BRITISH AIRWAYS

BEYOND FLIGHT SIMULATION

Identifying training needs through 'Root Cause Analysis'

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The Runway Excursion

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Runway Overrun

Typical technical factors

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- **De-stabilised approach**
- **Weather, including runway surface condition**
- **Mishandling retardation devices**

Deep landings (Mar 04 – Feb 07)

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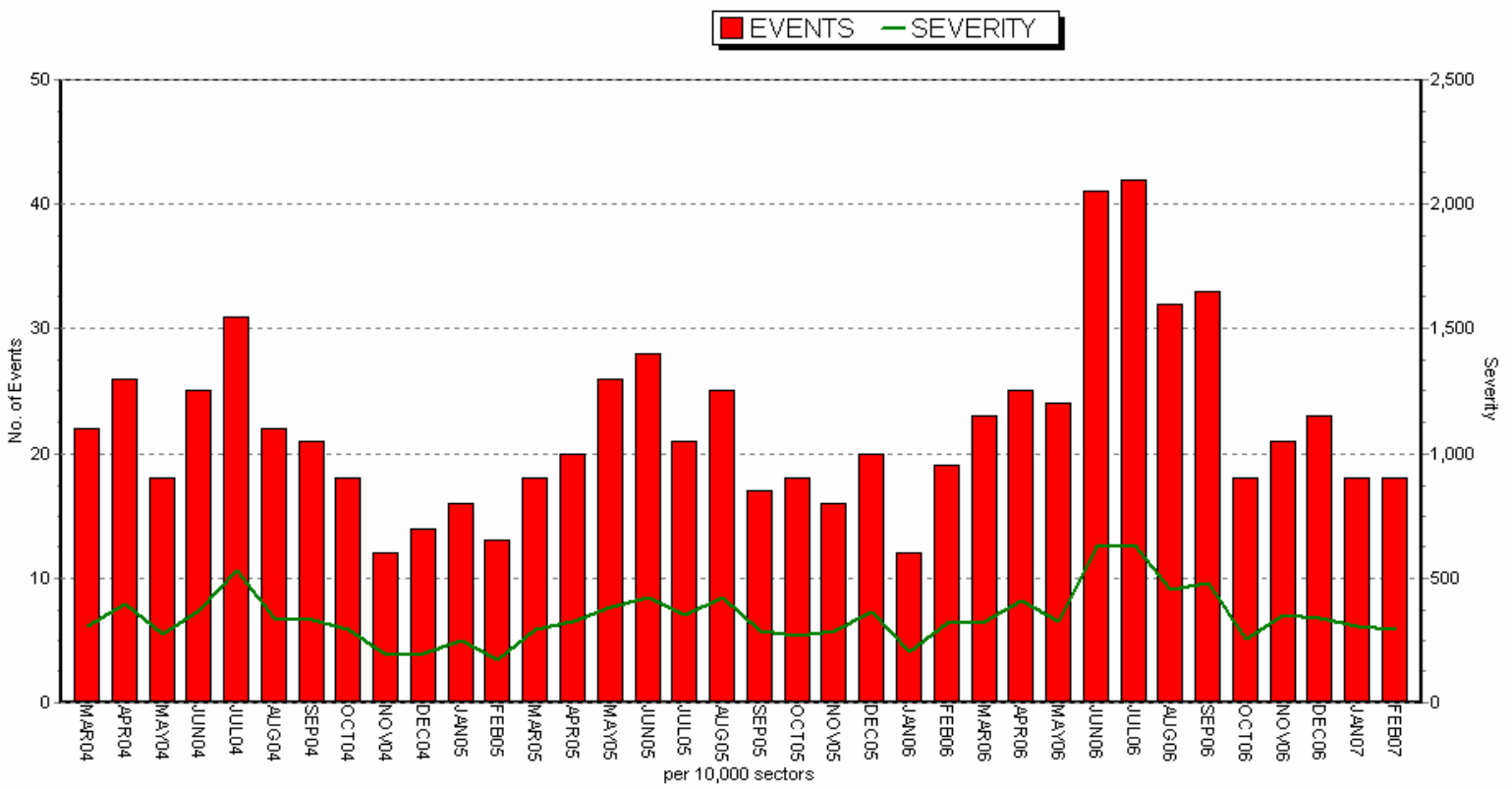

Filter: SESMA Category is "50A - Deep Landing".

Deep landings - destinations

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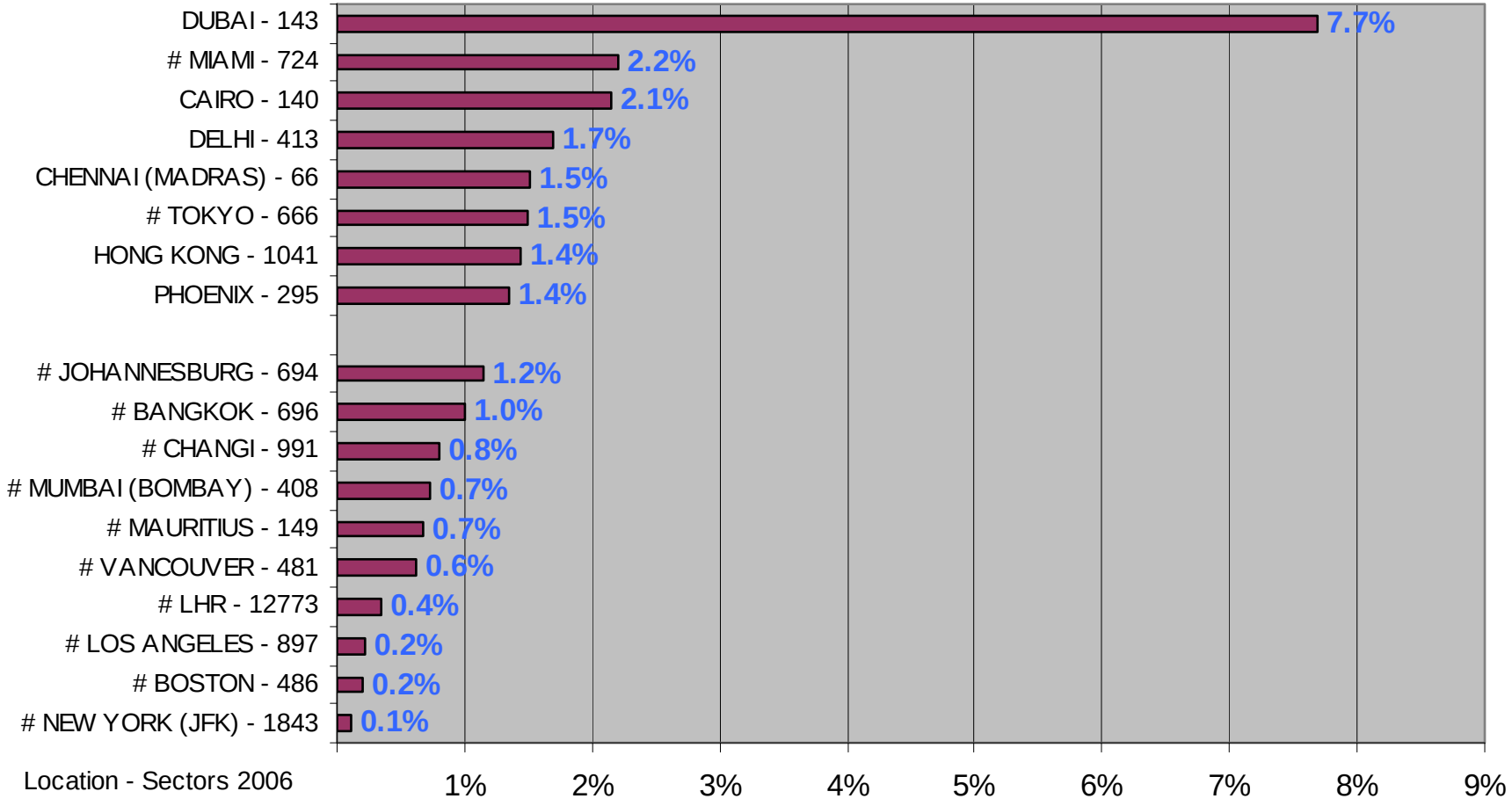
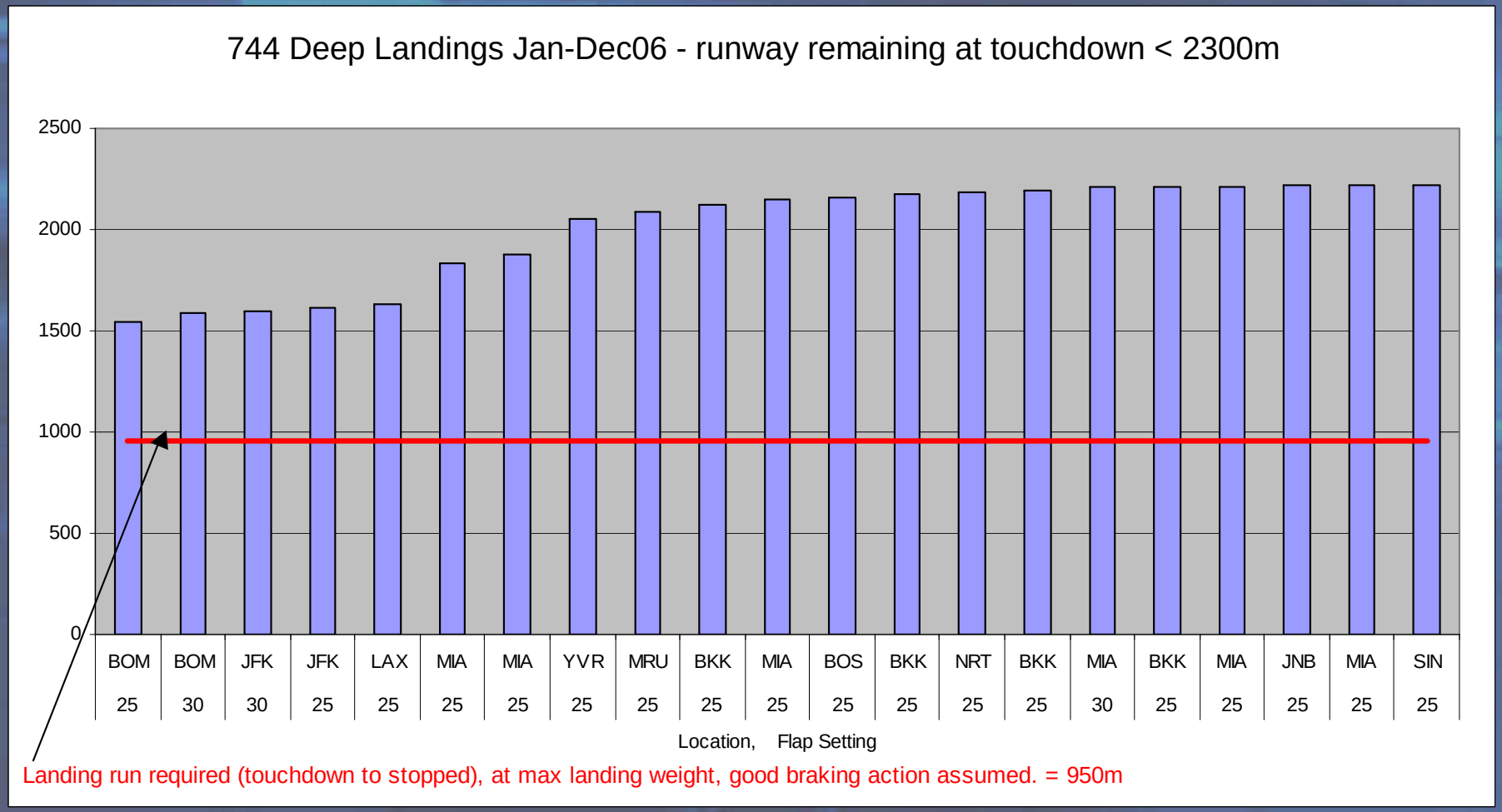
Rate of 747 Deep landings by Location Jan-Dec06



Deep landings – RW remaining



Deep landing factors

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- **Long, Broad Runway = Visual Illusion = High Flare**
- **Long Runway + Good Weather = Smooth Landing**
- **Higher Temperature = Higher TAS = Ground Rush = High Flare**

‘Near miss’ example (2002)

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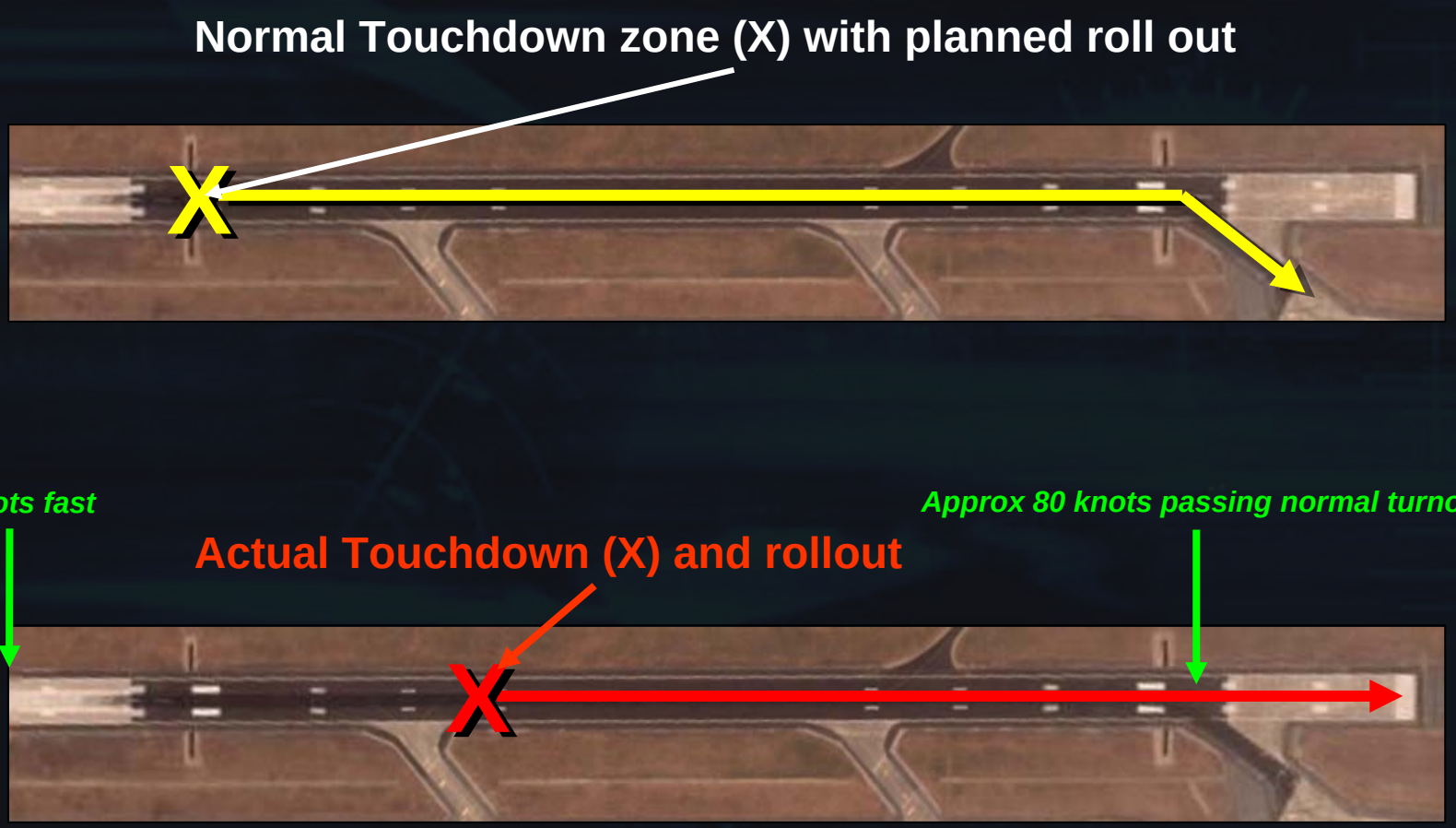

Near excursion incident analysis

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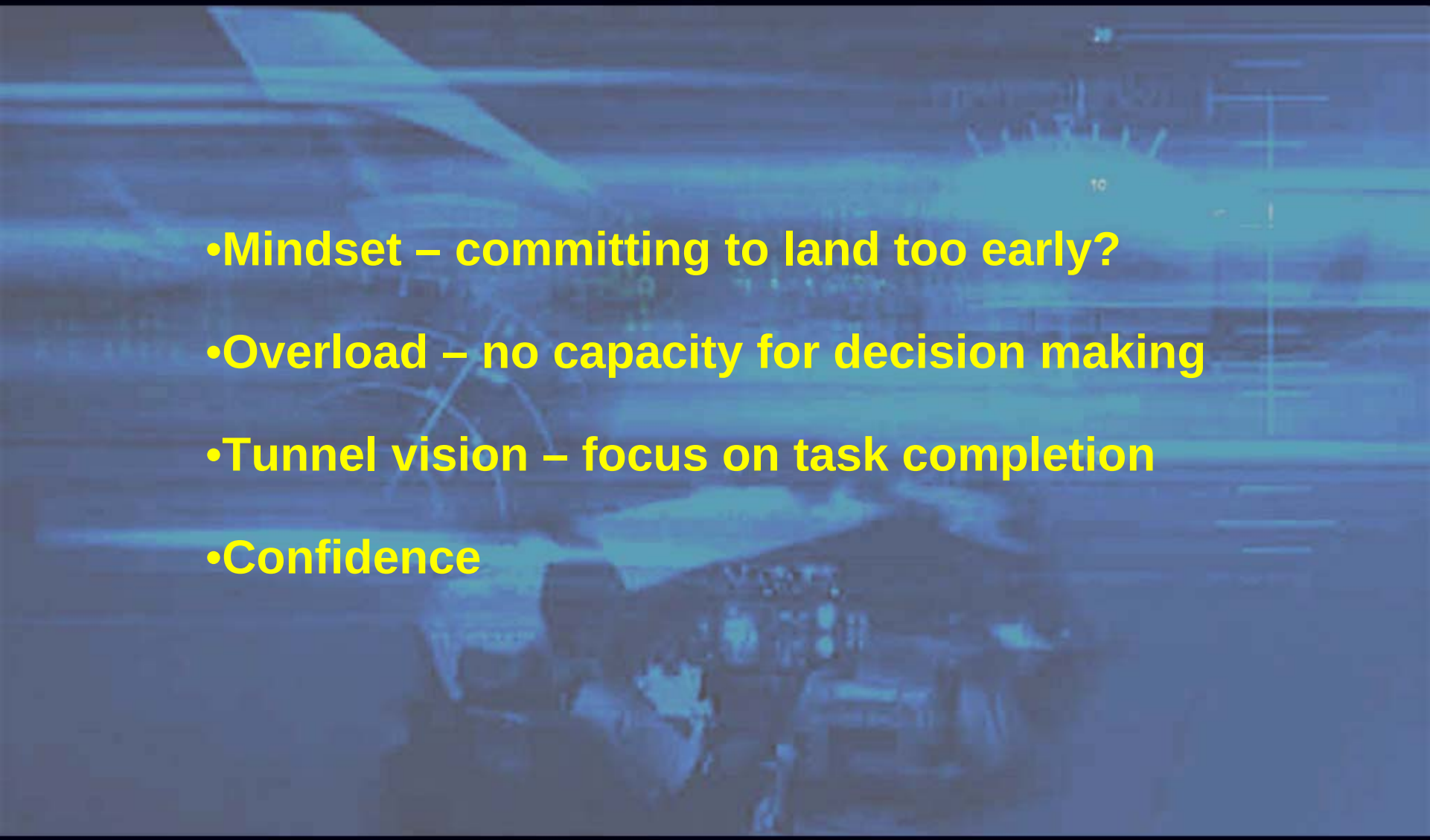

- **Mindset – committing to land too early?**
- **Overload – no capacity for decision making**
- **Tunnel vision – focus on task completion**
- **Confidence**

Training mitigation

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- **Raise crew awareness – mindset, threat identification and error management techniques**
- **Integrated human factors training – Situation Awareness, Decision Making, Workload Management (overload), Communication**
- **Simulator training – overrun pre-conditions, low go-around procedures & baulked landing practice**

ATQP repeat analysis

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- **Operational and Technical (OT)**
- **Leadership and Management (LM)**
- **Situation Awareness (SA)**
- **Teamwork (TW)**
- **Decision Making (DM)**

ATQP repeat analysis

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- **OT – less than 1% manual handling (S)**
  - **8% automation handling (S)**
  - **48% procedure or system knowledge (K)**
- **LM – 9% Workload management related (B)**
  - **4% Lack of assertiveness (B)**
  - **4% Standards (B)**
- **SA – 6% Building SA (B)**
  - **8% Maintaining SA (B)**
- **TW – No significant issues**
- **DM – Root cause on 10% of occasions (B)**

Summary

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- **Training decisions – risk based, supported by data**
- **Root cause analysis key**
- **Flexible regulations when an equivalent or better level of safety can be demonstrated**
- **More training does not mean better training**
- **Avoid imposition of training as an emotional response to a single event**


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THANK YOU