



## **CHALLENGE 1**

# **GREENER EV COMPONENTS**



### **CHALLENGE STATEMENT**

Design or produce components which reduce embodied carbon across the vehicle lifecycle.

### **CHALLENGE DESCRIPTION**

We are seeking solutions for life-cycle sustainability of electric vehicles which also aid in removing one of the largest blockers in the uptake of clean transport technology: cost of acquisition and use.

By combining sustainability and affordability, we aim to contribute to the desire of the population of users to choose sustainable options. In the West Midlands today, there are over 3 million cars, projected to increase to 4 million by 2030. The growth rate of EV uptake was 50% from 2021 to 2022.

We are looking for SMEs involved in manufacturing of systems and sub-systems for any type of electric vehicle from micro-mobility, through traditional road vehicles, to public transport, and HGVs and other large vehicles.

This will also support the transition of traditional manufacturing and supply chains in the West Midlands to the electric vehicle market. In fact, companies making parts for conventional transport systems have high potential to access this challenge through changes to their process or selecting alternative materials or parts.

### **SOLUTION EXAMPLES**

Solutions that address this challenge could include:

- Local manufacturers producing components for traditional vehicles at scale (with cost efficiencies) which could be adapted to EVs.
- Use of alternative materials which are more sustainable or cost effective.
- Lightweighting solutions or components for EVs.
- SMEs solving challenges to adapt components for traditional vehicles for EVs, or manufacturing these components in a way which will become more cost effective than the existing solution at scale.
- SMEs supporting designing or manufacturing EV components more efficiently (in terms of cost and/or emissions).
- Manufacturers of solutions to improve in-life serviceability of battery packs, even in cases where a single cell fails.