



Assessing and Improving the SMS

**Peter Simpson
Manager Air Safety**

Cathay Pacific...

- **110 aircraft (155+ Dragonair & AHK)
+ 31 firm orders**
- **Total staff 16000**
- **7500 flights/month**
- **1.5 M pax/month**

Safety at Cathay Pacific



**Our vision is to make Cathay Pacific
the most admired airline in the world**

Ensuring safety comes first

Providing service straight from the heart

Encouraging product leadership

Delivering superior financial returns

Providing rewarding career opportunities

How do we achieve our Vision? How do we ensure '*safety comes first*'?

- With a risk-based SMS
- SMS ensures that safety and risk are measured and managed
- The SMS should answer the questions:
 - “How safe are we?”
 - “Are we meeting our safety targets?”
 - “What is going to hurt us?”
 - “What are our risks?”
 - “What are we doing about those risks?”

The SMS Jigsaw Puzzle



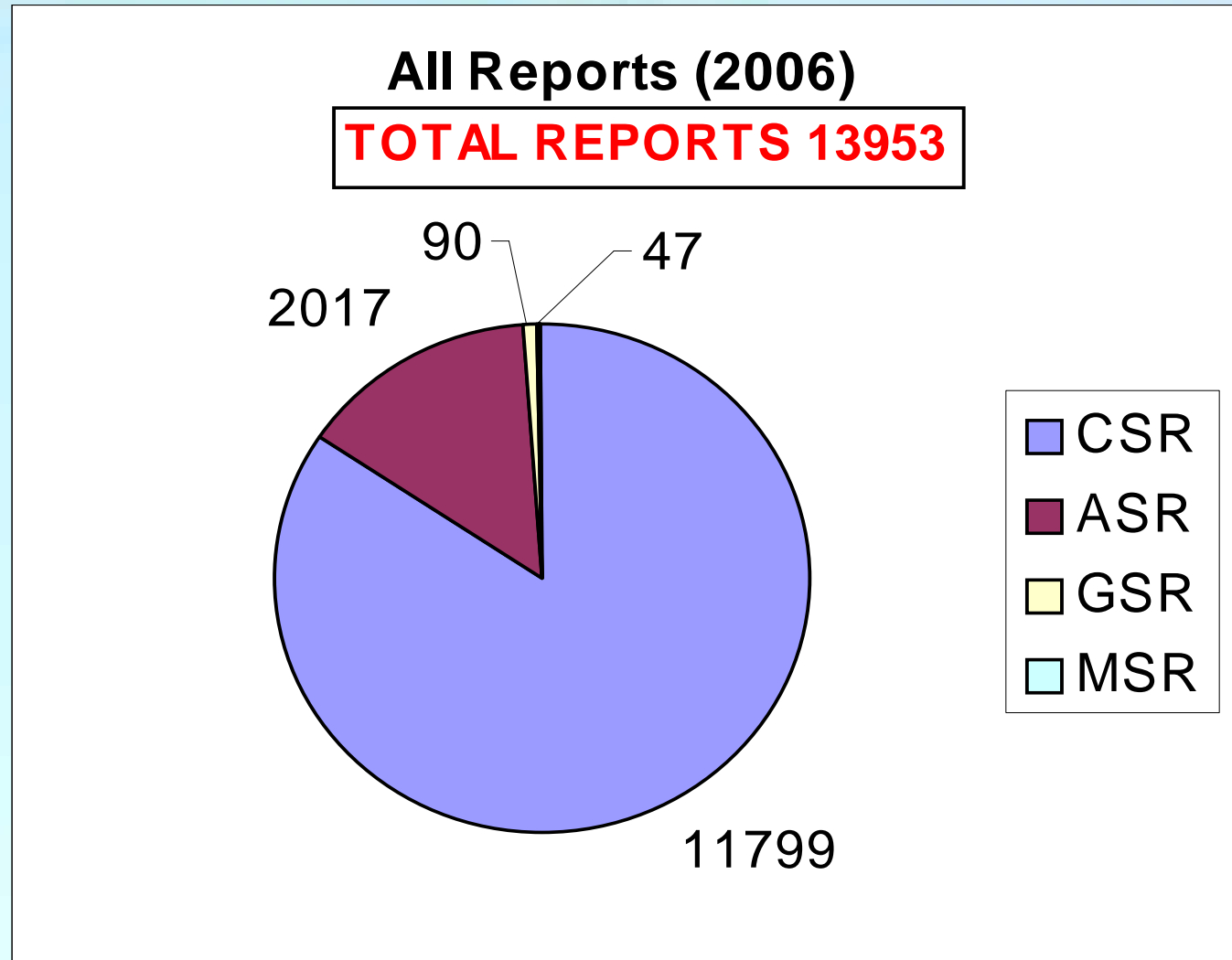
Safety Culture



Assessing and Improving the SMS

- **SMS = lots of DATA**
- **Assessing and improving the SMS requires turning DATA into useful INFORMATION**
- **Information can drive improvements in safety**
- **Resources are always limited - good information shows where resources are needed most**

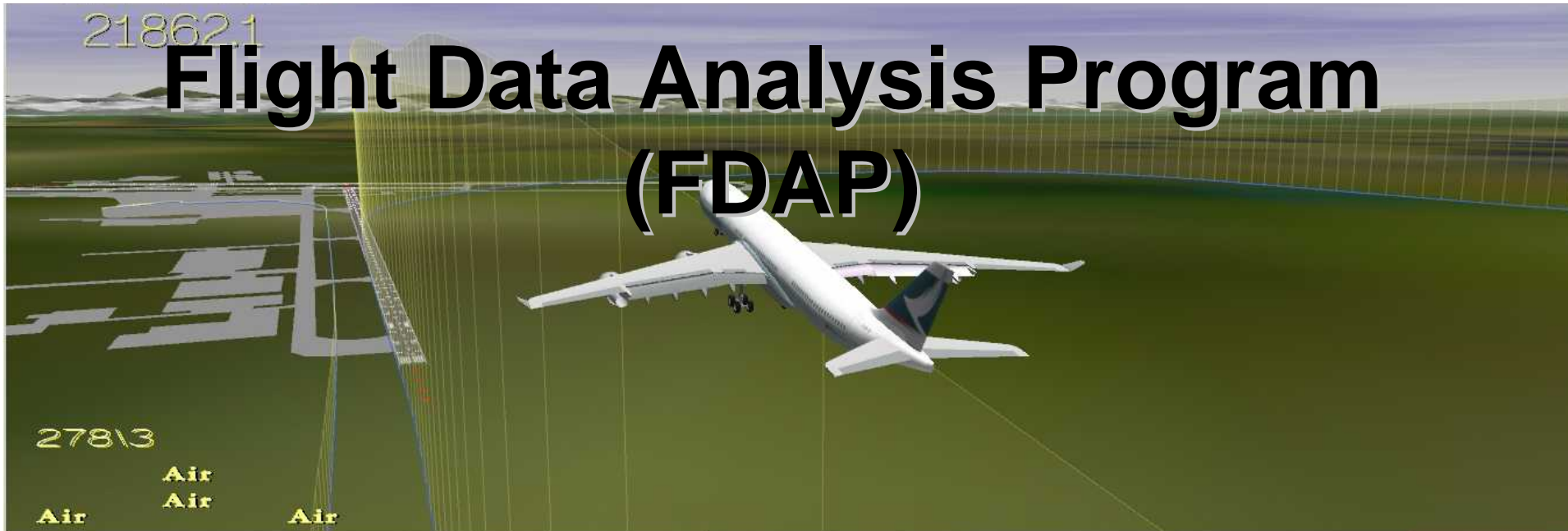
Safety Reports



CSR = Cabin Safety Report
ASR = Air Safety Report
GSR = Ground Safety Report
MSR = Maintenance Safety Report

DATA WITHHELD

Flight Data Analysis Program (FDAP)



Onboard Data Recording System

- Cockpit Voice Recorder (CVR)
- Flight Data Recorder (FDR)
- Quick Access Recorder (QAR)





CRUISE

- VMO exceedance

APPROACH

- Descent rate
- Approach speed
- Landing gear
- Landing flap
- Glideslope deviation

CLIMB

- Climb speed
- Flap speed

TAKE-OFF

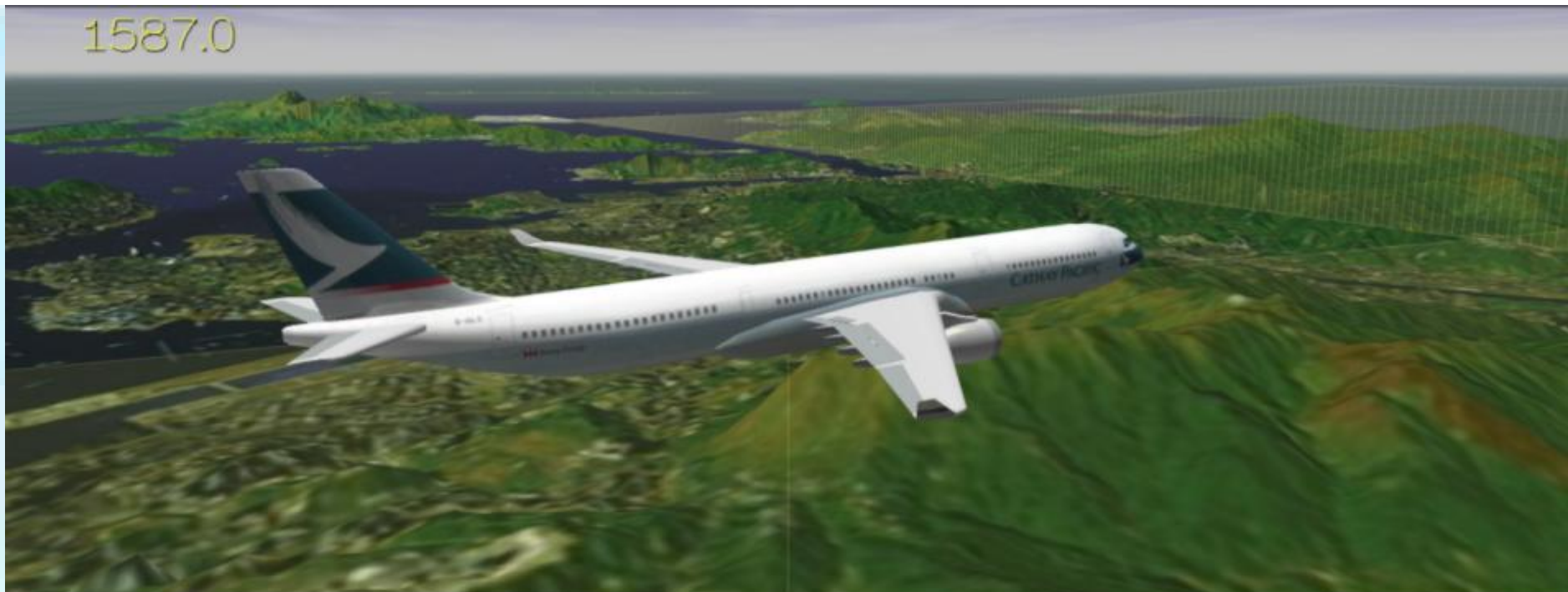
- Pitch attitude
- Pitch rate

LANDING

- Hard landing
- Long flare
- Deep landing

DATA WITHHELD

1587.0



Left Panel (PFD):

- Mode: SPEED
- Mode: V/S
- Mode: NAV
- AP 1
- 1 FD 2
- A/T-HR
- Altitude: 24000 ft
- Speed: 136
- QNH: 4500
- Scale: 32, 33, 34, 35, 36

Center Panel (EICAS):

- EPR: 0.945
- EPR: 0.948
- 62°C
- FF KGM: 891
- 366
- EGT °C: 374
- FF KGM: 902
- N3 %: 67.2
- 29.5
- N1 %: 29.8
- N3 %: 67.2
- FOB: KG

Right Panel (ECL/FCL):

- TO GA
- FLX MCT
- CL
- A/T-HR
- R

Further Improving the SMS

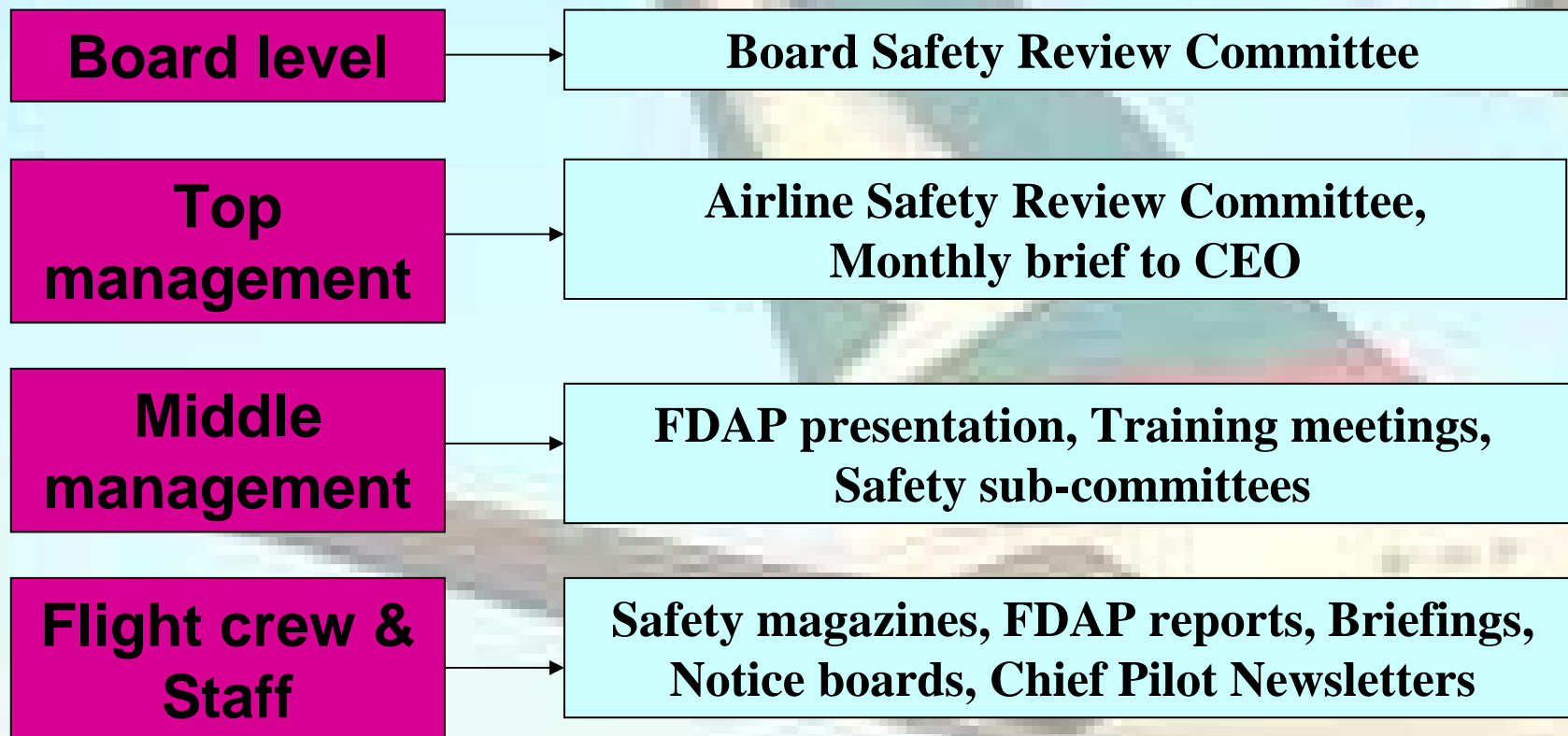
- **The aim of improving the SMS is to improve safety**
- **A key improvements to safety is FEEDBACK to ALL levels**
- **Many SMS (and safety departments) become 'black holes' - gathering safety data but never feeding back any information**



Feedback

SMS Feedback

Tailor the information and recommendations to the appropriate audience



Feedback - Flight Data

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CATHAY PACIFIC
國泰航空公司

Corporate Safety Department

Our Mission is to promote a safety culture that maintains Cathay Pacific Airways amongst the safest airlines in the world through:

- Safety Education and Training
- Proactive Data Analysis
- Independent Investigation
- Promoting Personal Health and Safety

企業安全部

我們致力向員工推廣安全意識與文化，令國泰航空公司成為全球最安全的航空公司之一。要完成這使命，我們需要：
向員工提供有關安全的教育及培訓
主動地分析數據

Corporate Safety Department Home -- CSDMission

Useful Links

- What's new
- Risk Management
- Flight Safety News
- Confidential Reporting Program
- FDAP Summary Report - 2006 July to 2006 August (Latest)

Applications

- ER - Flight data request

0 Hierarchical Menu Trees Created Trusted sites

Start No... Wi... Wi... Ca... Mi... 2 L... EN 10:54 AM

CATHAY PACIFIC

FLIGHT DATA ANALYSIS REPORT

Aircraft Type : A330
Start Date: 01-Jul-2006
End Date: 31-Aug-2006

Corporate Safety Department
Cathay Pacific Airways Ltd.
117 Canton Road, Causeway Bay, Hong Kong
Tel: (852) 2888 8888

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Flight Data Analysis Report

A346 JAN - FEB 2007

CSD - Flight Data Analysis Team

Feedback - Safety Publications

- Kai Talk (Flight Safety Journal)
- Kai Talk Cabin
- Engineering HF Bulletin

Feedback - Safety Promotion

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主動地分析數據
對事故進行獨立調查
推廣員工在工作環境裡的個人健康和安全

Useful Links

- [What's new](#)
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Feedback - Training

All simulator scenarios are based on recent CX events, incidents & trends

Improving the SMS Further - Where to next?

- Safety & Quality in a single database (AQD)
- Measuring the safety climate (safety culture survey)
- Ongoing improvement to flight data collection, analysis & animation.

Thank you
Arigato Gozaimasu