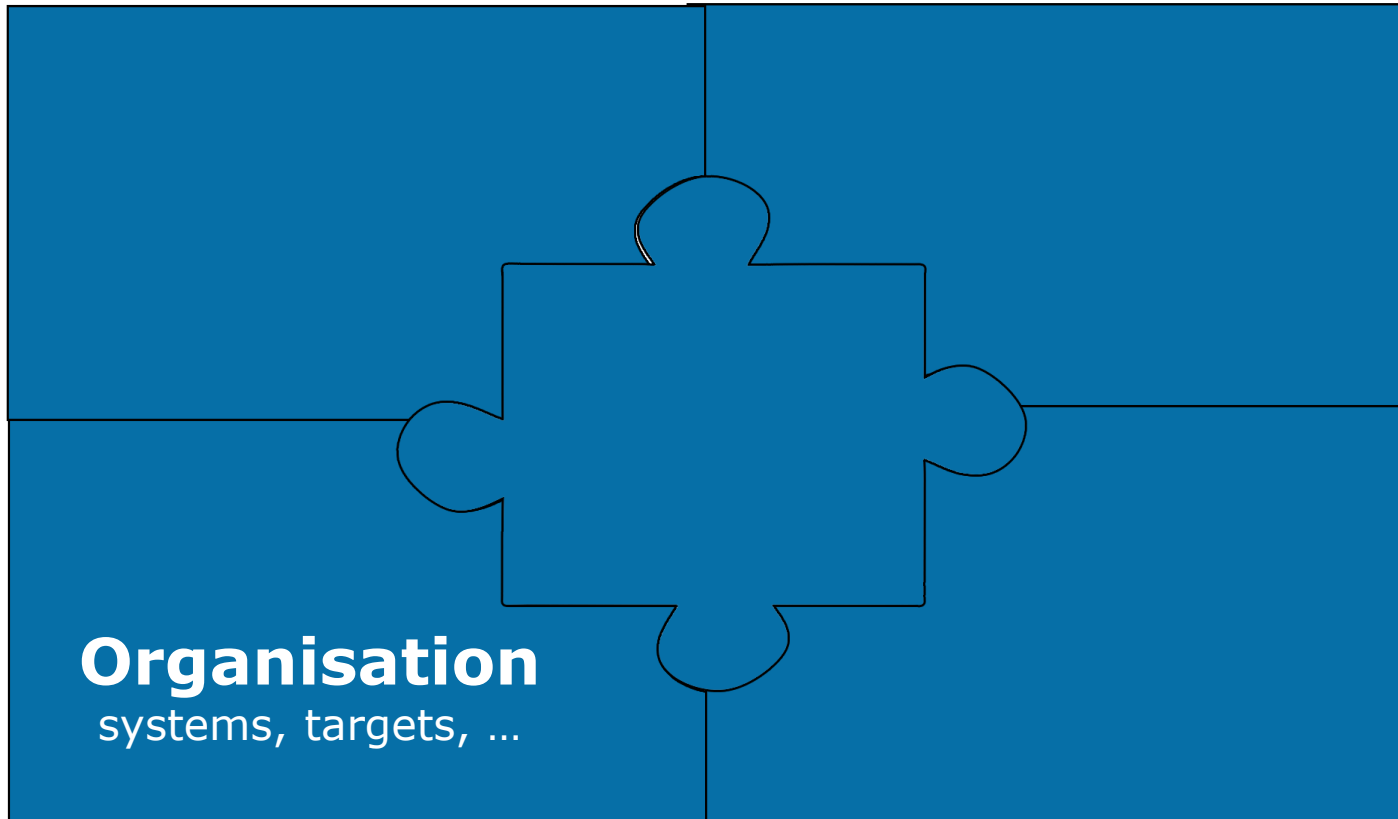
***Get in touch: [info@aeroclub-saar.de](mailto:info@aeroclub-saar.de)***



*Airsports  
inspires!*



# 5 Puzzle-Stones for safety improvements



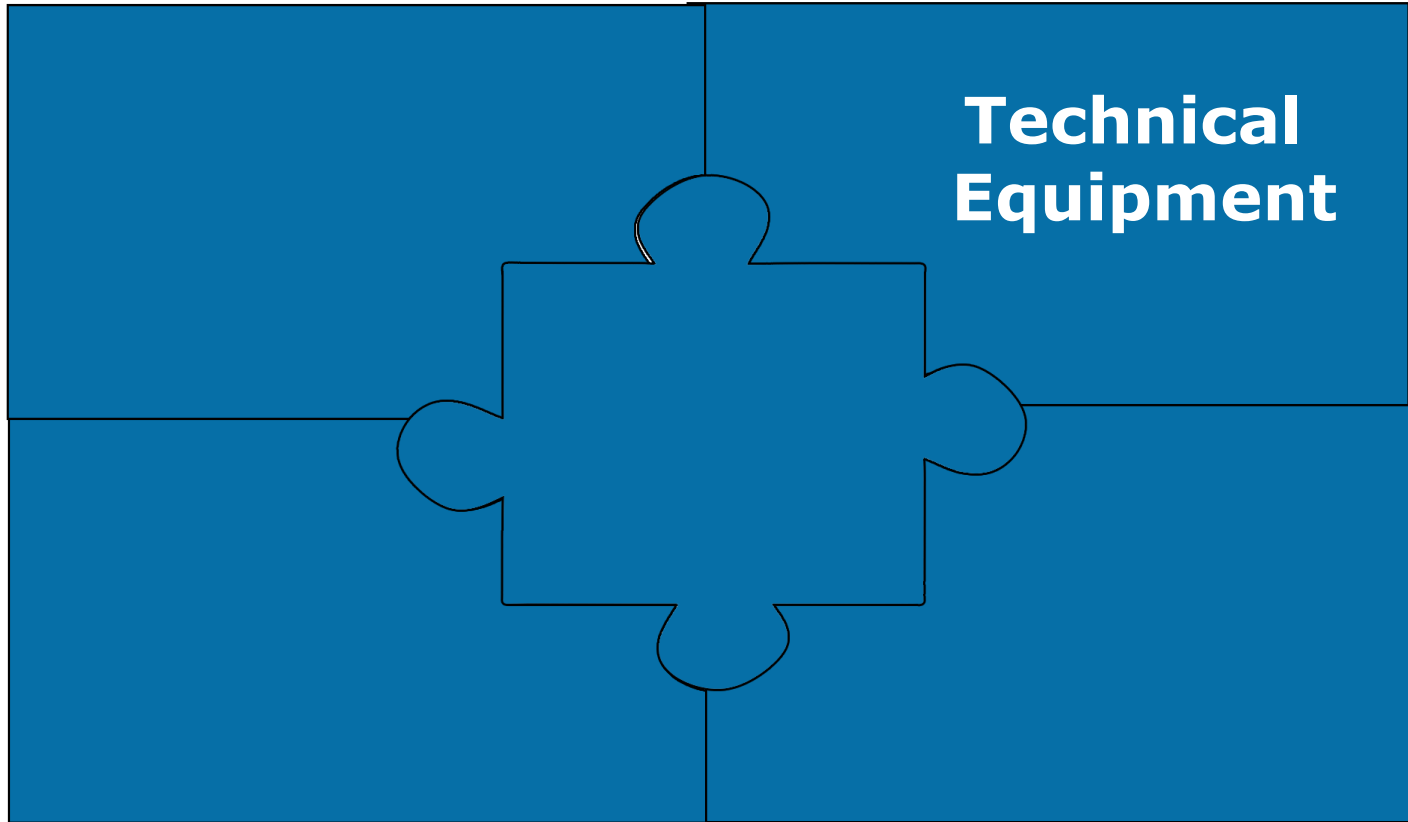
**Have a look at your ATO safety management !  
All points existing ?**

Some nasty questions:

1. Do you know your Safety Management Handbook ?
2. You know where to find all documents ?                      Checklists ...
3. Do you use the Modul Flusi in vereinsflieger ?
4. Briefing before 1st takeoff into the new season:
  - Do you check the training condition of each pilot and staff ?
  - Do you use a risk-analysis before each takeoff ?
  - Do you check yourself and the club-team ?

By the way: Would you enter a commercial aircraft knowing, that the pilots would not do these checks = unprofessional work ?

# 5 Puzzle-Stones for safety improvements



- |              |  |
|--------------|--|
| Airfield     | Warning markers, Barriers, fire extinguishers,...                                  |
| Cars & Winch | Fire extinguishers, wire cut-system, ...   |
| Aircrafts    | Rescue systems, gear warning, stall warning, XPDR, FLARM, ADS-B, rescue wests, ... |

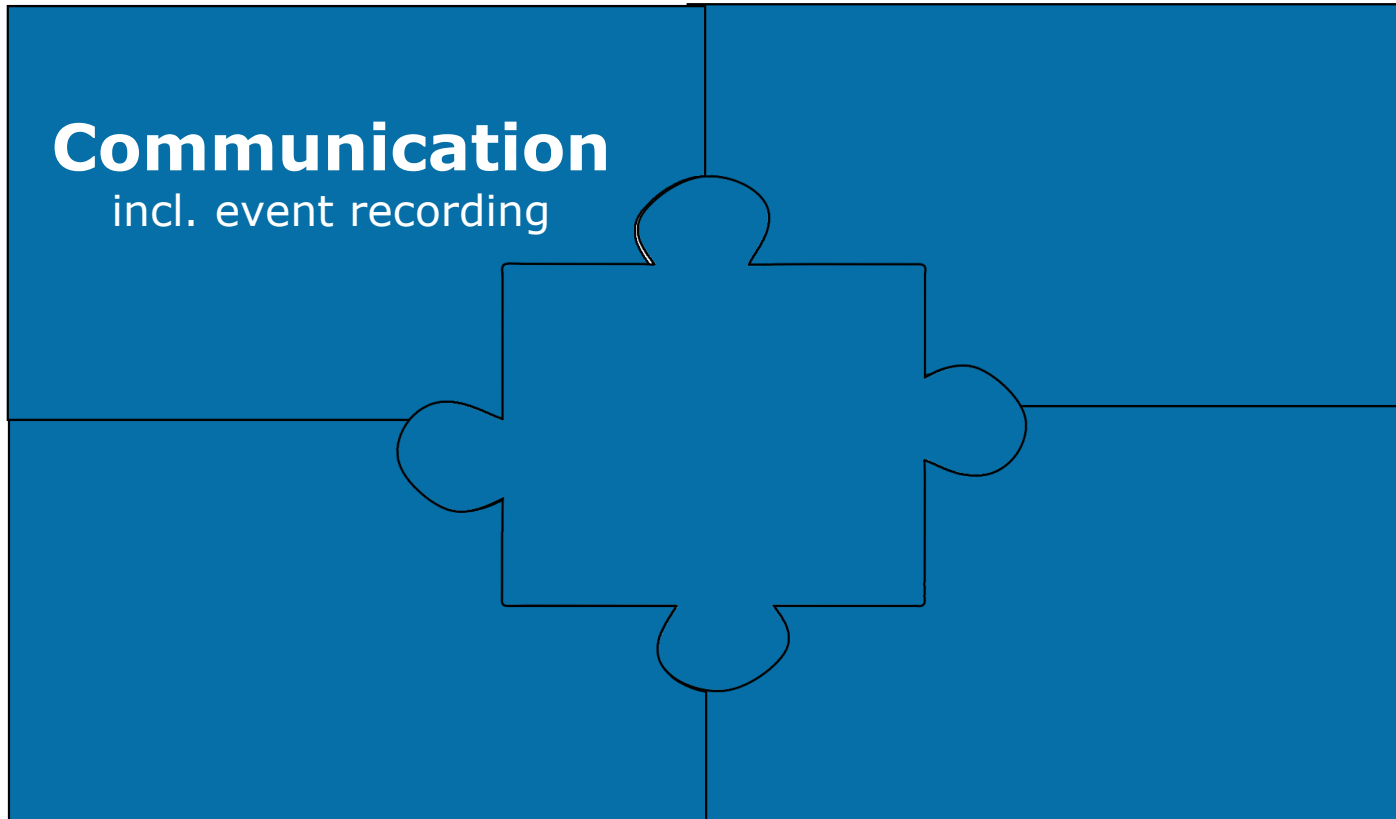
**Developemet of a all-in one system**

**For integration of all existing alert systems**

**DAeC et al. - BA Project University of Aachen**

***EASA – Project  
Conspiucity***

## 5 Puzzle-Stones for safety improvements



**Do you register all safety issues in your club ?  
Do you already use the register Modul of vereinsflieger or equiv.?**

# Möglichkeiten des Moduls

- Sicherheitsereignis erfassen  
(im Flugbetrieb, im Verein oder ...)
- Flugsicherheitstraining dokumentieren  
(Seilrissübung, Startunterbrechung, ...)
- Jahresunterweisung dokumentieren  
(jährlicher Sicherheitsunterricht, Sicherheits ¼ Stunde, Briefings, ...)
- Doku Flugsicherheit anschauen

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## Ereignis erfassen

- Kleines Ereignis  
(Flugbetrieb)
- Mittleres Ereignis  
(Flugbetrieb, Sachschaden, kein Personenschaden)
- Schweres Ereignis  
(Flugbetrieb, schwerer Sachschaden, Personenschaden)
- Luftraumverletzung
- Vogelschlag

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### Genereller Hinweis:

Alle erfassten Info bleiben zunächst einmal intern vertraulich im Verein/in der Flugschule.  
Über die Vergabe nach außen entscheidet der „Kümmerer/Flugsicherheitsbeauftragte“



# Sicherheitsereignis erfassen

## Kleines Sicherheitsereignis erfassen

- Kleinen Text verfassen

Beispiele:  
 - Heute Seile übereinander am Startplatz  
 - Heute schon wieder DG Kuller vergessen  
 - Heute Remo Abdeckung Pilotrohr vergessen

Damit sind alle kleinen Sicherheitsereignisse gemeint

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## Mittelschweres Sicherheitsereignis erfassen

(Flugbetrieb, Sachschaden, kein Personenschaden)

- Text verfassen
- Fragebogen ausfüllen
  - Segelflug
  - Flug mit Motor (SEP, TMG, UL)
  - Fallschirmspringen
  - Hängegleiten
  - Modellfliegen



sportartspezifisch zu erarbeiten

Links in Phase 2 des Moduls, in Vorbereitung

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## Schweres Ereignis aufnehmen - Meldepflicht !

(Flugbetrieb, schwerer Sachschaden, Personenschaden)

- Fragebogen ausfüllen
  - Segelflug
  - Flug mit Motor (SEP, TMG, UL)
  - Fallschirmspringen
  - Hängegleiten
  - Modellfliegen

Dies ist eine Abfragemaske auf Basis BFU/LBA-EASA-ICAO-Anforderungen für schwere Störungen

**In Phase 2 des Moduls, in Vorbereitung !**

- Bericht für die Versicherung erstellen **In Phase 2 des Moduls, in Vorbereitung !**

## Sicherheitstraining im Flugbetrieb erfassen

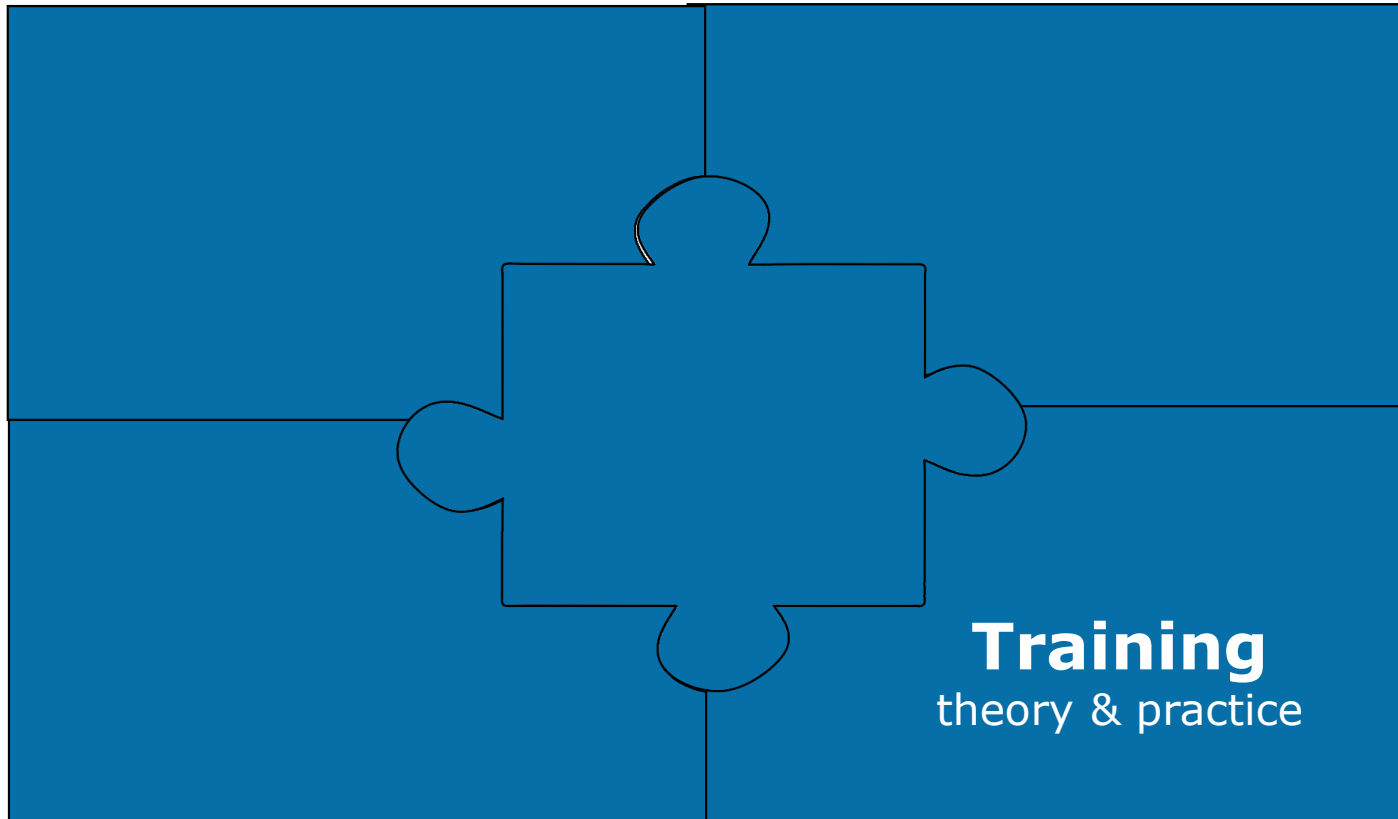
- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Segelflug               |  | <input type="checkbox"/> Trudleinweisung<br><input type="checkbox"/> Seilrissübung<br><input type="checkbox"/> Anflug aus ungewohnter Position<br><input type="checkbox"/> Außenlandeübung<br><input type="checkbox"/> F-Schlepp-Landeübung<br><b><i>z.B. Daten von Startliste übernehmen</i></b> |
| <input type="checkbox"/> Flug mit Motor          |  | <input type="checkbox"/> Trudelübung<br><input type="checkbox"/> Ziellandeübung<br><input type="checkbox"/> Ziellandung aus 2.000 ft ü.G<br><input type="checkbox"/> Außenlandeübung<br><input type="checkbox"/> Übung Umkehrkurve<br><b><i>z.B. Daten von Startliste übernehmen</i></b>          |
| <input type="checkbox"/> Fallschirmsprungbetrieb |  |   |
| <input type="checkbox"/> Hängegleitbetrieb       |  | sportartspezifisch zu erarbeiten  |
| <input type="checkbox"/> Modellflugbetrieb       |  |   |

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## Unterweisung erfassen

- Termin, Thema, Teilnehmerliste Sicherheitsunterweisung dokumentieren
- Termin, Thema, Teilnehmer tägliches Sicherheitsbriefing dokumentieren
- Termin, Thema, Teilnehmerliste Sicherheits ¼-tel Stunde

# 5 Puzzle-Stones for safety improvements



**Have a look at you actual ATO activities !  
Ask you FIs how they want YOU to push safety !**

**Sicherheit ist eine Grundvoraussetzung  
für Freude am Fliegen und am Flugbetrieb,  
entsteht aber nicht von selbst.  
Wir müssen gemeinsam daran arbeiten.**

**Belohnung/Freude der Fehlerfindenden  
(mögl. im Team & vor dem Fehlermachen)  
ersetzt Bestrafung von Fehlermachenden.**

## Stufe 1

### Sicherer Piloten und Flugbetrieb/Safe Flight Operations

#### **Pflicht /Mandatory in ATOs**

- Piloten-Training (Theorie & Praxis)  
(läuft in vielen Vereinen heute, Fein-Tuning)
- Fluglehrer-Training (Theorie)  
(läuft in der ATO-Saar, Fein-Tuning)

## Stufe 2

### Sicherer Vereinsbetrieb /Safe Club Operations

- Sicherheitskümmerer/-botschafter/-beauftragter  
Vereinsvorstand und Fluglehrer

Systematisches Arbeiten, Nutzung Modul Flusi im vereinsflieger

#### **Erweitertes Praxistraining (Vorschlag der ATO ...)**

## Stufe 3

### Vereinsbetrieb und andere Beteiligte

- Selbstreflexion, Reaktions-Training, Teamarbeit  
Einbindung aller Beteiligter, auch im Umfeld