RNP-AR approaches at Tromsø airport in Norway

RNP-AR approaches (Required Navigation Performance – Authorisation Required) make use of advanced RNP capabilities of modern aircraft to provide better access to runways with terrain or environmental constraints. They use specific obstacle clearance criteria and require a particular RNP approval for the aircraft.

SAS, Avinor and Eurocontrol are testing technology and procedures that will result in major reductions in aircraft emissions. Tromsø was chosen because it is topographically one of the most demanding airports in Norway for the aircraft's systems.

Successful tests were carried out in August 2009 using a Boeing 737 NG with two pilots from SAS and experts from Avinor and the Norwegian Civil Aviation Authority on board. The procedure was the first of its kind with this level of navigational accuracy. Compared to a regular approach, the test reduced emissions by at least 300 kilos of CO2.

The technology offers opportunities at airports where the terrain currently causes a longer flight path than optimal. Most of the approach is carried out automatically by the aircraft, and it glides downwards in a perfect arc with idling engines during much of the approach. The pilots monitor the systems and take over the controls just before landing.

The approach procedure at Tromsø airport will form the basis of international guiding material that may be used by airlines and aviation authorities prior to implementation of RNP-AR procedures.

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AVINOR is responsible for planning, developing and operating the Norwegian airport network. AVINOR operates 46 airports in Norway, with 12 airports operated in cooperation with the armed forces. Operations also include: air traffic control towers, control centres, and technical infrastructure for aircraft navigation. AVINOR is committed to maintain the highest level of safety in all operations. AVINOR works continuously to limit environmentally harmful emissions from air and ground operations, and towards reducing aircraft noise.