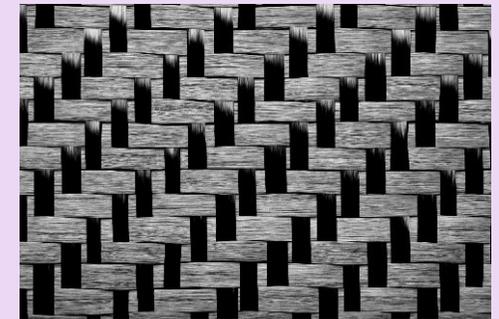


# Recycled Carbon Fibre Reinforced Polymer (CFRP)

Research at the University of Warwick (led by Professor Kirwan and his team) has established the technical and commercial **viability of recycled carbon fibre reinforced polymer (CFRP) in high-performance manufacturing industries**, including **automotive and aerospace**. A collaboration with West Midlands employer, and industrial partner, **ELG Carbon Fibre** led to development of the innovative lightweight **Carbiso** range of materials, now in use by companies across **26 countries**.



**26 countries served**



**ELG Carbon Fibre Ltd.**  
**RECYCLED CARBON FIBRE**

There have been **three key impacts** from Professor Kirwan's research:

- Impact on **production** – **significantly lower costs** to use recycled carbon, alleviating shortages of supply and improved environmental sustainability.
- Impact on **commerce** and the **economy** - because of improved production, industrial partners' annual sales have grown rapidly from £300,000 in 2016 to £2,000,000 in 2020 (**560%** increase). The research has supported the local economy by **protecting and creating jobs in the Midlands region**.
- Impact on the **environment** – the recycling of waste carbon fibre vs. virgin carbon fibre production has led to a decrease of **52,700t in carbon dioxide equivalents** and is the equivalent to the greenhouse gas emissions from 11,385 passenger vehicles driven for a year, the CO2 emissions from 58,000,000lbs of coal burnt, or the carbon sequestered from 68,824 acres of forest.

The number of people employed by ELGCF has increased from 42 in 2016 to **102** in 2020. Overall, the collaboration between WMG and ELGCF is a prime example of **superior industrial-facing research** – solving specific production challenges to hasten commercial, economic and environmental benefits. The MD of ELGCF stated: "Growth and inward investment on such a rapid timescale between 2016 and 2020 would have been impossible without input from the University of Warwick, accelerating ELGCF to world-leader status for carbon fibre recycling far sooner than would have occurred without this greatly valued collaboration".



**60 more people employed within 4 years**



**£2m in sales annually from the CFRP product**