

The RCR-Tool[®]

**Scalable solution
tailored to your airport's
needs and budget**

**How can you be GRF compliant,
improve safety and increase
revenues at the same time?**

Discover the benefits of
automated runway condition
assessment and reporting



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The NACO RCR-Tool[®]

How it works in five simple steps

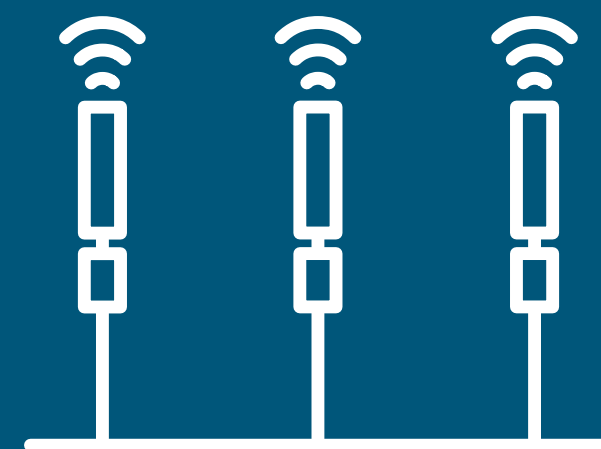
01

A 3D model of your runway is needed



02

Rain sensors are placed along the runway, compliant, and without the need for a runway closure



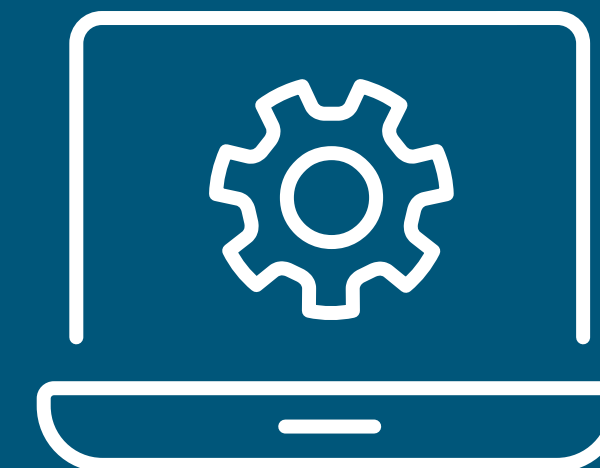
03

The sensors check for rain continuously and report the moment any rain is detected



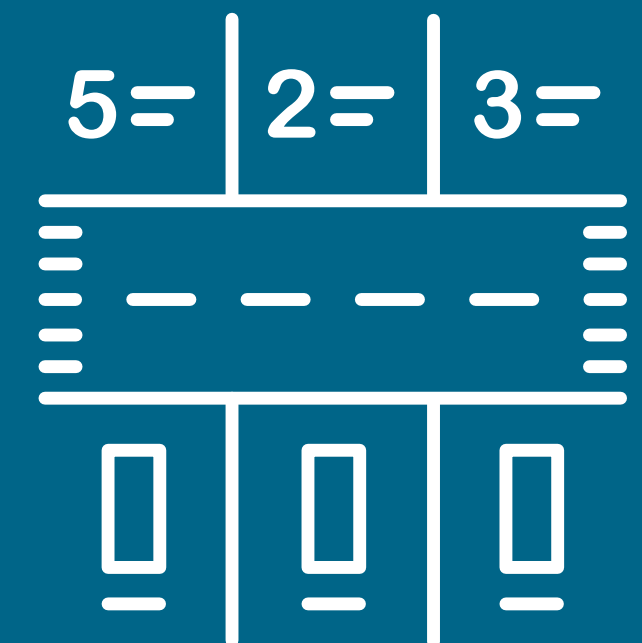
04

Weather data and 3D model are combined in a computer simulation resulting in accurate and real time runway condition data



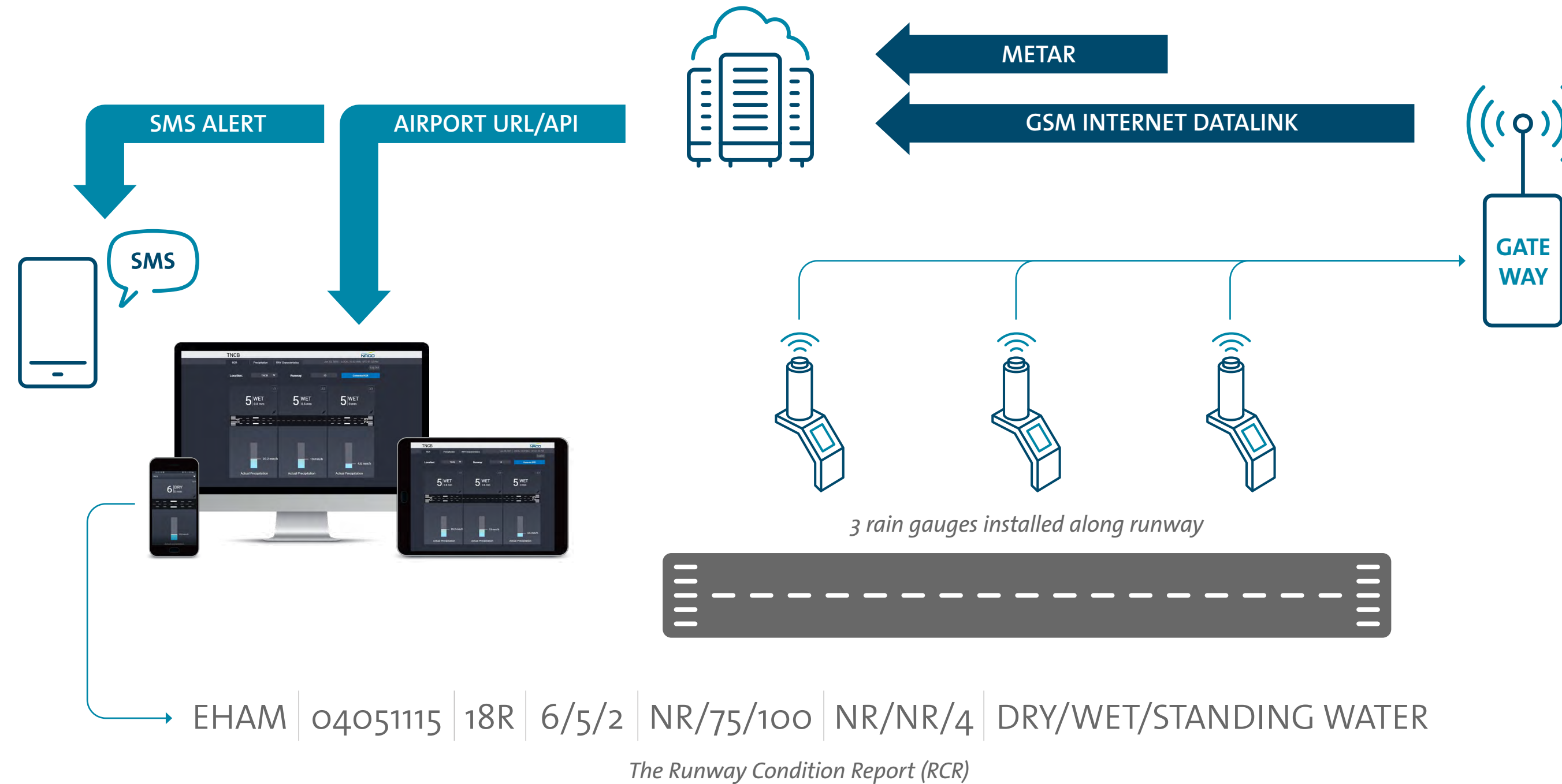
05

A GRF compliant RCR is produced and distributed, without operational disruption



The NACO RCR-Tool[®]

System overview



The tool uses advanced simulation software to calculate the amount and location of water on the runway at any one location and time. Inputs are the **geometry of the runway** for which it will report, and **real-time rainfall data** collected near the runway.

- The tool literally “knows your runway”, from day 1
- Alerts at every significant change
- Reports real-time
- Multiple interface options
- Is capable of forecasting

The NACO RCR-Tool[®]

Hardware components



Rain gauges

- 3 or more rain gauges placed along the runway
- Solar powered and radio link data communication, so no need for wired connections
- Data communication is real-time



Gateway receiver

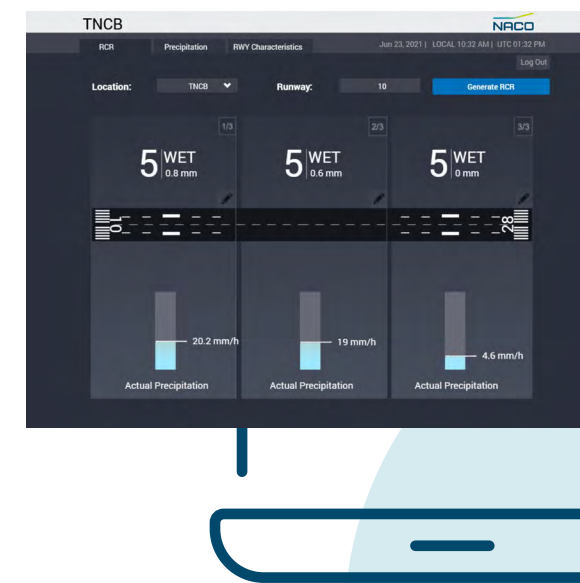
- Gateway receiver located at central point with line of sight to rain gauges
- Receiver is connected to NACO RCR-platform through LAN connection or 3G connection
- 110/230V connection and LAN-connection needed

The NACO RCR-Tool®

User interface

- Fully integrated set of user interfaces
- Real-time information
- Option to automatically transmit data to AIS and other stakeholders

Dashboard through web-link (URL)



RCR-Tool® Cloud



SMS-alert service

Smart-phone app for remote use



The benefits for your airport

1. System operational in two weeks

RCR-Tool® is a compact system and easy to install. The system components can be delivered by courier for you to install yourself (lowest cost option) or a NACO engineer can handle the implementation for you. Installation can take just half a day without disrupting air traffic. Once switched on, the tool boots automatically and is ready to produce its first RCR – with immediate access to the RCR-Tool® web page.

- Easy install in half a day with no air traffic disruption
- Switch on and create an RCR in moments



The benefits for your airport

2. No need for runway closures



RCR-Tool® uses a unique approach to runway condition reporting. Where other solutions rely on physical inspections of your runway, be it automated or manual, the RCR Tool® uses advanced software to simulate your runway condition. This real-time approach ensures the safety of your staff in fast changing weather conditions and there is no need to close your runway each time an assessment is required.

- With 3D model of runways and real-time weather data as inputs, RCR-Tool® literally “knows your runway”
- RCR produced instantaneously with alerts every time the runway condition changes significantly



The benefits for your airport

3. Lower cost, higher revenues

Under the Global Reporting Format (GRF), a RCR must be generated every time the runway condition changes significantly. This means that every time the runway becomes wet, dry, gets icy, etc. an assessment must be carried out and a RCR must be produced. This is a demanding and ultimately inefficient process for airside operations – one that RCR-Tool® helps resolve.

- As RCR-Tool® automates the assessment, reporting and data storage, fewer skilled inspectors and administrators are required, and runway closures are reduced
- Automation leads to lower personnel cost and increased revenues from higher airport capacity
- Prevention of delays creates value for the airlines and improves customer experience, strengthening the position of your airport

*A labour-intensive process **made simpler.***



The benefits for your airport

4. Easier GRF compliance



As the tool fully automates the assessment, reporting and filing of the runway condition, a significant portion of the steps that need to be taken to be GRF compliant are taken in the process.

- RCR-Tool® offers an easier path to compliance if your airport has limited resources
- The package includes GRF training for airport staff to ensure fundamental understanding of GRF compliance
- In addition NACO can provide optional services such as help with creating standard operating procedures to further help you be GRF compliant

The benefits for your airport

5. Improved aircraft and operator safety

The implementation of the GRF is expected to contribute significantly to runway safety as it allows for improved flight crew assessment of take-off and landing performance. But the current procedure of manual assessment and reporting of the runway condition falls short in both accuracy and personnel safety, particularly during inclement weather. The RCR-Tool® is capable of remedying both with:

- **Improved accuracy of RCR with real time reporting – manual assessment and reporting is not fast enough to follow fast changing weather conditions. The full scope of RCR-Tool® quickens the process and improves accuracy**
- **Reduced exposure of inspectors – in certain regions rainfall can be severe and sometimes it is combined with very strong winds. This is especially true in the Asia Pacific region and the Caribbean. The simulated approach of RCR-Tool® increases the safety of staff by eliminating the manual runway assessment**



The benefits for your airport

6. Custom fit IT-integration of RCR data platform



The RCR generated by the tool is available to your airport staff through an API or the RCR-platform web page. The easy access to this page gives your staff and stakeholders access without the need for complex integration into existing IT-systems. And if your airport has multiple (older) systems generating data on different platforms or displays, the RCR data platform can be used to bring all this data together in one place.

- Access to the web page is simple and only requires a login and a password
- The data platform also provides access to other data generated by the tool's monitoring equipment
- Save cost and space by making accessing and processing of different data sources more efficient

NACO's experience, your gains

At NACO we have been supporting airports for over 70 years in meeting the challenges they face. Our in-depth knowledge of airport infrastructure, operations and digital transformation help us to leverage the benefits of automation, technology and data to provide insights and improve operational efficiencies and safety. NACO's deep domain knowledge combined with Dutch water heritage results in comprehensive understanding of how rainfall affects runways.

- **Where most RCR-solutions focus on automating the report, we understand that the assessment is the real challenge. Automated, accurate and real-time assessment allows significant savings on resources and optimises runway availability. Optimal presentation and custom integration of data into existing systems wrap up the process**
- **We work together with clients to ensure a seamless integration of the RCR-Tool® - delivering a proven solution that improves operational efficiency – and all while preparing airports for a digital and resilient future**



Contact



Get in touch with our experts today and find out how the RCR- Tool[®] can help your airport.



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