



## SUMMARY BENCHMARK REPORT CE DELFT

### Analysis of fuel efficiency and other sustainability criteria

#### Summary

KLM and the Dutch branch of the Worldwide Fund for Nature - het Wereld Natuur Fonds (WNF) – have established a ‘cooperation agreement’ in 2007. The scope of the cooperation agreement between KLM and WWF NL is focusing on CO2 efficiency, nature conservation and clean technology. One of the conditions for this partnership was the fact that KLM had been judged to be ‘best in class’ in terms of CO2 efficiency of its operations. This should be evaluated by an independent benchmark study in 2011.

This study has assessed how the sustainability achievements of KLM compare to those of other airlines. Seven criteria were used for this assessment. The following conclusions were reached on the basis of these criteria.

1. **Observed fuel efficiency**

We have calculated fuel efficiency per revenue tonne kilometre, which is a measure of passengers and freight transported. In terms of current fuel efficiency, KLM is performing second-best of the airlines analysed (behind Cathay Pacific) but is best-in-class of airlines with a comparable network. Its CO2 efficiency (0.85 kg/RTK) is much better than the unweighted average efficiency (0.99 kg/RTK).

2. **Targets relating to fuel efficiency**

All airlines in this study have been taking measures to improve fuel efficiency, such as fleet renewal and reducing weight on board. Most airlines have also set fuel efficiency targets for the years until 2020. This includes KLM and Lufthansa, whose target (2%) is higher than the IATA target for the industry as a whole (1.5%). Therefore, KLM is best-in-class, especially when considering the fact that its current fuel efficiency is already very high.

3. **Biofuel strategies**

The development of affordable and sustainable biofuels is a prerequisite for halving emissions by 2050, which is the current IATA goal. In 2009, KLM has executed a test flight with a biofuel blend (like several other airlines) and it participates in several initiatives on sustainable biofuels. However, it has not set a target for using biofuels, unlike some other airlines. We therefore consider KLM to be a runner-up in the field of biofuels.

4. **Carbon offset programs**

Most airlines, including KLM, have carbon offset programs in place, each with different specifications. We have looked at the type of program, certification, the price of offsets, the calculation method and whether it was integrated in the booking process. KLM is considered to be best-in-class, because it adheres to the Gold Standard certification, its offsets are cheap and it has integrated the possibility to offset carbon in its booking process.



5. [Participation in CDP](#)

The Carbon Disclosure Project collects information on environmental performance from many airlines. Due to its participation in the Carbon Disclosure Project and the highest score it receives on disclosure, it follows that KLM is best-in-class in its transparency on CO2 emissions.

6. [Participation in DJSI](#)

The Dow Jones Sustainability Index identifies global sustainability leaders on the basis of economic, environmental and social criteria. Together with Air France and Iberia, KLM is included in the Dow Jones Sustainability World Index. It has also been named 'super sector leader' in the category Travel & Leisure. It follows that KLM/Air France are best-in-class, according to Dow Jones.

7. [Collaboration with universities and other innovation/sustainability institutions/programmes.](#)

Many airlines participate in research projects aimed at reducing the climate impact of aviation. Based on public sources, Lufthansa appears to be the most active airline in this respect. KLM ranks average amongst the airlines analysed. However, only the number of projects was considered, not the (financial) commitment to the projects. Unfortunately, this information is not public.

Taken these seven criteria together, it can be concluded that KLM performs best-in-class on five criteria (including fuel efficiency), and scores average on the other two. Of these criteria, fuel efficiency is the most important criteria, because fuel consumption is proportionally related to CO2 emissions, and these have the largest environmental impact. It is therefore fair to say that KLM scores very well on sustainability and that the cooperation agreement with WNF can be extended.

*Source: KLM Benchmark for WWF-Netherlands, Analysis of fuel efficiency and other sustainability criteria. By CE Delft, May 2011*