



Press release

Gothenburg, May 25th, 2011

VINGA – How Air Traffic Can Reduce Its Environmental Impact

The ongoing VINGA project at Göteborg Landvetter Airport, Sweden, is part of the European joint effort to reduce aviation's impact on the environment. The goal is to, with the best available technology and best practice, reduce emissions to air and noise in the vicinity of the airport. Already VINGA, as the first project in the world, has demonstrated that there is no technical problem in combining different navigation systems and perform green landings in a new way, independent of weather conditions.

VINGA (Validation and Improvement of Next Generation Airspace) is a one-year project designed to find out how the total of aviation's environmental impact can be reduced through a co-operation between several entities in aviation, developing solutions in partnership. The VINGA project will be ended this autumn and has already proven that existing technology and knowhow can give substantial effects on the environment – in terms of reduced emissions of carbon dioxide as well as in noise pollution around the airport, VINGA is singular in studying all phases of flight, from the surface phase, through taxiing, takeoff, climb, the en-route phase, approach, landing and taxiing to the gate.

Shows how today's technology can reduce environmental impact

"In this project we use and evaluate a number of various ways to start and land the aircraft and allowing them to operate with as little impact on the environment as possible", says Niclas Wiklander, Project Manager for VINGA. "So far, VINGA has matched our expectations. We have demonstrated that by using best practice, together with state-of-the-art technology, we can reduce emissions and aircraft overflying populated areas quite substantially."

Each phase of a flight is tested for environmental impact

In the project, a large number of methods to reduce environmental impact are being tested. Some examples: optimized taxiing to the runway (in shorter time and with only one engine running), quicker climb to cruise altitude, approaches and landings by means of gliding with a minimum of thrust via special curved trajectories that shorten the whole approach and relief certain neighbours by avoiding overflying them near the airport.

Already in this early stage of the project, preliminary calculations show that it is possible to reduce fuel consumption with almost 300 kg, taking into account all phases of the VINGA project, when all stakeholders are working in partnership to optimize all segments of the flight, including shorter approaches and the use of more fuel conservative procedures to and from the airport. This corresponds to a reduction of carbon dioxide emissions with approximately one ton.

A World's First Breakthrough

A major breakthrough was performed within VINGA on April 7th, 2011, when Novair landed an Airbus A321 using two separate navigation systems. The aircraft approached Göteborg Landvetter Airport via a completely new satellite based navigation trajectory, with extremely high navigation precision, and was then guided to the actual landing by the ground based navigation system ILS (Instrument Landing System) during the latter part of the approach, to hit the runway on the exact right spot. Satellite based navigation allows a more environmentally conscious approach but today lacks the accuracy necessary to land in thick fog. The ILS system is then required, to guide the aircraft safely to the runway. This time a combination was used – for the first time in the world.

"Technically we have proven that it is possible to combine these two systems", says Niclas Wiklander. "Since we are part of SESAR we can achieve a wide distribution of the knowledge we have obtained. Of course we hope that the regulations that govern air navigation can be adjusted to these findings so aviation regularly can utilize this environmentally advantageous technology – in the perspective of emissions as well as noise."

Background

NINGA is an EU Project

In order to make aviation more efficient, the European Commission has initiated a programme for modernization of the European airspace, denoted SESAR, Single European Sky ATM Research (where ATM means Air Traffic Management). SESAR's objective is to create a single European airspace without any country borders. It would facilitate aircraft flying straighter to their destinations and spend less time in the air and thus save significant amounts of fuel and considerably reduce emissions of carbon dioxide.

NINGA is one of many projects within SESAR. It is co-ordinated by LfV at Göteborg Landvetter Airport in co-operation with the airline Novair and Quovadis, a company developing navigation technology. Quovadis is owned by aircraft manufacturer Airbus, also participating in VINGA. Swedavia, a state-owned Swedish company that owns, operates and develops eleven airports in Sweden is participating in VINGA as well.

For additional information:

Press pictures are available at www.dropbox.com, which will be updated during the day.

User ID: vinga@gmail.com

Password: 20110525

Swedavia:

Klas Nilsson, Press officer Swedavia, 070-453 65 88, www.swedavia.se

Annika Hilmersson, Information officer Swedavia, Göteborg Landvetter Airport, 031-94 11 98, www.goteborglandvetterairport.se

LFV: Per Fröberg, Press officer LfV, 070- 879 26 35, www.lfv.se

Airbus:

Raphael Sheffield, Manager Technical Marketing, Airbus, +33 6 09 26 74 75, www.airbus.com

Robert Nyström, Airbus PR Sweden, 070-567 49 04

Quovadis: Paul Franck Bijou, Head of Performance Based Navigation services, +33 6 86 07 09 01

Novair:

Anders Fred, CEO, Novair 08-673 86 06, www.novair.se

Kajsa Moström, Information officer, Novair and Apollo, 070-672 32 00

SESAR: Celia Rodriguez, Environment Officer/AIRE programme manager, +32 2 507 80 49, www.sesarju.eu