

Circe

Circe is a project born within the **LIFE programme**, the European funding instrument for supporting new initiatives aiming to protect the environment.

Its strength is based on the partnership of **five Italian companies** operating in the **research and industrial sector**, oriented to product and industrial processes innovation.

Companies with different core businesses, yet firmly bound by a common objective: encouraging the **reuse of composite materials** through the circular economy paradigm. Which, basically, means giving **new life to the future of the planet**.

Three years to make the difference

The **Circe** project aims to achieve ambitious goals over three years, under the European **LIFE** program: from **1 September 2019** to **31 August 2022**. These goals range from the reduction of the environmental impacts of industrial wastes, to the optimization of the use of natural resources; from the development of a leaner and less polluting mobility, to the birth of a recycling virtuous paradigm dedicated to the carbon-fibre sector.

- **10 tons** per year less of **carbon fibre** prepreg sent to landfill by the end of the project.

- **550 tons** of **CO2** avoided (for every ton of prepreg), with a huge reduction in atmospheric emissions and a considerable saving from an energetic point of view.

- **5.000 tons** per year of recovered **carbon fibre** prepreg, three years after the end of the project.

HP composites

HP Composites is world leader in the production of carbon fiber components for the motorsport and automotive sectors.

Alci

Alci is a manufacturing company in metal and mechanical field, born in 1990. Alci develops customized machineries and production lines for rubber, pharmaceutical, food and chemical industries.

Cetma

Cetma is a Research and Technology Organization (RTO) which carries out for more than 25 years applied research, experimental development and technology transfer in the field of advanced materials (composites, polymers, bio-based and recycled), ICT (development of specialized software for engineering, manufacturing and services) and product development. It is a non-profit organization reinvesting all profits in research, training and technology transfer.

Petroceramics

Petroceramics S.p.A. is an Italian SME with decennial experience and expertise in the design, fabrication, processing and testing of various types of innovative ceramics and composites. Petroceramics develops new advanced ceramic materials and technological solution in a variety of field, such as: automotive and aerospace engineering, defense engineering, equipments, energy and environment, architectural design.

Base protection

Base Protection starts from the comfort to create work footwear which combine technologies and functionality, responding zto the needs of workers.



The Circe project in five steps

1

CFRP production

The carbon fiber reinforced polymers are innovative and ultralight materials, increasingly appreciated and applied in the automotive, motorsport, shipbuilding, aerospace, industrial and design sectors.

2

Where the scraps end up

During the production of carbon fibre composites, waste and scraps of industrial material are generated. Wastes that - in the best scenario - end up in landfills or inside incinerators, with important repercussions in terms of pollution. Today, due to the technical complexity required by the recovery process, no effective system for recycling such industrial waste exists.

3

The ideas behind the Circe project

From the imperative need of safeguarding the environment and optimizing the use of natural resources, an ambitious idea is born: Circe. Five Italian companies for a project intending to redesign the industrial recycling chain through innovation.

4

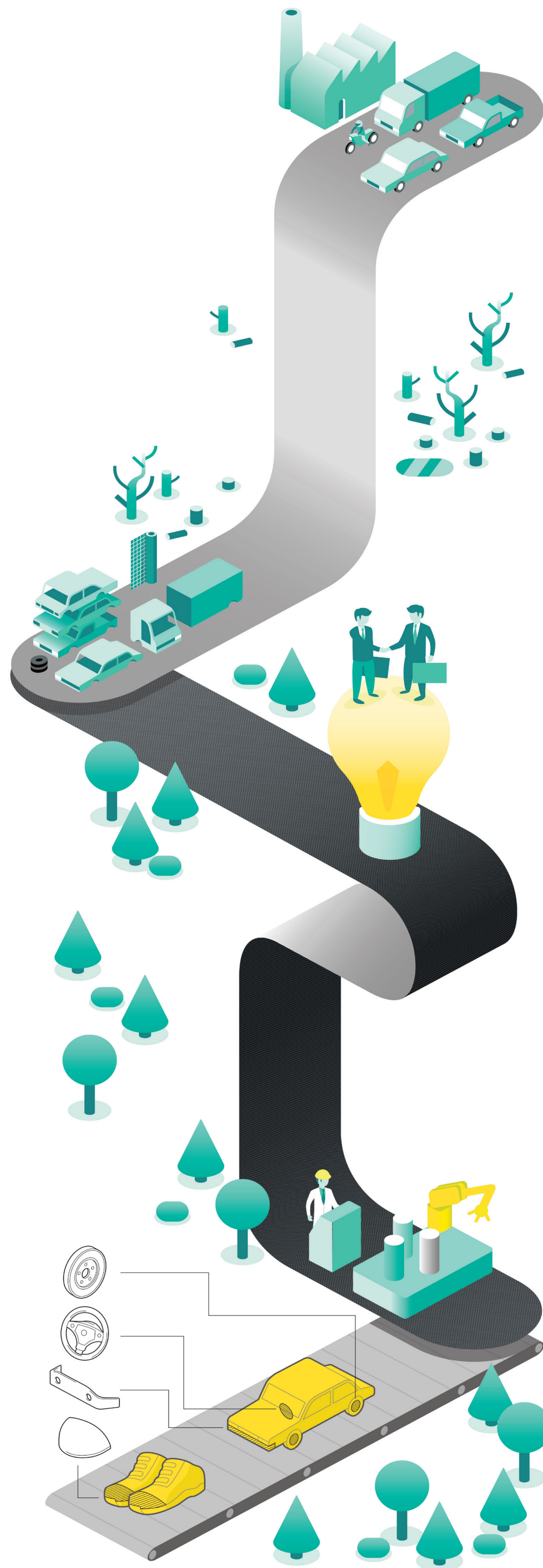
The means to reach the goal

The Circe team will develop two innovative machines that will allow to select, resize and process carbon fiber scraps for their re-use.

5

Reuse to create new products

The re-processed carbon fibre prepreg scraps will be used to produce automotive components, brake discs, toecaps for safety work shoes and other types of applications.



Re-inventing
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