

**Airbus China Safety Conference**  
**Chengdu, 15-16 July 2015**

**Introduction**

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# Airbus fleet worldwide – End May 2015

	Orders	Deliveries	
A380 Family	317	159	
A340 Family	378	378	
A350 Family	780	2	
A330 Family	1401	1182	
A300/A310 Family	816	816	
A320 Family	11688	6544	

## Airbus Fleet in Mainland China – End of March 2015

	In Operations	To be delivered Until 2020	
A380 Family	5	0	
A350 Family	0	20	
A330 Family	150	34	
A300/A310 Family	0	7	
A320 Family	979	685	

# Airbus fleet worldwide – End March 2015



# Airbus Fleet in Mainland China – End of March 2015

	In Operations	To be delivered Until 2020
A380 Family	0	0
A350 Family	0	20
A330 Family	150	34
A300/A310 Family	0	7
A320 Family	979	685

**1880 Aircraft Ordered**  
**17 Operators**

**746 A/C Backlog**

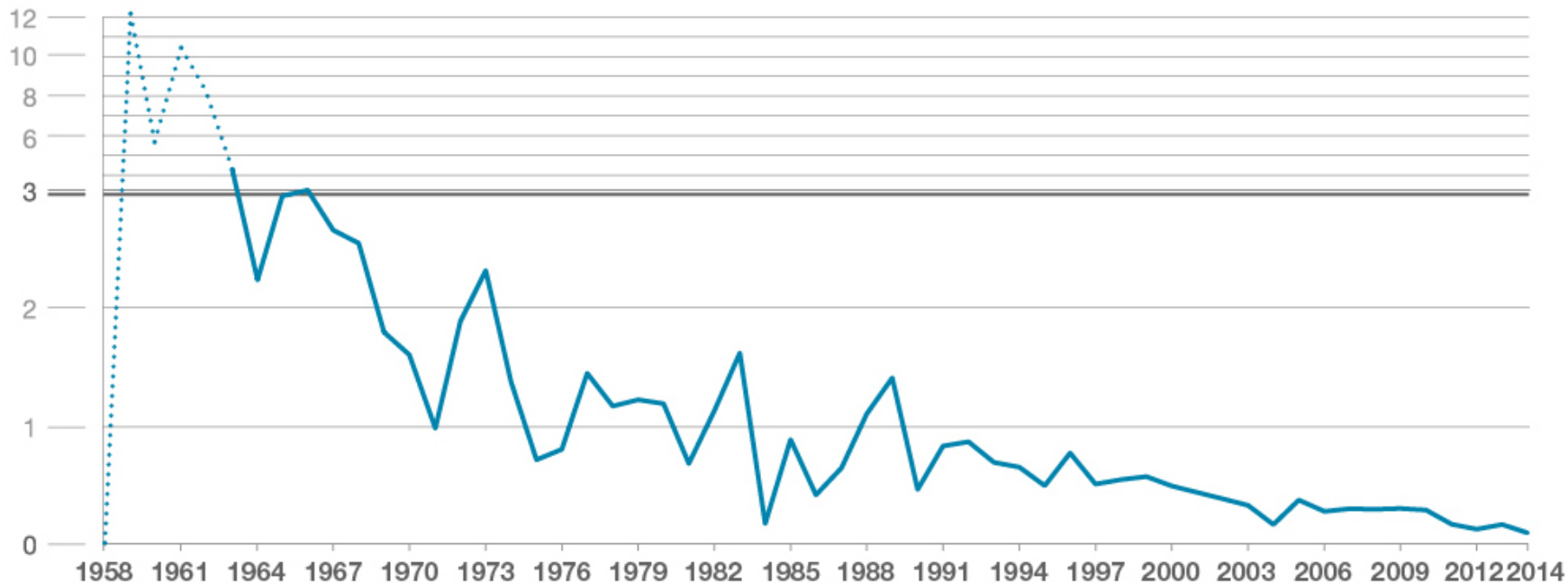
**1134 A/C In Operations**

**~3.4 M FH since last 12 month**

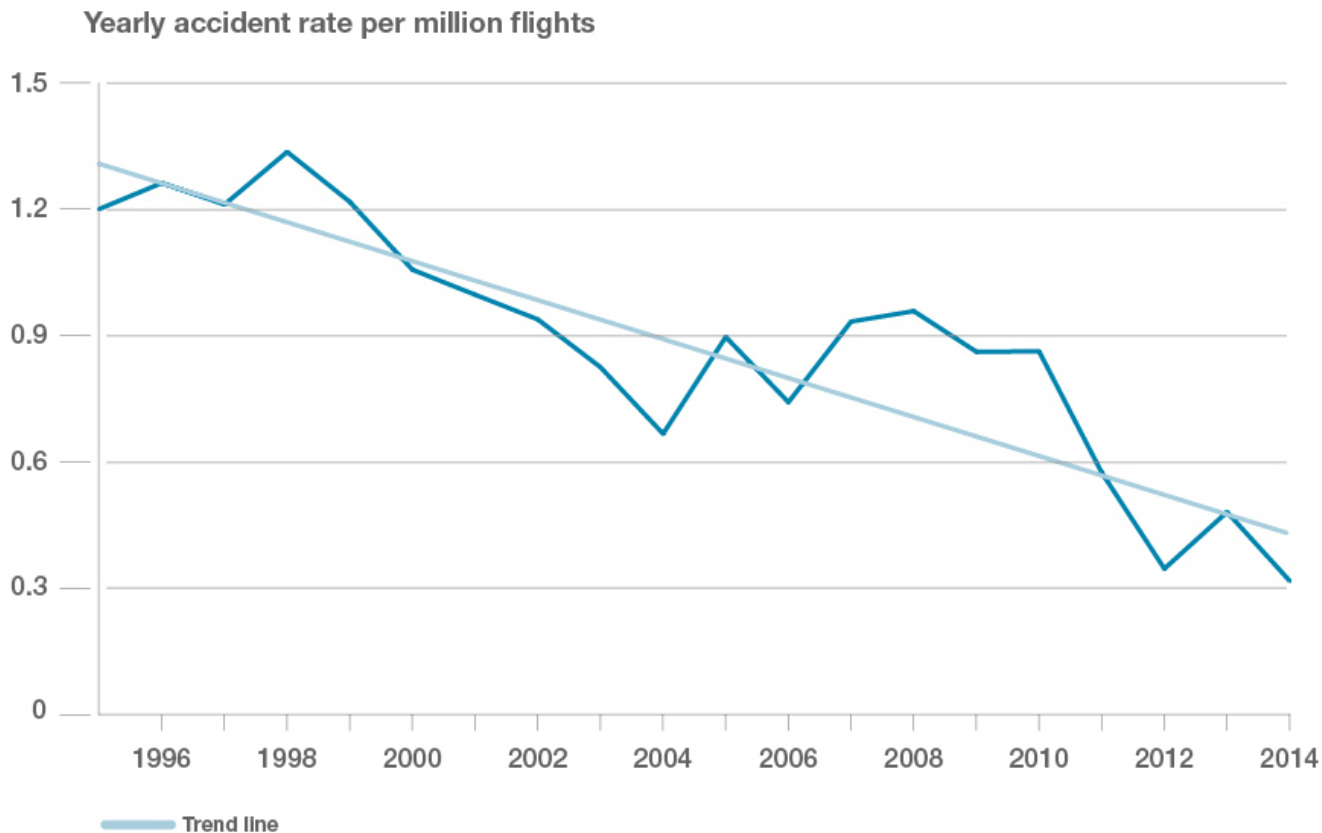


# Safety has significantly improved over the years...

## Yearly accident rate per million flights



... and continues to do so



# Significant evolution of aircraft technology

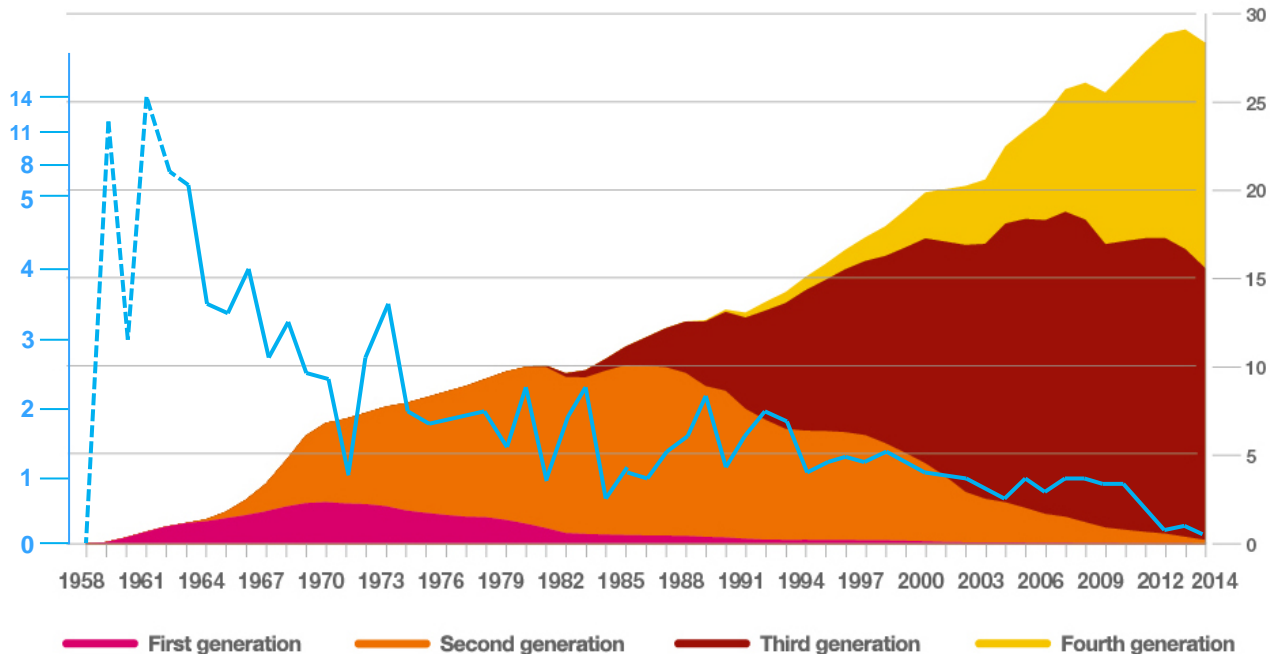




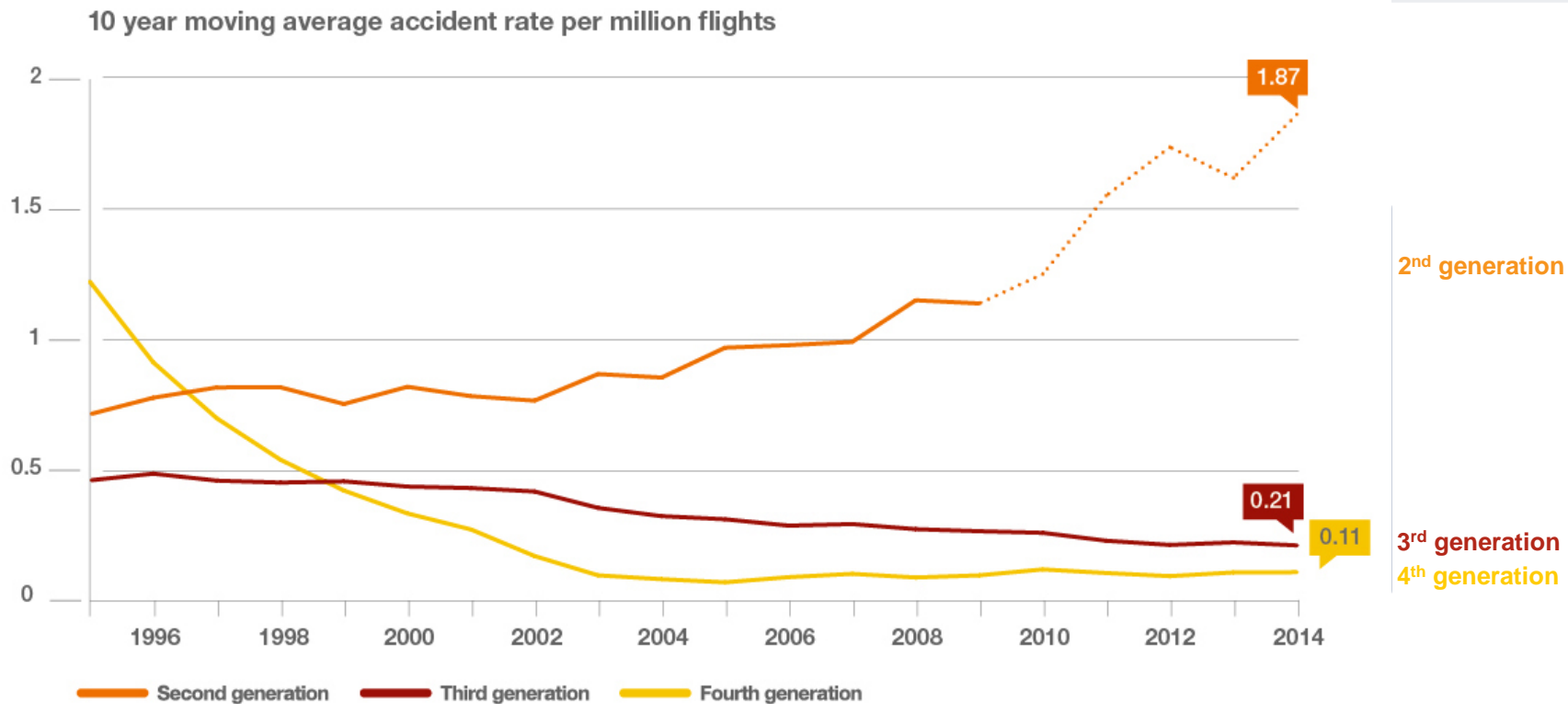
# Safety has improved... despite a massive increase in exposure

## Yearly accident rate per million of flights

## Yearly number of flights in millions



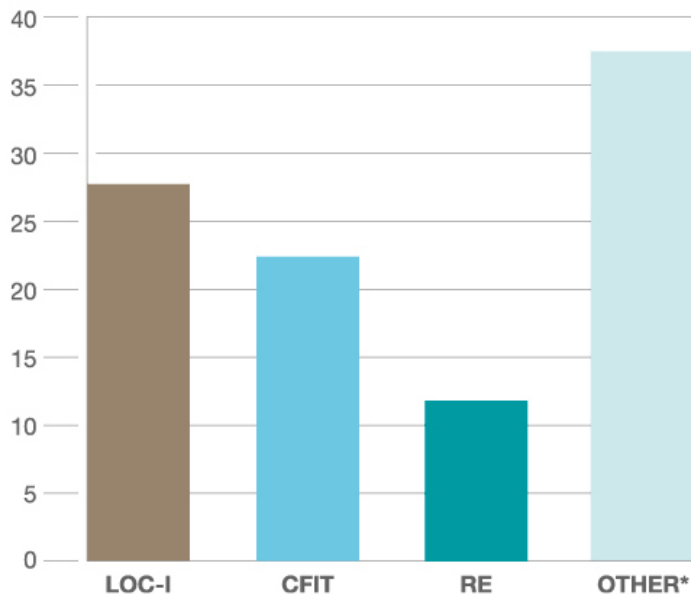
# Aircraft technology makes a difference



\* Below 10 years of operation, the moving average is based on the number of years of operation.

# The 3 major accident categories

Percentage of total number of accidents since 1995



\*All the accident categories representing less than 10% of the accidents are clustered in the "OTHER" category.

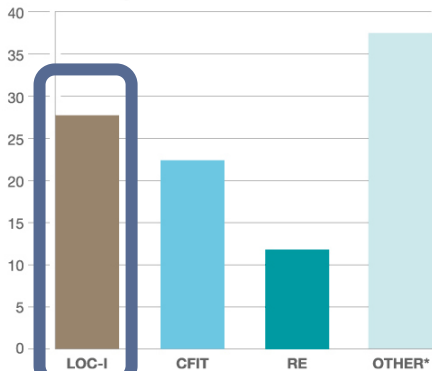
**LOC-I : Loss of control in-flight**

**CFIT : Controlled flight into terrain**

**RE : Runway excursion**

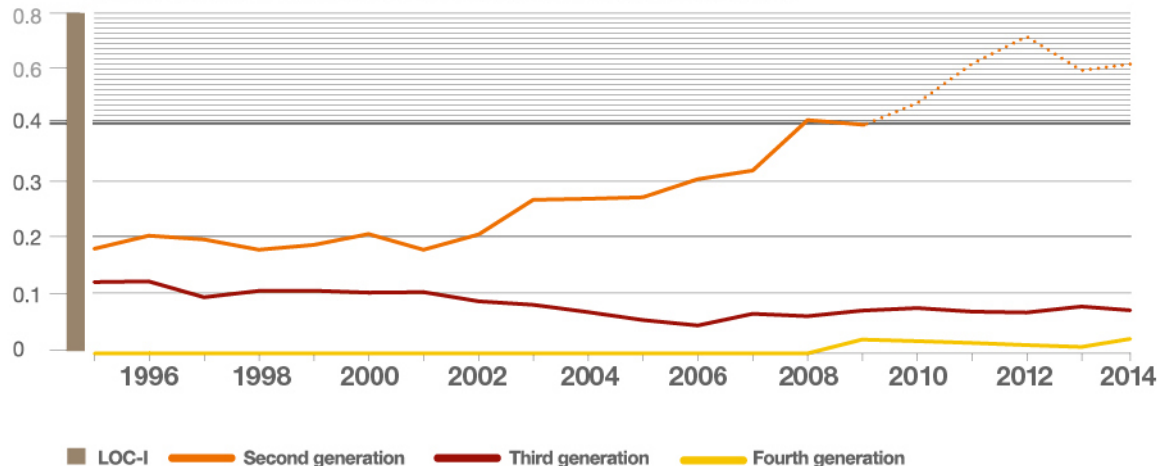
# Technology makes a difference

Percentage of total number of accidents since 1995



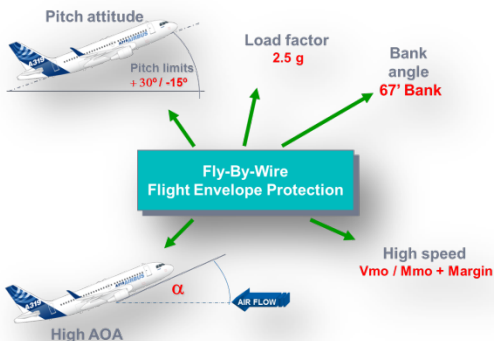
\*All the accident categories representing less than 10% of the accidents are clustered in the "OTHER" category.

10 year moving average LOC-I accident rate per million flights



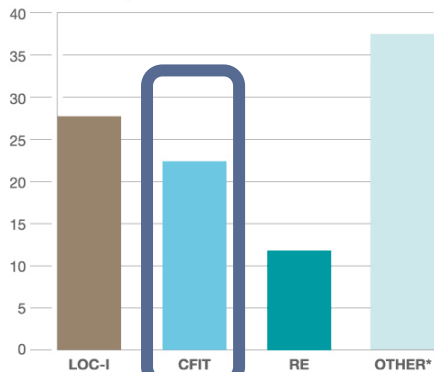
Technology contribution in addressing Loss Of Control type of accident:

- ✓ Fly By Wire a/c / Flight Envelope Protection (applicable only to 4<sup>th</sup> generation of a/c)



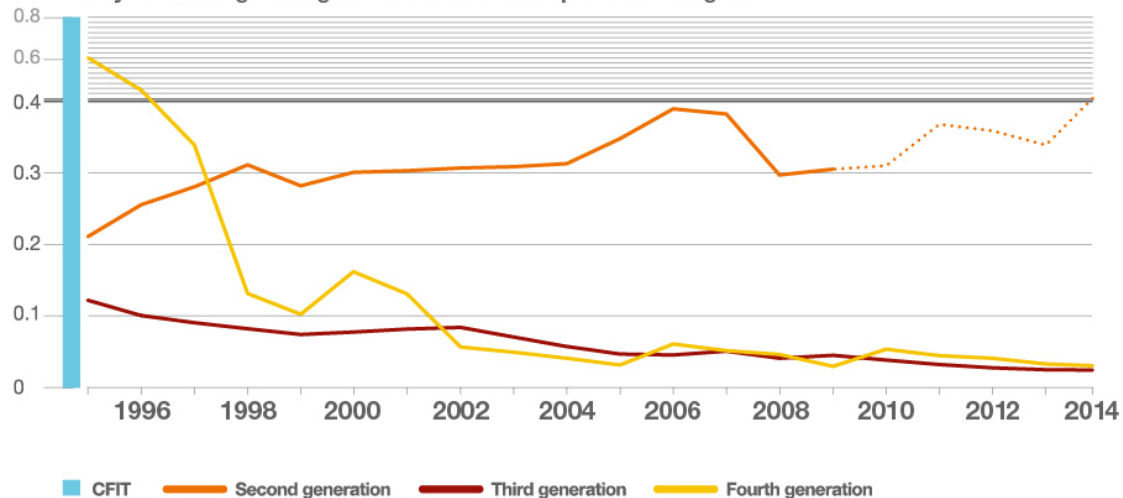
# Technology makes a difference

Percentage of total number of accidents since 1995



\*All the accident categories representing less than 10% of the accidents are clustered in the "OTHER" category.

10 year moving average CFIT accident rate per million flights



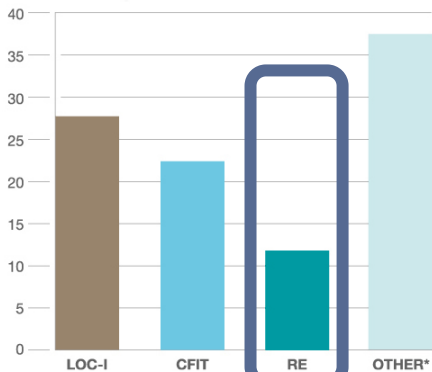
## Technology contribution in addressing Controlled Flight Into Terrain:

- combination of TAWS, Improved Navigation performance, Glass Cockpit/FMS equipped a/c (mainly 3<sup>rd</sup> and 4<sup>th</sup> generations of a/c)



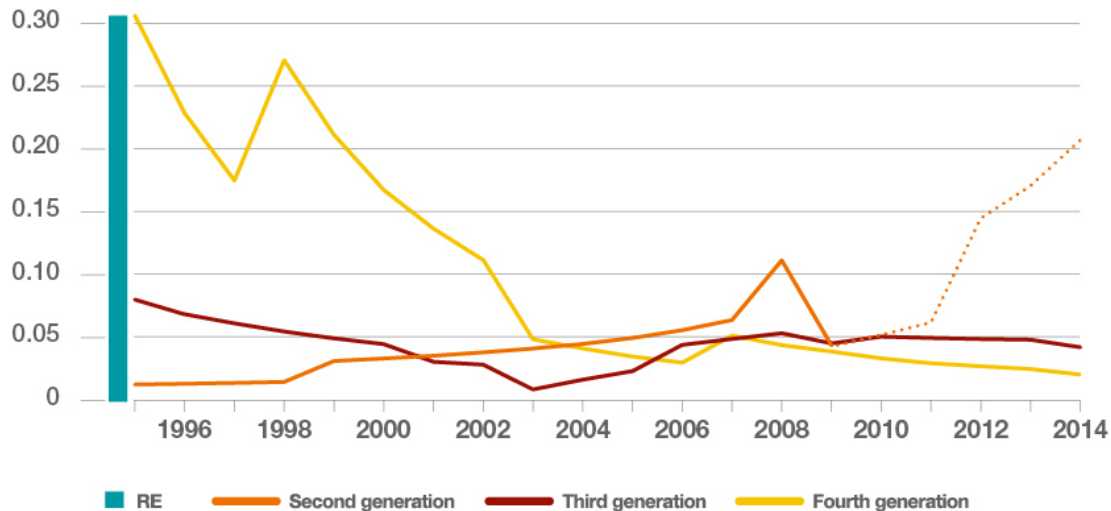
# Technology makes a difference

Percentage of total number of accidents since 1995



\*All the accident categories representing less than 10% of the accidents are clustered in the "OTHER" category.

10 year moving average RE accident rate per million flights

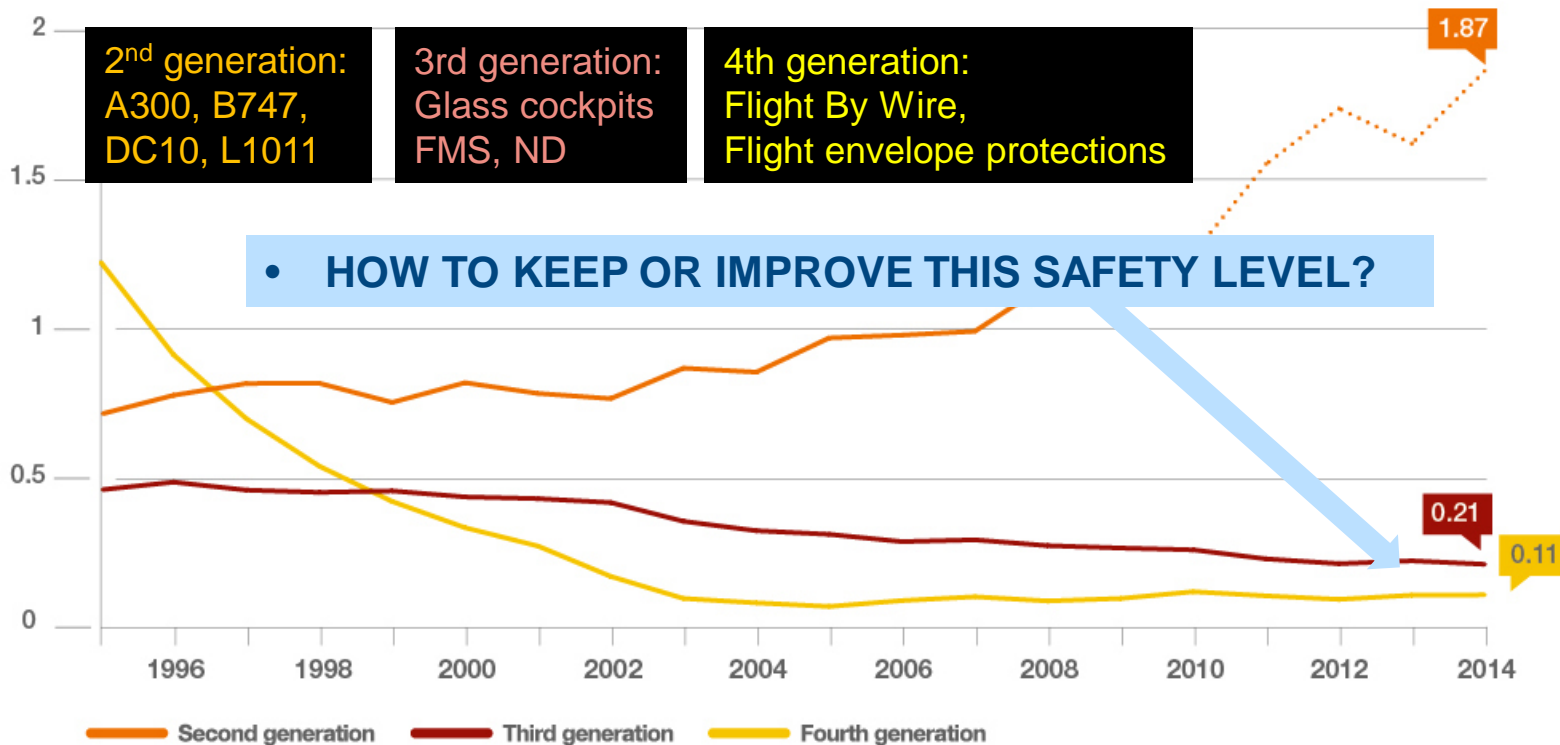


Emerging technology contribution in addressing Runway Excursion:

- ✓ ROPS or equivalent energy/landing performance based system

# Safety evolution with aircraft generations

10 year moving average accident rate per million flights



# Training evolution

Yes, technology brings safety benefit, and will continue to do so.

But is-it enough considering pilots are less & less exposed to manual flying conditions ?

- RVSM rules
- Increased reliability

The pace of training evolution (from ab-initio to recurrent) must catch-up with the today environment.

- We all need to accelerate the pace of training evolution, working together with Industry, Authorities and Operators.

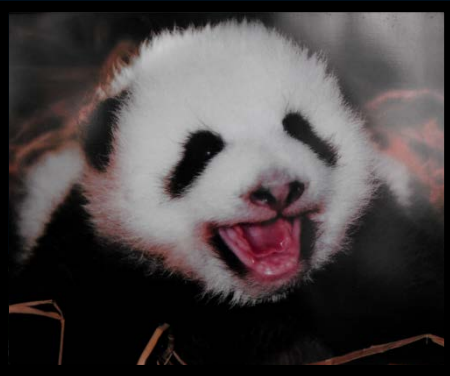


## What's next at global level ?

### Continue to enhance Safety TOGETHER for more anticipation

- SMS, Safety Culture, Safety Strategy
- Risk Management
- « Big data » - identification of trends
  - At individual organisation level
  - At a wider scale
- Continuous implementation of known Lessons Learnt
- Further improving the sharing of Safety information

- **Sharing**
- **Sharing with ALL levels and with ALL actors**
- **And repeat, repeat & repeat lessons learned**



**Welcome to Chengdu**  
**Enjoy Your Conference**

**成都大熊猫繁育研究基地**  
CHENG DU RESEARCH BASE OF GIANT PANDA BREEDING

