*August 2024 – for immediate release*

**Renishaw celebrates Olympics success with British Cycling**

As Team GB celebrates its success at the Paris 2024 Olympic Games, global engineering technologies company, [Renishaw](https://www.renishaw.com/en/metal-3d-printing--32084?utm_source=StoneJunction&utm_medium=HN&utm_campaign=OlympicBike&utm_id=REC868&utm_term=AdditiveManufacturing&utm_content=owned), is celebrating its role in providing additive manufacturing (AM) expertise for the manufacture of a highly successful track bike for British Cycling. At the Games, Team GB brought home 65 medals, including 11 in cycling, eight of which came from the track. To assist the riders who faced fierce competition at the Games, British Cycling’s bike had to deliver maximum performance in speed, balance and aerodynamics. This made design and manufacturing capabilities, including metal additive manufacturing (3D printing), a critical part of the organisation’s efforts to help Team GB maximise its medal haul.

The 2024 Olympics was very successful for Team GB’s track cyclists. A notable highlight was Katy Marchant, Sophie Capewell, and Emma Finucane winning gold in the women’s team sprint, coming from behind to break the world record for a third time in one day. Behind Team GB’s cycling success is British Cycling, the national governing body for cycling in Great Britain. It provides riders of all backgrounds and abilities with opportunities to hone their skills and meet their potential in diverse disciplines covering BMX, mountain bike, road and track cycling. The organisation’s equipment and apparel development team is constantly pushing the boundaries of innovation to develop new bikes for Team GB’s cycling teams.

After the 2020 Olympic Games in Tokyo, British Cycling knew it wanted to extend its existing partnerships with Lotus Engineering, Renishaw and Hope Technology, to develop and manufacture its bike for the 2024 Olympic Games. However, because of COVID delays to the 2020 Games and shorter deadlines to present a new bike for 2024, it was under significant time constraints to deliver an optimised bike.

“The carbon fibre parts produced using traditional machining methods for the Tokyo bike met all the requirements we had, but time constraints for the Paris bike meant that this method was no longer viable for some bespoke parts,” explained Dr Oliver Caddy, Lead Project Engineer at British Cycling. “After seeing the benefits of AM and what it helped us achieve on the Tokyo bike, we knew it could be a manufacturing method to explore further.”

Ben Collins, Lead Additive Manufacturing Applications Engineer at Renishaw, added: “After determining that the British Cycling team could not produce core crank and seat posts components in carbon fibre within the shorter time frame required, we began creating some additively manufactured prototypes in plastic.”

“Additive manufacturing enabled us to create complex geometries that removed any unnecessary weight while delivering the strength required for the athletes to reach racing speed. To develop a more aerodynamic seat post, engineers designed more free-form geometries to hollow out the part as much as possible, something that would not be achievable using traditional methods,” added Collins.

“We are delighted for British Cycling on another successful Olympic Games and to be able to play a part in this. It’s a fantastic achievement and a great showcase of the benefits of additive manufacturing,” concluded Collins.

British Cycling’s partnership with Renishaw resulted in it having a first-of-its-kind aerodynamic seat post, featuring a hollow centre and backwards leaning design, allowing airflow through the centre of the bike. Additive manufacturing facilitated the rapid production of unique titanium seat posts to the exact measurements of the individual riders. Over the course of the project Renishaw manufactured over 1,000 parts to support 32 track bikes plus spares

The new cutting-edge bike was ridden by Great Britain’s track cyclists at the track cycling events, which took place between August 5th and 11th at the Paris 2024 Olympic Games National Velodrome.

To learn more about Renishaw’s work with British Cycling, read the full case study on Renishaw’s website: [Renishaw brings AM innovation to Olympic track bike components](https://www.renishaw.com/en/48767.aspx)

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**Notes to editors**

**About Renishaw**

Renishaw is a world leading supplier of measuring systems and manufacturing systems. Its products give high accuracy and precision, gathering data to provide customers and end users with traceability and confidence in what they’re making. This technology also helps its customers to innovate their products and processes.

It is a global business, with over 5,000 employees located in the 36 countries where it has wholly owned subsidiary operations. The majority of R&D work takes place in the UK, with the largest manufacturing sites located in the UK, Ireland and India.

For the year ended June 2023 Renishaw recorded sales of £688.6 million of which 95% was due to exports. The company’s largest markets are China, USA, Japan and Germany.

Renishaw is guided by its purpose: Transforming Tomorrow Together. This means working with its customers to make the products, create the materials, and develop the therapies that are going to be needed for the future.

Further information at [www.renishaw.com](http://www.renishaw.com/)