







Safety Assurance

Ole Fisker
Director of Flight Operations

 *We deliver innovative solutions to customers with unique aviation requirements.*







Why are we here?

Listen, Collaborate, Improve
To promote and enhance Safety

 *We deliver innovative solutions to customers with unique aviation requirements.*

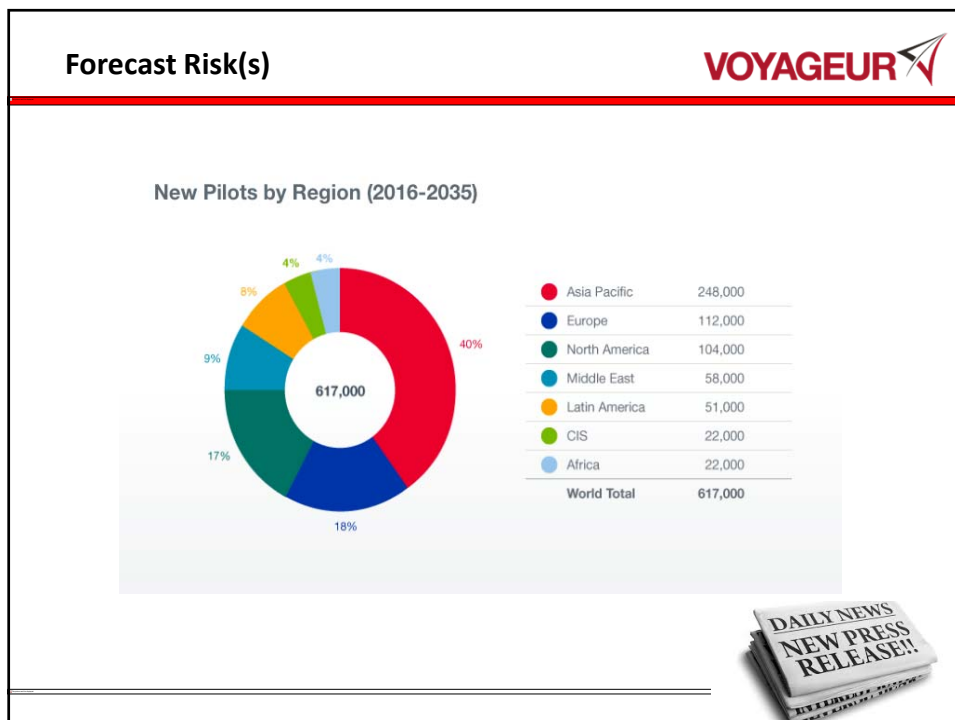
Forecast Risk

Global Pilot Shortage

chorus
aviation inc.

voyageur
AVIATION

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Exercise

All Pilots in the room please standup.

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voyageur
AVIATION

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Exercise

**Please sit down if you have less
than 3000 hours total time.**

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Exercise

**Please sit down if you have less
than 1500 hours PIC.**

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Exercise

**Please sit down if you do not
have a type rating on a Dash 8.**

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Exercise

**Please sit down if you do not
have 500 hours on Dash 8.**

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Exercise

**Please sit down if you do not
have 350 hours PIC on Dash 8.**

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4.2.4 Flight Crew Qualifications – Aeroplanes

Crew Qualification and Experience Required by UN	Single-engine turboprop	Multi-engine turboprop up to 7.6 T	Multi-engine 7.6 T - 20.0 T (incl. multi-engine jets up to 7.6 T)	Multi-engine above 20.0 T
License				
Captain (PIC)	CPL/IR	CPL/IR*	ATPL	ATPL
Co-Pilot	CPL/IR	CPL/IR	CPL/IR	CPL/IR
Flight Experience				
Captain				
Total Time	750	1500	3000	4000
Total as PIC	500	750	1500	2000
Total on Type	200	450	500	1250
PIC on aircraft type and in similar type of operations	100	250	350	750
Co-Pilot				
Total Time	300	500	1500	2000
Total Time as PIC	100	100	500	750
Time on aircraft type and in similar type of operations	50	100	250	300
Aircraft Type (examples)	C208B (3.9T); PAC 750 (3.4T); PC-12(4.1T); PC-6(2.8T); TBM 700 (3T)	B200 (5.7T); DHC-6 (5.7T); L410 (6.6T); B1900 (7.5T)	S340B (13.4T); EMB120 (12T); ATR42-500 (19T); ERJ135LR (20T)	ERJ 145 (21T); CRJ100/200 (21.5T); S2000 (22T); AN-72 (27.5T); DHC8Q400 (29T)

* This does not override the requirements stated in 4.2.3 a).



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Dash 8 Reality

Less than 2% of all applicants have a type rating.

Less than 50% of those applicants have the minimum time on type relative to the AVSTADs.

100:1 ratio

Situation is worse for other aircraft types operated by the UN.





How do we protect and enhance Safety?



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Assess the Risks

Aging mentors are retiring and leaving the industry.

Aging, out of production aircraft are no longer flown by major airlines.

New aircraft types are being introduced with no Pilot experience on type.

The AVSTAD provides no mentorship scheme within the organization.

Higher turnover to the airline industry with inability to promote to Captains.

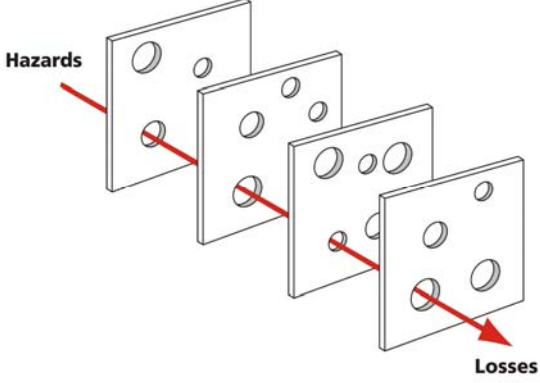


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Risk Mitigation

The reason model must be viewed as dynamic and constantly changing. Hazards and Risks are never stagnant.




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Modernization



In the 21st century modernization and technology significantly reduce safety related occurrences relative to the aircraft.



Electronic instrumentation and paperless flight deck.

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Develop our People & Culture



New strategies need to develop to meet demands of social changes and training trends. Ie. Upset recovery/hand flying.



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Develop our People & Culture



Promote Mentorship

Promote the development of UN First Officers and Pilots from other UN types to reach Captain standards.

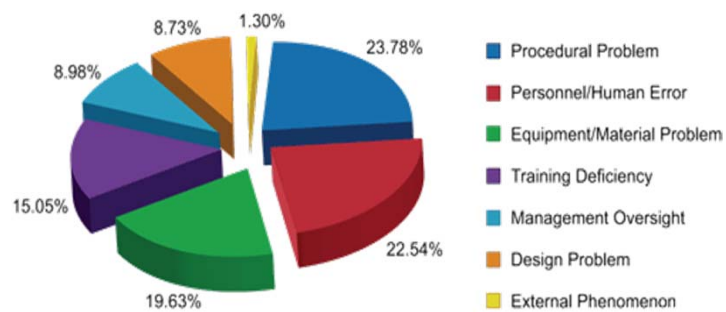


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Performance Based Analysis



Performance Based Analysis encompasses a magnitude of techniques to study the cohesion of policy, procedures, technology and human elements.



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Airline Approach – Safety Management Systems



SMS and reporting cultures – Listen, Collaborate, Improve



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SMS Data Collection & Analysis



ICAO input, Flight Data monitoring, Flight Crew simulator analysis, continuous audit and procedural surveillances elevate safety strategies to a new level and reduce risk.

From data collection and analysis a better understanding of risk can be understood.

Fact:

- Not all errors are made by junior pilots.
- Not all errors are procedural based.
- Not all accidents are caused by pilot error.

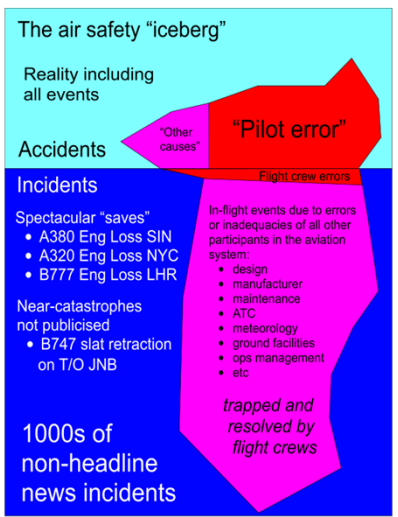


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Cognitive Concept & Joint Analysis



- Airline strategies are designed to trap and resolve risk.
- Employing Pilots with varying backgrounds, education, qualifications, and pilot hours has proven to reduce risk.



The air safety "iceberg"

Reality including all events

Accidents

Incidents

Spectacular "saves"

- A380 Eng Loss SIN
- A320 Eng Loss NYC
- B777 Eng Loss LHR

Near-catastrophes not publicised

- B747 slat retraction on T/O JNB

1000s of non-headline news incidents

trapped and resolved by flight crews

Flight crew errors

"Pilot error"

"Other causes"

- Performance Based monitoring is more effective than monitoring Pilot qualifications alone.
- Continuous improvement using simulator checks, line checks and process management (SOP) relates directly to the overall level of safety.



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Risk Countermeasures



Work with stakeholders to develop new strategies. Ie. Air Ambulance

- Alternate Means of Compliance (AMOC).
- Equivalent Levels of Safety.
- Exemptions (ie. Introducing a new aircraft type).





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Risk Countermeasures

Create an ATAG sub-committee with interaction from the Operators so that we can collectively bring ideas to the table and discuss ideas.

- Line indoctrination concepts.
- PICUS.
- Crew Pairing restrictions.
- Consolidation.
- Crediting of time in the missions on other types.
- Crew Mentoring.
- Scenario Based Training.



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Positive Engagement & Interaction



Working with Operators, the AVSTADS can include Operator strategies and more effectively enhance safety and promote safety culture.




SYNERGY



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