

1st Asia Pacific Workshop on Flying at High Altitude under Adverse Weather Conditions

Flight at High Altitude in Adverse Conditions Flight Crew Training

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Organisers



Supporting Partners





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Recent changes in training

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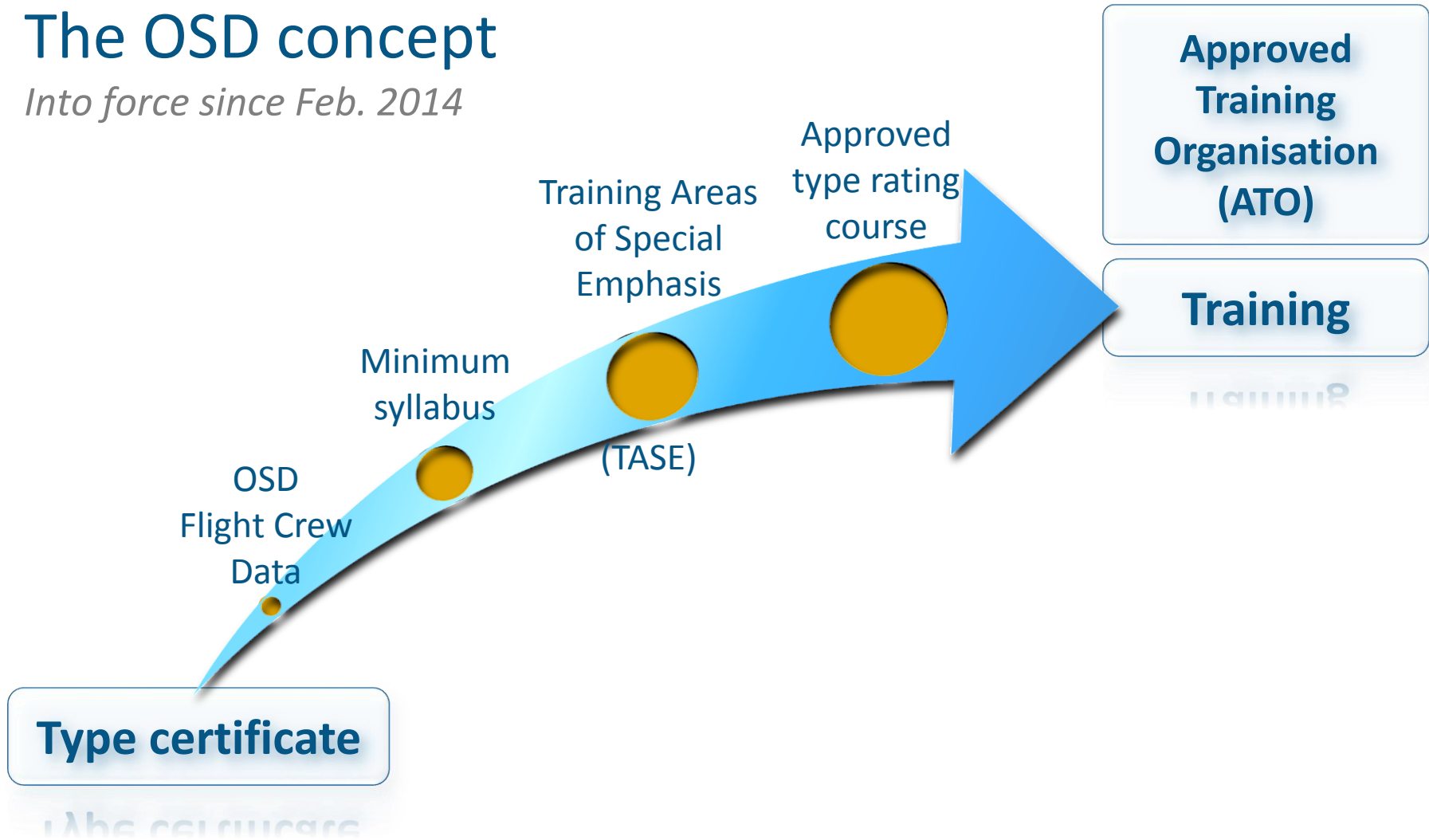
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The OSD concept

Into force since Feb. 2014

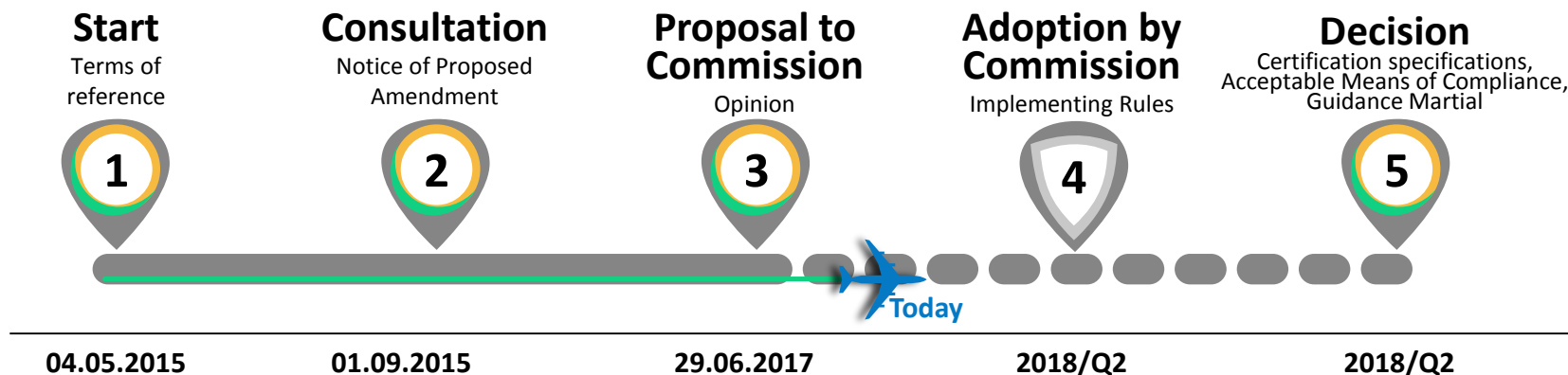




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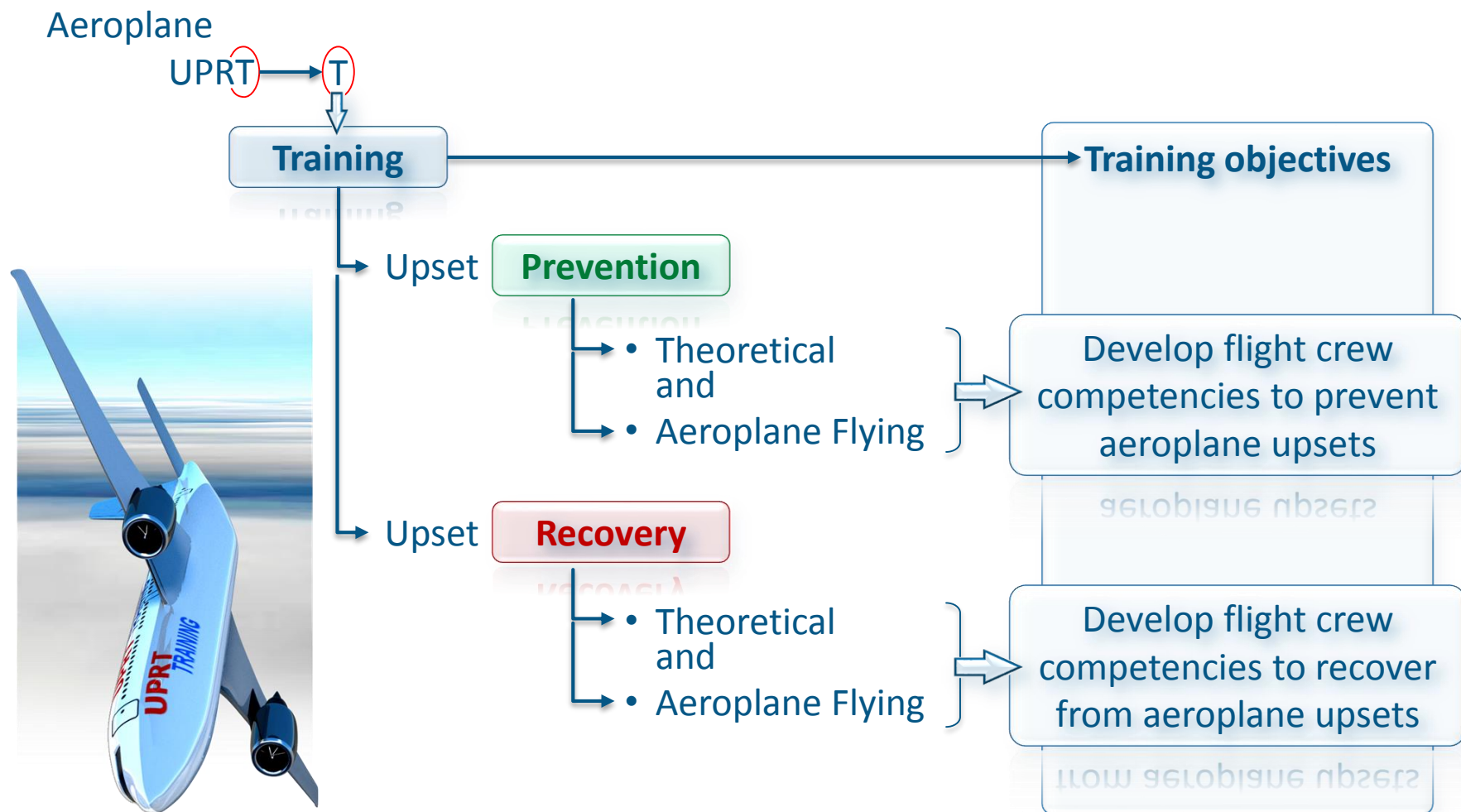
Opinion No 06/2017

Loss of control prevention and recovery training





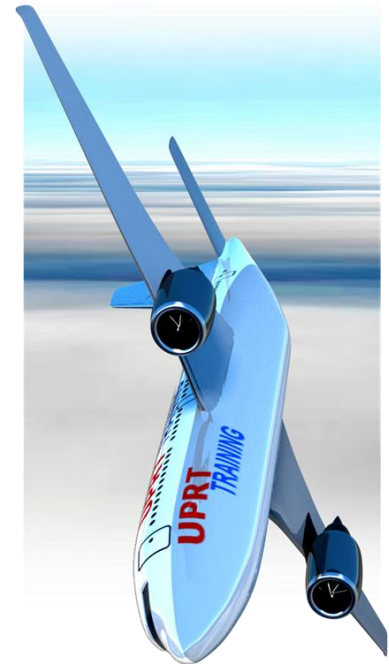
What is meant by UPRT in the proposal?





Main aspects of UPRT

- All upset prevention and recovery training (**UPRT**) shall be conducted **within** an Approved Training Organisation (**ATO**);
- **When FSTD is used → specifically qualified → prevent negative training;**
- **Instructor competencies → requirements amended;**
- **Training in an aeroplane → for the ATPL(A) and MPL;**
- **Checking: skill test or proficiency checks
→ FFS specifically qualified**
- **Advanced UPRT — aeroplanes**
 - 5 hours of theoretical knowledge instruction;
 - pre-flight briefings and post-flight debriefings; and
 - 3 hours of upset recovery training in an aeroplane qualified for the training task





UPRT in flight at high altitude

- **Mandatory** training → recovery from stall events in clean configuration **near maximum operating altitude** for
 - Multi-pilot aeroplanes and
 - Single pilot, high-performance, complex aeroplanes (SP-HPA) in multi-pilot operations only

- **Guidance**

High-altitude stall event training should be included so that:

- flight crew appreciate the aeroplane control response,
- the significant altitude loss during the recovery, and
- the increased time required.

The training should also emphasise the risk of triggering a secondary stall event during the recovery.





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Paradigm Shift



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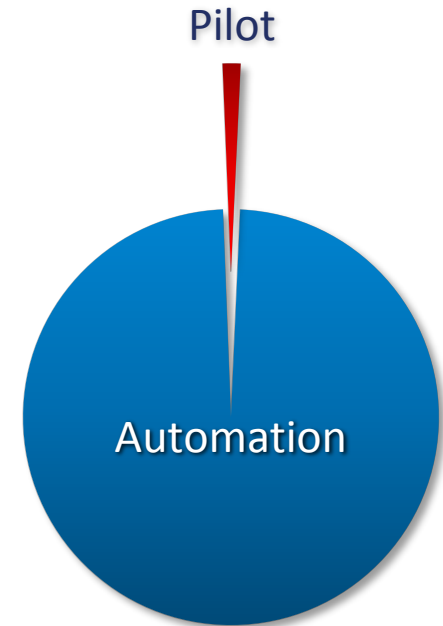
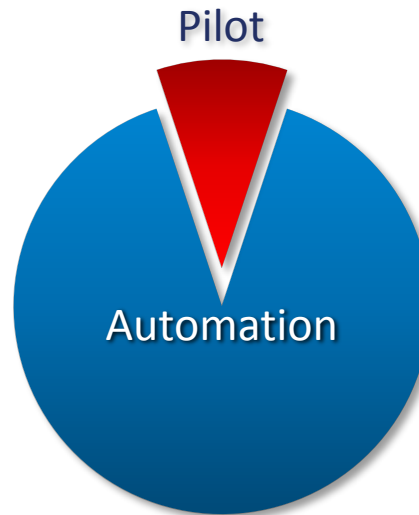
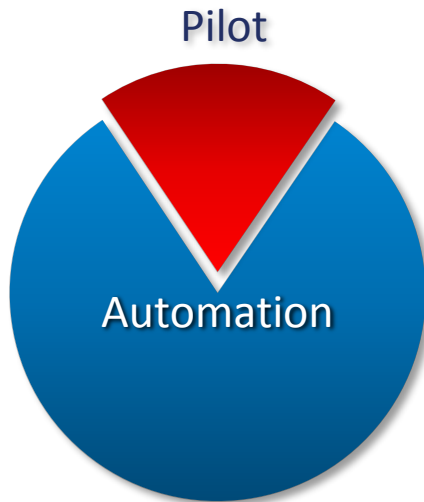




Why a human pilot is needed on board?

Human pilot → when
automation does not help

Less frequently needed → but
more important when needed



Technology ↗



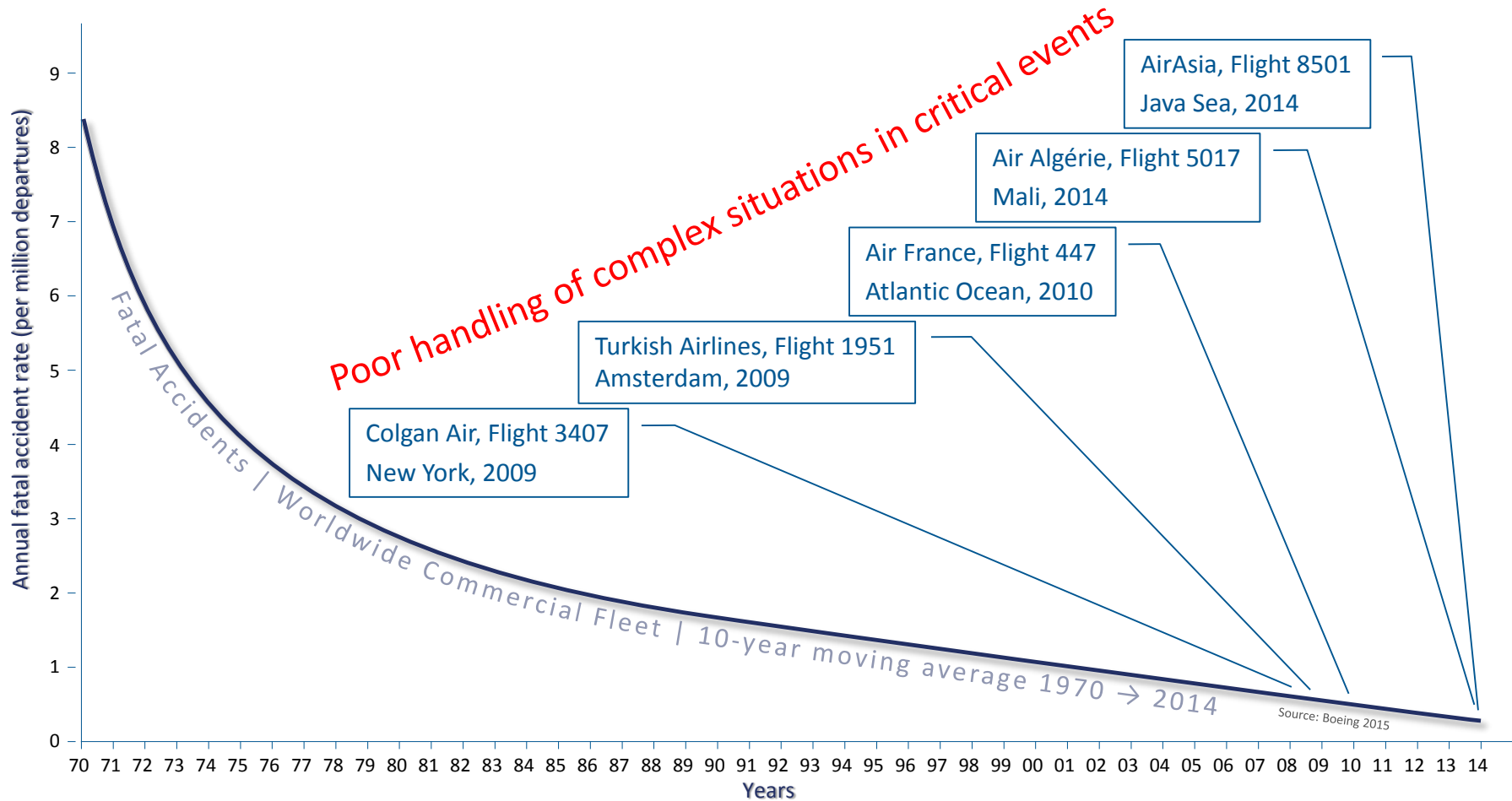
Why a change is needed?

Aviation reliability ↗

Safety ↗

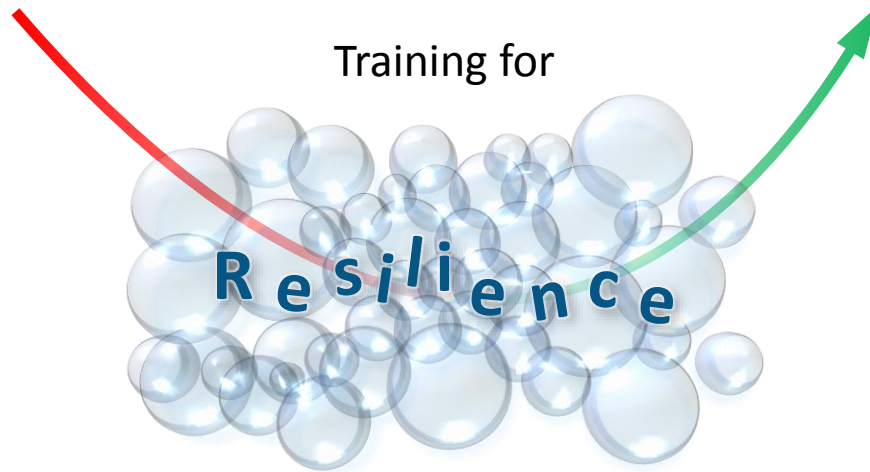
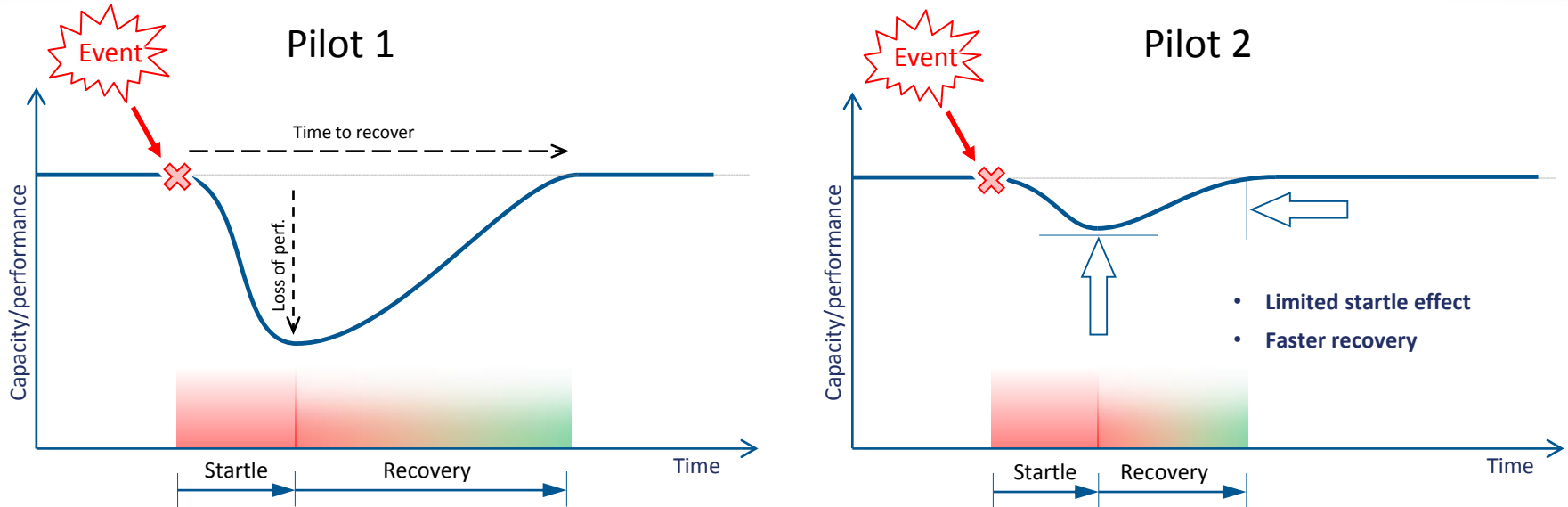
System complexity ↗

Needs for new competences ↗





A new dimension for pilot training



Training for

Resilience

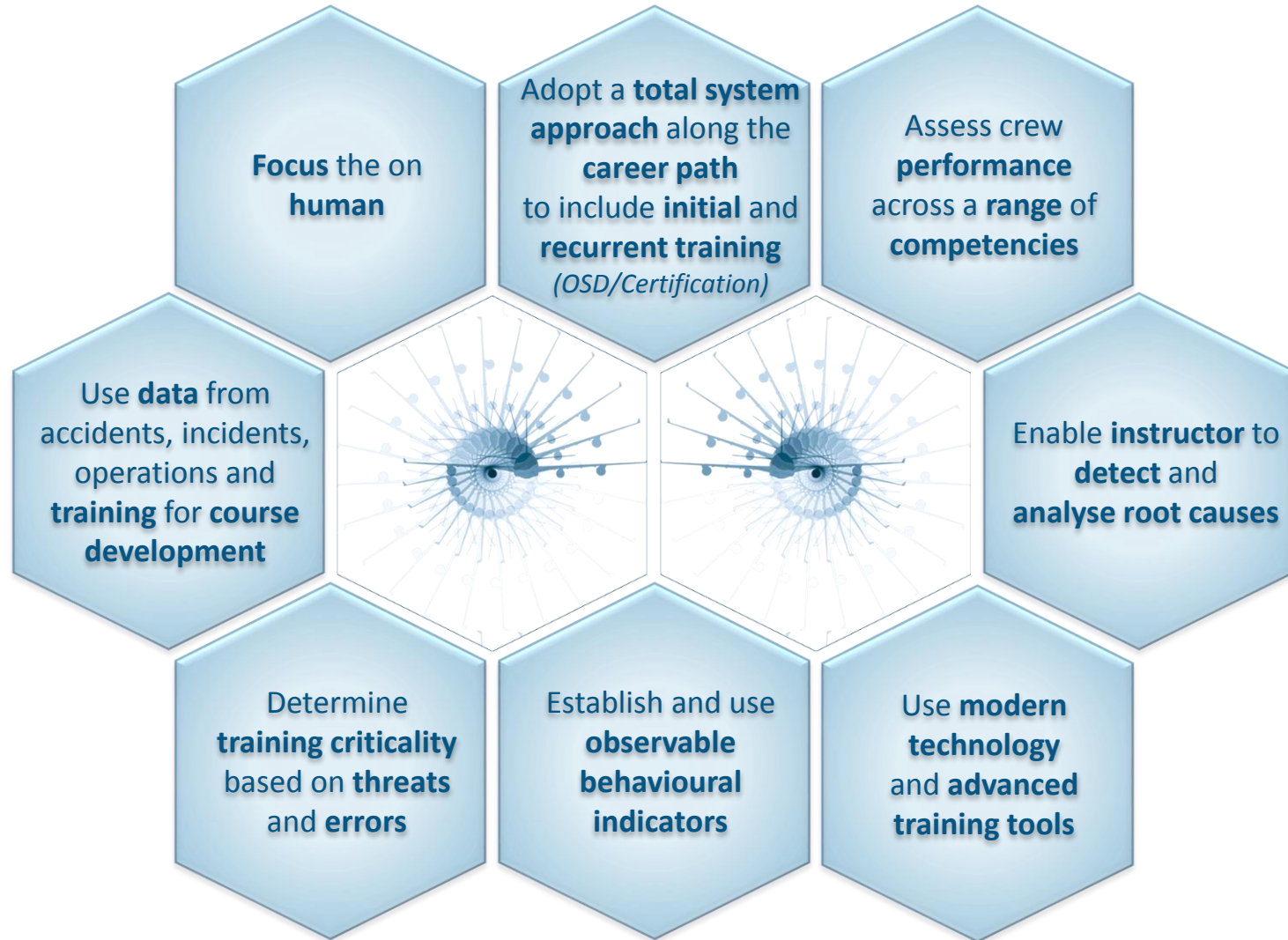


A new dimension for pilot training



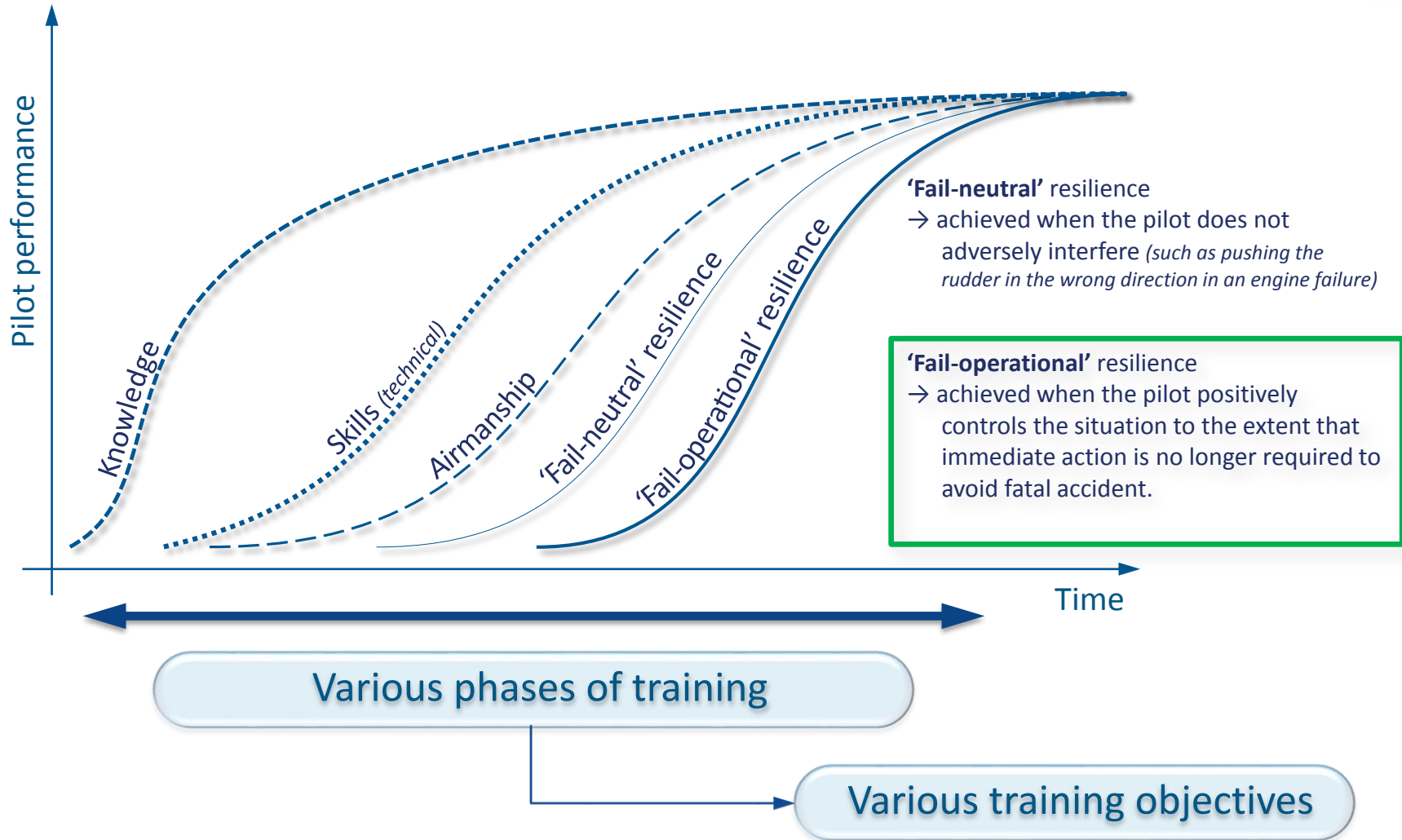


The new approach





Training for performance





Challenges for regulators

- Adapt regulation
- Train inspectors
- Monitor implementation → oversight
 - Risk based → Safety performance focusing on outcome of training
 - Data driven → SMS/SSP/EASP
- Standardise → Uniform level of implementation
- Assess effectiveness → sample real pilot training
- Improve whole system → global vision
 - Theoretical, initial & recurrent training
 - Prerequisites, training, assessment and checking
 - Instructors, examiners and inspectors
 - Training providers: Management and delivery of training



Example: EBT partly enabled since in 2015

Evidence-Based Training (EBT)



- EASA Decision 2015/027/R added
 1. 'GM1 ORO.FC.230 Recurrent training and checking'.
 2. 'GM1 ORO.FC.A.245 Alternative Training and Qualification Programme'.

- **Objective**: facilitate implementation of EBT within the existing European regulatory framework by ensuring as much as possible alignment with ICAO Doc 9995 "Manual of Evidence-based Training".



Other examples

2 Agency decisions:

Agency Decisions		
PUBLICATION DATE	TITLE	
28/09/2015	AMC/GM to Part-ARO, Part-ORO and Part-SPA ED Decision 2015/022/R	
04/05/2015	AMC-GM to Part-ORO (Issue 2 Amdt 2)+ GM to Part-Definitions (Amdt 3) and related docs ED Decision 2015/012/R	

1 ➤ CRM¹ training → 2 New elements for flight & cabin crew:

- Resilience development
- Surprise and startle effect

2 ➤ UPRT² training → New element for flight crew:

- Exposure to scenarios that contain startle/surprise effects

¹ Crew resource management

² Upset Prevention and Recovery Training

AMC: Acceptable Means of Compliance

GM: Guidance Material



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Thank you for your attention



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