



# Global Reporting Format Europe

Implementation and Pilot Training



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# Overview

Introduction – Why  
GRF?

Training

Dissemination –  
Timely and  
Reliable

Case Study

Conclusion



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# Introduction - Why GRF?

Runway  
Excursions

Issues

GRF for Pilots



## Introduction - Why GRF? / Runway Excursions

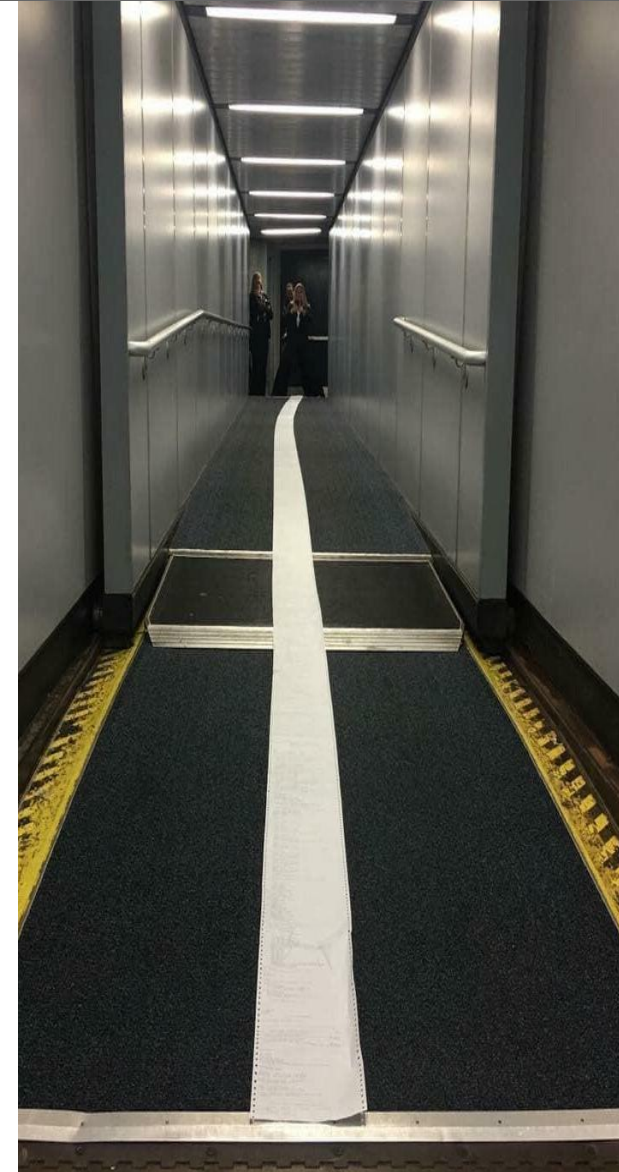
- Aviation's number one safety risk category;
- Caused usually by more than one factor;
  - Unrealistic or Erroneous Perf. Calculations
  - Unstable approach – Hot & High!
  - Long flare or floating
  - Inadequate use of reverse thrust and spoilers
  - Tailwind
- Among the top contributing factors are poor braking action due to contaminated runways combined with shortfalls in the accuracy and timeliness of assessment and reporting of the runway surface conditions.





## Introduction - Why GRF? / Issues

- Imprecise aircraft performance data;
- Huge NOTAM files that make it hard to find important information about runway condition;
- Increasing information flow & workload: Pre-flight; In Flight.





## Introduction - Why GRF? / GRF for Pilots

Benefits of GRF for pilots - the end users –  
unambiguous and standardized information

**RCR EFHK 03260455**

**04R 5/5/3 100/100/100 02/03/05**

**WET/ SLUSH/WET SNOW OVER  
COMPACTED SNOW**

LOOSE SAND. TWY Z POOR. APRON  
POOR



# Training

Pilot  
Training

General  
Objectives

Decision  
Making

Basics

Company  
Policies

Takeoff

Landing

AIREPs



## Training/ Pilot Training

- They do not read the regulations
- “Regulations are for the authorities and operators”
- They don’t have AIPs
- They do read the operators OPS manuals;
  - Company OPS manual FOM / OM-A
  - The aeroplane AFM / FCOM / OM-B
  - Charts / OM-C

ICAO doc 10064 ?

CAT.POL.A.235 ?

FAA AC 25-31 ?



**They need training.**





## Training/ Pilot Training

- Update of manuals and a leaflet is NOT enough!
- Flight Crews need
  - Background Information
  - Possibility to ask questions
  - Practice
- ICAO doc 10064 APM
- ICAO Circular 355 Appendix H
  - Example of a content of flight crew training syllabus
- IATA CBT
- Content processing within an airline takes time!





## Training/ General Objectives

- Pilots should understand that the actual safety margins get smaller when conditions get worse.
- They should understand that RCAM, RWYCC and braking action are adaptive tools in decision making

A calculated 1m margin in landing distance does not necessarily mean that the landing will be safe.

However, it should make the pilot to use his best judgement taking different variables into account and cross-check between sources when making decisions.





## Training/ Decision Making

- Crews should be trained to take pre-determined decisions for deteriorating conditions. These “canned decisions” improve situational awareness, help in late stage decision making and improve workload management
- Examples: Lowest acceptable RWYCC , max wind speed from certain direction



## Training/ Basics

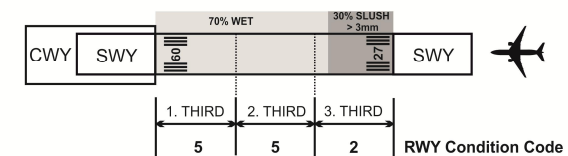
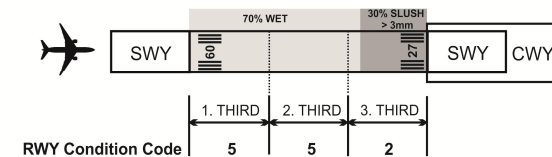
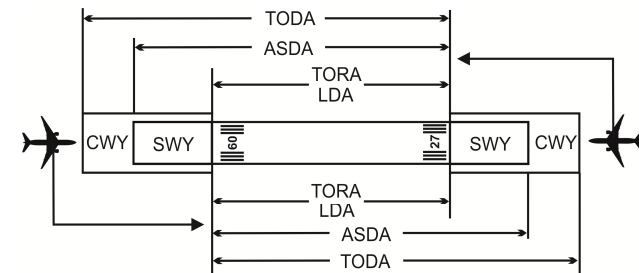
- Contaminants;
- Those that cause increased drag thus affecting acceleration
- Those that cause reduced braking action affecting deceleration
- “Slippery when wet”
  - What it means for performance
  - How to interpret





## Training/ Basics

- Dispatch and in-flight conditions
- Use of reduced thrust for takeoff
- Use of RWY thirds in calculations
- Distance At time of Landing calculations
- Usage of AIREPs
- OPS if cleared runway width is less than published
  - Max allowed X-wind
- Use of autoland
- Variable winds and gusts
- OPS on icy RWY





## Training/ Takeoff

- Aeroplane control in takeoff and landing
  - Lateral control
  - Longitudinal control
- V1 correction in correlation with minimum control speed on ground
- Why use the type and depth of the contaminant instead of Runway Condition Code





## Training/ Landing

- Pilot procedures
- Flying techniques
  - Landing on performance limited RWY
  - How to regain control if having problems with directional control (aeroplane windcocking)





## Training/ AIREPs

- Understand the difference between friction limited braking and different modes of autobrakes
- Policies
  - When to give one (only when contaminated!)
  - What “LESS THAN POOR” means for aerodrome operations



- GOOD
- GOOD TO MEDIUM
- MEDIUM
- MEDIUM TO POOR
- POOR
- LESS THAN POOR

Aeroplane as friction measuring and/or reporting system should be the future





## Training

### Training is vital in this transition.

You just saw a lot of slides about contents that pilots need to be aware of.

Give your pilots the chance to be knowledgeable and to operate safely in the new environment.

**Airlines:** Make sure your training materials suit your pilots' needs and your instructors are ahead of their game. –use IATA'S CBT and the new ICAO 355 and APM and build on it!

**Regulators:** Ensure that training includes at least classroom or simulator training.

**Regulators:** Airlines will NOT train when not mandated. Do you feel comfortable when all pilots get is an OM-C update and an IATA (or custom made) CBT? No possibility to ask questions.



# Dissemination – Timely and Reliable

Information  
Dissemination

How to Receive a  
SNOWTAM-RCR



## Dissemination/ Information Dissemination

- The RCR is of utmost importance for the pilot
- It must be ensured that accurate information is made available in a timely manner.
- High standards for RCR/RWYCC dissemination should apply for all AIS-stakeholders (Aerodrome personnel, ATS, Flight Service, AIM, service providers etc).
- An RCR that does not reach the cockpit is



# USELESS!



## Dissemination/ How to Receive a SNOWTAM-RCR

- US TALPA ARC is showing the way. FAA uses FICON (=SNOWTAM-RCR), disseminated through the following:
- D-ATIS, Voice ATIS, Flight Service Stations FSS, Airlines' proactive flight support. FICON is „pushing a square peg through a round hole“. They also have AFIS in Alaska, a dedicated frequency that gives FICONs

**Be aware:** As of today, NOTAMs can **not** be disseminated to cockpits. Select airlines have an application that may allow this.!

In Europe: D-ATIS, where available. Voice ATIS. No other means.

How does your country ensure that an a/c flying to your airport that has published a SNOWTAM-RCR reaches the pilot?

Is your country's FIS equipped to deliver SNOWTAM-RCR? Does it have the information for neighbouring countries? Does it have capacity?



## Dissemination/ How to Receive a SNOWTAM-RCR

- Do your airlines have proactive flight support?
- MOTNE is to be removed. Often, it is the only source for RWY condition. Needs to be replaced by abbreviated SNOWTAM-RCR
- It must be ensured that ACARS service providers, such as ARINC and SITA, are involved in ensuring dissemination. This is an AIS/AIM issue. Are your services up the task?
- What about aircraft without ACARS? There are at least 400 737s in Europe without it.



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# Case Study



## Case Study

- Harp Air 123 from EFHK to EHEH, alternate LFQQ
- Aircraft not ACARS equipped
- No D-ATIS at destination or alternate

**RCR EHEH 03260455**

**03 5/5/3 100/100/100 02/03/05**

**WET/ SLUSH/WET SNOW OVER  
COMPACTED SNOW**

**RCR LFQQ 03260455**

**08 2/2/1 100/100/100 04/04/05**

**SLUSH/ SLUSH/ICE**



Captain  
Peter Michael Rix, MBA

ICAO GRF Workshop  
Frankfurt



## Case Study

Cold front over the Channel with snowfall: 5-5-3 Runway 21 in EHEH which RWYCC does your pilot apply? LFQQ Lille RWYCC: 1-2-2, Rwy 26 in use. How does the pilot know about the runway condition in LFQQ when he starts his approach into EHEH? Would he change his alternate if he knew the conditions in LFQQ? Which wind could he accept in LFQQ?





## Case Study

- Regulators: Is this example far-fetched?
- ATIS dissemination via VHF only: Is it an acceptable risk NOT to know the RCR of your alternate airport if it is located behind your destination?
- Airlines: Would your pilot have had the tools to make the right decision?
- Is it enough for the pilot to start his before landing calculation when able to receive ATIS? Where do I get the SNOWTAM-RCR for my alternate? ICAO: 1-2-2 means 2-2-1 on RWY 26! Which performance calculation do you apply? Lowest? Middle? Touch-down zone?



## Case study/ Possible Solution

- Replace MOTNE with SNOWTAM-RCR on Volmet and METAR transmissions?
- AFIS according to the Alaskan model? (Automated Flight Information Service)
- RCRs available in SITA and ARINC database`s?
- Other ideas?
- Accept risk?



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# Conclusion



## Conclusion

# 1

RCR must correctly reflect runway state - Airports' job, procedures well drafted



# 2

SNOWTAM-RCR must reach pilot in time



# 3

Pilot must know what to do with it and apply the correct procedures



Are you sure 2 and 3 are provided for in your country/organisation?



# Thank You !

The Mission of IFALPA is to promote the highest level of aviation safety worldwide and to be the global advocate of the piloting profession; providing representation, services and support to both our members and the aviation industry.