



Flight Operations Safety Awareness Seminar (FOSAS)

A350 Flight Crew Training Concept Training for Safety

Airbus Flight Operations Support and Training Standards
Nairobi, 19-21 Sep. 2017

AIRBUS



A new Plane – a new Training Concept

2007:

“Design of the A350 XWB will set the new standard for long-range passenger transport!”

2010:

“Design of the new A350 type rating will set the new standard for pilot type training!”



The goal

+ Be more **effective** + Be more **efficient** + Have more **fun**

Aviation Media



“Radical new concept”



“A Revolutionary Training System”



Training “On a Higher plateau”



A350 Flight Crew Training Concept

Training For Safety

What is new?

Why is it new?

Training by Airbus

A350 Flight Crew Training Concept

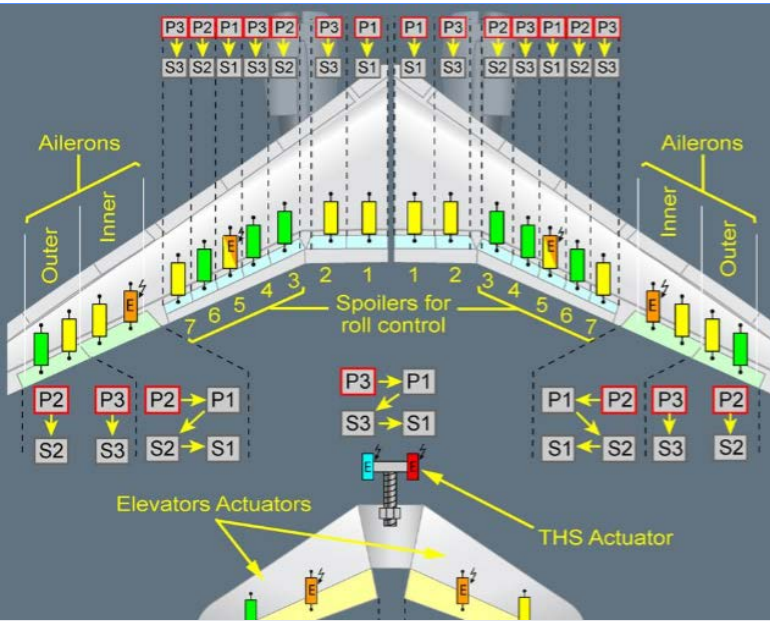
Training For Safety

What is new?

Why is it new?

Training by Airbus

The Ground Phase



- + System Knowledge Modules - **SKM**
- + Need to Understand
- + Immediate consolidation with **ACE**



Technical Knowledge

Quick
user
Guide

> 30h CBT (e.g. A320, A380)



The Ground Phase



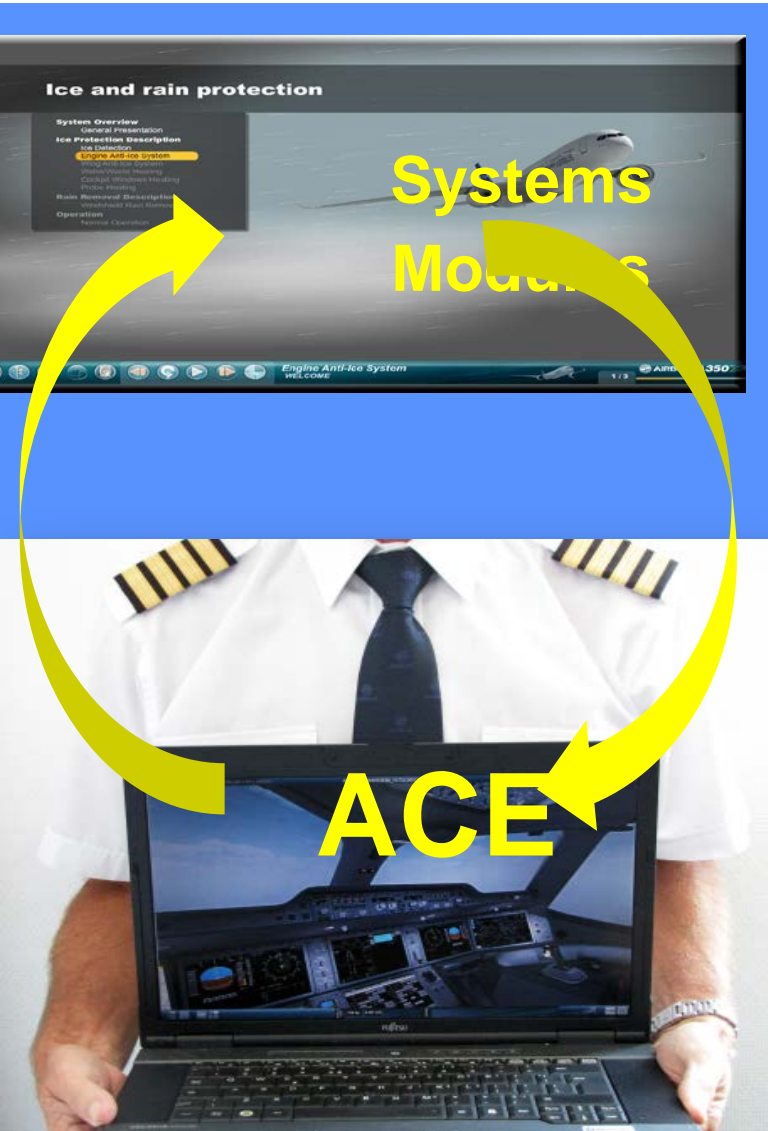
ACE = Airbus Cockpit Experience

- Part Task Trainer
- Difference Level C



- + Cockpit Simulator on Laptop
- + Used from Day 1 - Module 1
- + System Knowledge modules (SKM) and ACE modules are intermixed
- + ACE is used throughout the whole course - also for preparation of e.g. FFS sessions

The Ground Phase



Ground phase - Overview

Day1	Day 2	Day 3	Day 4	Day 5
CREW registration SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT
Day 6	Day 7			
SYSTEM KNOWLEDGE & PTT + SYSTEM TEST	SOP PTT			

A320: 15 Days
A380: 15 Days

Manual Flight



Day 8: First Fly-Out

- **Session starts in FL 100**
 - AP OFF
 - FD OFF
 - A/THR OFF
 - “BIRD” OFF
- **First Landing after 40min**



Airborne Phase



APT+ includes Sidesticks,
Trust Levers and Rudder
Panels

➤ SOP Training on APT

- + SOP Training starts after manual flying training
- + Simple visualizer
- + Forward facing crew
- + Operations-style training

Airborne Phase



		Day 8	Day 9	Day 10
		FFS 1	APT+ 1	APT+ 2
Day 11	Day 12	Day 13	Day 14	Day 15
APT+ 3	FFS 2	FFS 3	FFS 4	APT+ 4
Day 16	Day 17	Day 18	Day 19	Day 20
APT+ 5	APT+ 6	FFS 5	FFS 6	FFS 7
Day 21	Day 22			
FFS 8	FFS 9			

- + APT and FFS integrated for optimum training
- + Normal- , Abnormal- and LOFT-phase
- + Last 4 sessions: Mini LOFTs

A350 Flight Crew Training Concept

Training For Safety

What is new?

Why is it new?

Customer Voice

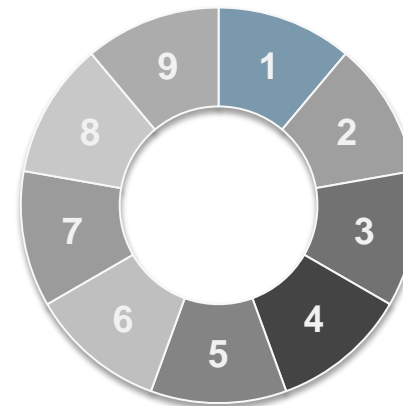
Training by Airbus

Why these innovations in the A350 Type Rating?



State of the Art training

- + EBT Elements introduced
- + New learning paradigms - “Learning by Discovery”
- + Pilot’s competencies drive syllabus and grading
- + Surprise elements added



- Knowledge
- Situation Awareness
- Workload Management
- Communication
- Manual flight
- Application of Procedures
- Auto Flight
- Problem Solving and Decision Making
- Leadership and Teamwork

Summary: The A350 Standard Type Rating Training

Day 1	Day 2	Day 3	Day 4	Day 5
CREW registration SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT
Day 6	Day 7	Day 8	Day 9	Day 10
SYSTEM KNOWLEDGE & PTT + SYSTEM TEST	SOP PTT	FFS 1	APT+ 1	APT+ 2
Day 11	Day 12	Day 13	Day 14	Day 15
APT+ 3	FFS 2	FFS 3	FFS 4	APT+ 4
Day 16	Day 17	Day 18	Day 19	Day 20
APT+ 5	APT+ 6	FFS 5	FFS 6	FFS 7
Day 21	Day 22	Day 23		
FFS 8	FFS 9	SKILL TEST		

New Training Program

- + More simulator time
- + One day shorter than A330
- + EBT Elements

New Training Style

- + Learning by Discovery”
- + Competency Based

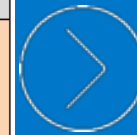
New Training Tools

- + ACE – Laptop simulator
- + “Real Cockpit “ APT+

Summary: The A350 CCQ and CTR

Day1	Day 2	Day 3	Day 4	Day 5
CREW registration SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT + SYSTEM TEST	FFS 1
Day 6	Day 7	Day 8	Day 9	Day 10
APT+ 1	APT+ 2	APT+ 3	FFS 2	FFS 3
Day 11	Day 12			
SKILL				

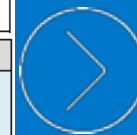
Day1	Day 2	Day 3	Day 4	Day 5
CREW registration SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	SYSTEM KNOWLEDGE & PTT	FTD Level 2 1
Day 6	Day 7	Day 8		
FTD Level 2 2	FTD Level 2 3	FTD Level 2 4		



CCQ A320 to A350 (*)

- + Same principles as standard course
- + 11 days
- + “Fly Out” on day 5

(*) Similar courses for A340 to A350 and A380 to A350



Difference Course A330 to A350

- + Common Type Rating
- + Same principles, but no “Fly Out”
- + Use of FTD2 instead of FFS possible
- + No Skill test required

A350 XWB – New Training Concept – Lessons Learned



First course: October 2014

Sept . 2017

- **Very positive feedback** from the start
- Noticeable: **very steep learning curve esp. in short courses**
- **More competent crews** with very few remedial
- **Instructor standardization** for **Competency** based training an ongoing challenge
- **Hardware development** for **ACE trainer** desirable

› The A350 Flight Crew Training Program applies the new Airbus training philosophy for the first time

A350 Flight Crew Training Concept

Training For Safety

What is new?

Why is it new?

**Training by Airbus
EBT Implementation**

New Training Concept – EBT Implementation at Airbus

