

To provide some practical guidance and clarity on the application of the International Civil Aviation Organization's (ICAO) Global Reporting Format (GRF) methodology for Runway Condition Reporting, Airports Council International (ACI) World has developed the following Frequently Asked Questions and applicable answers.

<b>SECTION 1 – APPLICABILITY</b>	
<b>1</b>	<b>What is the GRF applicability date?</b>
	The GRF will become mandatory 4 November 2021, as per ICAO requirements. The States applying European Union Aviation Safety Agency (EASA) regulation and Canada will transition to GRF on 12 August 2021.
<b>2</b>	<b>Is the GRF applicable at airports located in regions with non-winter conditions?</b>
	<p>The GRF is applicable to all airports regardless of their location, local weather, and operating conditions.</p> <p>Pilots need information on runway surface condition during key phases of flight. Therefore, airports must identify and report any significant changes of the runway surface condition whenever they occur. The purpose of the GRF is to ensure the global harmonization of such reporting.</p>

<b>SECTION 2 – ASSESSMENT</b>	
<b>1</b>	<b>Why should the runway surface condition be assessed?</b>
	<p>The intent of the assessment is to gather information on the runway surface conditions affected by certain types of contaminants and to communicate it to the flight crew. The contaminants can have a significant effect on an aircraft landing or take-off performance.</p> <p>It is considered that there will be an impact on the aircraft's performance whenever any of the runway's third has been more than 10% covered by a contaminant.</p>
<b>2</b>	<b>How should the runway surface conditions be assessed?</b>
	<p>Whenever there is the presence, or suspected presence, of a contaminant, the aerodrome operator performs visual observations of the runway to gather the following information:</p> <ul style="list-style-type: none"> <li>• Percentage of each runway third that is covered by contaminant(s)</li> <li>• Depth of the contaminant(s)</li> <li>• Runway surface condition and type of contaminant(s)</li> </ul>

	The aerodrome operator will then use the Runway Condition Assessment Matrix (RCAM) to determine the Runway Condition Code (RWYCC) and report that information using the Runway Condition Report (RCR).
<b>3</b>	<b>Which tools could be used to determine the depth or percentage coverage of contaminant(s)?</b>
	<p>The GRF methodology requires the aerodrome operator to assess the depth or percentage coverage during visual observations. This is an assessment, not a measurement. It is based on the judgement and experience of a trained aerodrome inspector conducting the runway assessment.</p> <p>The inspector must use his/her knowledge of the runway to assess the information needed. He/she can use basic tools such as a ruler, pencil, or finger, to support his/her assessment and measure the depth of a contaminant, but no specific tool is required.</p> <p>It is essential that the runway inspector knows the runway and the critical areas where there will likely be accumulation, drainage, or friction issues.</p>
<b>4</b>	<b>What if the runway is covered by a contaminant that is not listed in the GRF surface contaminant descriptors such as hail, mud, or sand?</b>
	<p>Aircraft manufacturers have determined that variances in contaminant type, depth, and air temperature cause specific changes in aircraft braking performance. The RCAM, used by airport operators to assess the runway conditions, has been produced to take into consideration the aircraft manufacturer's data for specific contaminants.</p> <p>As a result, only the contaminants listed in the GRF methodology are associated to a RWYCC. For the other types of contaminants such as mud, hail, sand, etc., there is no consistent data on their impact on aircraft performance to date. Therefore, no RWYCC could be associated. However, a runway assessment must still be conducted should any of these contaminants be present on the runway.</p> <p>The presence of such contaminants should be mentioned in the situational awareness section of the RCR. For example, it would be necessary to report in the RCR (SNOWTAM) after a significant hailstorm has left a visible layer of hail on the runway surface.</p> <p>In some cases, the national Civil Aviation Authority may determine that certain types of contaminants particularly present in a national climate should be reported in another form. Application of national guidance will always be necessary.</p>
<b>5</b>	<b>When should a downgrade or upgrade of the RWYCC be done?</b>
	<p>In certain circumstances, runway surface conditions could be more slippery or less slippery than the RWYCC assigned by the RCAM process.</p> <p>This may require conducting further assessments that may lead to:</p>

	<ul style="list-style-type: none"> <li>• A downgrade of the Runway Condition Code if conditions are more slippery than the RWYCC generated by the primary assessment</li> <li>• An upgrade of the RWYCC if conditions are less slippery than the primary assignment</li> </ul> <p>For example, a slippery wet runway with RWYCC 3 could be downgraded to a 2 based on air-reports (AIREP) or a runway with standing water on it with RWYCC 2 could be downgraded to a 1 based on AIREPs or an observation of worsening conditions by the runway inspector. However, it is important to note that the regulation states that only a RWCC of 0 or 1 can be upgraded, and only up to a code 3. The higher codes cannot be upgraded.</p>
<b>6</b>	<b>Which elements should be considered when downgrading or upgrading the RWYCC?</b>
	<p>Initial RWYCC should be downgraded or upgraded using the RCAM downgrading or upgrading assessment criteria and all available means of assessing runway slipperiness such as:</p> <ul style="list-style-type: none"> <li>• Prevailing weather conditions, such as variation in precipitation intensity</li> <li>• Measurements, such as friction measurement, tactile test, and vehicle behaviour</li> <li>• Experience and local knowledge of a trained runway inspector</li> <li>• AIREPs: pilot reports of runway braking action</li> </ul>

### SECTION 3 – REPORTING

<b>1</b>	<b>How is the runway surface condition reported using the GRF methodology?</b>
	<p>After assessing the runway surface condition, the aerodrome operator should use the RCR to promulgate the information.</p> <p>The RCR is a standardized report, in the form of a string of information, that includes relevant data for aeroplane performance calculations and situational awareness.</p> <p>The aerodrome operator transmits the RCR to the air traffic controller (ATC), and the ATC, in turn, provides this information to the flight crews by SNOWTAM, by adding the information to the ATIS, or by voice over the Radio Frequency. For further information on the SNOWTAM, see the ICAO PANS-AIM (Doc 10066).</p>
<b>2</b>	<b>When should the runway surface conditions be reported?</b>
	<p>The process of reporting starts when the runway is wet or when there is presence of a contaminant (either water, slush, ice wet snow, dry snow, compacted snow, or frost) on an operational runway.</p> <p>The contaminant should be assessed and a RCR generated, if necessary, when there is 10% or more coverage of a contaminant in any third of the runway.</p> <p>A new RCR is generated whenever there is a significant change, i.e., a change that requires new information in any item of the RCR.</p>

<b>3</b>	<b>Is there any specified frequency for reporting runway surface conditions?</b>
	<p>There is no specified interval. Reporting depends on the specific conditions at the airport. It is only when there is presence of a contaminant that the process of reporting the runway surface condition starts. The condition should then be monitored until there is no contaminant.</p> <p>It is important to ensure any GRF information promulgated is accurate at all times. A SNOWTAM is valid for a period of 8 hours. If the conditions have not changed, yet it is still necessary to inform air crews of these conditions, a new SNOWTAM will need to be published within the 8 hours.</p>
<b>4</b>	<b>Should a RCR be generated every day even if there is no precipitation?</b>
	If there is no contaminant on the runway, there is no need to generate a report.
<b>5</b>	<b>How is the information disseminated?</b>
	<p>The aerodrome operator assesses the runway surface conditions and reports them to the local Air Traffic Services (ATS) by means of a RCR.</p> <p>The ATS convey the information received via the RCR and/or special AIREP to the air crews operating the aircraft, through voice communications, the ATIS, or electronic means such as Controller Pilot Data Link Communications (CPDLC).</p> <p>The Aeronautical Information Services (AIS) will also publish the information received in the RCR to the end users via a SNOWTAM.</p> <p>The air crew operating the aircraft will utilize the information in conjunction with the performance data provided by the aircraft manufacturer to determine if landing or take-off operations can be conducted safely. The air crew will also provide runway braking action special AIREPs that can be used by a trained runway inspector as part of its overall assessment to validate, upgrade, or downgrade the RWYCC.</p>
<b>6</b>	<b>What tools are available to assist airports in the generation of the RCR and its transmission to ATS?</b>
	<p>There are several data management tools on the market that can be used to facilitate the data capture of the runway during physical observation, generate the RWYCC and RCR, and transmit the data directly to the local ATS.</p> <p>Airport operators implementing such a tool should evaluate the use of these types of systems in their local operating conditions, including a cost benefit analysis, and should also ensure that a backup manual procedure exists in case the system does not function correctly during an operation.</p> <p>Some of the tools currently available through the ACI World Business Partners include:</p> <ul style="list-style-type: none"> <li>• Moventor: <a href="#">Global runway report</a></li> <li>• NACO: <a href="#">RCR Tool</a></li> </ul>

	<ul style="list-style-type: none"> <li>• NavBlue: <a href="#">RunwaySense</a></li> <li>• SKYWARE: <a href="#">RWX Runway Reporting Platform</a></li> </ul>
<b>7</b>	<p><b>It may not always be possible to access the runway and provide runway surface condition in a timely manner. How can this risk be mitigated?</b></p> <p>The GRF will lead to changes in several operating procedures. Airport operators should perform a safety risk assessment of the procedures that will need to be changed to identify the appropriate mitigation measures that will maintain a safe operating environment. It is important to always promulgate accurate GRF information, which requires more frequent assessments of the conditions on the runway, or systems that will provide accurate information of the runway's surface condition.</p> <p>The new methodology for transmitting data, changes in frequency of access to the runway in extreme weather conditions or during intense traffic, and the means used for conducting physical observations, are examples of some procedures that may need to be changed within the specific operating context of the airport.</p> <p>It is important that each airport operator go through a structured management of change process and perform a safety risk assessment of each of the processes or procedures that may be impacted by the implementation of the GRF. Where applicable, these safety risk assessments should be conducted with the relevant airport stakeholders (e.g., pilots, air traffic controllers, etc.).</p>

#### **SECTION 4 - TRAINING**

<b>1</b>	<p><b>Are there GRF training courses available?</b></p> <p>Each industry segment has developed specific training courses for the GRF. These are online modules that provide industry specific guidance and training. Each one of these courses has been validated by ICAO.</p> <ul style="list-style-type: none"> <li>• ICAO-ACI training for aerodrome operators: <a href="#">here</a></li> <li>• ICAO-IATA training for flight crews: <a href="#">here</a></li> <li>• ICAO-IATA-CANSO training for ANSPs: <a href="#">here</a></li> </ul>
----------	---