

**Bron: Huffingtonpost.com, 10-11-2016**

THE BLOG

## **Airports going green**

11/10/2016 09:25 am ET

[Marga Hoek](#) An entrepreneur, prominent business leader with profound knowledge, experience and vision on both sustainable business and capital.

### **Opportunities for innovation soar**

This week, the Airports Going Green conference was held at Schiphol Airport. During the conference, the Airports Sustainability Declaration was signed by 18 airports and related organizations such as Brisbane Airport Corporation, Carbon War Room, Centennial Airport, Chicago Department of Aviation, Wayne County Airport Authority, Dallas Fort Worth International Airport and San Francisco International Airport. Over 25 airports attended when the declaration was officially signed. In this declaration, the airports agreed to work together to create major steps forward in terms of sustainability. The joint ambition is to strengthen the system of sustainable and resilient airports worldwide, through collaboration, transparency, innovation, and engagement. My attention was specifically drawn to the fact that the airports announced that they would voluntarily join forces worldwide to become socially, environmentally and economically prosperous and, perhaps most importantly, to become more adaptable.

The impact of airports is, of course, huge with one the most significant issues being CO2 emissions. As climate change actually affects 13 of the 17 SDGs, the impact or footprint of airports and specifically aviation, is enormous. The IPCC (Intergovernmental Panel on Climate Change) has estimated that aviation's total CO2 emissions account for 2% of global emissions' impact on climate change. Of that figure, the airports' own operations only account for up to 5%. It is of course the flying that accounts for the most emissions. Back in 2007, the global airport industry recognized this and committed to reduce its carbon emissions in a special resolution passed at the ACI WORLD Annual Congress & Assembly.

### **CO2 positive airports, future power plants**

So, right at the time of Cop 22 and with regards to CO2, my perception or expectation of the value of this newly signed declaration is one of a commitment to a collaborative system change. After all, the fact of the matter is that despite all appreciative initiatives and steps forward, the sector as a whole must innovate and solve its sustainability challenges together, in order to effectively beat climate change in time. Collaboration is, in fact, the only way to get the job done. If that was indeed the spirit behind the declaration, I'm all for it, and it has my support and praise. They can share and raise ambitions based on the progression of trendsetting airports such as London Gatwick Airport for instance, who also signed the declaration, and is on track to becoming UK's most sustainable airport. Gatwick aims to cut emissions by 32.6% and energy by 16.6% by 2020. This was stated in their Decade of Change report, which was disclosed a few weeks after Gatwick became one of UK's happy few to achieve the triple certification of the Carbon Trust Standard, received for achieving ongoing reductions in carbon emission, water use and improvements on waste management.

Thus, there is already work in progress. But we need to raise the bar. And airports can do this with their collaboration. The aim is getting all airports to be -at least- carbon neutral. That way they can cover the operational 5% as mentioned above. A press release of Airport Carbon Accreditation on May 13, 2016 shows that Post-COP21, more airports than ever are working to reduce their CO2 and impact

on climate change. Currently, 157 airports worldwide are certified at one of the 4 levels of the Airport Carbon Accreditation and 21 airport operators are carbon neutral - the latest is Izmir Adnan Menderes airport in Turkey.

I wish the new coalition sets itself the goal to achieve carbon neutrality for her members as soon as possible. From the 0 point of frontrunners, it will be easier to create tremendous impact by setting course towards all or at least the majority of all airports. From carbon neutral onwards, we can move forward to CO2 positive. Following the footsteps of companies like Unilever, aiming to have a positive CO2 footprint by 2030, by generating more sustainable energy than they need for their own use. If airports can reach the positive impact goal in terms of CO2, they would become the renewable, power plants of the future.

## **Airports**

## **circular**

## **hotspots**

In addition to making a significant impact on CO2 emissions, airports are a great circular economy opportunity. Jos Nijhuis, President and CEO of Royal Schiphol Group, proudly explained how to build terminals with sustainable technologies and how temporary terminals will be recycled by literally folding them up. Airports can be innovation hubs for new technologies like these. Great examples around the world are appearing, such as the new Mexican airport claiming to be the most sustainable one in the world. The construction of the airport would rely on an exclusive pre-manufactured system designed to quicken the rate of construction and minimize waste. The airport is designed to have shorter walking distances and fewer floors. Equipped with solar panels, ultimately providing 50 megawatts of peak power, the energy generated is enough to supply a large portion of the airport's energy use. With systems for re-utilization of rainwater as well as an intelligent ventilation system, solutions are created to reduce the airport's footprint in term of resource use, waist generation and of course CO2 emissions. It should also be said that besides being sustainable, its design is stunning, providing amazing views of planes circling the sky and showing its unique skin-like material wrapped around an enormous, lightweight structure.

The new coalition can share great innovations like these and use them to build new airports or renovate existing ones. Airports can become truly circular hotspots, not only for themselves, but also with an impact on constructions for cities, factories and other facilities such as hospitals. The impact of airports extends to a much bigger system level; construction and architecture. In reverse, airports, and certainly this new coalition, can learn from other constructing sectors to reach the highest possible circular rate, with the final destination being: zero waste and upcycling of material and waste from other places. Airports could even become the cleansing areas of the world! Jos Nijhuis, President and CEO of Royal Schiphol Group, mentioned Boyan Slat, our young Dutch hero who has the ambition to clean up the oceans of plastic waste. Let that inspire the coalition!

## **Cleaning up aviation: the next revolution in aviation**

It is also vital to let the coalition challenge and facilitate its customers, most importantly the airlines. At a time where we have just witnessed the around the world tour of Solar Impulse 2, powered only by the sun, the sky should literally become the limit. Pioneer Piccard's mission was the ultimate energy saving: no fuel at all. He dares to take a bet on the fact that in 10 years' time, commercial short haul flights will be able to transport 50 passengers at a time in fully electric carriers. Imagine the impact of eliminating all negative particles and the resulting CO2 impact. And imagine from that moment on having totally silent airplanes and airports during the day and, most significantly, at night. The impact on both nature and people would be tremendous and would contribute to most of our Sustainable Development Goals (SDGs).

In the meantime, at this year's conference, a new partnership between the Carbon War Room, a global non-profit organization founded by Sir Richard Branson, and SKYNRG, an aggregator and supplier of sustainable aviation fuels, based in the Netherlands, made Seattle Tacoma International airport the world's first airport to proactively explore long-term financing for sustainable aviation fuels.

This is instrumental for now, but the game needs to be changed. The ultimate goal should be to strive for absolute zero carbon, as outlined in Piccard's mission. Fortunately, hope is on the way: Nasa has started utilizing a new facility to test electric aircraft technologies in what will become the 'next revolution in aviation'. NASA's New Electric Aircraft Testbed (NEAT) facility will become -after completion- a testbed used to assemble and test power systems for large passenger airplanes with over 20 megawatts (MW) of power. Progress is already being made. The largest sustainable aircraft so far has passed recent tests. The aircraft, measuring 92m long has recently passed ground systems tests in Bedfordshire, UK. Named Airlander 10 and owned by Hybrid Air Vehicles (HAV), the vehicle is 60 percent lighter than traditional aircrafts, eliminating materials which typically weigh aircrafts down. The aircraft is approximately 50ft larger than conventional passenger aircrafts. Incorporating lightweight composites, the construction foregoes any internal structures but is supported by the use of helium, alongside internal gas pressures which supports and maintains the aircraft's shape. Chris Daniels, Communications Director, HAV, said in an interview recently that he believes this will be the first aircraft of its size to achieve commercially viable zero carbon flight, once the technology is well established.

### **High expectations: a threefold ambition**

Airports can challenge aviation, combat climate change, facilitate and become breeding grounds of innovation. It is the future and a tremendous opportunity. One that involves a threefold ambition at least. Become CO2 positive, circular, and an innovation hotspot that is a breeding ground for innovative progress from all sectors and most significantly, aviation. I can't wait to see what next year's Airports Going Green conference will bring. A year from now, and given the above: we should expect innovation and opportunities to soar!

Follow Marga Hoek on Twitter: [www.twitter.com/bfg\\_world](https://www.twitter.com/bfg_world)