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Training and Checking in the 21st Century

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ADTS Conference 3-4 March 2010


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- Best technology and teaching methods
- Current MPL programmes
- Ab-initio pilot training programmes
- ITQI

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- Pilot Training and Checking in the 21st Century

Training and Checking in the 21st Century

- The challenges we currently face in training and checking
- Ways to combat these challenges
- Initiatives we have introduced here in Emirates

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- **The challenges we currently face in training and checking:**
 - Out of date checks which do not address the threats of modern aircraft operations
 - Training and checking for events which are extremely rare
 - Making best use of our limited and expensive training resources to ensure quality training is delivered at affordable prices
 - Combating the increased dependence on automation
 - Incorporating meaningful CRM training into our training programmes.

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- **Ways to combat these challenges:**
 - Evidence Based Training via a recognized programme to address legacy training and checking issues
 - Working in partnership to provide data to enhance training and make it relevant and appropriate for individual airlines
 - Addressing the degradation of manual handling skills
 - The 21st century does not mean training has to be wholly technology driven – return to core training values
 - Effective CRM training programmes
 - Introduce Airmanship, Awareness, Suspicion and a return to Common Sense!

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Current Challenges

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Hull Loss
per million departures

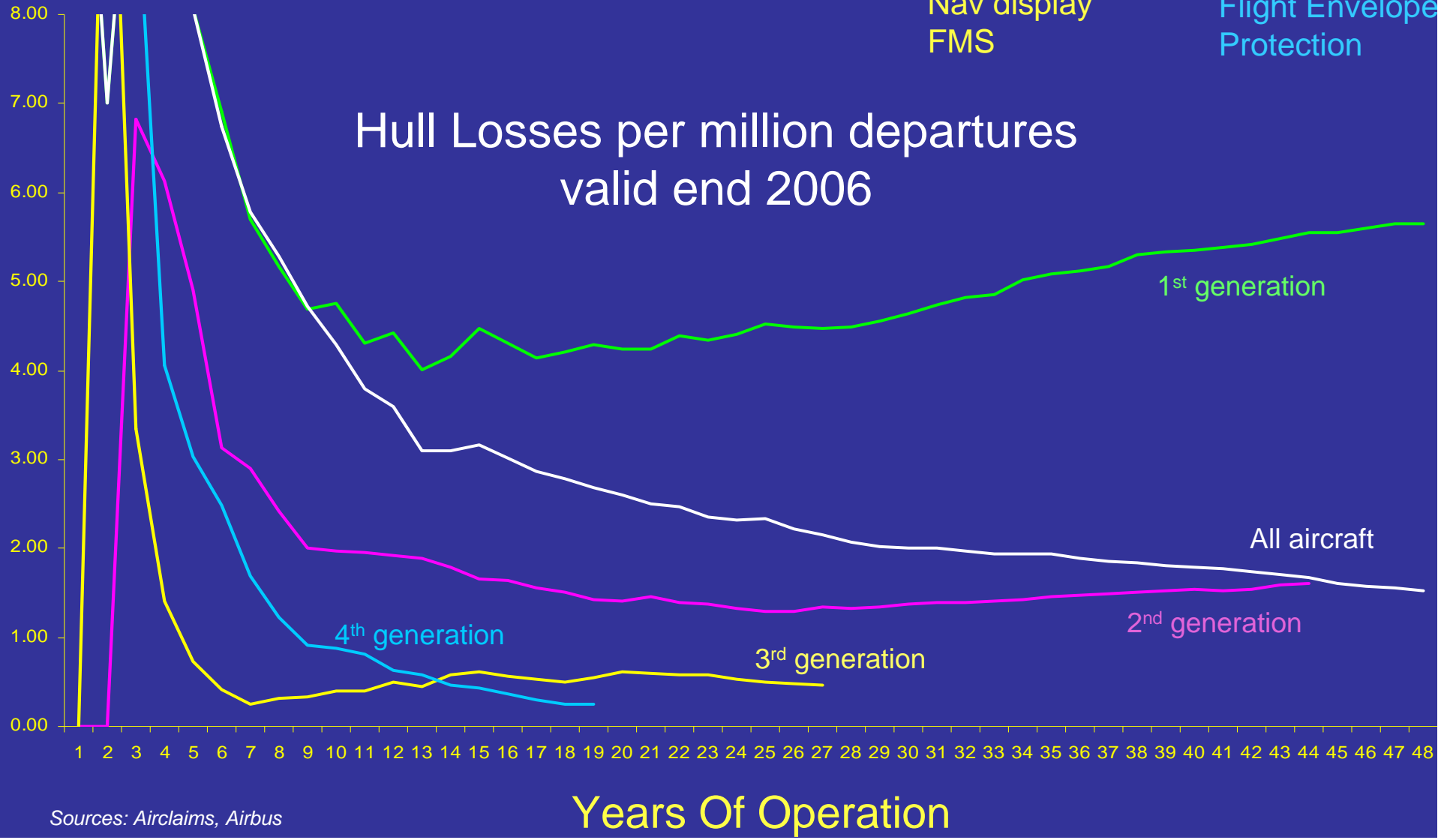
1st generation:
Early jet

2nd generation:
2nd jet generation

3rd generation:
Glass-cockpit
Nav display
FMS

4th generation:
FBW
Flight Envelope
Protection

Hull Losses per million departures valid end 2006



Sources: Airclaims, Airbus

Years Of Operation

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The challenges

- Inadequate training as the probable cause of 169 accidents, albeit mainly in the general aviation world.

Flight Safety Foundation President and CEO William R Voss

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The Challenges

“...since 2000, serious accidents have frequently involved pilot failure to manage situations that they should really have been able to handle successfully” *David Learmont Flight Magazine*

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The Challenges

Inappropriate Training and Checking

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The Challenges

JAR FCL Mandatory Items:

- Flight Preparation
- Before take off check list
- Rejected take off before reaching V1
- Engine failure between V1 and V2
- Instrument departure and arrival procedures
- Engine out precision approach to minima
- NDB/VOR/LOC approach to MDA
- Engine out go around
- Landing critical engine inoperative

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The Challenges

- In addition to the mandatory items we have to cover:
 - Low Visibility
 - Special airport operations
 - ETOPS, RNP-AR, RNAV, CFIT etc

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The Challenges

Backwards compatible

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The Challenges

Combating the increased use of automation

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The Challenges

Introducing effective Human Factors/CRM training into our training programmes

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Addressing the Challenges

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Addressing the Challenges

MPL

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Addressing the Challenges

ITQI

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Addressing the Challenges

- Change training to meet real challenges
- Train threats to individual aircraft type and area of operation
- Change the regulations to support the changes required



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Addressing the Challenges

The degradation of manual handling skills

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Addressing the Challenges

- learning to handle rare events such as engine failure at V1 still dominate our training.....
-there is overdependence on automation today and pilots are losing airmanship and piloting skills.

President of the Flight Safety Foundation William Voss

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Addressing the Challenges

Capt Jacques Drappier Airbus Vice-President Training and Flight Operations Support and Services

- “.....the need to refocus on basic handling”.
- "We are putting people into our training today who have forgotten how to fly”
- “.....less than 3 hours of stick time”

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Addressing the Challenges

Manual Handling Simulators

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Addressing the Challenges

New Automation Policies

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Addressing the Challenges

Return to class room training

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Addressing the Challenges

Human Factors Training

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Addressing the Challenges

- “...less medical error,
- less patient complaints,
- less liability problems,
- less pain,
- less cost”

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Addressing the Challenges

“.....that the airline industry handles baggage more reliably than the medical industry does patients”

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Addressing the Challenges

Resilience Engineering

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Conclusion

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QUESTIONS?

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