

TECHNICAL INNOVATIONS & INTERPRETATION OF RULES

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TECHNICAL INNOVATIONS & INTERPRETATION OF RULES

▪ OBJECTIVE

- > **Accept & Facilitate** the utilisation of Technology Solutions by EASA within certain area of Operation. (Ref. AMC - GM), aiming to **reduce subjectivity**, ensuring **high level** of **Safety**.
- > Present a **Technical Innovation** (Runway pavement sensor for wet RWY) that can help ADR to create RCR through data originated by pavement sensors, and to report RCR to ATS, with reduced down time.



METHODOLOGY FOR INSPECTING-ASSESSING RUNWAY SURFACE CONDITIONS

- ADOPTING ED Decision 2021/003/R
- INTRODUCTION Reg EU 2020/2148
- AMENDMENT of Reg EU 139/2014 (ADR)

> OBJECTIVE

- Reduce n. Safety events
- Enhance Maintenance Control Program
- Std RWY surface condition assessment & reporting

ADR.OPS.A.065

Reporting of the runway surface condition.

ADR.OPS.B.037

Assessment of RWY surface condition & assignment of RWY condition code (RWYCC).

METHODOLOGY FOR INSPECTING-ASSESSING RUNWAY SURFACE CONDITIONS

▪ RATIONALE

- > **Current Methodology** to perform a RWY assessment on a contaminated RWY is based on a **Visual Inspection** (*subjective*) performed by an inspector through an **undefined tool**, not subject to certification, calibration or maintenance. (Ref. GM1 ADR.OPS.B.037(a)).

▪ PROPOSAL

- > **EASA** revise AMC-GM to **Accept & Facilitate** the utilisation of suitable Tech. Solution (pavement sensors) as approved methodology to determine contaminant depth, in support of the issue of RCR.

▪ STRENGTHS

- > **Reduce subjectivity** and Ops downtime, improving **data accuracy**, ensuring highest **level of Safety**.

METHODOLOGY FOR INSPECTING-ASSESSING RUNWAY SURFACE CONDITIONS

■ ADR.OPS.B.037

...Whenever the contaminants are present, ADR shall : **inspect** the RWY ; **assess** the Runway and **assign** a RWYCC...

Who ?	What ?	When ?	How ?
ADR.OPS.A.065 ADR shall report RWY surface condition over each third using a runway condition report (RCR).	AMC1 ADR.OPS.B.037(a) RWY Condition Code RWYCC shall be assigned any time Contaminants are present on the RWY Surface	ADR.OPS.A.065(b) Reporting shall commence when a significant change in RWY surface condition occurs due to <u>water</u> , snow, slush, ice or frost.	GM1 ADR.OPS.B.037 (a) The VISUAL INSPECTION of the movement area to assess the surface condition is the core method to determine the RWYCC.



Missing **definition** for Visual Inspection / Distance from Observer point / utilisation of specific tool .

→ Current RWYCC Overview Process WET RWY



0,1 mm sensors
alert & trigger the
process

Inspector alert
ATS for need of
RWY **Inspection**
and move on the
RWY. **Traffic STOP**

Physical Visual
Inspection is
performed 4
points for each
RWY third. (12)

Repeat the
process for 2nd
RWY & Issue
RCR to ATS

ATS receive
RCR
& **distribute** via
Frequency

Traffic **RE-
START**

-----→ 15 min

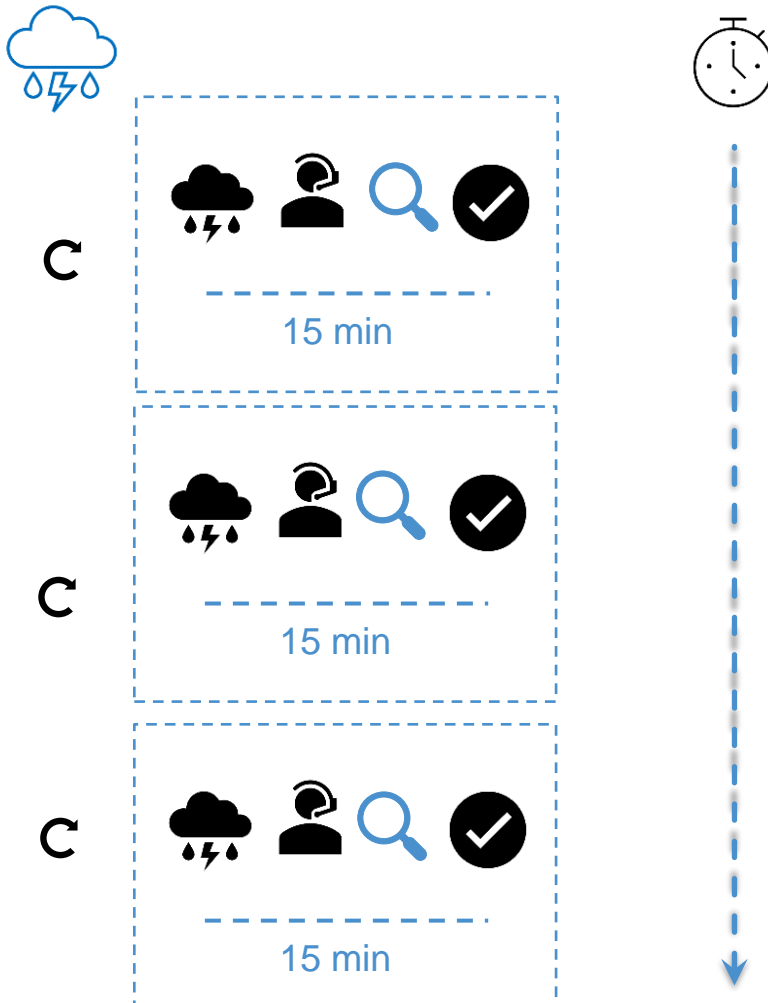
CRITICALITIES :

Assessment performed with no TEC instruction, nor TEC specification on the tool.
ADR to provide with a self created tool, without calibration, MX, certification, etc..

High potential level of subjectivity



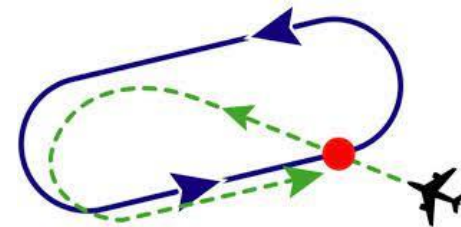
→ Current RWYCC Overview Process WET RWY



CRITICALITIES :

During Heavy short shower rain (Summer wx) :

- Frequent RWY Inspections
- Frequent OPS Interruption
- High Operation & Network Disruption (SRM, Crew FTL, Additional Contingency Fuel)
- High ATC Congestion
- Workload increase for ATFM



→ PROPOSAL SOLUTION scope : WET Condition

EASA to **accept & facilitate** the utilisation of pavement **sensors** as approved methodology to determine contaminant depth, in support of the issue of RCR.



> Current pavement sensors technology, **capable to provide immediate** information on:

- Surface T;
- Water thickness;
- Freezing point;
- QNH;
- Contaminant type & level;
- Underground temperature, etc...



→ PROPOSAL SOLUTION scope : WET Condition



0,1 mm sensors
alert with
necessary
information. Air
T; QNH ;
Contaminant
Level , Type

ADR **to utilise**
Sensor
information,
create RCR &
distribute to ATS

ATS receive RCR
& distribute via
Frequency



Physical
Inspection is
performed 4
points for each
RWY third. (12)



Repeat the
process for other
RWY & issue
the RWYCC to
ATC



Immediate

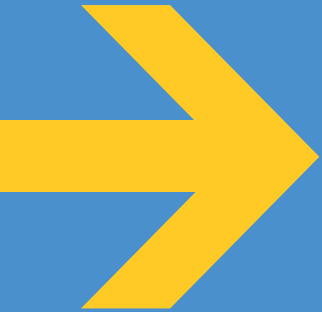
SUMMARY

▪ Actual Rules PROPOSAL

- > Similar cases currently uncovered by ADR Regulation to investigate :
- Camera **DRONE** utilisation for Wildlife control – FOD search – Pavement Inspection ;
- **Synthetic Device** for Practical Training & Proficiency Check purposes – Drive License - (Ref. ADR.OR.D.017)

▪ Future System PROPOSAL

- > For **future Regulation development**, EASA to **facilitate & include** the utilisation of Technologies solutions within AMC – GM ; avoid subjective definitions.



THANK YOU

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