

Airport CDM Adverse Conditions Panel

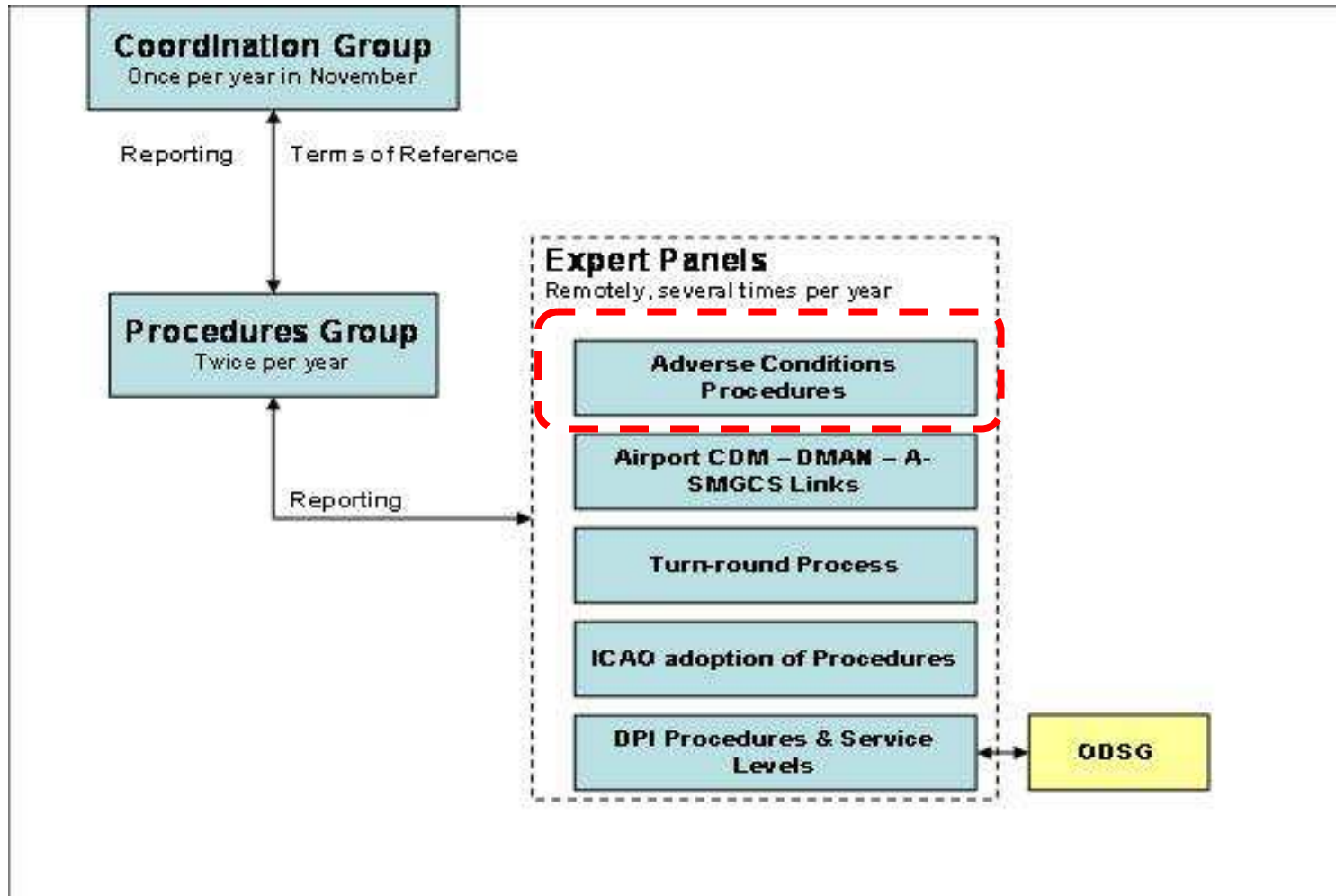
Eugene Leeman & Dave Hogg

Airport CDM Coordination Group

18th Nov 2010

Eurocontrol Brussels

EUROCONTROL A-CDM Governance Structure





Airport CDM Adverse Conditions Expert Panel

- **Scope and Purpose**
 - Identify best practices and guidelines to improve the management of adverse conditions through Airport CDM
 - Timeframe: today's operations and very short term improvements → IP1
 - Adverse Conditions procedures in line with manual
- **Members**
 - Limited number (20)
 - Representatives of the airport CDM partners
 - Co-chaired by a Eugene Leeman (Schiphol Airport) & Dave Hogg (EUROCONTROL)



Panel Members

Dave Hogg, EUROCONTROL (Co-Chair)

Eugene Leeman, AAS (Co-Chair)

Eugene Tuinstra, EUROCONTROL

Marc Matthys, Belgocontrol

Werner Suhner, Swiss International
Airlines

Jonas Wobmann, Skyguide

Andreas Gammel, Unique

Hans Koolen, EUROCONTROL

Wim De Breucker, FlightCare

Peter Kanzler, FMG

Jostein Skjefstad, OSL

Timo Suorto, Finavia

Jens Albek, SAS

Keld Larsen, SAS

Hans Petter Stensjoen, OSL

Juha Fieandt, Finnair

Zarko Sivcev, EUROCONTROL

Olivier Mongenie, EUROCONTROL

Didier Lucas, DSN

Pavel Attl, APP/TWR LKPR

Why we do this



Adverse Conditions - Definition

- **Expert Panel**
 - Adverse condition is the situation where airside and / or landside conditions of the airport are such that capacity drops, and the airport partners need to use special designed procedures to minimise operational costs and utilise available capacity efficiently

Adverse Conditions - Definition

- **CFMU (ATFCM Users Manual)**
 - The ATFCM service is charged with ensuring that ATC capacities are respected and that aircraft operators can operate whenever possible with little or no delay. However, from time to time the normal operating conditions at aerodromes can be affected by events which make compliance with CTOTs almost impossible. CFMU is able, under most circumstances, to minimise the impact of such events by co-ordinating short term modifications to the normal criteria for CTOTs and/or releasing individual flights by exempting them.
 - The procedure [...] is meant to accommodate situations where a succession of aircraft are affected by a deterioration in local operating conditions to the extent that CTOTs cannot be met without serious additional workload on the tower and the AOs. It is designed to be in effect for normally no more than two hours but it can be extended if necessary.

Adverse Conditions - Definition

- **CFMU (ATFCM Users Manual)**
 - **Situations that do NOT qualify**
 - The fact that normal operations at an aerodrome may make the adherence to CTOTs difficult is not considered as an event which in itself requires special procedures. Such difficulties as may arise in such circumstances are part of normal operations.
 - Individual aircraft which cannot make their CTOT due to one-off events delaying their taxi/departure are not covered by this procedure. They are to be treated like any other aircraft whose CTOT is about to expire or has expired.
 - Low Visibility conditions do not qualify as they are managed by the imposition of exceptional conditions (XCD) by the CFMU, neither do conditions requiring routine de-icing procedures.



Adverse Conditions - Content

1. Objectives and Methodology
2. Impact Assessment
3. Automated Processes
4. Best Practices

This content applies to the determined categories of Adverse Conditions.

Objectives & Methodology

1. Collect Adverse Condition Best Practices from Stakeholders
2. Derive operational consequences for each Adverse Condition
3. Derive impact from these consequences on key Airport CDM planning parameters
4. Compare impact of different conditions and identify overlap
5. Develop generic automated processes based on common impact



Adverse Conditions Categories

1. METEO
2. AIRPORT
3. ATC
4. OTHER

CFMU categorisation is linked to IATA delay codes, which contains a strong framework for the structure of Adverse Conditions

1. METEO

- ✓ De-icing
- ✓ Thunderstorms/CB
- ✓ Heavy Rain
- ✓ Wind
- ✓ Ceiling
- ✓ Snow
- ✓ Fog/Low Visibility

2. AIRPORT

- ✓ Aerodrome Capacity
- ✓ Accident / Incident
- ✓ Equipment (Non-ATC)
- ✓ Industrial Action (Non-ATC)
- ✓ Environmental Issues
- X Ground OPS Issues
- ✓ Increased Security Levels
- ✓ New System Procedures
- ✓ Runway Configuration
- ✓ Staff Shortages
- ✓ Technical Failure
- ✓ Work In Progress

3. ATC

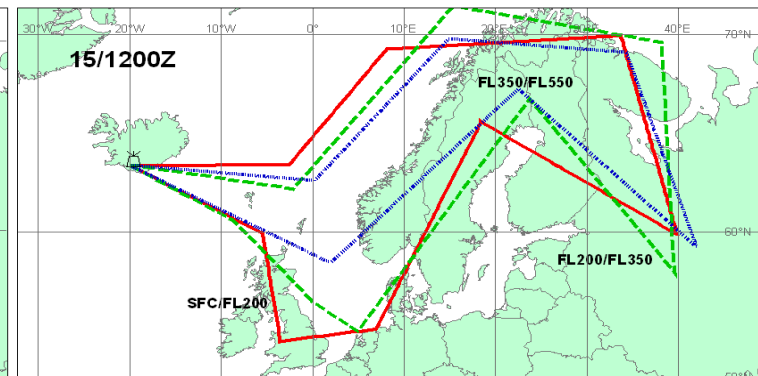
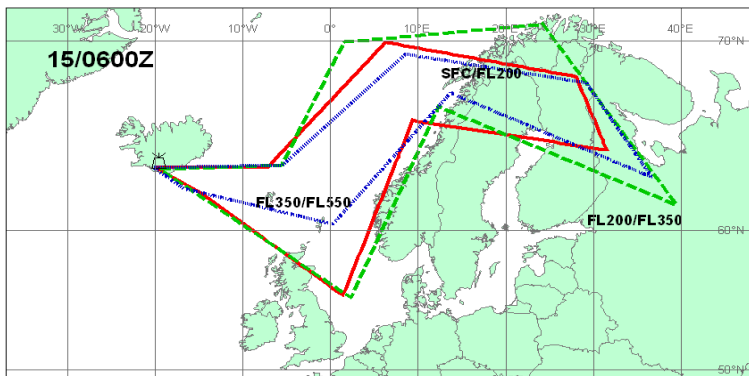
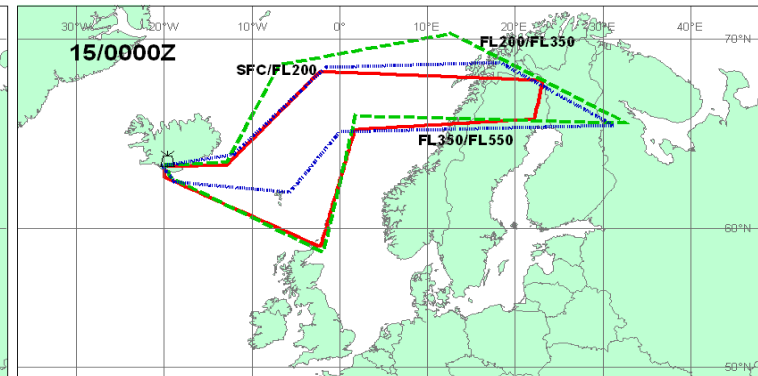
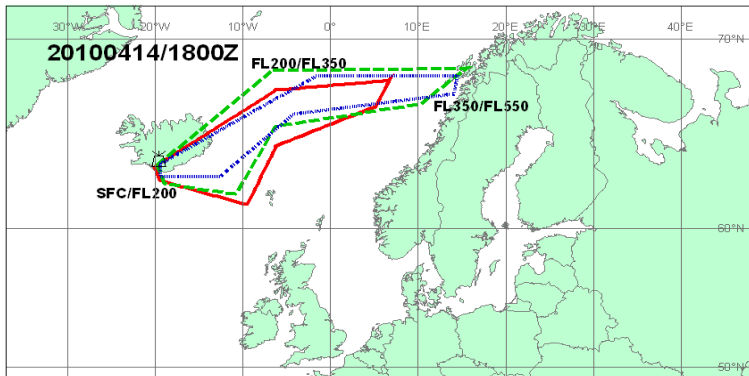
- ✓ ATC Capacity
- ✓ ATC Staffing
- ✓ Equipment (ATC)
- ✓ Industrial Action (ATC)

4. Other

- X Military Activity
- X Special Events
- X ATC Routing
- X Other (Non-Defined)
- X Sector Configuration
- X System Maintenance
- X Vulcano Activity

X = To be addressed later

OTHER... “to be addressed later”



VA ADVISORY
 DTG: 20100414/1800Z
 VAAC: LONDON
 VOLCANO:
 EYJAFJALLAJOKULL
 PSN: N6338 W01937
 AREA: ICELAND

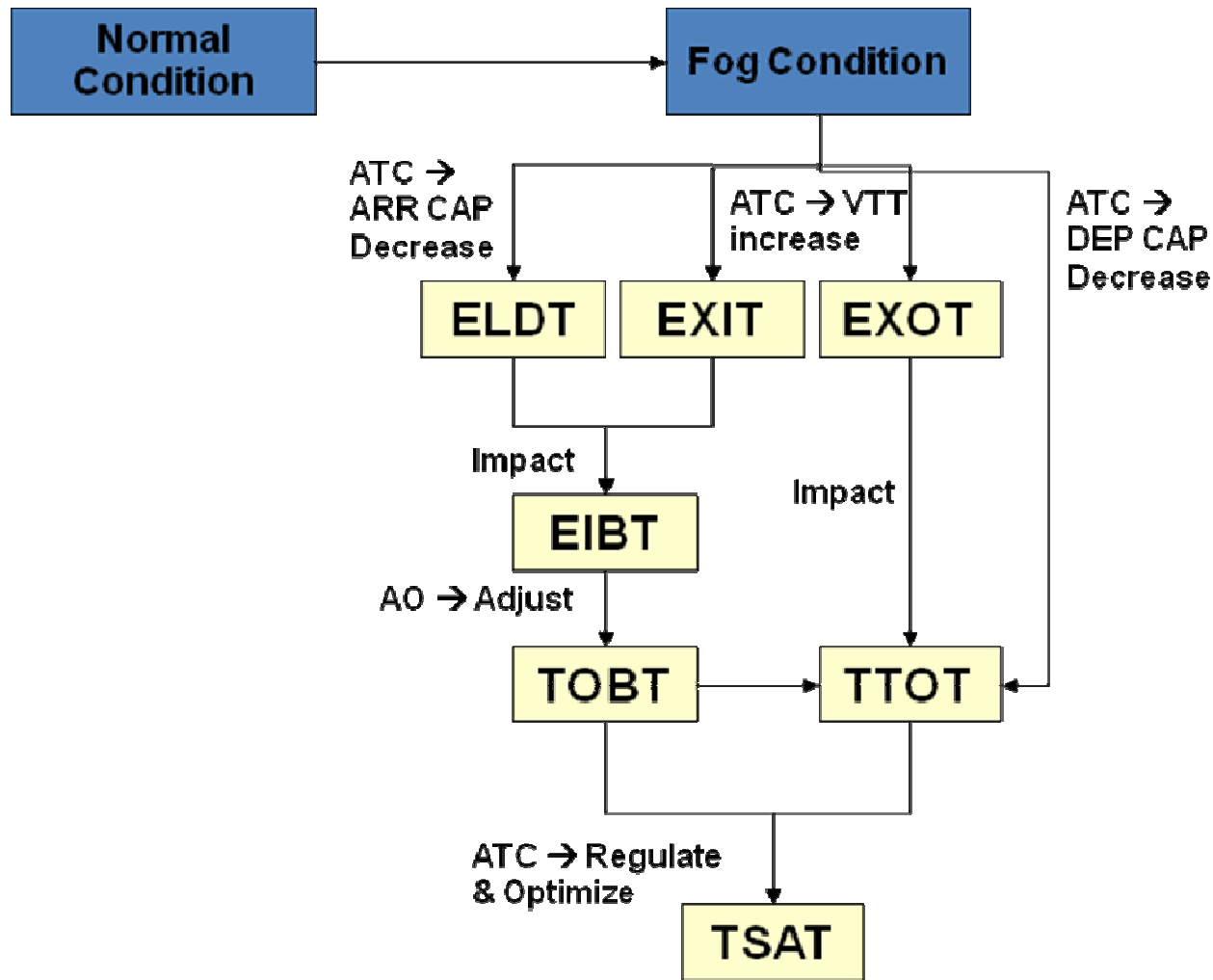
SUMMIT ELEV: 1666M
 ADVISORY NR: 2010/003
 INFO SOURCE: ICELAND MET OFFICE
 AVIATION COLOUR CODE: UNKNOWN
 ERUPTION DETAILS: PLUME FROM VOLCANO
 REPORTED TO BE UP TO 11KM HEIGHT

RMK: SCIENTISTS ARE ON ROUTE TO INVESTIGATE FURTHER
 NXT ADVISORY: 20080415/0000Z

Airport CDM Parameters

Parameter	Responsible Partner					
	Airline operator	Ground Handler	De-icing Handler	Airport Operator	Air Traffic Control	CFMU
	Time Parameters					
ELDT					Adjust	
EXIT				Adjust	Adjust	
EIBT					Adjust	
MTTT		Set/Adjust	Adjust			
TOBT	Set/Adjust	Set/Adjust				
TSAT					Optimise	
ECZT			Set			
EEZT			Set			
EDIT			Adjust			
EXOT				Adjust	Adjust	
TTOT					Optimise	
CTOT						Adjust
	Other Parameters					
MET status					Adjust	

Dependencies between Parameters



Impact Assessment Methodology

EXAMPLE: Increased Security Levels

- Bomb scare/threat received
- Unidentified baggage found in terminal
- Evacuation of terminal due to a security alert
- Irregularities, additional restrictions for flights to USA

Operational Consequence	Impact on Parameter								
	ELDT	EXIT	EIBT	MTTT	TOBT	TSAT	EDIT	EXOT	TTOT
	Procedures Activation								
Increased Security Level Activation & Communication & Coordination Increase	P	P	S			S		S	S
	Increased Security Level								
Bomb scare/Threat	P	P	S		P	S			S
Unidentified baggage found in Terminal	P	P	S		P	S			S
IRR in connection with US flights	P	P	S		P	S			S
	Capacity								
Arrival Capacity Reduction	P	S	S		S	S		S	S
Departure Capacity Reduction									
Stand Capacity Reduction	P	P	S		P	S		S	S
Ground Handling Time Increase					P				

Impact Assessment Methodology (2)

EXAMPLE: Increased Security Levels

Handling activities may be stopped or will be delayed in case of Increased security level at an airport

- Departing aircrafts are delayed and blocking parking space and gates. Aircraft may be forced to return to the gate(s) for another security check. As a consequence gate planning will be disrupted. Congestion building up with increased taxi-in times
- Air Traffic Control may issue flow control measures to reduce number of inbound flights and movements
- Airline schedule is disrupted, Terminals may be congested.



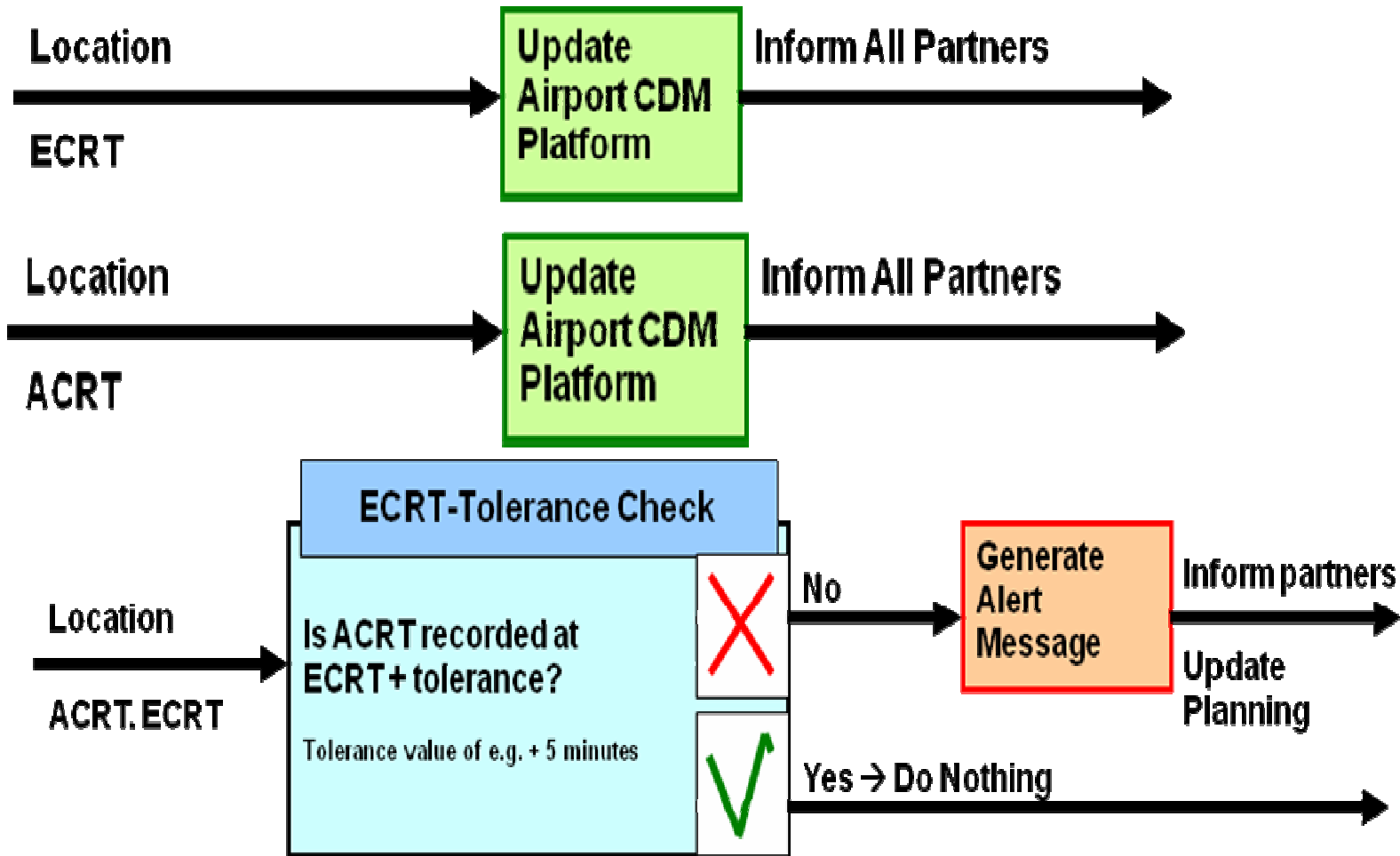
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Content of the Document

7 generic processes

- Change in airport condition
- Change in runway status
- Flight crew request for de-icing
- Commence of apron / remote aircraft de-icing
- End of apron / remote aircraft de-icing
- Commence of snow removal
- End of snow removal

Methodology Automated Processes





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- **Content of the Document**
 - List of best practices
 - De-icing and anti-icing services in Helsinki
 - De-icing and anti-icing services in Oslo
 - Airport crisis experience in Amsterdam
 - Lightning warning system in Amsterdam
 - Winter operations in Zurich
 - Snow Flake simulation in Amsterdam
 - Checklist for adverse conditions
 - Recommendations for remote de-icing sequence planning

Airport CDM Adverse Conditions Expert Panel

Recommendations to SESAR

- Continue to harmonise terminology and acronyms for procedures, processes, conditions and categories
- Further improve and develop operational processes
- Develop procedures for pre-departure sequencing degradation in case TSAT predictions reliability deteriorates
- Continue to collect best practices and lessons learned
- Apply the methodology used in the Panel to further describe consequences and impact of adverse conditions



Airport CDM Adverse Conditions Expert Panel

Endorsed by the Procedures Group

Will be included in the A-CDM Manual

Our efforts should result in.....





Special Thanks to :

- Dave Hogg (EUROCONTROL)
- Eugene Tuinstra (EUROCONTROL)

For their :

- Enthusiasm & drive
- Professionalism
- Focus on results
- Inspiring leadership
- Good working atmosphere



Thank You

