



# **International Pilot Training Conference Safety in Aviation**

**John Vincent**  
**Head – Safety Analysis & Research**  
**Cologne**  
**24 November 2009**

---



# Background

---

- Aviation safety in Europe is good
  - Our Vision is: “Ever safer civil aviation”
  - Last 3 years:
    - ★ 2007, MD83 in Turkey\* involving 57 fatalities
    - ★ 2008, MD83 in Spain involving 154 fatalities
    - ★ 2009, A330 in the South Atlantic involving 228 fatalities
-



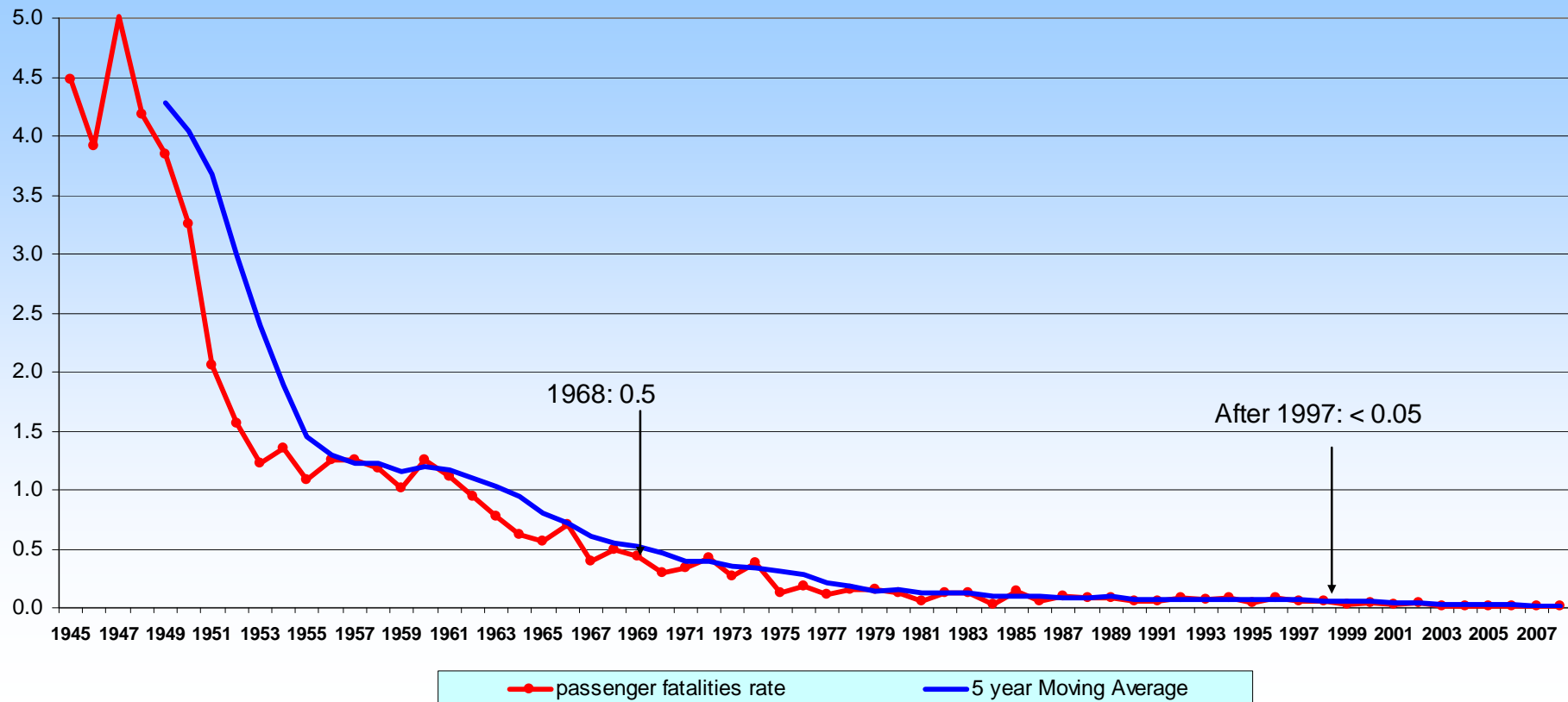
# Outline

---

- Background
  - History
  - What we know
    - ★ Over time
    - ★ Recent
  - What we don't know
  - Next Step
-



# Historical development (1)





# Historical development (2)





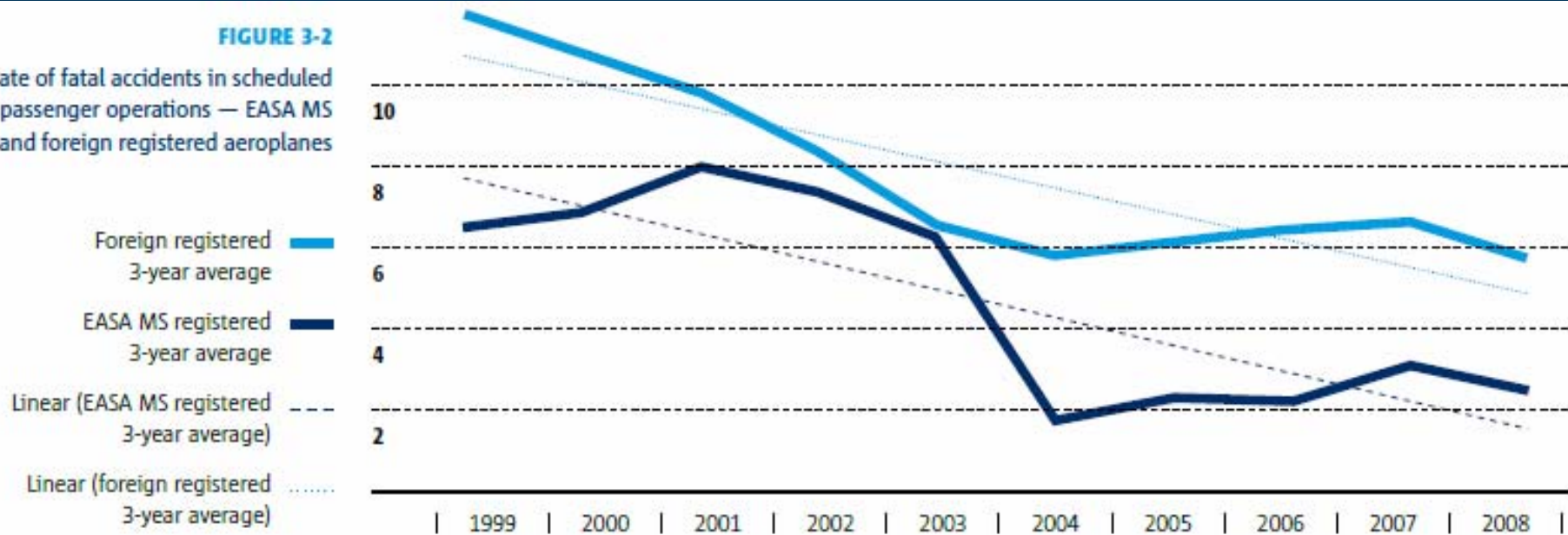
## European Aviation Safety Agency

### Commercial Air Transport

### Rate of fatal accidents in scheduled passenger operations

FIGURE 3-2

Rate of fatal accidents in scheduled passenger operations — EASA MS and foreign registered aeroplanes



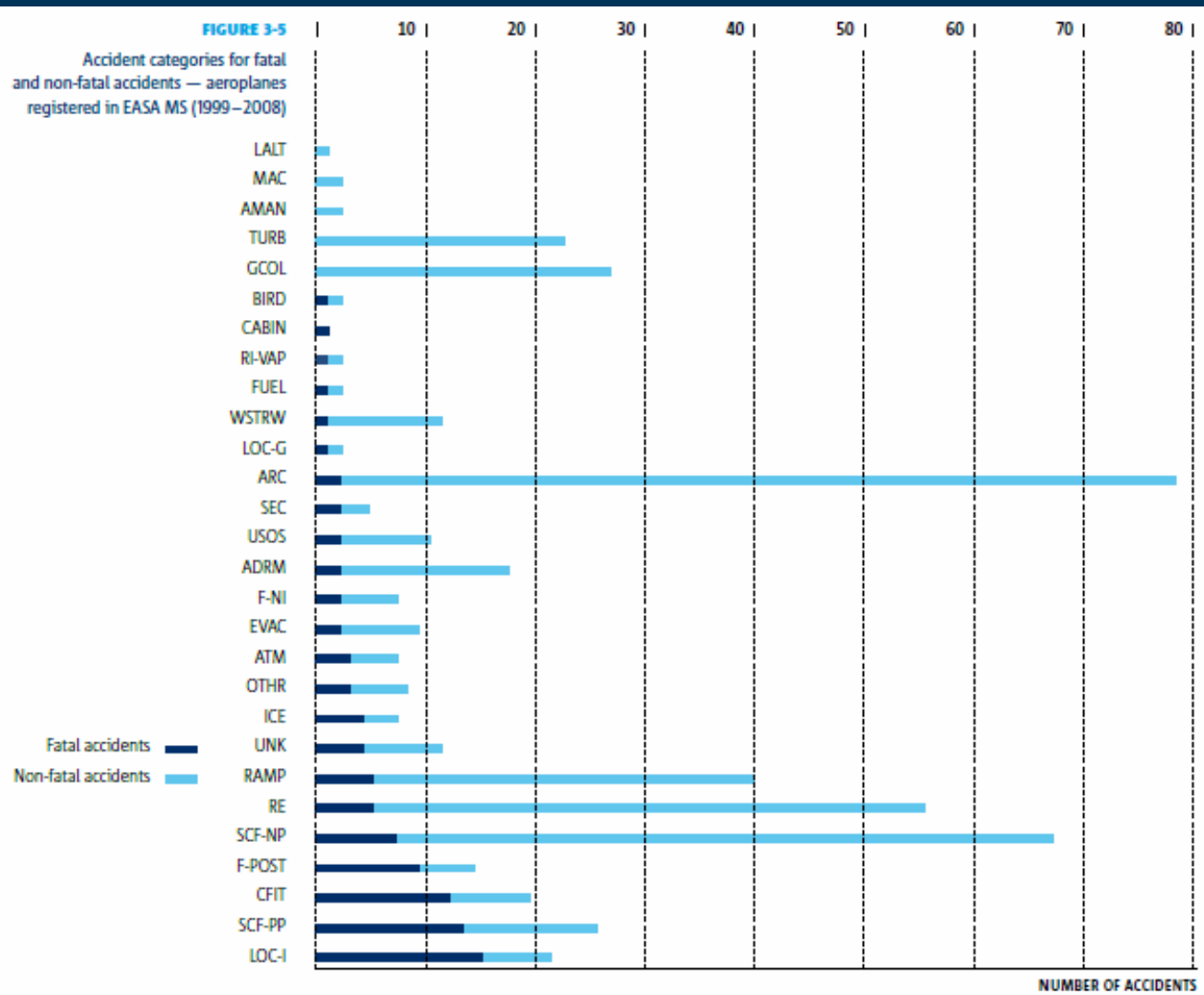
➤ Rate per 10 million flights



## European Aviation Safety Agency

### Commercial Air Transport

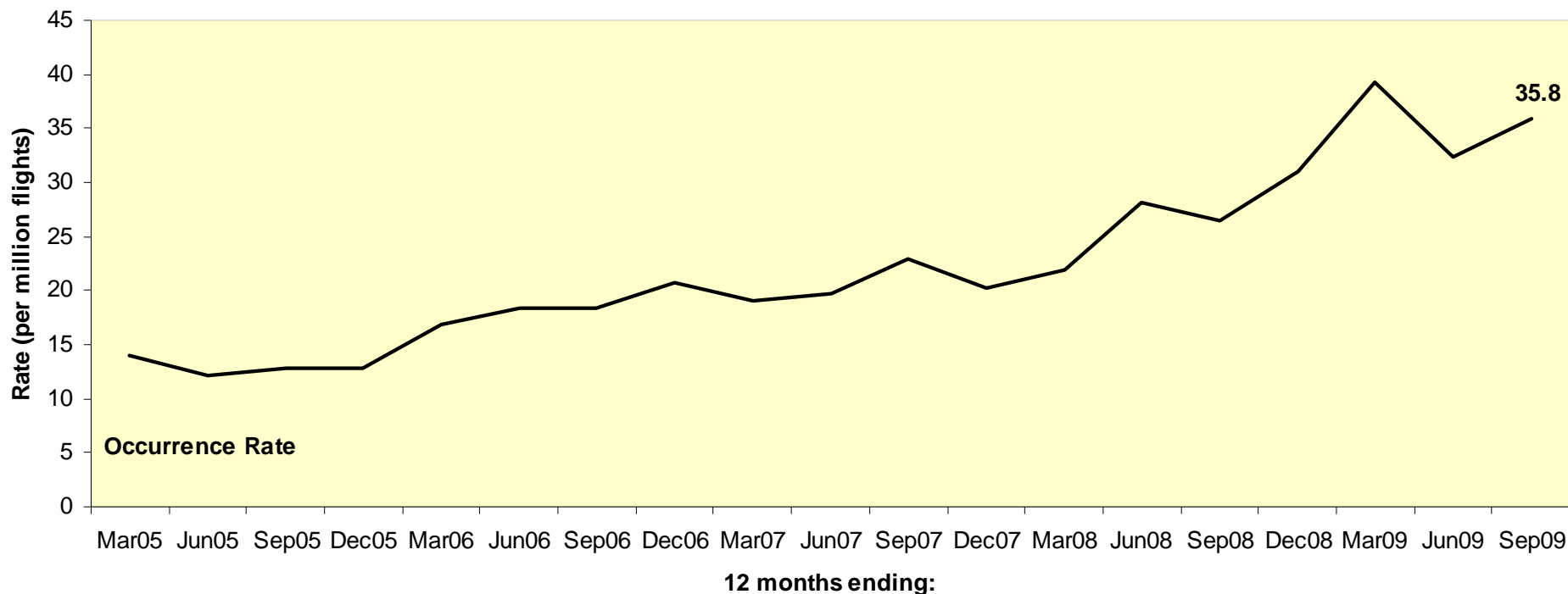
# Accident categories for fatal and non-fatal accidents – Aeroplanes registered in EASA Member States





# recent evidence base 5 years

- High-severity occurrences involving UK commercial air transport aeroplanes

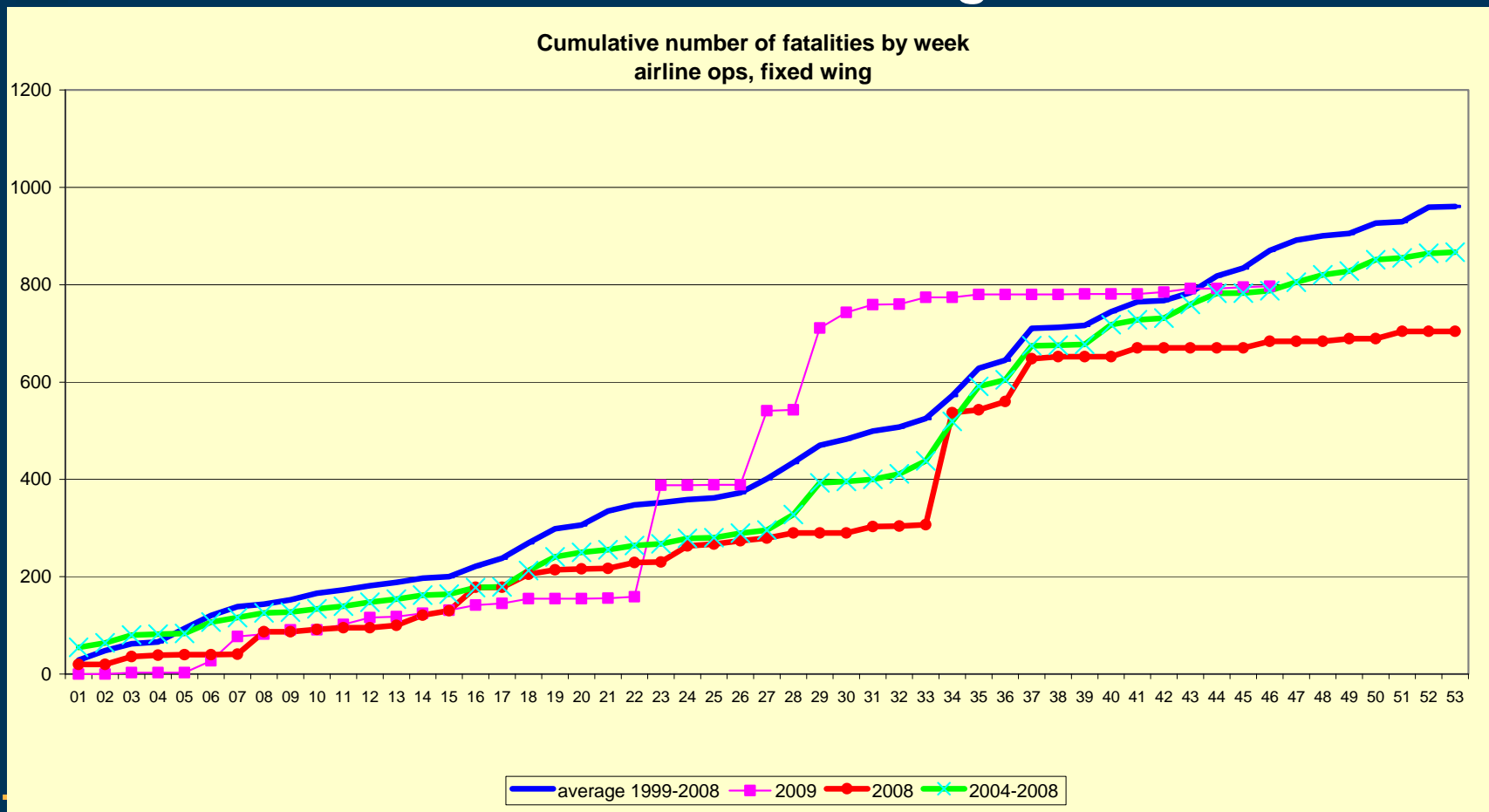






# recent evidence base 2009

## ➤ Fatalities FW aircraft over 2250 kg





# recent evidence base 2009

---

- 15 January: US Airways flight 1549 from New York-La Guardia Airport, NY (LGA). 155 on-board.
  - 12 February: Colgan Air, DHC-8-400, N200WQ, operating as Continental Connection flight 3407, during approach to Buffalo-Niagara International Airport (BUF), Buffalo, NY. 50 fatalities.
-



# Recommendations (1)

---

## ★ It is recommended that A

- review flight crew training programs to ensure that they adequately prepare crews to diagnose and take appropriate actions to mitigate the consequences of fuel leak events (2001).
  - consider requiring training for flight by sole reference to standby instruments to pilots during initial and recurrent training courses (2005).
  - require practical hypoxia training as a mandatory part of flight crew and cabin crew training. This training should include the use of recently developed hypoxia training tools that reduce the amount of oxygen a trainee receives while wearing a mask and performing tasks(2005).
  - should require xx aircraft manufacturers, operators and training providers to issue appropriate guidance to pilots in the techniques for recovering from bounced landings (2006).
-



# Recommendations (2)

---

## ★ It is recommended that A

- should contact all xxx Type Rating Training Organizations within xxx Member States and emphasise the need to train pilots to use icing speeds following de-icing/anti-icing with thickened fluids, even when in non-icing conditions (2005).
  - the training syllabus recommended by xx to the airlines for type rating of xx is reviewed in order to assure that it leads to an adequate understanding of the details of the brake system of the aircraft (2002).
  - mandate training for air transport pilots to better enable them to make landing decisions in deteriorating weather (2005).
  - training programmes to obtain the PPL or CPL license be modified so as to include awareness training for flying an airplane in case of a failure of one of the primary flight controls (2007).
-



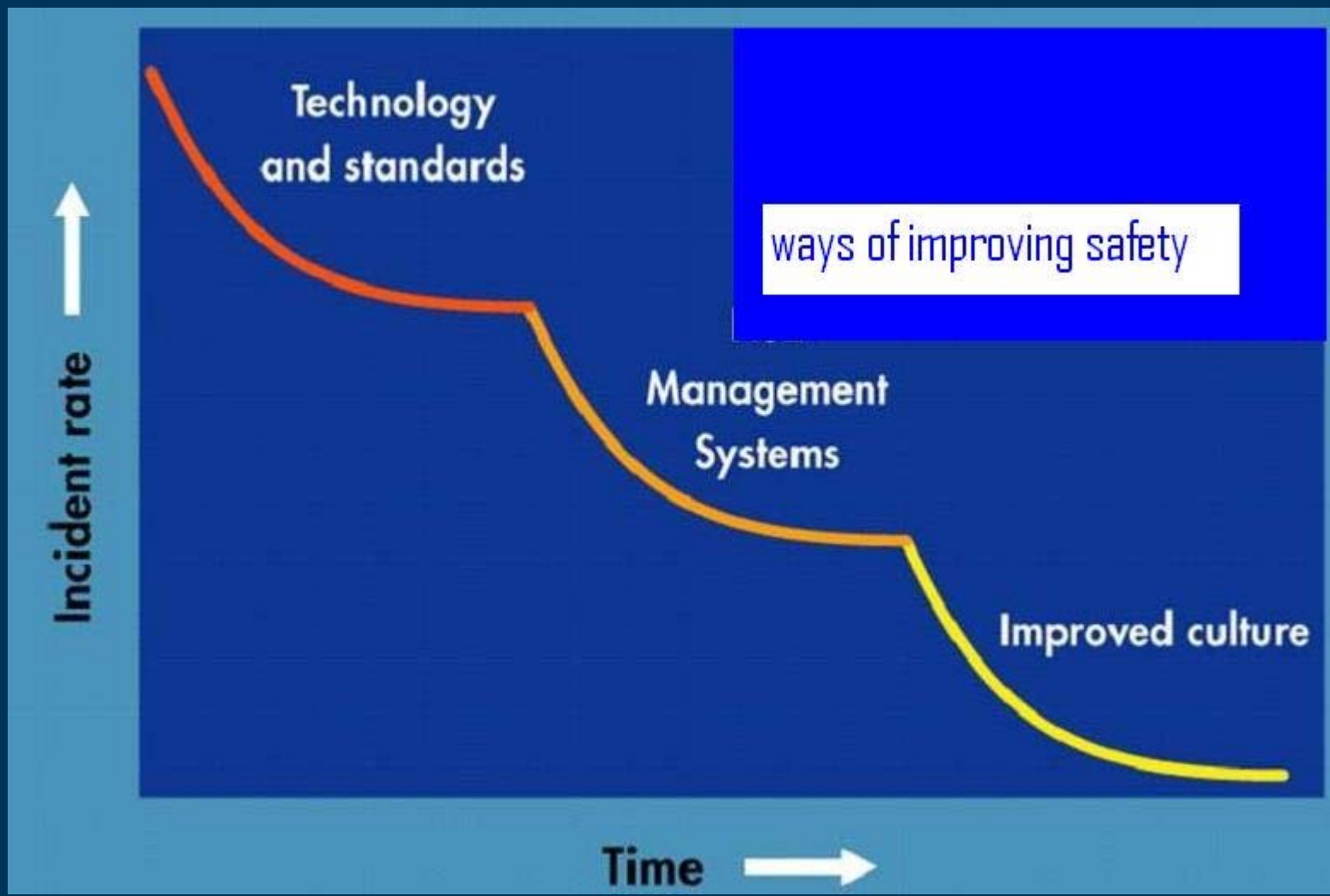
# What we don't know

---

- A measure of the contribution of training as a factor in major accidents;
  - The best balance between training, procedures and design for safety;
  - How effective training can be to mitigate against future risks;
  - A way to put in place an evidence based systematic approach to improved training.
-



# One theory





# Next Steps

- Dig deeper
- Actions based on:
  - ★ Reactive Recommendations
  - ★ Analysis of historical data
  - ★ Analysis of operational data
  - ★ Considering future risk





**European Aviation Safety Agency**



## **Contacts:**

**John Vincent**

EASA Safety Analysis and Research Dpt Head

[john.vincent@easa.europa.eu](mailto:john.vincent@easa.europa.eu)

Tel: + 49 221 89990 2012

## **EASA**

Ottoplatz 1

D-50679 Köln

PO Box 101253

D-50452 Köln, Germany

Tel: 49-221-89990000

---