



Observation Platform for Technical and Institutional Consolidation of Safety research

2nd Workshop

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How can safety research make flying safer?

12th of October 2018, Cologne



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Challenges for the near future



flight safety & research topics?

2015

research required to close this gap

2050

next generation

$R \sim 0.5 \times 10E-6$

close cooperation between
flight operations & research

$R < 10E-8$



Examples of
safety threats for Airline Aviation:

Basic Flying Skills



Basic Flying Skills



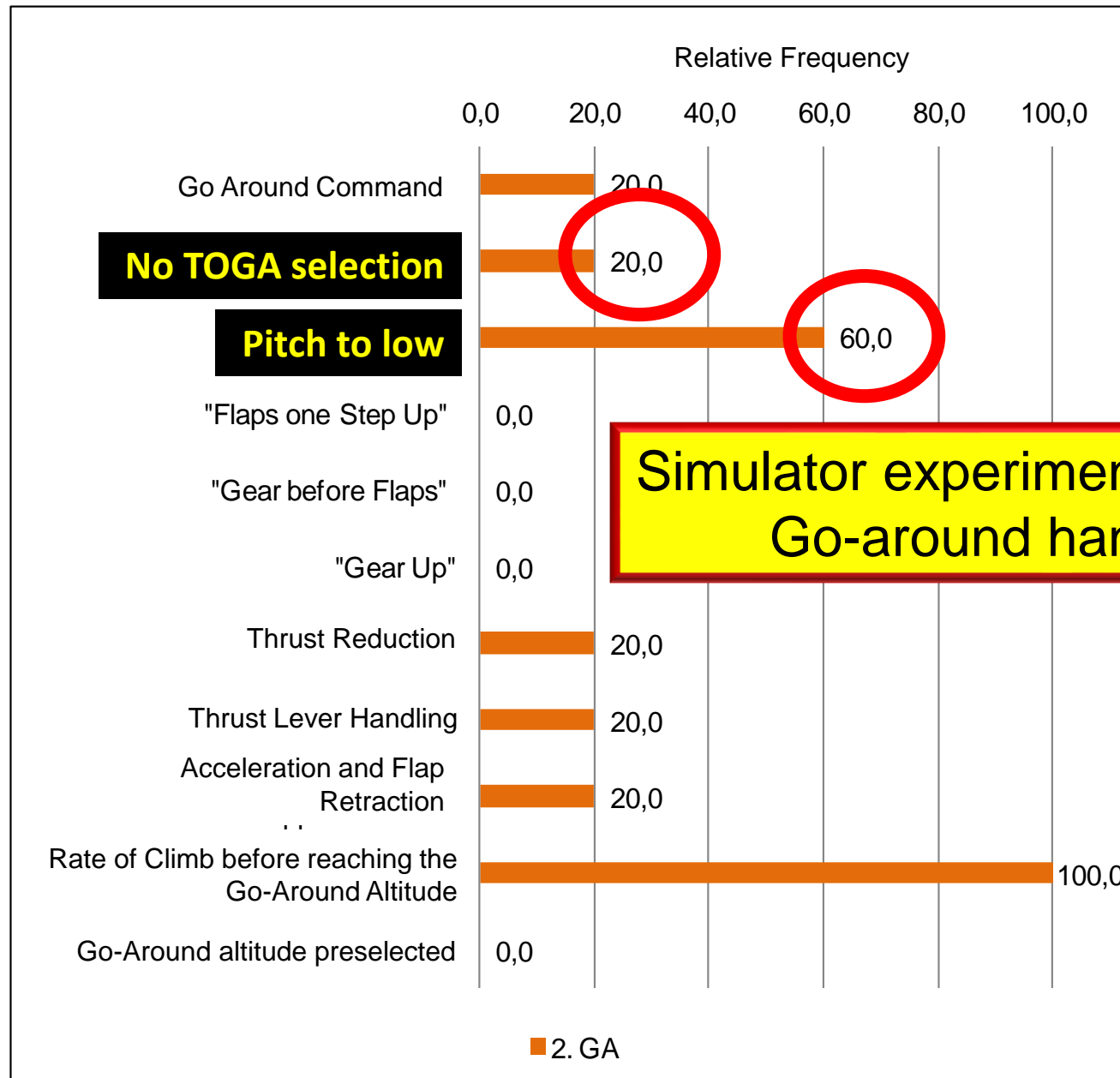
Standard Airbus or Boeing Type-Rating Courses and recurrent training are not sufficient to reach the EU-safety target:

Manual / Basic Flying Skills have to be improved:

Example: Go Around Handling

Errors during an unexpected Go-Around

Technische Universität Berlin



unexpected go around:
▶ NO TOGA-selection
▶ Pitch to low



August 2016

There is no functioning link
between research and Airline Ops

Why is the current status accepted
by the Authorities ?

ICAO DOC 9859 / 01.01.2009:

...an Airline has to define an acceptable level of safety (ALoSP)

Definition: An acceptable level of safety is a safety level which is acceptable for the respective Airline. (e.g. 10E-5)

LH-Group: 1 per month



Do not rely on oversight authorities!



AUDITING (legally required)

Major threat: increasing bureaucracy

number of auditors increased by
one order of magnitude

**NO measurable increase in safety: NO
quality control of the under-lying rules**



Safety Management & Quality Management

QM-Audits are checking flight operations not taking into account the EU-safety target of 1 accident in 10 Million flights
($R < 10E-7$)

Consequences:

„Design freeze“ in safety innovation

Major improvements are blocked by
established QM-structures

Financial considerations have priority:
Continuous improvement process only if cost-neutral

31st of July 2018:
...one lady is not checked passing security control



08th of August 2018:
...a family passes security control

Risk smaller $10E-10$

...but ops risk increase due to the airport closure

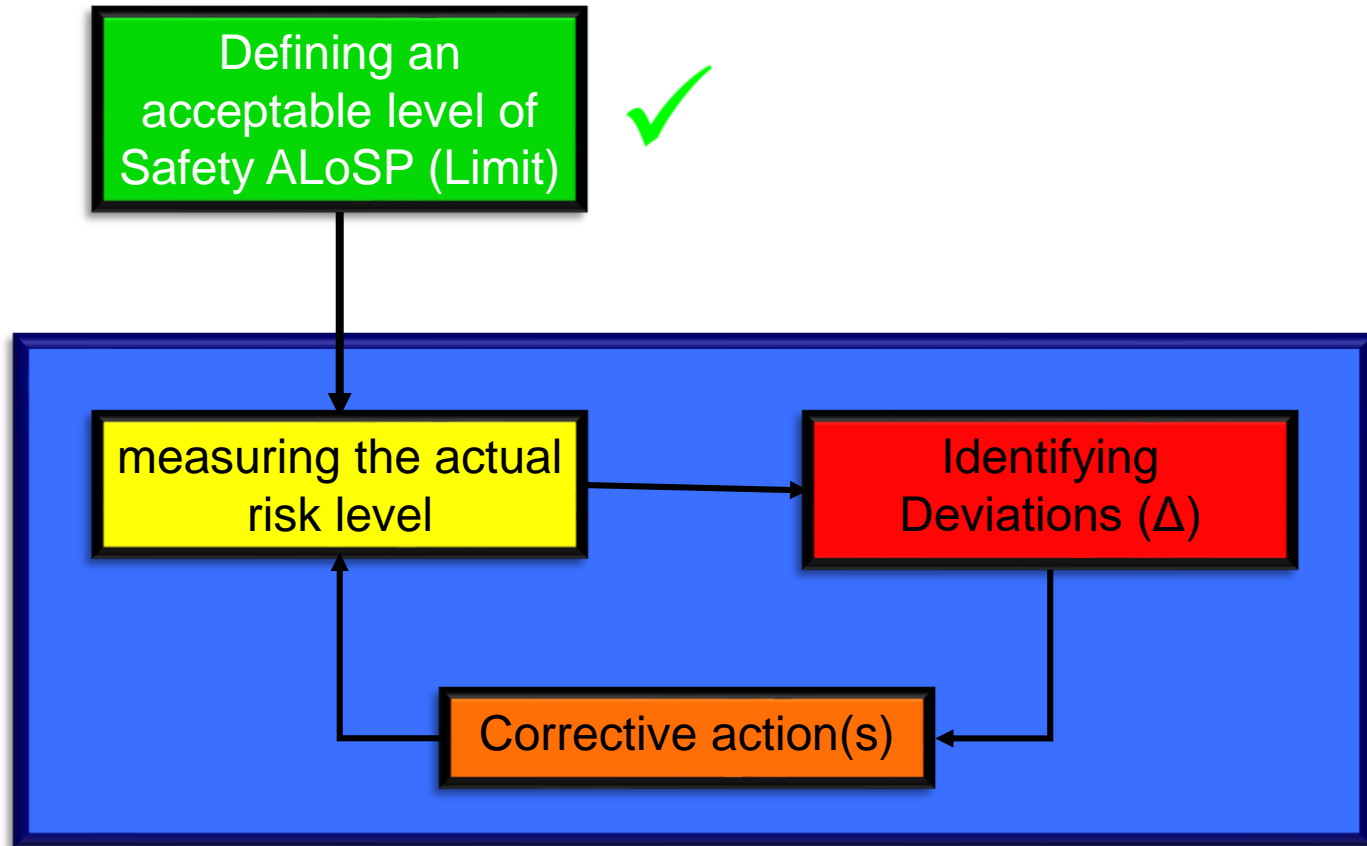


Scientific findings should be the basis for Airline
internal SMS & QM.

Blind activism should be avoided.



Flight safety research is required to determine evidence based minimum operational standards for a defined safety target



Research & Informed Rule Making