

Decently descending at GAE

First CDA at Groningen Airport Eelde

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There was great media attention at Groningen Airport Eelde for our first Continuous Descent Approach (CDA) flight which took place on Friday 17th February. To investigate the expected environmental benefits of implementing a CDA procedure at Groningen, research was undertaken by our partners at the National Aerospace Laboratory.

The first results look very promising. On average a noise reduction of 5-7 dB(A) is expected over longer distances (>13 km) and on an annual basis fuel savings are possible up to 10 tons, meaning some 32 tons of CO2 reduction.

To present information on this flight procedure to the press, politicians and public in an easy and understandable way we have produced a brochure, in close collaboration with our partners Dutch Air Traffic Control, National Aerospace Laboratory and transavia.com. Furthermore, EUROCONTROL is very enthusiastic about our CDA initiative and they have asked if they can use this to show other airports as well. A digital version of the brochure - Sustainable Airport Solutions, CDA edition - can be downloaded from the project website.

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GSA partners meet in Larvik and



Sandefjord TRF Airport, an airport arguably better able to cope with winter than almost any other European airport, was once again the right place for a meeting focusing on runway and aircraft de-icing procedures. GSA partners and delegates from Norway, Germany, Denmark, Belgium and the Netherlands attended the transnational meeting held at Larvik – a beautiful setting on the Norwegian coast just a short drive from Torp Airport. All was excellently organised by our host Lars Guren, Environmental Manager of SandefjordLufthavn AS.

Mr. Guren opened the meeting with a presentation on the baseline study. The as-is report summarizes today's de- and anti-icing procedures as well as related challenges faced by the GSA partner airports. A second study will be conducted over the coming months to identify alternative methodologies and possible solutions to be applied by the partnership. One of the targets identified will be to assess the applicability of identified solutions to small and medium sized airports considering their special requirements and circumstances.

Other partner airports, such as Billund Airport (Denmark), presented their approach to de- and anti-icing and pointed out the challenges faced. This raised the desired discussion on the challenge to combine the need for state of the art technology and cost efficient solutions at the same time. Furthermore, the communication and cooperation among all stakeholders, especially the product manufactures, should be increased to improve the overall efficiency of the procedures.

In line with the concept of exchanging knowledge and experience, guest speakers were once again invited to share their know-how with the GSA partnership.

Mr. Roger Roseth, from Bioforsk, happily agreed to take part in the winter working-group session illustrating the status and challenges of sustainable de-icing procedures. Bioforsk, a company which has been developing and testing various approaches to de-icing procedures for years, is equipped with extensive knowledge and experience making their input even more interesting to the GSA project. The de-icing



Sandefjord



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expert shared his knowledge on the future of sustainable de-icing namely, de-icing pads and natural systems to handle the water run-off such as dilution, degradation, evaporation and dispersion.

On the second day of meeting, the project partners from Groningen Airport and the Province of Drenthe reported about the first CDA (Continuous Descent Approach) flight which was successfully performed at Groningen Airport. In this context, the importance of communication to all stakeholders was stressed once again, the topic being applicable to all aspects of airport operations.

Representing the winter management at Sandefjord Lufthavn AS, Mr.Øystein B. Fremstad demonstrated the Airport's impressive approach to winter management. At an airport where facilities, machinery and procedures are designed with snow and ice in mind, Mr.Fremstad gave the GSA partners an insight into best practices of de- and anti-icing procedures.

The participants found both external speakers to be very informative and everyone was suitably impressed by all the airport equipment exhibited. And finally, just as the meeting ended, the weather conditions changed right on cue – icy snow and a cutting wind! We had yet another opportunity to observe aircraft de-icing, this time from their cabin seats just before take off! It was a rewarding and instructive stay in Sandefjord.



A Double Announcement

Kortrijk Airport - learning more about sustainable buildings

We, at Kortrijk-Wevelgem Airport, are proud to announce the start of a tender procedure for an investigative report on creating sustainable new buildings and infrastructures at small and medium-sized airports, including our own. At the same time we will be host of the next GSA transnational seminar to be held from 22nd - 24th of May 2012.



The region, well known for its Innovation, Design & Creation concept, will prepare a warm welcome for the project partners and guests and offer a balanced programme. Expert speakers, GSA partners and guests will have the opportunity to exchange knowledge and experience, creating an ideal kick off moment for the baseline study on sustainable buildings. The seminar will be followed by meetings concerning the work packages, a guided tour of the airport and a major touristic highlight. While showing some of the economic importance of the South-West of Flanders we will also share information about the cross border project "Euroregion" of Lille/Kortrijk.

Registration for the GSA Transnational Seminar on Sustainable Buildings and Infrastructures in Kortrijk will open mid April and details will be posted on the GSA website (www.greenairports.eu)

For further information:
airport.kortrijk.directeur@skynet.be



Envirometer ... a Stimulating training

On Thursday 19th January Groningen Airport Eelde organized an in-house training, together with Stimular, to start using the Envirometer software tool. With this tool we can benchmark our eco efficient airport operations (WP3) by monitoring and comparing relevant data like energy & water consumption, emissions etc. Over the next weeks and months we will gain experience with this tool and inform all GSA partners how we can use it and discuss how we can benchmark the environmental performance of our airports.

Together with Femke Batterink, the instructor from Stimular, we made a short tour over our compound to evaluate what data, what buildings to incorporate when using this tool.

Roel Swierenga



The Stimular Foundation

The Stimular Foundation was set up in 1990 by the business community and government agencies in the Rotterdam region. Now Stimular is successfully encouraging small and medium-sized enterprises (SME) and similar organisations to adopt Sustainable Management practices in a growing number of regions in the Netherlands. The essence of Sustainable Management is to improve business management from three perspectives:

- Economic performance,
- Environmental impact,
- Human and social impact, both within and outside the enterprise.


For SMEs 'sustainable management' means making conscious business decisions to improve performance on all three of these aspects.

Working together with SME entrepreneurs, Stimular is developing new tools for Sustainable Management. Stimular has experience in many branches of industry and implements projects in collaboration with national and regional governments, branch organisations and private companies.


If you want to read more about the Envirometer just follow this link:
<http://www.envirometer.eu/>

Quietly does it!

GSA - Baseline Study on Noise Abatement



A baseline study on noise abatement has just been completed. Based on a discussion at a GSA work package 3 meeting which took place in Bremen (Germany) in May 2011 there has been an exchange of experiences between the GSA partners concerning strategies on noise abatement. The Bremen Ministry of Economic Affairs, Labour and Ports, together with UNICONCONSULT universal Transport Consulting GmbH, combined the different approaches in a baseline study.



Several measures have been considered. The study, divided into three parts, has as key objectives: noise reduction from aircraft ground operations and aircraft air operations. Furthermore, a strategy on noise abatement has been developed.

The first part of the study involved finding ways to avoid noise while the aircraft is on ground. Consider, for example, noise from taxiing on the apron before take-off or after landing or from engine test runs. This noise can be reduced by using protection walls or hangars, or by choosing an area which is less noise sensitive. Another possibility, at least for all turbo prop aircraft, is taxiing with one engine off.

An aircraft requires power while standing on the apron. The electrical power is usually delivered by auxiliary power units (APU) and ground power units (GPU) which are much less noisy. So it is best to avoid using APU and GPU as long as possible. It is even feasible to use the public electricity network, combined with a transformer, instead of diesel driven GPUs.

Concerning the pushback, this could be performed in areas which are not noise sensitive and – in the future – probably even by an electric vehicle instead of a diesel driven one.

The second part of the GSA noise abatement study regarded the noise from aircraft air operations. This noise often comes from above so protection walls etc.

are not an option - other measures must be taken. There are administrative regulations, like airport charges depending on noise emissions or night flight restrictions. Other potential solutions are to raise penalties for night-time flight delays or to facilitate passive noise protection by funding investments like new windows.

Furthermore, the departure and arrival procedures can also be taken into account. Thrust or reverse thrust should be reduced when the situation allows and such advice could be presented in national aeronautical information publications. Positive effects can be gained from restricting the use of certain runways and optimizing the departure and arrival routes to limit the noise in populated areas. Another alternative is to follow a continuous descent approach, which can lead to less noise in certain areas. Additionally – in the long term – the aircrafts can be technically improved.

All in all one can say that there are many measures which can be taken to reduce noise hindrance at, and in the vicinity of, airports. Bremen and all GSA partners are committed to finding solutions which lead to greener sustainable airports.

The report on noise abatement can be found on the GSA website.

Further information:

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Billund's solutions are COOL!



Heating and cooling of aircrafts

Billund Airport currently have some rather old diesel heaters that need to be replaced in the very near future. In this context the airport believes this to be an ideal opportunity to change over to a more environmentally friendly way of heating planes. Furthermore, the airport wants to be able to provide cooling of aircrafts as well.

At the moment Billund Airport is investigating the possibilities of using the airport's ground water cooling system (Aquifer Thermal Energy Storage) and / or using the existing district heating as part of the new solution. The airport is now cooperating with a company, AXA Power, on developing a unit for heating and cooling of aircrafts based on green technology.

A preliminary impact analysis of the heating of the aircraft has been made, involving a comparison between the use of aircraft APU with electrical PCA. Results indicate that, by turning off the aircraft's APU and using 400 Hz Solid State & PCA technology instead, there is a potential to achieve a reduction in CO₂-emissions of nearly 80%.

Billund Airport plans to test a unit this autumn.

Further information:

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The Green Sustainable Airport project was initiated by Groningen Airport Eelde (the Netherlands). The Province of Drenthe is responsible for project management and is acting as Lead Partner in cooperation with Groningen Airport Eelde. There are 17 partners and sub-partners from 6 countries in the North Sea Region. Each partner airport acts as a platform in the region for developing, testing, producing, monitoring and displaying innovative solutions and quick wins. The airports have a role as spindle between regional authorities, knowledge institutes and the business sector.



Turn off the APU - Use sustainable technology!



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