# Case study: Improved delivery vehicle logistics

- Institution: Cranfield University
- Funder: Defra
- Sector: Transport
- Project Type: Consultancy

Road transport accounts for about 20% of the total GHG emissions of the UK, and HGVs and LGVs are responsible for about one-third of these. The total direct GHG emissions from HGVs and LGVs in 2008 were about 40 Mt $CO_2$e.

Dr Andrew Palmer, a Cranfield University visiting fellow and former PhD student contributed to the transport recommendations for the food distribution industry following publication of The Food Industry Sustainability Strategy. These recommendations were taken up by IGD as part of the Efficient Consumer Response (ECR – UK) initiative and implemented with 40 leading UK brands. They reported that this initiative had taken off 124 million road miles (equivalent to 60 million litres of diesel fuel) from UK roads over three years (2007–2009) and 163 million road miles up to 2010, with a target of 200 million road miles by the end of 2011.

The quoted reduction in vehicle use up to 2010 is equivalent to 250 kt $CO_2$e, but this cannot all be attributed to Cranfield University's carbon brainprint, because Dr Palmer was only one of the authors of the report and he was not an employee of the university at the time. We estimate the attributable brainprint to be 56 kt $CO_2$e with a 95% confidence range of 32–87. Assuming that this is maintained until 2020, and assuming a 1%/year increase in efficiency independent of this work, which will reduce the future brainprint, gives an estimate of 187 kt $CO_2$e (102–295) for the period 2007–2020.