



# FDM and Training – a Ryanair perspective



Koln 5<sup>th</sup> April



# Aircraft

- ➔ 325 +1 x B737-NG
- ➔ + 180 x B737s on order
- ➔ + 200 x B737Max on order
- ➔ 560,000 flights per year
- ➔ 2000 flights per day
- ➔ 1 T/O Ldg every 16 sec.





→ Pilots

→ 2016 Cadet

→ Direct Entry Capt.

→ Command Upgrade

→ Training Capt.

3500+

744

248

312

150





# OFDM and the development of SOP

## 2004 - xx% Class II and xx% -Class III

- Take-off Configuration prevention SOP
- Restricting Maximum Cruise altitude
- CDA / LDA technique
- High Energy Approach prevention SOP
- Tail Strike Prevention
- False G/S prevention SOP

## 2016 – xx% Class II and xx% -Class III





**RYANAIR**

# HOTSPOTS

ISSUE 25 - July 2015 OFDM AND SAIR REVIEW - FLIGHT SAFETY OFFICE

**FLAP UP GEAR UP!!**

SKZ - Pilot Flying, in response to a complex change of departure clearance, called for Flap Up instead of Landing Gear Up after take-off. Pilot Monitoring retracted Flaps to the up position. After landing the Flight crew correctly filed a report annotated the CVR CB.

The resulting investigation revealed that all times after the flap lever was moved, there was a significant positive margin between the Top of the Amber Band and the actual IAS.

Correlated factors to this event and possible distractions were extensive weather build up on departure and a constant non English transmissions on tower frequency by another aircraft.

**PLOC**

**SCOTTISH FIR**

SceneFIR - short sector flight from GLL to GUB experienced a PLOC of between 0-10 minutes when the FlightCrew did not hear and/or respond to a change of frequency instruction.

**IRISH FIR**

A number of aircraft attempted to establish communications on 121.5 without success. Communications were made approaching Irish FIR by the FlightCrew.

**2015 - Q2 FOQA OFDM**

**TOP 5 OFDM EVENTS**

RANK	EVENT
1	DESCENT RATE HIGH - 3000 TO 1000FT
2	DESCENT RATE HIGH - 1000 TO 500FT
3	GLIDESLOPE DEVIATION HIGH- 500 TO 200FT
4	RATE OF DESCENT THROUGH 500FT GATE
5	DESCENT RATE HIGH - BELOW 500FT

**QUARTERLY RATE**

The OFDM Capture Rate for the quarter was 99.41% which compares well to the 12 month capture rate up to Q2 of 99.45%.

**VALIDATED EXCEEDANCES**

There were 9303 validated exceedances during the period, 5.2% of the flights that provided data, of which 893 were Class 3 (3.54%) and 744 were Class 2 (4.7%). The table (above, FIG 2) shows the Top 5 Class 3 events for Q2.

**TYPICAL APPROACH**

And the screenshot (above, FIG 1) shows what a typical HEA, which features all of the top 5

exceedances, (2300ft at 3.0nm when should be 1090ft).

**VISUAL APPROACHES**

Visual approaches account for the majority of HEA events as 'task saturation' gets the better of the pilot and situational awareness (3 x distance to TD) is degraded.

**ASR**

Finally, if you step outside the SDP and you think an exceedance has occurred then file an ASR and set out the detail leading to the event. Please explain your rationale in an ASR.

**SURVEY: I PREFER RECEIVING HOTSPOTS ONLINE? YES NO**

AMBER TALKY HOTSPOTS@RYANAIR.COM

**RYANAIR**

## RYANAIR CORPORATE SAFETY STRATEGY

### 2013 - 2016

**RYANAIR**  
SAFETY DIRECTORATE





# OFDM Communication – Pilot Road Show



Target Pilot  
Attendance

>75%





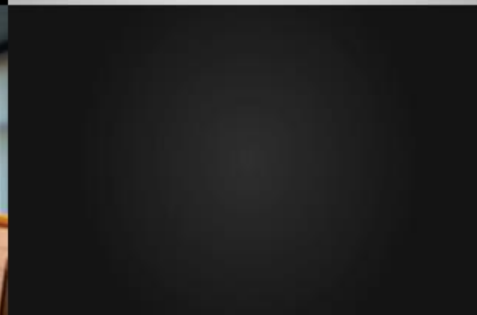
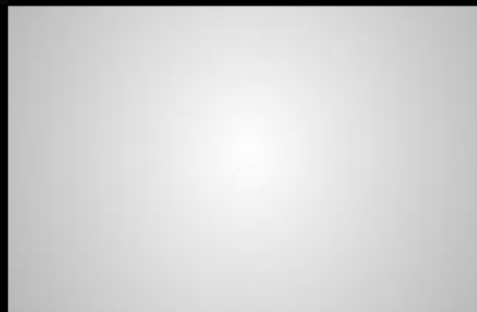
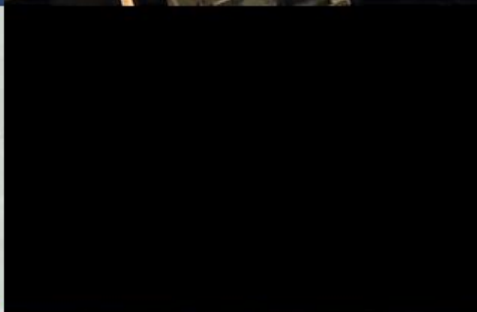
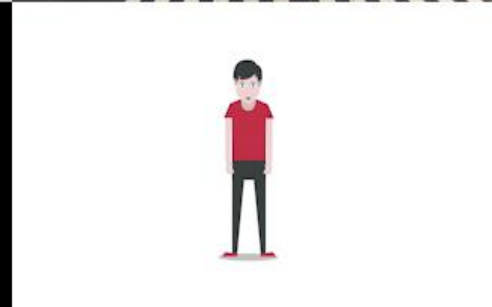
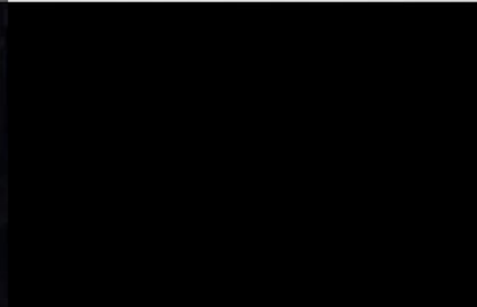
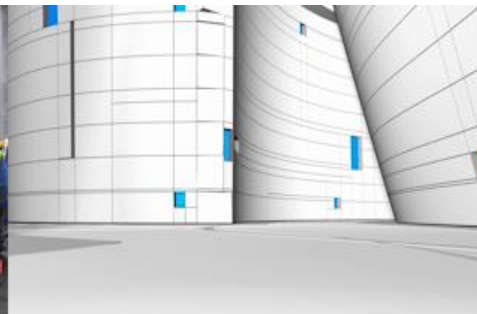
# OFDM Communication Safety TV - STV







# OFDM Communication Safety TV - STV







# OFDM Communication - Video 3D Animation



Tail strike on landing - London STN



# OFDM Communication - Video 3D Animation







**OFDM – Training**

**Pilot Standards**

**StMS**





## 2 Year KPIs

- **Simulator Training and Checking**
- **Line Training and Checking**
- **Line Incident**
- **Serious OFDM event**

StMS is a modular analytical tool [AMC page 42; Para (2)(ii)(B)] that enables OFDM information to be networked into other safety information systems [AMC Para (2)(ii)(C)] such as pilot Key Performance Indicator (KPI) and Core Competency analysis .





Value calculated by multiplication or addition in appropriate column	KPI VALUES			
KPI	1 KPI	2 KPIs	3 KPIs	4 KPIs
OFDM	Nil	500	750	1000
Line Incident	Nil	500	750	750
Line check	Nil	250	250	250
Sim	Nil	250	250	250



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VALUE	StMS PROCEDURE
> 2250	<b>Initial Procedure</b> <ul style="list-style-type: none"><li>• KPI Procedures apply.</li><li>• Performance overseen &amp; reported on by BC/BTRE.</li></ul> <b>OFDM Trustee Options:</b> <ul style="list-style-type: none"><li>• Off line operations within 7 days.</li><li>• OFDM Trustee formal review &amp; interview.</li><li>• Letter issued.</li><li>• Specific training and checking program.</li><li>• Specific goals set for pilot.</li></ul>
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</= 1000 2 KPI	KPI procedures required to ensure standards. Enters StMS





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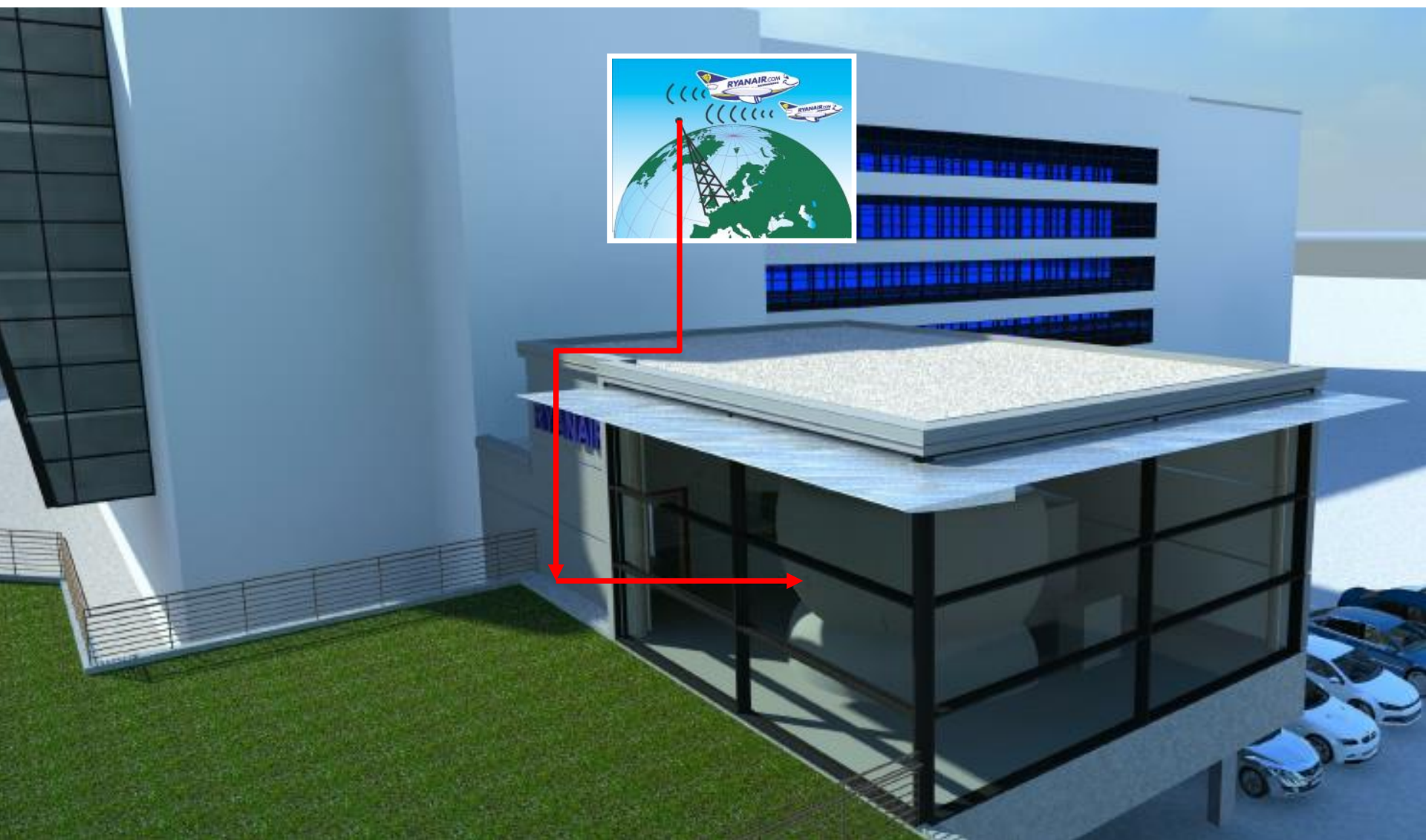
- **Confidential**
- **Constructive**
- **Proactive**
- **Non-punitive**





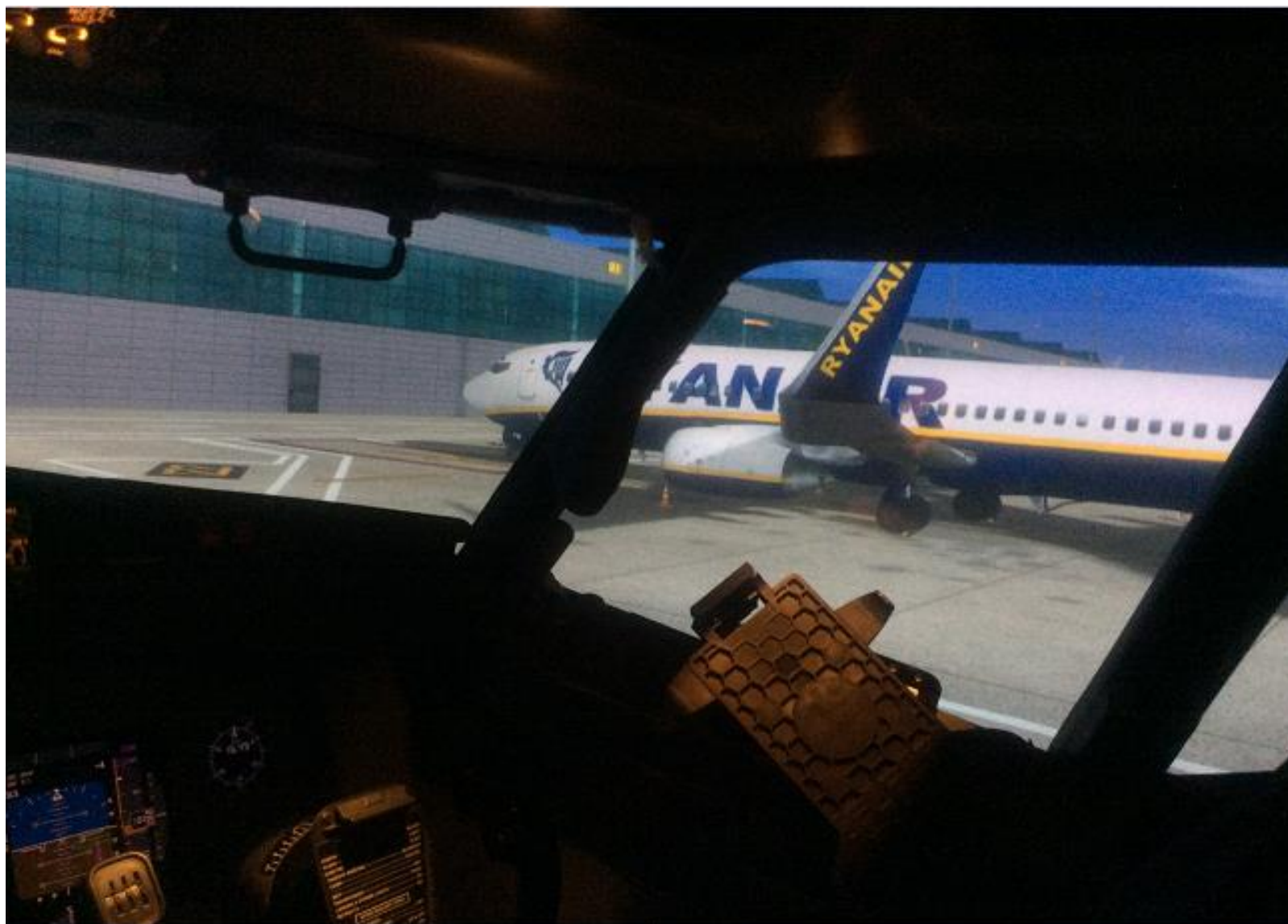


# Simulator - OFDM Replay





# Simulator - OFDM Replay





- ➔ OFDM, part of the SMS jigsaw.
- ➔ Data accessibility- quality/quantity – essential
- ➔ Investment in technology and communication – essential
- ➔ Commitment from the top – essential





# FDM and Training – a Ryanair perspective



Thank you ...