



Global Reporting Format Concept & RCAM Implementation at Airbus

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Pilots use the runway condition information to prepare their take-off and landing

- **Type, Depth and Coverage are necessary to compute the take-off distance**
- **RWYCC is necessary to compute the landing distance**
- **Runway Thirds is important for situational awareness**

The accuracy and timeliness of the runway condition information is a vital piece of the safety barriers



AIRBUS FCTM

USE OF THE RCAM

The flight crew gathers all available information (e.g. ATIS, METAR, SNOWTAM, TAF, ATC report such as PiRep, NOTAM, Airport Documentation) related to Runway Surface Conditions.

The flight crew makes a **primary** assessment based on Runway Condition information (i.e. runway state, contaminant type, depth, temperature). This results in a **primary** Braking Performance Level.

Then, the flight crew **downgrades** this primary Braking Performance Level, if:

- A Pilot Report of Braking Action (PiRep) is available and this PiRep corresponds to a lower Braking Performance Level
- A SNOWTAM is published, and the Estimated Surface Friction (ESF) corresponds to a lower Braking Performance Level
For loose contaminants (Dry Snow, Wet Snow or Slush), the flight crew should not consider an ESF based on friction measurements.
- Complementary information is available and is related to a possible degradation of the Runway Condition or braking action.

AIRBUS FCTM

RISK OF DEGRADED RUNWAY CONDITIONS

If there is a risk of degraded runway conditions, in addition to the usual assessment with the Braking Performance Level "5 - Good", it is a safe practice to perform a second assessment with "2 - Medium to poor". If the result of the second assessment shows that the runway is too short, it enables the flight crew to anticipate, in the event of degraded runway conditions (e.g. strong rain), an appropriate decision to continue or to discontinue the approach if they become aware of such conditions late in approach. e.g. following a PiRep transmission that contains "Medium to Poor", or following the visual assessment of the runway.

Generally speaking, if there is a possibility that meteorological conditions will change, or under active precipitation, the flight crew should consider performing a backup in-flight landing performance assessment associated with the worst likely Braking Performance Level.



Descent Preparation



9:41 PM Sun Mar 3

62%

My Flight

LANDING

F-A32C

A320-214



IN-FLIGHT

RPLL/MNL NINYOY AQUINO A...

RWY 13

WIND °/kt (160/4)

OAT °C 26 (ISA +11)

QNH hPa 1010

RWY COND 5-Good

LW T 66

LDG CG CG > 27%

LDG CONF CONF FULL (STD)

AIR COND On (STD)

A-ICE Off

APPR TYPE Normal (STD)

GA GRADIENT % 2.1

VPilot kt 0

LDG TECH MAN-A/THR on (STD)

BRK MODE Manual (STD)

REV Yes (STD)

MEL 0 GDL 0 ECAM 0

CLEAR

MODIFY

13

VAPP 141 kt

F-LD 1612 m

margin 147 m

EO GA GRADIENT 5.1 %

AT 1516.3 ft

LD 1401 m

MLW (PERF) 72.6 T



1759 m

250 m

N.A.

13



Descent Preparation

9:41 PM Sun Mar 3

62%

< My Flight

LANDING

F-A32C

A320-214



IN-FLIGHT

RPLL/MNL NINYO AQUINO A...

RWY 13

WIND °/kt (160/4)

OAT °C 26 (ISA +11)

QNH hPa 1010

RWY COND 2-Medium to poor

LW T 66

LDG CG CG > 27%

LDG CONF CONF FULL (STD)

AIR COND On (STD)

A-ICE Off

APPR TYPE Normal (STD)

GA GRADIENT % 2.1

VPilot kt 0

LDG TECH MAN-A/THR on (STD)

BRK MODE Manual (STD)

REV Yes (STD)

MEL 0 CDL 0 ECAM 0

CLEAR MODIFY

13

WARNING
LDG REQUIREMENT NOT FULFILLED
NOT AUTHORIZED LANDING

LD
1863 m

LDG CONF **CONF FULL**

LW **66** T

VAPP **141** kt

LD **1863** m

BRK ENERGY **31** %

EO GA GRADIENT **5.1** %
AT 1516.3 ft

TIRE SPEED **137** kt

MLW (PERF) **62.3** T

N.A.



250 m

ACARS REPORT			
F04	B-MED	LDIST	LTP
6	DRY	1890	853
5*	GOOD	1890	853
4	G/M	1981	853
3	MED	2103	853
2	M/P	2529	518
1	POOR	----	----

Descent Preparation

RWY CONDITION / BRAKING ACTION

LFBO 14L QNH 998 OAT -5 °C
VAPP 164 KT CONF FULL WIND 285° / 35KT

RWY CONDITION	BRAKING ACTION	LDG PERF CODE	
DRY	DRY	6	
WET	GOOD	5	
COMPACTED SNOW & OAT AT OR BLW -15 °C	GOOD TO MEDIUM	4	
SNOW OR SLIPPERY WHEN WET	MEDIUM	3	
STANDING WATER OR SLUSH	MEDIUM TO POOR	2	
ICE (COLD & DRY)	POOR	1	



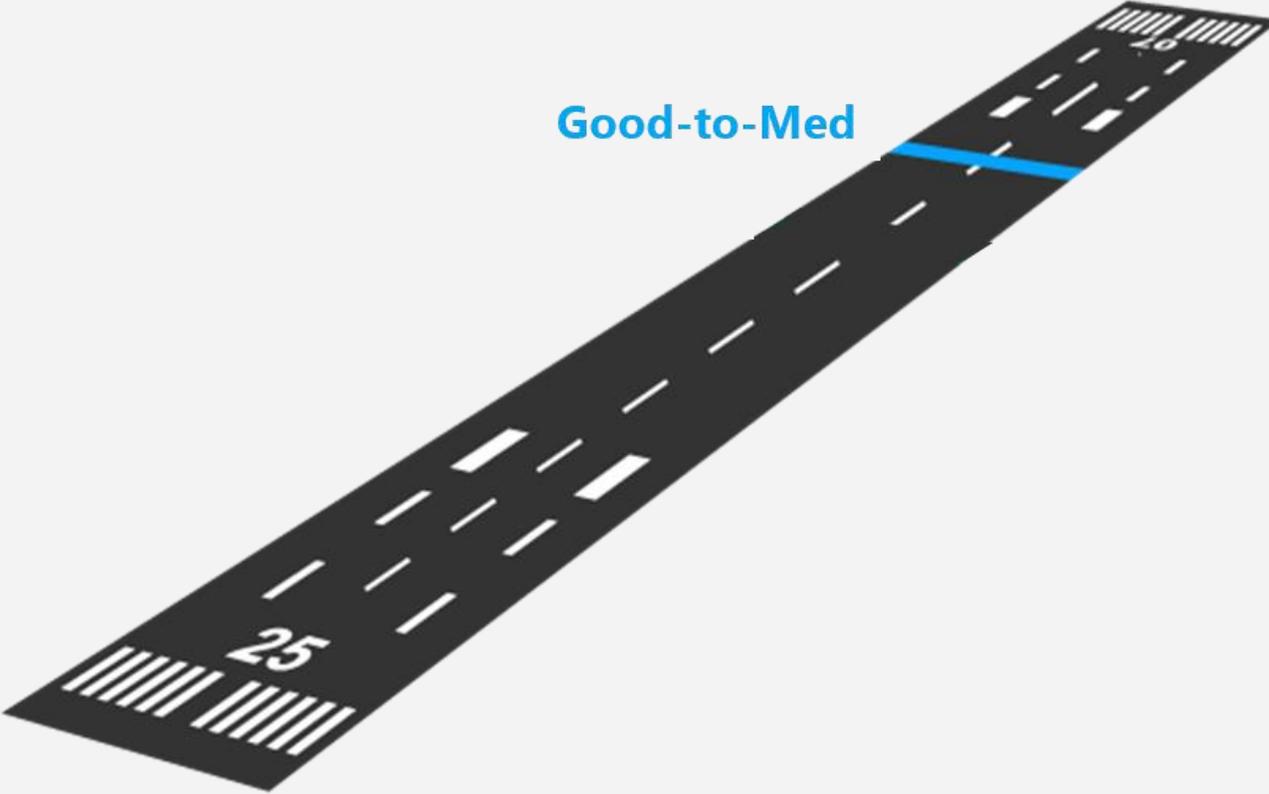
Descent Preparation



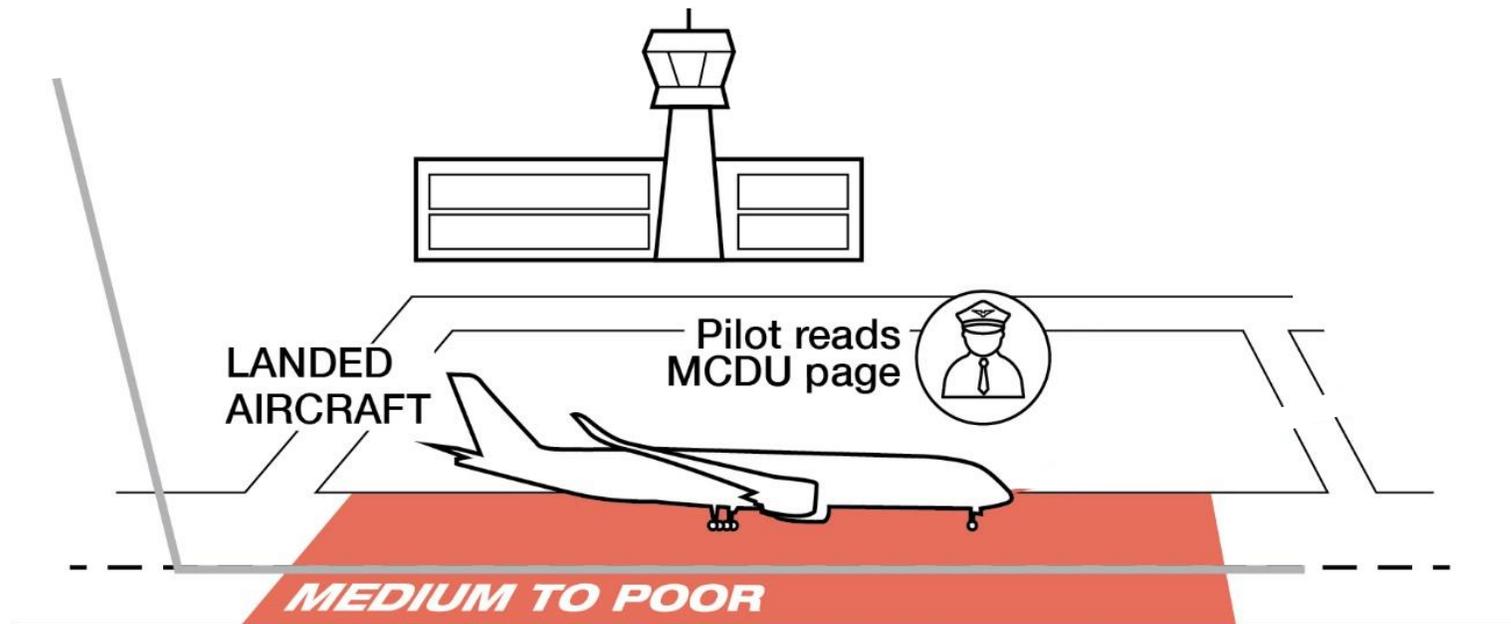
RWY CONDITION / BRAKING ACTION

LFBO 14L QNH 998 OAT -5°C
 VAPP 164 KT CONF FULL WIND 285° / 35KT

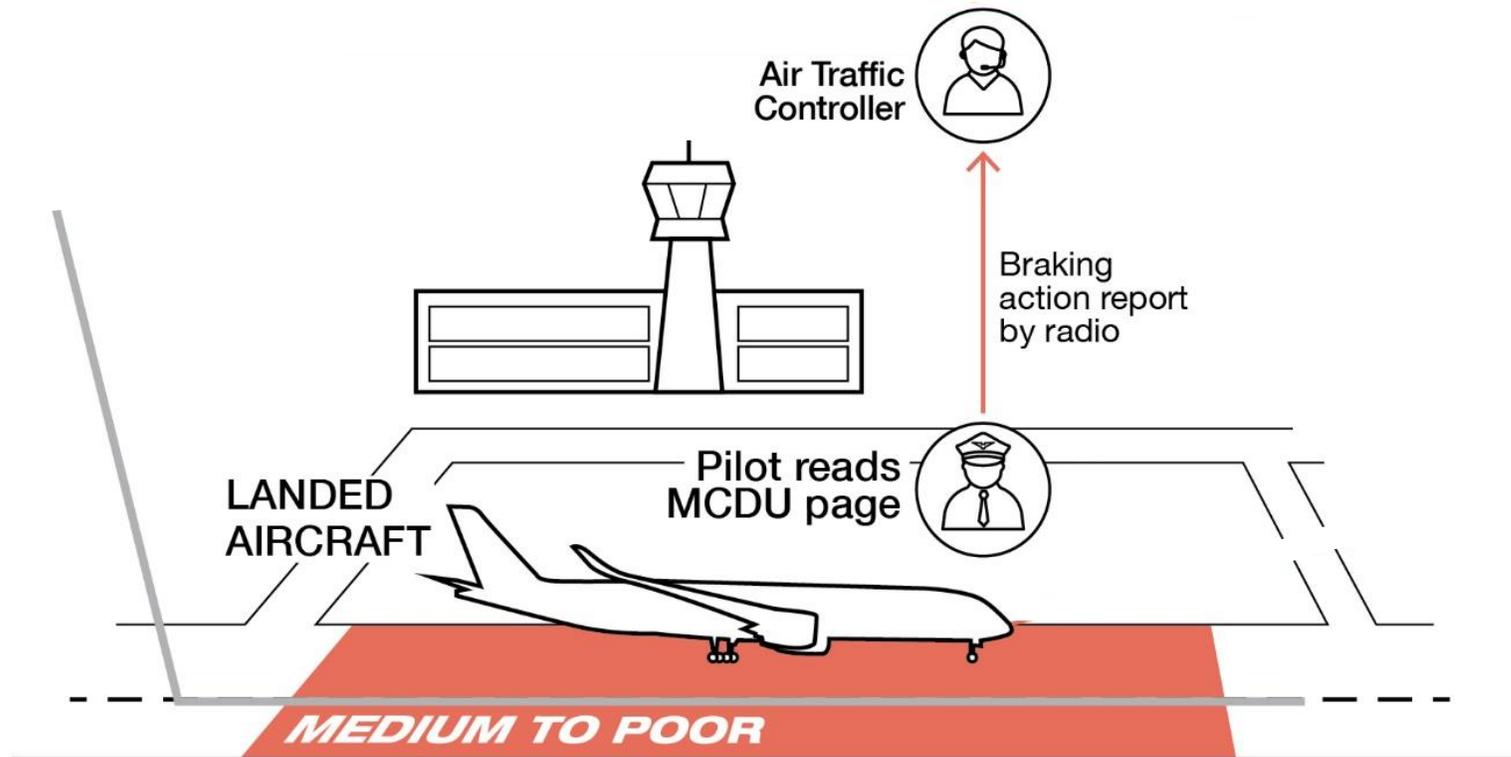
RWY CONDITION	BRAKING ACTION	LDG PERF CODE
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SLIPPERY WHEN WET	MEDIUM	3
STANDING WATER OR SLUSH	MEDIUM TO POOR	2
ICE (COLD & DRY)	POOR	1



Feedback



Feedback



Feedback



Feedback to the Pilot

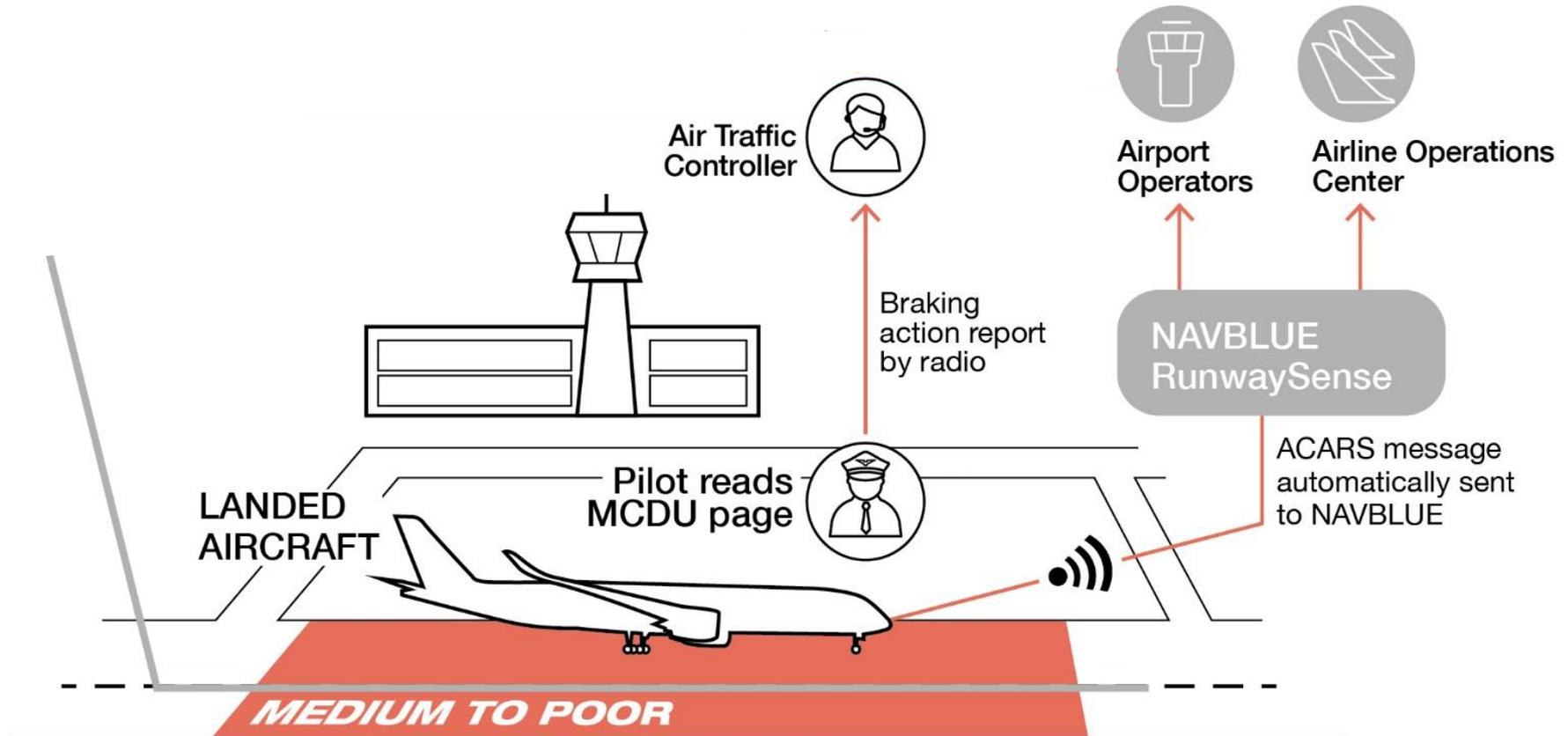
Situational awareness about how slippery the runway was and where

Aid for PIREP

Objective feedback for Pilot Braking Action Report

MEDIUM TO POOR

Feedback



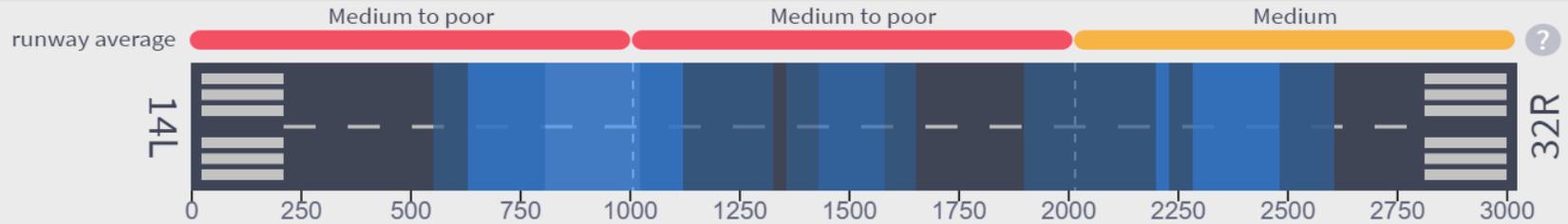
TOULOUSE BLAGNAC 14L/32R

Medium to poor
2 minutes ago

ENTER RUNWAY CLEANING



EVOLUTION LANDINGS



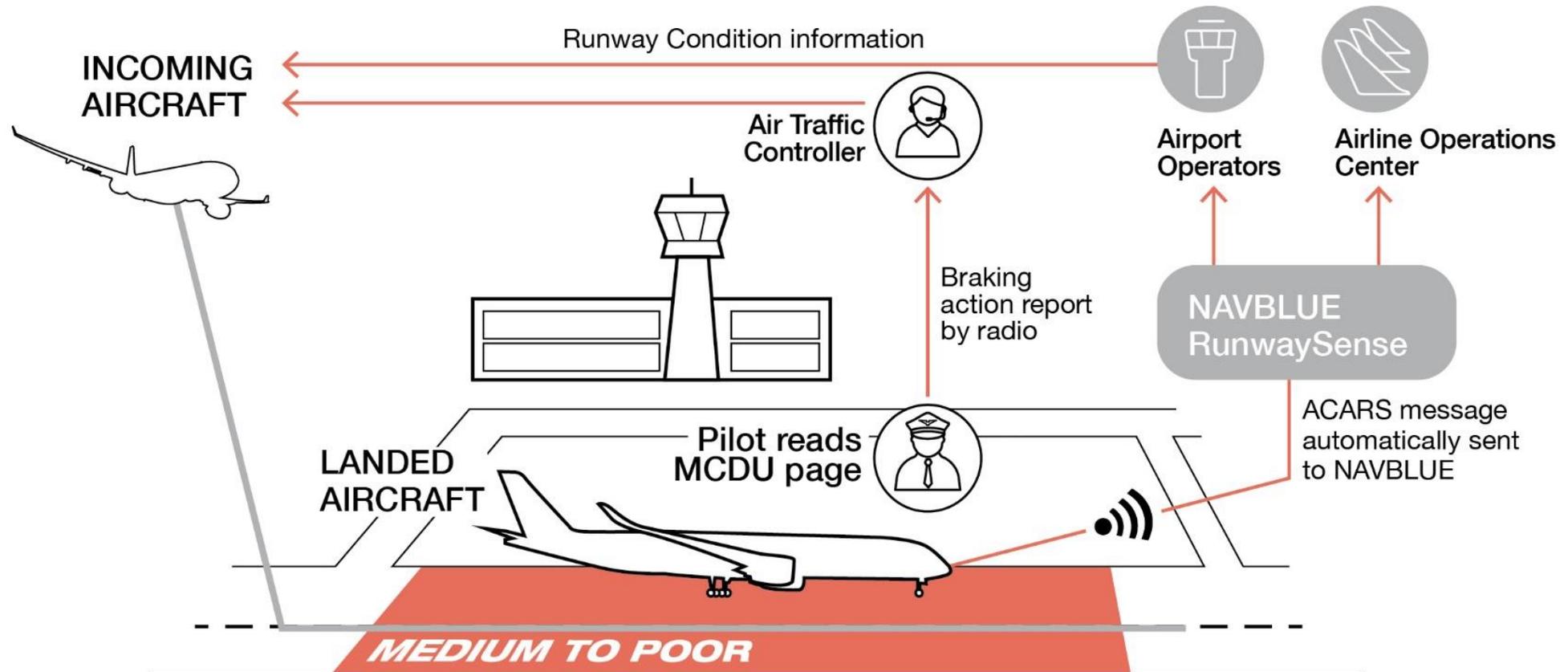
14L/32R

14R/32L



NAVBLUE

Feedback



Conclusion

The RCAM forms an integral part of the flight crew's preparation.

The global report format concept of operations has been embedded into the cockpit to enhance safety and situational awareness



Thank you

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