Symposium Runway Surface Conditions Assessment and Reporting DGAC - 31st March 2016 (Paris)

#### Assessment of the Runway Condition by Landing Airplane

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### Agenda

1 – What can be improved?

2 – Aircraft as a sensor

3 – Way forward



Page 2

What is the problem we are trying to solve?

# How Slippery is the runway?



Page 3

#### What is the problem we are trying to solve?

# How can I use the information?

Runway 28 CYVC RUNUAY SURFACE CONDITION. Center 140ft and lies and lies show 40% bare and wet 50% wet snow trace 10% compacted snow **Remaining width** 100% dry snow 3 inches



#### The TALPA Implementation

## **"OLD" News?**

### **2009 TALPA ARC 2012 Airbus Publication**

## 2015 ICAO State Letter

### **2016 FAA Voluntary Approa** EASA NPA **2020 ICAO Fully Applicable**

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#### What is important



**Current Runway Condition** 

The key link in the chain is ensuring that the runway condition delivered to the flight crew is:
The most up-to-date possible
Representative of how an aircraft will

experience braking





1/03/2016

#### Airbus Concept

Need for a **reliable**, **timely**, **objective** runway condition evaluation means consistent with aircraft landing performance.

#### Airbus Concept : Use The Aircraft As a Sensor

**Braking Action on TALPA format as output** 





#### General principle



#### **Braking Action automatically assessed**

**Reverse engineer the landing** 

Underlying physics is not new



#### Comparing actual and reference braking performance





#### Living Example – Contaminated runway case





#### **Operational concept**





#### An Addition to Current Reporting Means

#### LIMITATIONS

- The technology can only analyze on the parts of the runway where the aircraft was braking
  - 50ft to TD  $\rightarrow$  No analysis
  - End of Rollout  $\rightarrow$  No analysis
- If aircraft is not equipped then no information at landing

Airbus technology is not designed as a **replacement** for existing measurement means, it is designed to **complement** them.





Conclusion

The goal of Airbus' technology is to provide the airports with additional information to help them evaluate the current runway conditions and make strategic decisions.

Using the aircraft as a sensor, this technology provides the most up-to-date conditions of the runway, including trends which correlates to aircraft performance, using consistent TALPA language



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# **Thank You**



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