



**World's first qualified
Virtual Reality Flight
Training Device**



**Evidence-Based Training Concepts Implemented on the First EASA
Qualified Virtual Reality Training Device**



Swiss Made

WHO WE ARE

Who we are

Dübendorf,
Switzerland

International
customers

Manufacturing
20-30 FSTDs/Year

Airbus Helicopters
Partner

34 Employees



EASA Qualified
FSTD Operator

VR Helicopter
FSTD

2 Series Products
R22, H125 FSTD
Fixed and Mobile

Flight Test
Flight Dynamics Modelling
HW/SW Engineering
CLS Design
Physics Simulation and IG



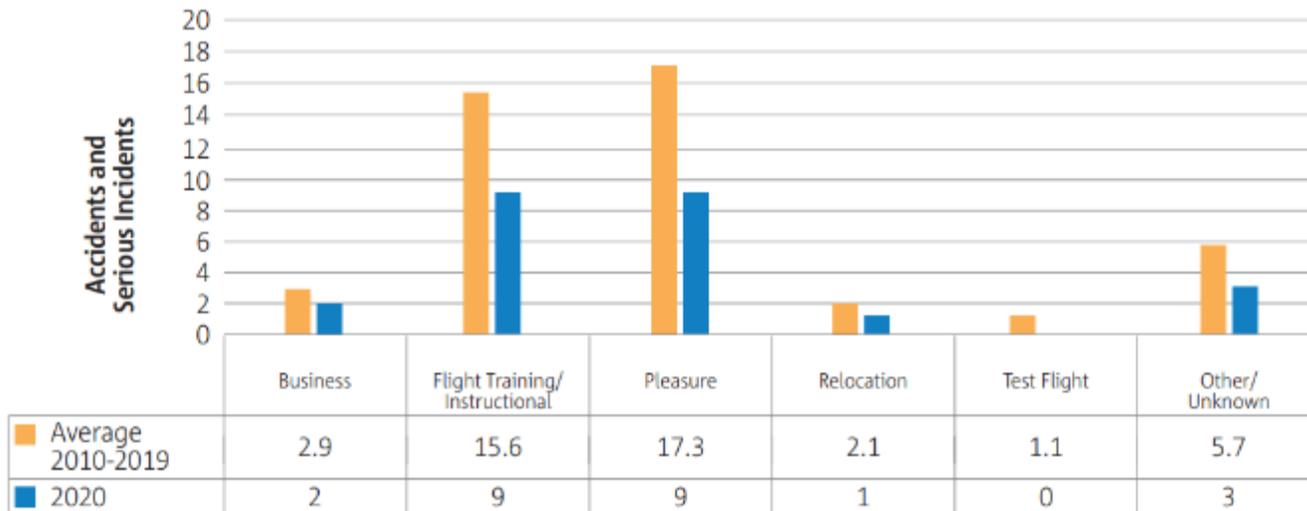
How it looks like



Why FSTD Training?

Safety issue

“The vast majority (80 %) of all accidents and serious incidents involved rotorcraft performing non-commercial operations or specialised operations.” (Chapter 3.1.2.2, p. 56, EPAS)



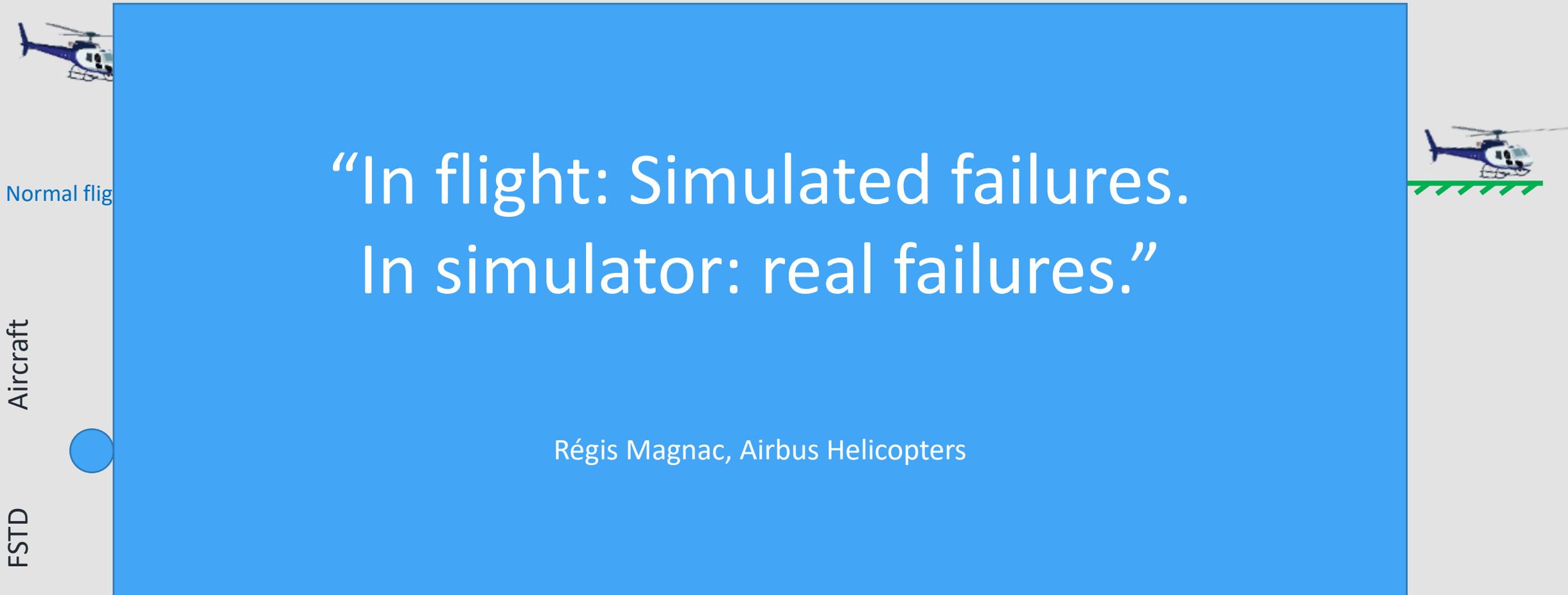
- High number of accidents in training
- High number of licensed private pilots with limited experience
- Training on aircraft involves many risks
- Not enough means for FSTD training – until now

Advantages of FSTD Training – Example PPL(H)

| Risks/Hazards | Mitigation with FSTD |
|--|--|
| Low skill level of the student. Unexpected inputs and reactions. | Basic skills fully trained on the FSTD |
| Often limited experience of the FI. Hazard in case of critical situations. | Student starts training with higher skill level and better understanding of the aircraft. |
| Near ground/obstacles manoeuvres. | Extensive training opportunities with the FSTD. |
| Student not used to various mass/CG. Hazard for first solo. | Training with different configuration. |
| Many emergency procedures not trained, or alternate methods. Risk of negative training, incorrect routine. | Training with scenarios <ul style="list-style-type: none">- Situation Awareness- Decision Making- Training correct routine (Procedures, Aircraft Management) |

Advantages of FSTD Training – A/C vs FSTD

Example for Malfunctions and Emergency Procedures



Normal flight

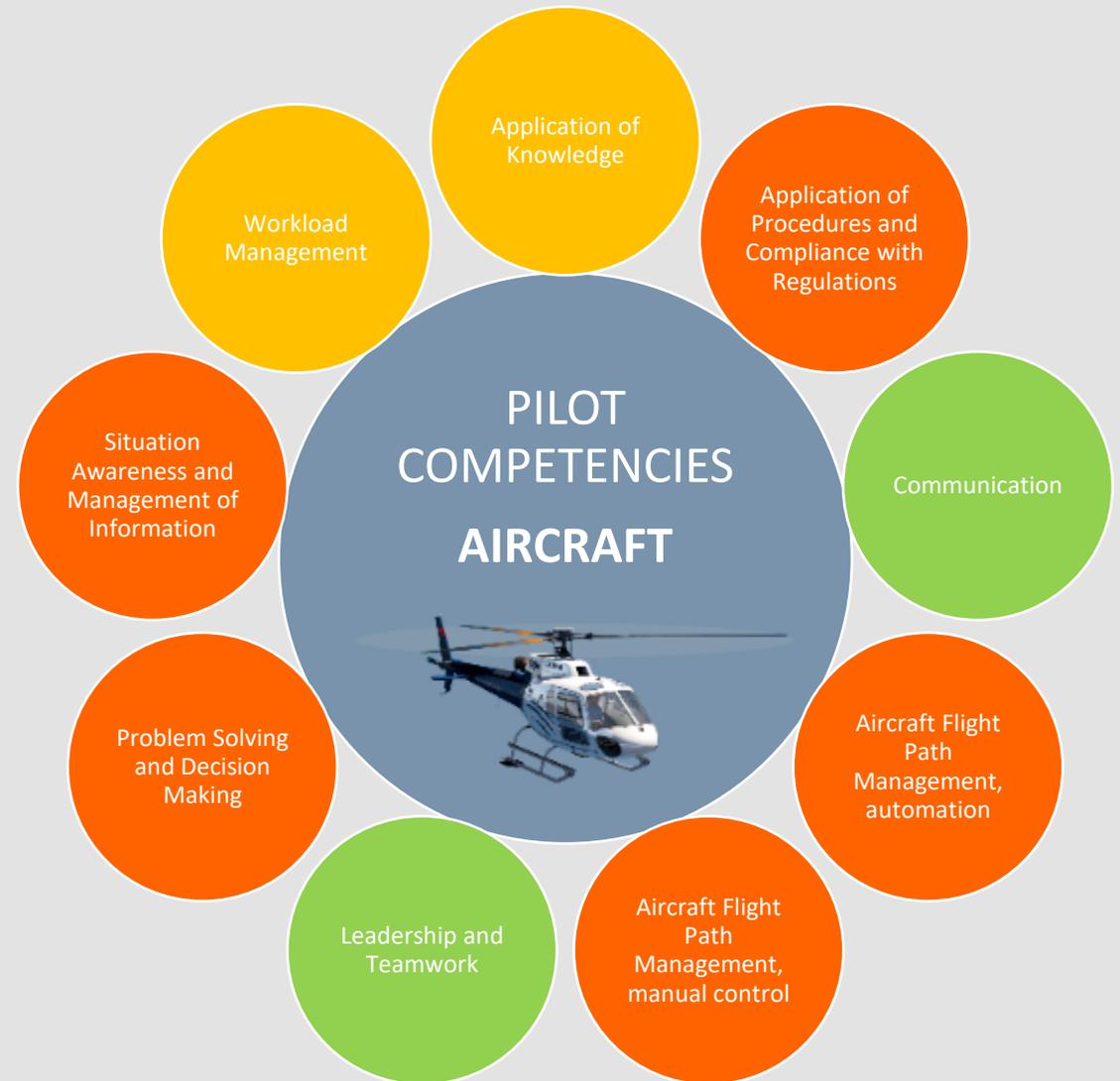
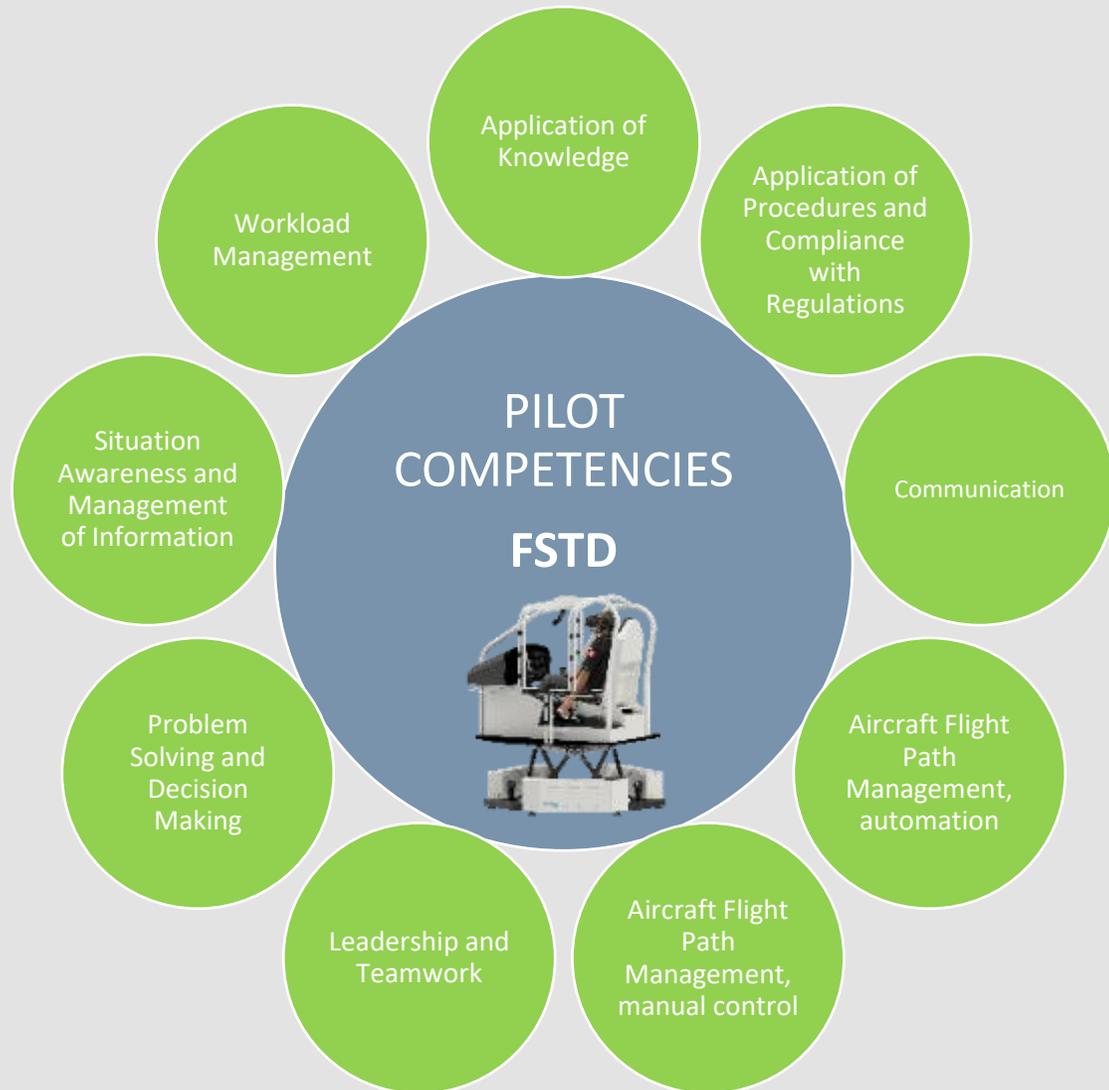
Aircraft

FSTD

“In flight: Simulated failures.
In simulator: real failures.”

Régis Magnac, Airbus Helicopters

Advantages of FSTD Training – Trained Competencies

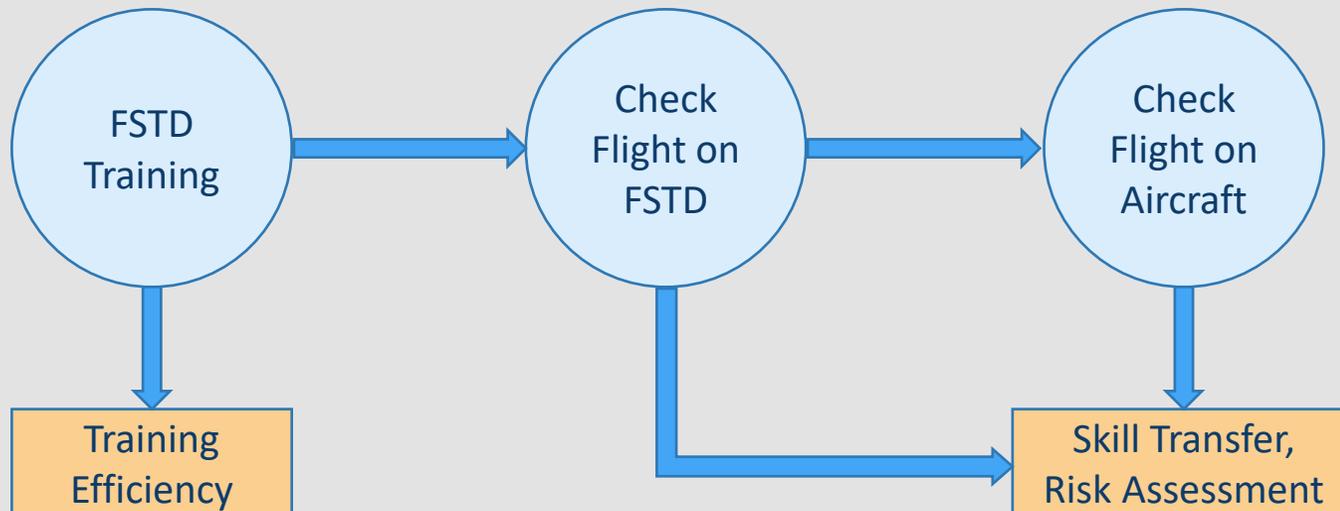


Training evaluation

VRM FSTDs

Training Evaluation PPL(H) – VRM FSTDs

- 33 students **without** helicopter experience
- Total 356h FSTD training
- PPL(H) exercises trained on FSTD with FI
- Targets
 - Assessment of FSTD capabilities, limitations and transfer of skills
 - Basis for PPL(H) Syllabus proposal using FSTD with increased credits



Training Evaluation PPL(H) - Outcome

- All exercises can be efficiently trained with the FSTD
 - No risk
 - No risk of negative training with emergency procedures
 - No Fuel, No Exhaust, No Noise!
- It is time for a paradigm shift! Use the A/C where it makes sense!



Co-Creation for Safety

Co-Creation for Safety



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[Visit Helitrans](#)

erland

kit Mountainflyers

Operators/ATO
Pilots

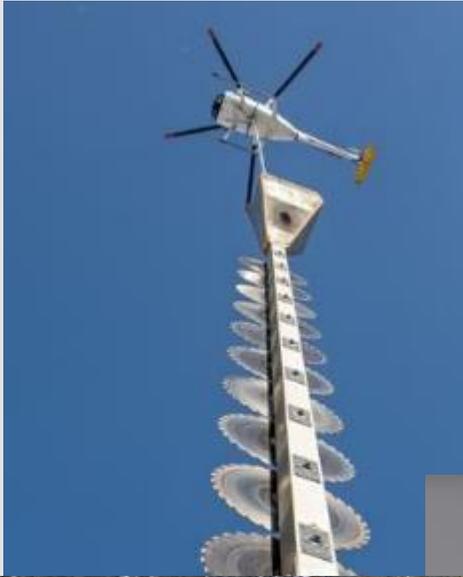
OEM

Authority

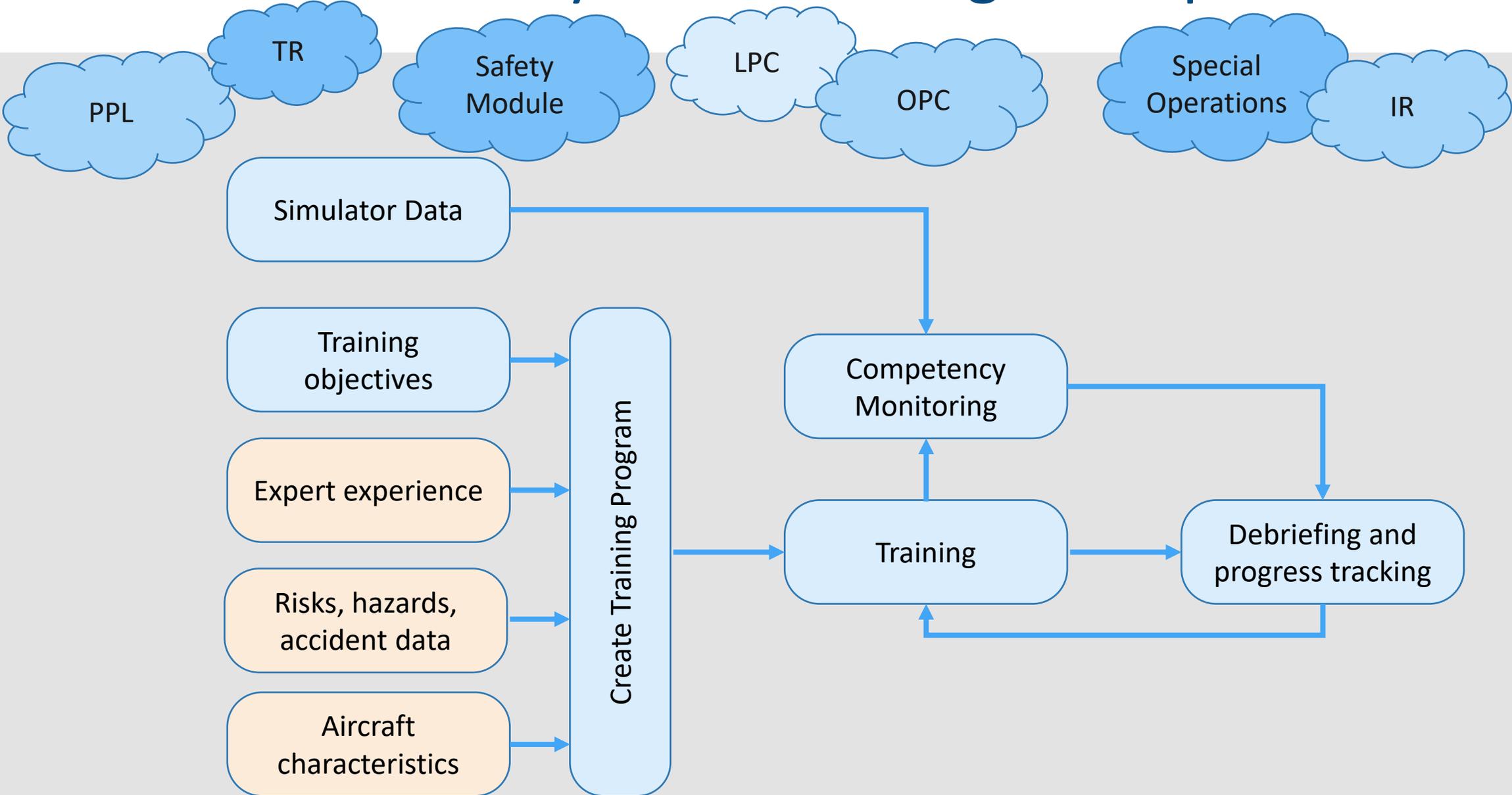


EASA
European Aviation Safety Agency

Co-Creation for Safety – Training demand



Co-Creation for Safety – EBT training concepts



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Fly Virtual. Feel Real.