VIRGIN ATLANTIC PILOTS HELP TO FLY GREENER

- **An academic study on pilot fuel and carbon efficiency has delivered savings of more than 21,000 tonnes of CO_2**

London, 20th June 2016 – Virgin Atlantic has partnered with leading academics at the London School of Economics and the University of Chicago, to devise a new approach to delivering standard fuel and carbon efficiency information to pilots. This innovative, evidence-based approach resulted in savings of 21,500 tonnes of carbon, and £3.3 million in fuel costs.

Working collaboratively with academics, Virgin Atlantic's fuel efficiency and sustainability teams developed a process that increased Captains' awareness of the measures they could take to improve on fuel efficiency. There are a number of things pilots can potentially do to improve fuel consumption and carbon efficiency, which has traditionally been presented to them through training and on-board manuals.

In this project, Captains were randomised into four different groups. These were based on delivering standard fuel efficiency information to the Captains, on three sets of behaviours they can take – before take-off, in the air and upon arrival – all of which can have an effect on fuel consumption.

- **Group one** – a 'business as usual' control group, who continued receiving standard fuel efficiency information in the usual way
- **Group two** – were sent information on the three sets of behaviours, once a month by post, along with personalised feedback about their fuel efficiency practices
- **Group three** – the same as group two, but with targets to aim for
- **Group four** – the same as group three, but with a donation to charity, if targets were met

Data from more than 40,000 flights was independently analysed by the university team. Of all the groups, numbers three and four produced the most savings, but there was a significant improvement in fuel efficient behaviours in all groups – with the study concluding that raising awareness among pilots is enough to drive significant changes. In addition, in an anonymised post study satisfaction survey, the Captains reported high levels of job satisfaction, with 81% of those responding suggesting they'd like more fuel efficiency information in future.

Dr Emma Harvey, Head of Sustainability at Virgin Atlantic commented:

"When the university team approached us about doing an evidence-based study on employee engagement on sustainability, we saw it as a fantastic opportunity to work more effectively with our pilots on fuel and carbon efficiency. They were certainly up for the challenge. Consulting closely with an experienced group of Captains, we were able to design something that would work for them. It was a big undertaking, but the impressive study results are a testament to all of those involved. We're excited to see how we can build on these findings in future."

-ENDS-

For more information, please contact press.office@fly.virgin.com or 01293 747373

To learn more about the **Captains' Study**, visit www.virgin-atlantic.com/changeisintheair and click on the *'What's going on'* news page. You can also watch our Change is in the Air short animation and download our sustainability reports.

To read the full academic paper visit http://www.nber.org/papers/w22316. *Gosnell, Greer K., John A. List, and Robert D. Metcalfe (2016). A New Approach to an Age-Old Problem: Solving Externalities by Incenting Workers Directly. NBER Working Paper.*

Since establishing its 'Change is in the Air' sustainability programme in 2007, improving fuel and carbon efficiency has been the top environmental priority for Virgin Atlantic. Over the last few years, the airline has been heavily investing in replacing older ,less efficient aircraft, with A330s and B787s – both of which are about 30% more efficient per trip than the aircraft they're replacing. The airline has also been undertaking a range of operational measures. As aircraft fuel use is such a large proportion of the emissions the airline produces, lots of small incremental changes add up to significant savings. The Captains' study is the latest of these measures. And with an eye on the future, the airline is also innovating on new fuels with low carbon fuel company LanzaTech.

About Virgin Atlantic

Virgin Atlantic was founded by entrepreneur Sir Richard Branson over 30 years ago after he decided the UK aviation industry needed shaking up and style injected back into it. On 22nd June 1984, Virgin Atlantic's inaugural flight to Newark took place, on an aircraft filled with personal friends, celebrities and the media.

The airline has pioneered a range of innovations setting new standards of service. For example, Virgin Atlantic was the first airline to introduce the Premium Economy product, include a bar in every aircraft for Upper Class customers, offer seatback TVs on every seat in every cabin, develop a fully flatbed seat and fly a commercial aircraft on biofuels. Despite Virgin Atlantic's growth, the service still remains customer driven with an emphasis on value for money, quality, fun and innovation.

Today, Virgin Atlantic flies to 33 destinations worldwide, including locations across the United States, the Caribbean, Africa, the Middle East and Asia. Virgin Atlantic currently has a fleet of 39 aircraft, which is comprised of Boeing 747s, Boeing 787s, Airbus A340-600s and A330-300s.