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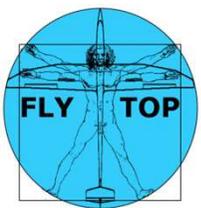
**Naïve transfer of
ICAO's Organizational Safety methods,
such as SMS,
into club-based flying might be
either useless or
even harmful**

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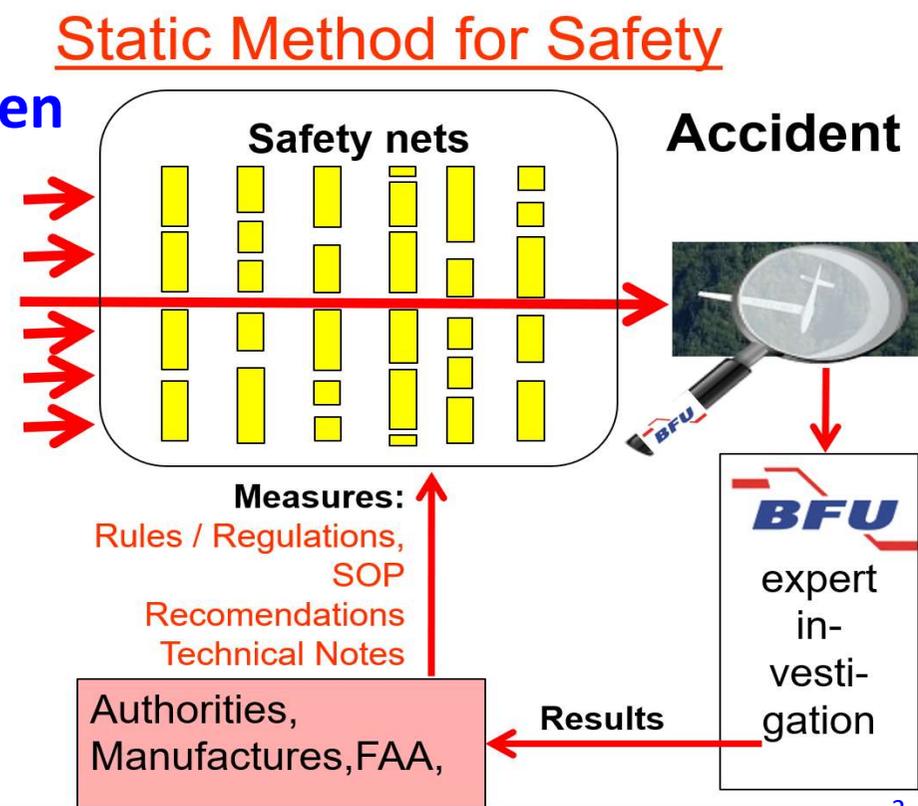
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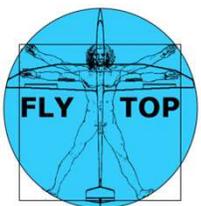


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Do we need Safety Management (SM) in Gliding?

- **Short answer: yes**
- Safety Management is THE practical method for **Organizational Safety**
- Organizational Safety is necessary when **Static Safety goes into saturation**
- **Static Safety: improving safety by accident investigations and deriving new rules/regulations from accident investigations:**

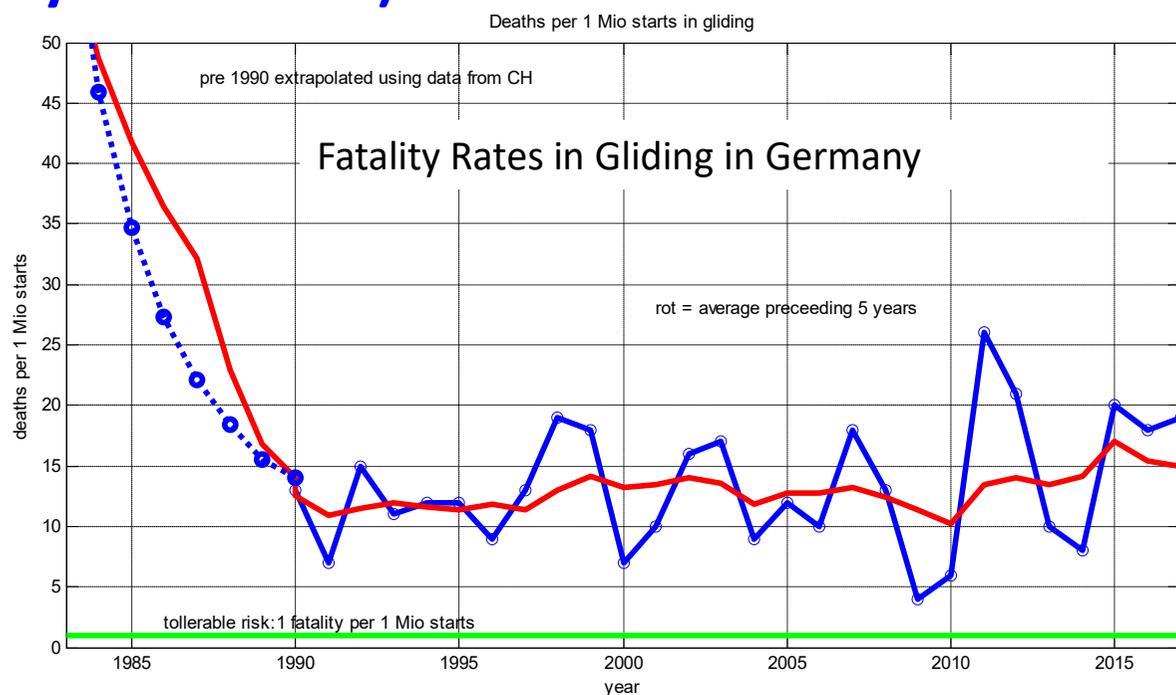




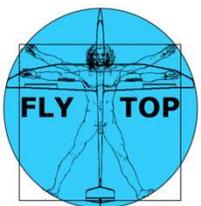
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Static Methods saturated in Gliding (decades ago!)

- **Saturation of Safety Methods is normal and expected**
(see my other talks)



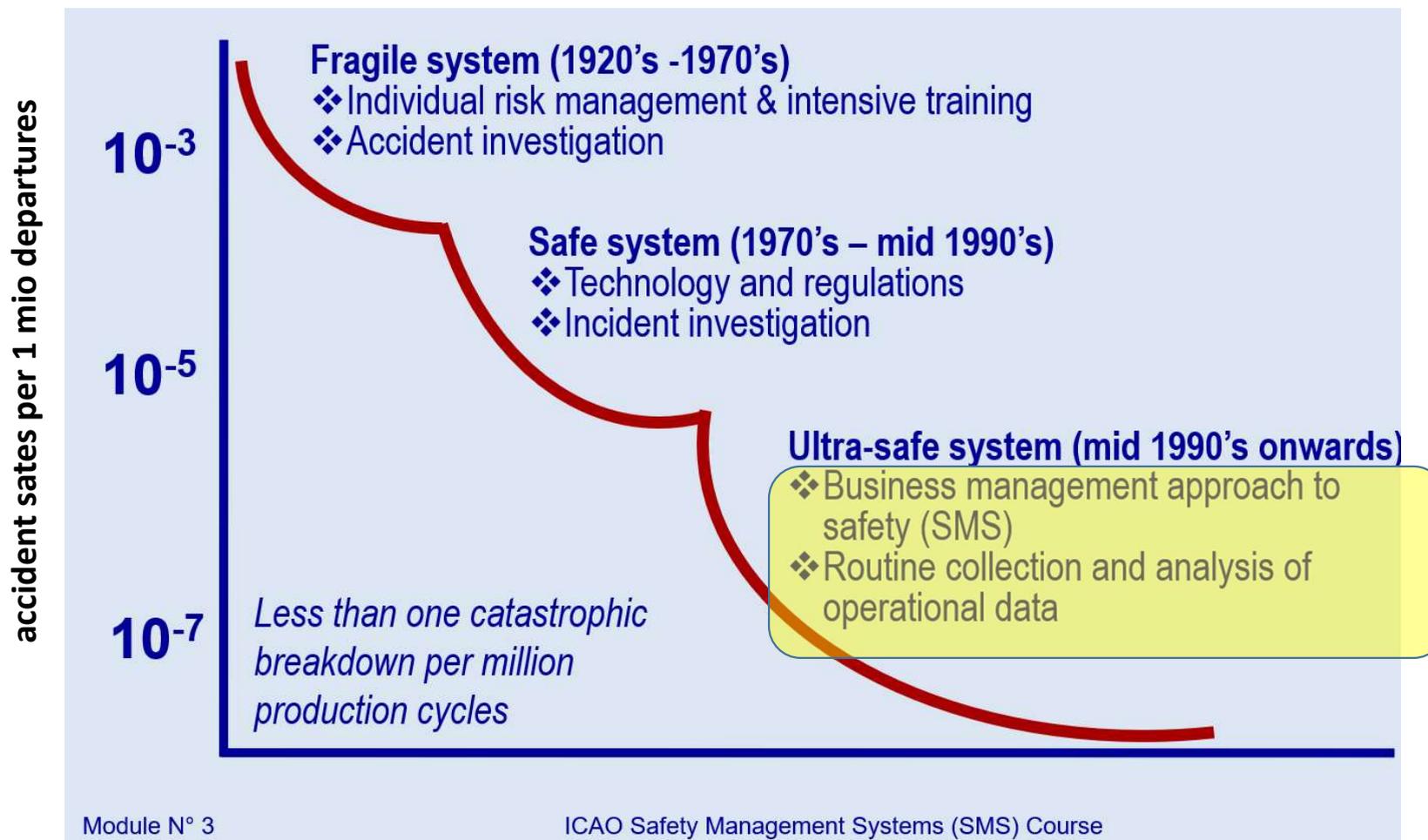
- **To overcome saturation of Static Safety Methods:**
use Organizational Safety!

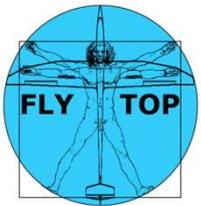


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Organizational Safety overcomes the Static Safety Bottleneck

- A slide from ICAO course on SMS:





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Safety Management = Organizational Safety

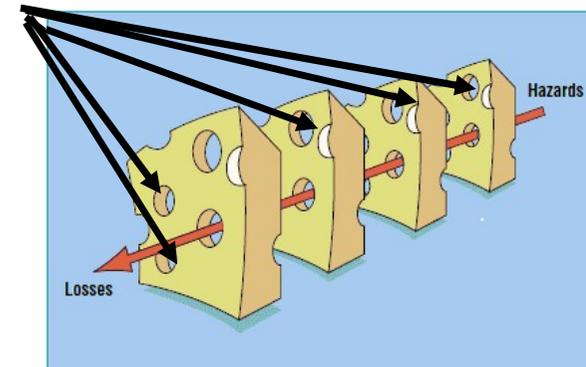
1) organized, planned, supervised, thorough i.e.

- A managed search for every day incidents i.e. the holes

- in the Swiss cheese model of James Reason!

2) experts in safety (educated!) personnel derives from these findings projects (Safety Officers)

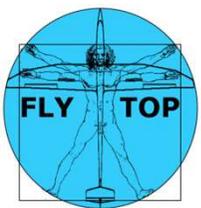
3) management implements and evaluates these Safety projects



Required:

- management methods

- educated personnel (pilots, Safety Officers, managers)



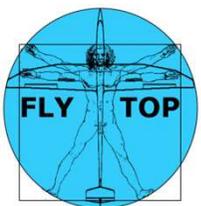
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Do we need ICAO's SMS?

- **Short answer: NO!**
- ICAO's approach for Organizational Safety called SMS
- Is designed by and for **business industries** as organizations = Airlines

In Germany, Austria Switzerland (DACH countries) most of the glider flying including

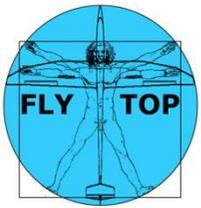
- Flight Training and
- (occasional) guest flying (passengers) takes place within
- **Clubs (Vereine / Verbände) as organizations!**
- **these clubs function**
- **very different from airlines or business industry!**



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ICAO-SMS has been designed for the Airlines Industry

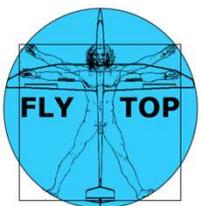
- **industrial business organizations**
- the existence and proper functioning of an SMS **is vital for an airline**
- airlines have a **self interest in a functioning SMS**
- resources for SMS are generated from customers
- airlines have a clear chain of command
- pilots and crews must participate in the SMS (or leave the airline)
- selection on pilots, managers and other personnel is safety oriented
- pilots, managers and chefs are **educated in modern safety methods**
- ICAO-SMS in airlines is **not done by the pilots**
- ICAO-SMS in airlines is performed **by trained professionals with an background in safety science !**
- ICAO-SMS **is not cheap**, resources in money and workforce must be assigned
- SMS are regularly measured and improved on a daily time schedule



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Glider Clubs (in D A CH) are organizations very different from industry

- the **existence of the club does not depend on Organizational Safety**
- **hardly educated** in modern safety methods
- **“Competence Illusion meets Educational Deficits”**
- participation in safety measures is **voluntary**
- resources for SMS must be generated from the members
- i.e. **resources for safety are subtracted from other projects**
- no clear chain of command
- ever **changing personal of volunteers**
- selection for a function (positions) often not based on formal qualification (education)
- hardly know how in safety science
- ...

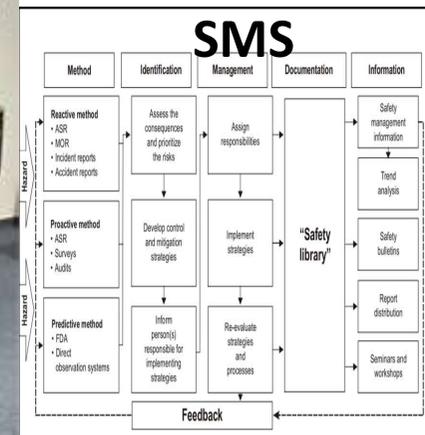


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Analogy

ICAO urges our gliding clubs to „play music“ (Organizational Safety)

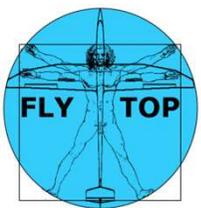
- on Steinway Piano:
- **ICAO's-airlines-SMS**



What our gliding clubs really need is:

- **learn and understand what music is**
- (Organizational Safety) and
- **play it on our own instruments:**
- guitars, flutes ,... or sing in a choir
- **Club-SMS (NCO-SMS)**





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ICAO's-airline-SMS a good Idea for Gliding?

- We have (at least) two cases where ICAO-airlines-SMS have been implemented in clubs
- Professional accident investigation resulted in:

mal- on non- functioning SMS in these clubs!



Accident: JU52 >20 deaths

Club: HOT-AIR in Switzerland

Accident Report Summary on SMS:

The SMS did not cover what was really going on in safety in the club



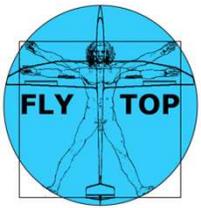
Accident: LS8, 1 female glider pilot

Club: Dutch gliding club in the Netherlands

Accident Report Summary on SMS:

SMS implementation in the club had several severe deficits

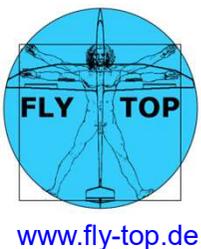
**main reason: clubs have a „legalistic“ approach to SMS:
What do the authorities want us to do? (mostly paperwork)**



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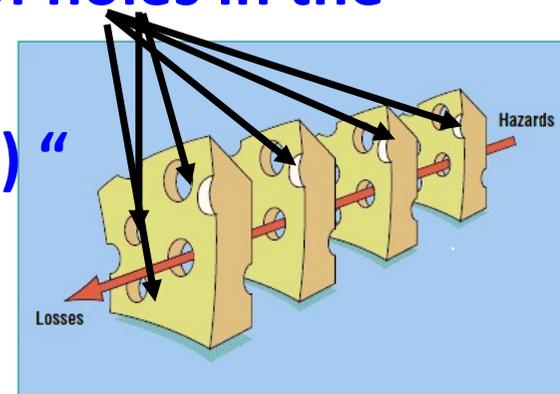
A first step towards a functioning Safety Management in Clubs

- **measure the safety** of your
- Club (Verein) / organization / national aero club (Verband)
- form if you have one: measure the safety of your „SMS“
- For a Measurement you can use: **SPINS**
Safety **P**erformance **I**ndicator based on the **N**umber of **S**tar



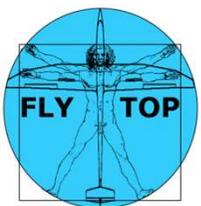
Safety Performance Indicator based on the Number of Starts (SPINS)

Based on a reasonable estimation of the number of holes in the stack of Swiss cheese layers (not elaborated here) a club should find in the „Safety Management (SM)“ with respect to the number of starts a gliding club has per year: **number of Starts / 3**



this is defined as: the Safety Management works to „100%

**SPINS : (NCO-) SMS works to 100% is equivalent to (at least):
Number of incidents are found per year in our SMS equals =
one third (33%) of the number of starts per year in our club**



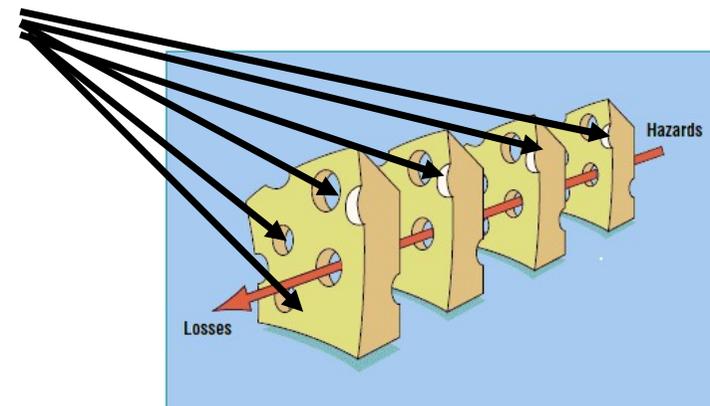
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Example for Safety Performance Indicator based on the Number of Starts (SPINS)

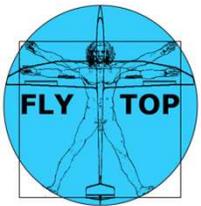
number of Starts / 3:

the Safety Management works to „100%“

- the Duch club (LS8 accident) had
 - 3000 Starts per year and
 - 30 incidents were processed in the „SMS“
 - 100% safety performance of the SM means
 - $3000/3 = 1000$ incidents should be found in the club
- ⇒ actual safety performance of the SMS = $30 / 1000 = 3\%$



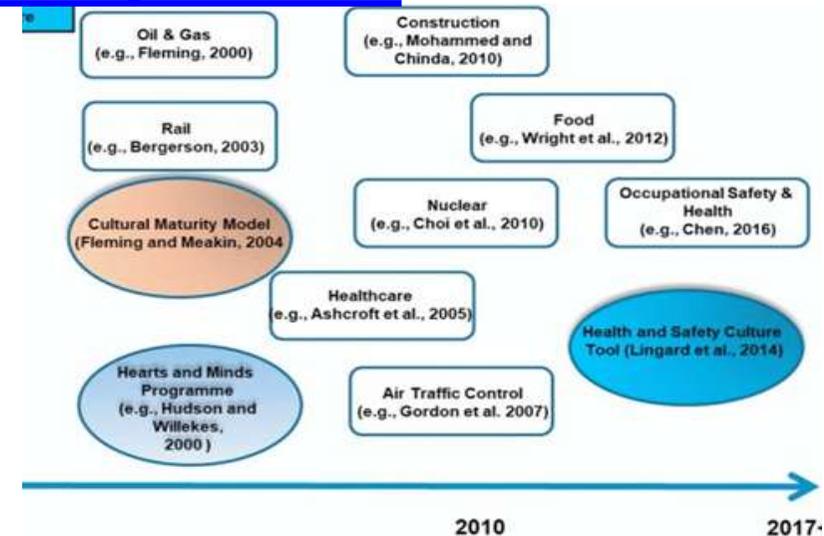
- so there is clearly room for improvement in this SMS



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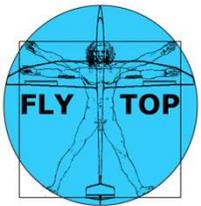
Research and Development

- Safety Management and SMS was NOT invented by ICAO
- Safety Science has developed SM and SMS
- for a number of different organizations
- who need a high level of safety



Issue for Research and development e.g. within OSTIV:

- use scientific research (organization psychology) on the organization „club“ and
 - For example (in German): „Meier: Mitarbeit im Sportverein“
- develop:
- **Club- SMS = NCO- SMS =**
- Safety management in noncommercial organizations operating non complex airplanes (NCO = EASA terminology for clubs)



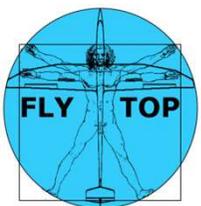
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Summary

- if we want to improve safety **Safety Management is a must in gliding**
- **ICAO'S-Airline-SMS is not suited for clubs**, it is designed for airlines

In order to start Safety Management (SM) in gliding clubs

1. **learn Safety Science** and educate glider pilots and
 2. **educate club officers** in modern flight safety methods and club based safety management
- If you (think) you have a SMS: do not wait until an accident happens !
 - Chances are high that the accident will reveal that your „SMS“ does not work very effectively!
3. measure safety using, for example the **Safety Performance Indicator** based on the **Number of Starts (SPINS)**

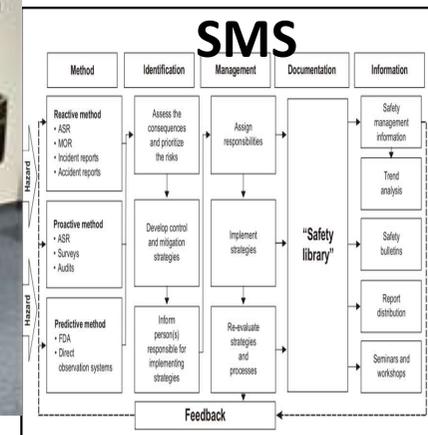


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Take home Message:

ICAO urges our gliding clubs to „play music“ (Organizational Safety)

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Community Music School

PIANO LESSONS FOR BEGINNERS

An Essential Beginners Guide to Learn Piano Lessons and Ways of Using Piano Chords