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The creation of an Aviation Safety Reporting Culture in Danish Air Traffic Control

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Introduction

Prerequisites for Reporting

• The Legal Framework
• Company Commitment to Safety
• Clear directions for Reporting
• Proactive handling of Investigation and Lesson Dissemenation
• Feed-back and Knowledge-Sharing
The time before....

- Punishing of Aviation Professionals
  (pilots/air traffic controllers)

- Disclosure to the Press of Aviation Safety matters

**No knowledge was being gained**
The Legislative Process...

- Started from the "bottom"

- Used the Window of Opportunity (proactive political climate)
The Law

- Non-Punitive (exceptions: Accidents/gross negligence/substance abuse)
- Confidential
- Punishable NOT to Report

- Information from the reports cannot be disclosed (exempted from the freedom of information act)
- Regulator will publish overview statistics two times annually
Subjects of the Law

- Pilots
- Air Traffic Controllers
- Certified Aircraft Mechanics
- Certified Airports
- Pilots holding General Aviation Pilots License

Each category of personnel/corporation has their own description of mandatory reportable situations
Reportable situations in Air Traffic Control

Samples ESARR 2

- Separation losses without avoiding action
- Inadequate separation between aircraft
- Runway incursions
- Deviation from standard operating procedures
- Failure in communication function
- Failure in dataprocessing and distribution function
The Implementation Process...

• Was undertaken by Incident Investigators (Air Traffic Controllers)
• Was fully supported by Management

Sufficient time and resources was allocated to the task
Implementation Process

- Written Statement from Management
- Briefing Campaign

Questions like:
- Why should we trust this?
- What will the information be used for?
- Why more non-productive paperwork?

were being asked by the controllers.
What happened after Opening of the Reporting System (15th August 2001)

- **Massive increase in reports overall (>900 the first year. Today >1100)**
- **x3 increase in amount of reported separation losses**
New knowledge gained from Reports can be viewed from two angles.

Safety is sliding!!
Dive for cover

Situations that have existed and gone unreported for years is now seeing daylight and offering new opportunities

Face the challenge

Flyvesikringstjenesten
Investigation

Where the learning starts
Priorities

- Separation Minima Infringement
- Runway Incursions where Avoiding action was necessary
- Inadequate Separation
Data gathering

- Voice recordings
- Radar recordings
- Flight progress strips
- Other written documentation
- Interview
- Technical analysis if needed
- Simulation
The elements we assess during investigation

- Aircraft Proximity and Avoiding Manoeuvres
- Safety Nets - their impact on the outcome and relevance for the incident
- System aspects
- Human Factors
- Procedures
- Conclusion
- Recommendations
The Milan Accident

Runway incursion was the triggering factor of the accident

- Apprx. 40 Runway Incursions was reported in Denmark by the time of the Accident

- The reports was a valuable basis for starting a thorough analysis of the anatomy of Runway Incursions in Danish Aviation
Air Traffic Safety Reports close the Gap

• Human error cannot be prevented!

• Safety Assessments focus on imagined Conditions/Consequences

• Operator observations (Safety Reports) reveal actual Conditions/Consequences
Flight Safety Partnership

- Air Traffic Control is only a part of the Aviation System
- Things do not happen in a Vacuum
- Share your Knowledge
Flight safety Forum

- Biannual meetings with major Danish airline operators
- Shared knowledge in investigations
Prerequisites for reporting

- Trust/Confidentiality
- Non-Punitive Nature
- Ease of Reporting
- Feed-back to Reporters
- Safety Improvement
Trust/confidentiality

- Paramount importance
- Swedish example
- Safety reports known to few people
- Names will only be revealed in isolated circumstances
Non punitive nature

- Must be guaranteed in the Legislation

- Cannot be complete (Gross negligence/substance abuse exempted)
Ease of Reporting/Feedback

- Means must be easily accessible
- Feed-back for every Report to the Reporter
- Feed-back of Findings to Everybody
Lesson Dissemination

- Briefing of every Controller (in groups) minimum two times per year (Backed by recordings etc.)

- Safety Letter 4 times per year

- Information as needed
Improvements

- **Latent conditions revealed** - *Procedural changes*

- **Technical “mysteries”** - e.g. Enhanced Radar Performance

- **Professional violations** - *Attitude change*
Conclusion

• The Legislation must be in place
• Management must support
• Professional Organizations must be in the loop
• Do not neglect Communication aspect
• People will sometimes feel blamed, face them proactively