

The Carbon Fibre Circular Alliance

Led by the World Sailing Trust, the CFCA is an alliance formed by the International Biathlon Union, the International Tennis Federation (ITF), Union Cycliste Internationale (UCI), and sports equipment manufacturers Wilson Sporting Goods, Starboard, SCOTT Sports and OneWay who are collaborating to support an innovative and disruptive programme based on the reuse of carbon components within the sports sector.

The sports industry uses



of carbon fibre every year

The sports industry is the



3rd 

largest global user of Carbon Fibre

Most carbon fibre sports equipment has an average of a



and ultimately

90%



of end-of-life carbon fibre equipment ends up in landfill



Our Background

- The CFCA was officially launched on Earth Day (22 April 2022) with the announcement of a Demonstration Project Alliance of four international federations, International Biathlon Union, World Sailing, International Tennis Federation and Union Cycliste Internationale, and four equipment manufacturers, Wilson Sporting Goods, SCOTT Sports, Starboard and OneWay. The Alliance is managed and coordinated by the World Sailing Trust.
- The Demonstration Project was successfully concluded, and during 2022 the equipment manufacturers successfully tested the recycled carbon fibre tape, known as AFFT tape (Aligned Formable Fibre Technology) on prototype equipment.
- In June 2022 Wilson Sporting Goods, produced a prototype tennis racquet made with 50% AFFT tape. The performance testing of the racquet was very positive, demonstrating proof of concept that the realigned material is suitable for high performance equipment.
- SCOTT Sports has built a prototype ski using the realigned carbon fibres from a bicycle frame, while Starboard has made a fin for a windsurf board from the realigned carbon fibres from a paddle-blade. All have concluded that the performance properties of the realigned carbon fibre tape are the same to that of virgin carbon fibre.

Our Awards

We are very proud to have been presented with the following awards in 2022.



2022 BASIS Award for Innovation - Process

BASIS

2022 Composites UK Sustainability Award

(Lineat Composites for collaborative project with World Sailing Trust)

CompositesUK
Trade Association

2022 METS DAME Award Charity Beneficiary

(World Sailing Trust for work on Carbon Fibre Circular Alliance)

DAME

 **WORLD SAILING TRUST**

Our Aim

To instill a circularity mindset within the sports industry, in particular sports equipment

Our Targets

- *Target 1*

Showcase AFFT sports equipment at the Summer Olympic Games 2024 and nurture support and endorsement for a circularity mindset from athletes, coaches and wider public.

- *Target 2*

Showcase AFFT sports equipment at the Winter Olympic Games 2026 and nurture support and endorsement for a circularity mindset from athletes, coaches and wider public.

- *Target 3*

Summer Olympic Games 2028 – encourage sports that use carbon fibre equipment to select equipment non-virgin carbon. Target percentage of equipment to be defined by stakeholders.

- *Target 4*

Widen remit to include other materials under a wider Sports Circular Alliance umbrella.

The Next Step

- With the successful completion of the Demonstration Project period, the Alliance will be formalising its position at the heart of a circular mindset within sport, and in particular sport equipment.
- To continue to develop this work, the World Sailing Trust appointed PA Consulting to carry out an interview process and audit with existing stakeholders to confirm the direction for the CFCA.
- As a result the Phase Two of the CFCA will operate under a more formal membership structure.
- This will serve to encourage as many International Federations and Equipment Manufacturers to join the drive for greater circularity, and responsibility for end-of-life sports equipment.

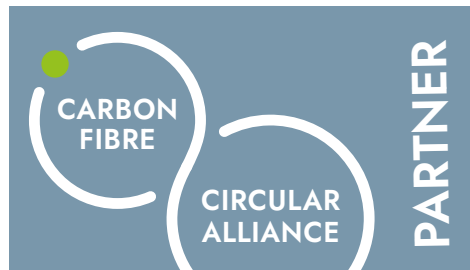
*At the heart
of a circular
mindset within
sport and sports
equipment*

CFCA Partnership

The CFCA welcomes International Federations and allied sports equipment manufacturers to become members of the Alliance.

Alliance members will receive a range of benefits including:

- Use of CFCA logo and brand on all relevant collateral
- Association with an award-winning, ground breaking circularity sports project
- Involvement in all marketing collateral
- Invitation to attend quarterly update meetings
- Collaboration and networking opportunities
- Quarterly technical presentations from Lineat Composites
- Access to full Lineat Composites circular process
- Annual composite workshops



*Welcoming
new partners
to share in
the many
benefits*



CFCA Members 2022

International Biathlon Union
& Wilson Sporting Goods
are founding members



Supporting Partner 2022-2024



What is Carbon Fibre?

- Carbon fibres are fibres about 5 to 10 micrometres (0.00020–0.00039 in) in diameter and composed mostly of carbon atoms. Carbon fibre is produced by bonding together carbon atoms into crystals that are more or less aligned parallel to the fibre's long axis as the crystal alignment gives the fibre a high strength-to-volume ratio (in other words, it is strong for its size). Several thousand carbon fibres are bundled together to form a tow (a bundle of continuous filaments), which may be used by itself or woven into a fabric.
- Carbon fibres are usually combined with other materials to form a composite. For example, when permeated with a plastic resin and baked, it forms carbon-fiber-reinforced polymer (often referred to as carbon fibre), which has a very high strength-to-weight ratio and is extremely rigid although somewhat brittle. Carbon fibres are also composited with other materials, such as graphite, to form reinforced carbon-carbon composites, which have a very high heat tolerance.
- Like any material that require a long and intense manufacturing process, carbon fibre has the potential to have a heavy effect on the environment.

Carbon Fibre Use in Sport

Currently, 50% of Summer Olympic sports and 90% of Winter Olympic Sports use equipment that includes carbon fibre (marked in green).



Summer Olympics - Tokyo 2020



Winter Olympics - Beijing 2020

Sports Circular Alliance

- While the initial focus remains on Carbon Fibre, the World Sailing Trust has created a Sports Circular Alliance structure, to look at other equipment materials that are not recyclable or reusable.
- The Sports Circular Alliance will look at increasing awareness and responsibility amongst its stakeholders and wider networks to adopt a more circular approach through education and research.

The logo for the Sports Circular Alliance is a white circle with a pink dot at the top left. Inside the circle, the words "SPORTS CIRCULAR ALLIANCE" are written in white, uppercase letters.

SPORTS
CIRCULAR
ALLIANCE

About the World Sailing Trust

The World Sailing Trust is a global charity established to support sailing in all its forms. It works to promote participation and access, support young sailing athletes and safeguard the world's waters for future generations.

- *Our Journey*

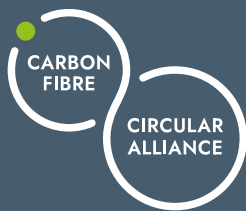
The World Sailing Trust was set up by World Sailing to catalyse change. Using collective influence, and working in partnership and collaborating with individuals and organisations around the world, the World Sailing Trust has the opportunity establish far-reaching partnerships to safeguard the future of sailing and our planet's waters.

- *What we believe*

We have a responsibility to protect the world's waters and to promote environmentally sustainable activities, products and practices. Sailing is for everyone, whatever their gender, capacity, wealth, age or nationality. We believe that sailing as a sport benefits when a diverse range of people are able to participate, and we know that the opportunity to sail benefits individuals too.



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