



European Union Aviation Safety Agency

**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

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# Who we are

Dübendorf,  
Switzerland

34 Employees

VR Helicopter  
FSTD

International  
customers

Manufacturing  
20-30 FSTDs/Year

Airbus Helicopters  
Partner

EASA Qualified  
FSTD Operator

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



2 Series Products  
R22, H125 FSTD  
Fixed and Mobile





# How it looks like



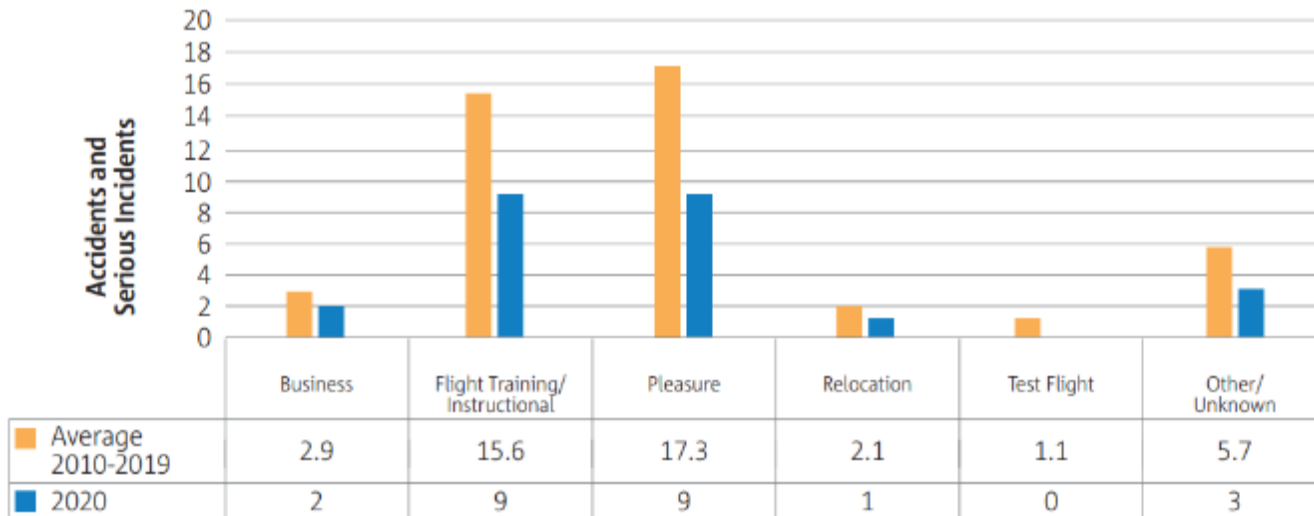
# Why FSTD Training?

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# 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

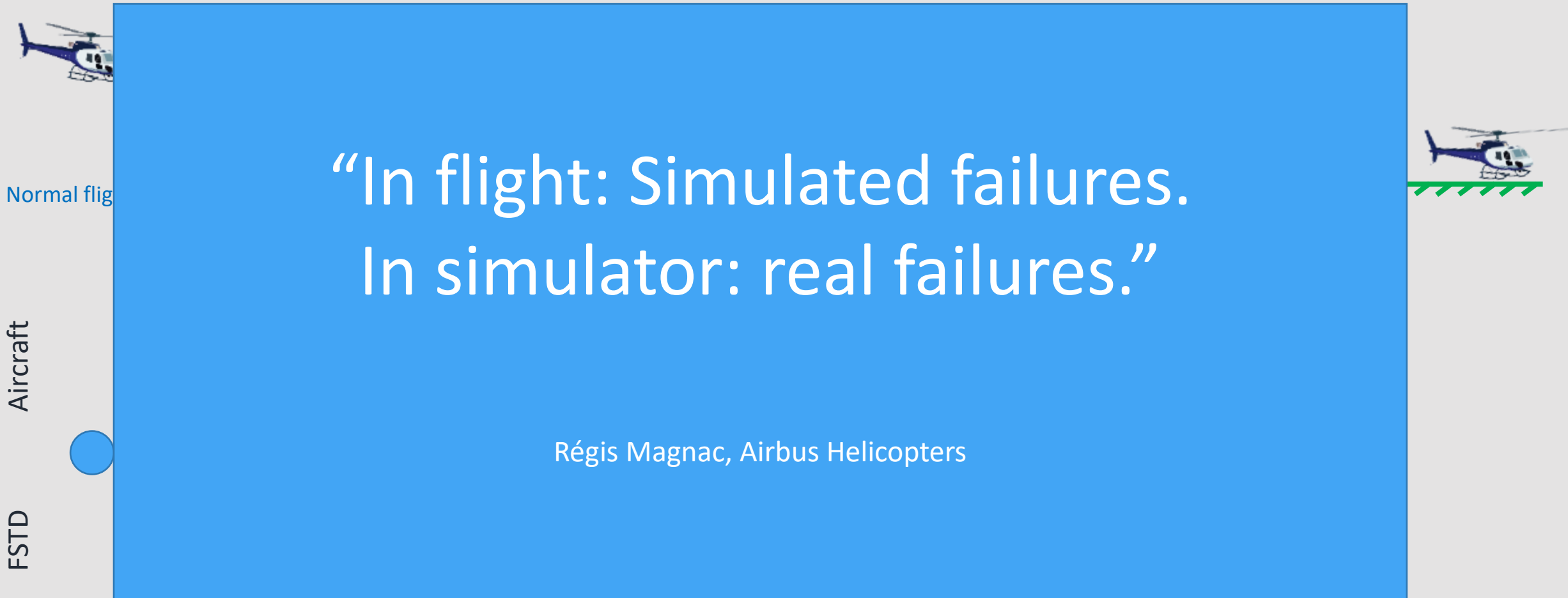
# Advantages of FSTD Training – Example PPL(H)

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"><li>- Situation Awareness</li><li>- Decision Making</li><li>- Training correct routine (Procedures, Aircraft Management)</li></ul>

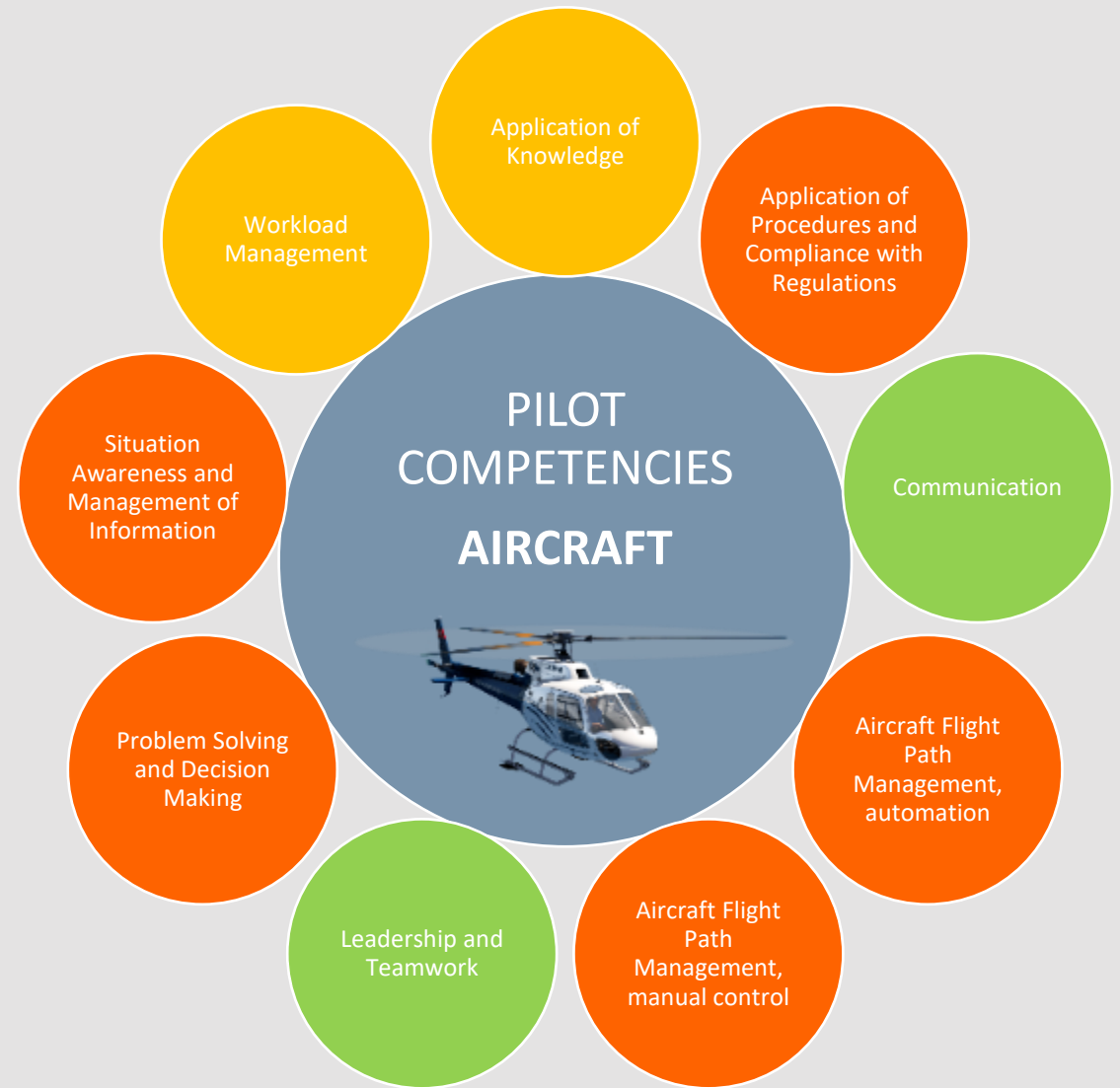
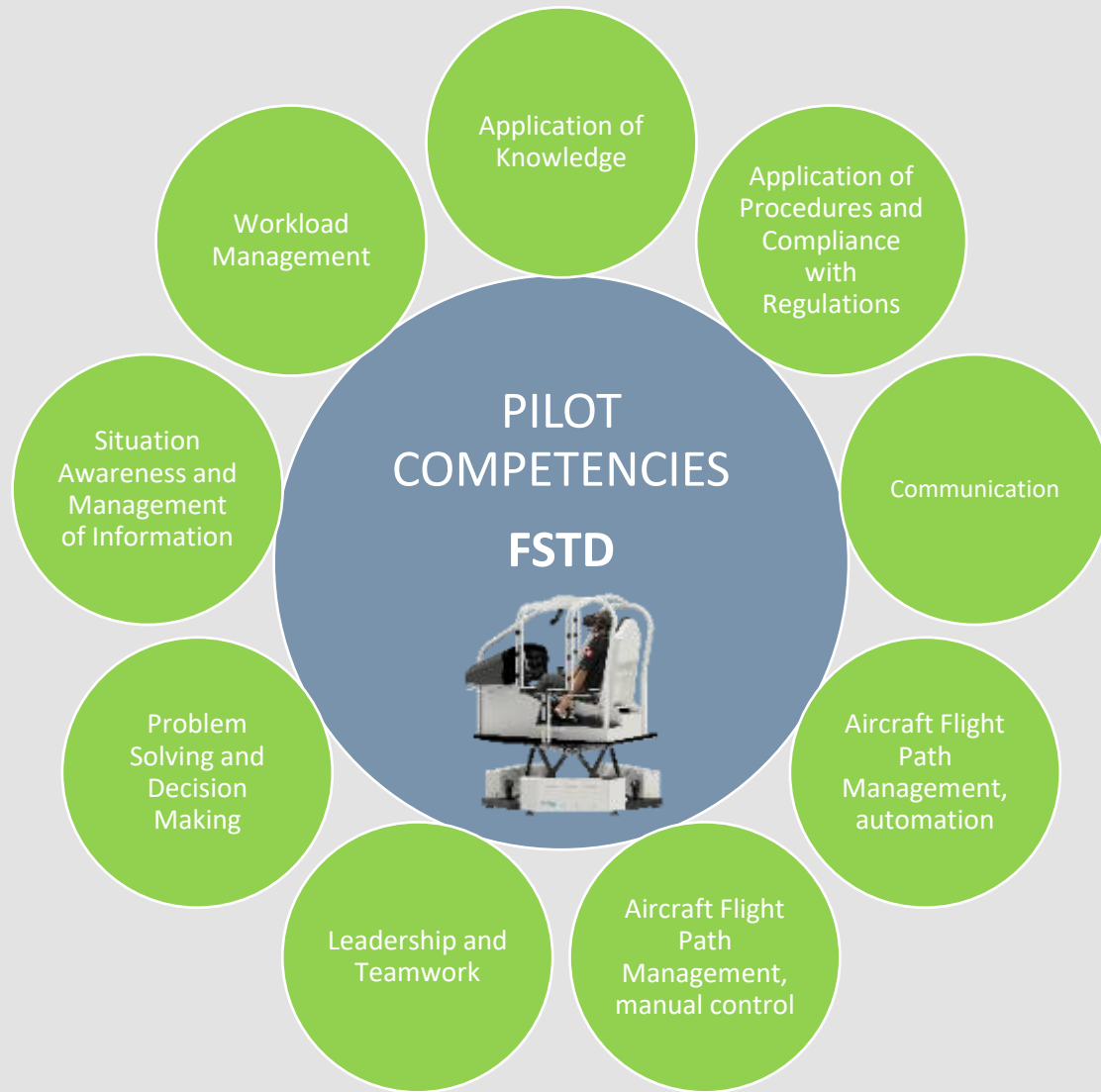


# Advantages of FSTD Training – A/C vs FSTD

Example for Malfunctions and Emergency Procedures



# Advantages of FSTD Training – Trained Competencies

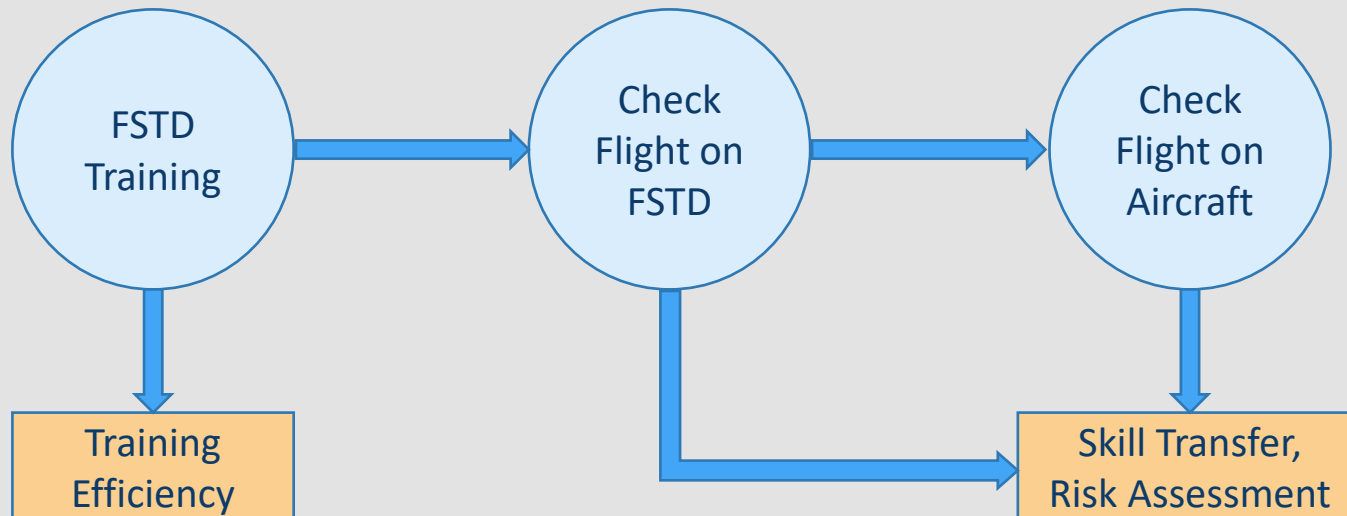


# Training evaluation

## 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

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# Co-Creation for Safety





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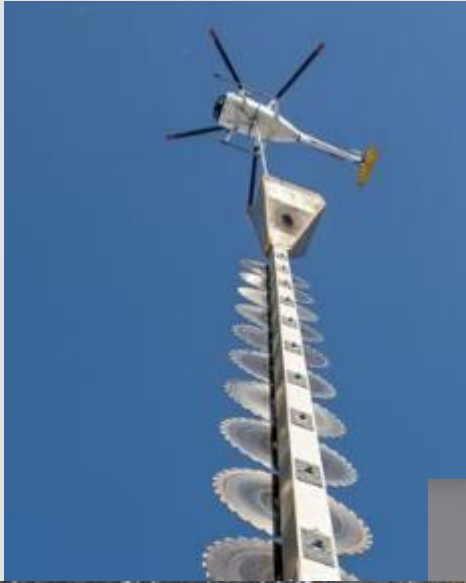


EASA

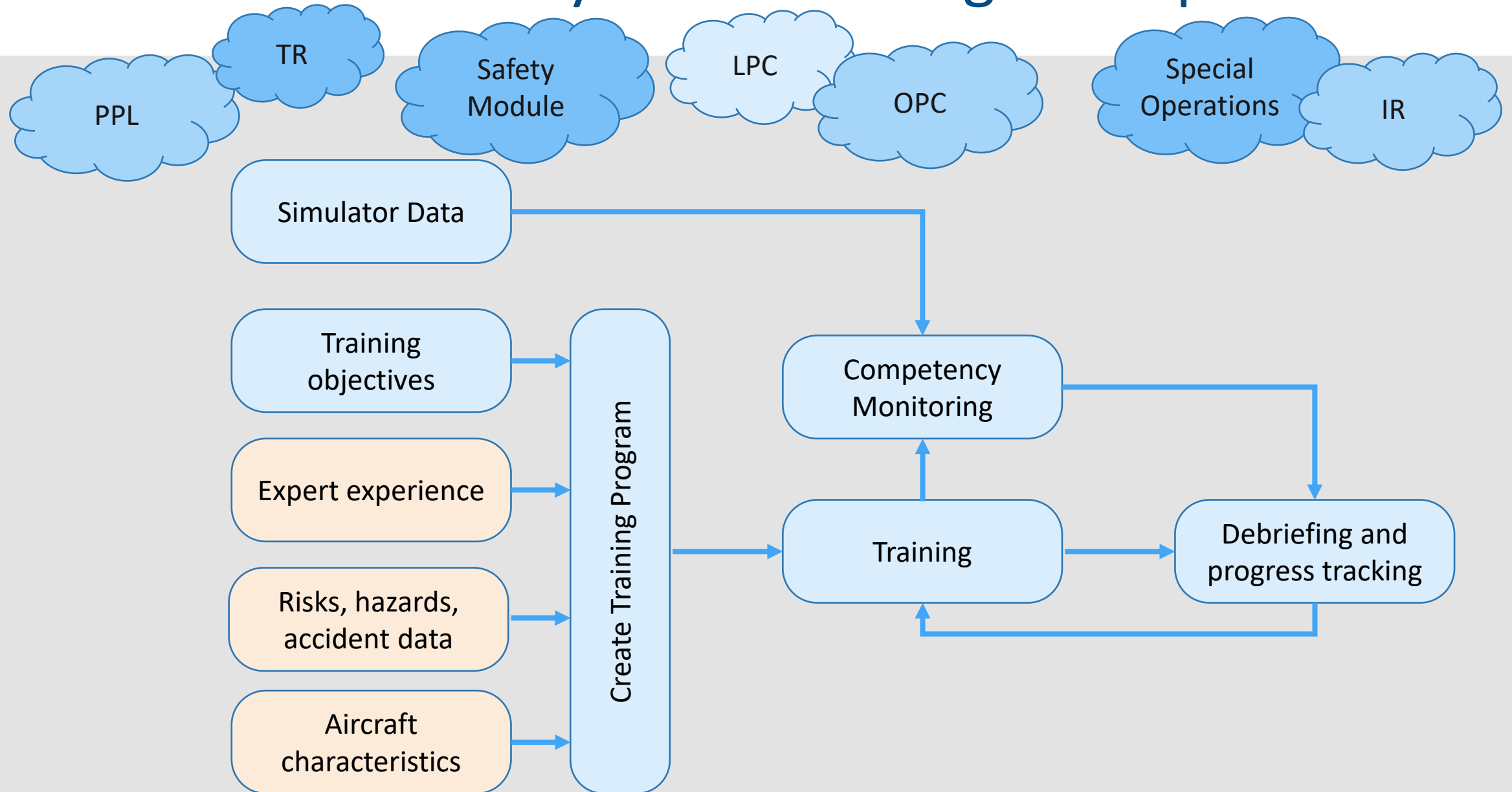
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# Co-Creation for Safety – Training demand



# Co-Creation for Safety – EBT training concepts



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Fly Virtual. Feel Real.