

# 10 years of coinnovation transforms the Tour de France and Tour de France Femmes avec Zwift

## Client profile

Amaury Sport Organisation (A.S.O.) are the owners and operators of the Tour de France and Tour de France Femmes avec Zwift as well as other top international sporting events, including the Dakar Rally, the Paris Marathon and the Ladies Open de France golf tournament. They organize 240 days of competition each year, running 90 events in 25 countries.

## Why NTT DATA?

- 10 years of partnership
- Official Technology Partner
- Expertise in edge

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We want our fans to have an exceptional experience, whether they're at home or on the roadside cheering on the race. Without the platforms and technology that we built and managed with NTT DATA this simply wouldn't be possible.

**Yann Le Moenner, CEO, A.S.O.**

### Business need

- Immersive race experience for fans
- Smooth race and event management
- Enhanced rider safety

### Solution

- Data analytics through edge computing
- Machine learning and AI models
- Digital twin of the races
- AI-enabled digital human, Marianne
- Fantasy leagues

### Outcomes

- Largest connected stadium
- Enhanced fan experience
- Improved operational efficiency



## Business need

### Use technology to bring a real race to real fans

The partnership between the Tour de France and NTT DATA began in 2014, when we installed IoT-enabled rider tracking and data-gathering – just in time for the 2015 Tour de France. For the first time in the history of the race, live data from the trackers was shared on television broadcasts, giving fans second-by-second information on rider speeds and locations.

2024 marks a decade of our collaboration as the Official Technology Partner of the Tour de France and, since 2022, the Tour de France Femmes avec Zwift. Our enduring partnership has revolutionized the management of the world's most prestigious cycling event, created a more immersive fan experience and pushed the boundaries of technological innovation. The innovations pioneered at the Tour de France have accelerated the digital transformation of professional cycling, showcasing how putting data at the fingertips of fans and officials can transform the way races are managed and experienced.

To bring the race to the fans, we combine cutting-edge technologies such as IoT, machine learning, artificial intelligence and edge computing. The IoT sensors underneath bicycle saddles transmit a constant stream of latitude, longitude and speed data. This live telemetry feeds into the TV broadcast, social media and other digital channels, giving fans and followers a greater understanding of team tactics and individual rider performance, and greatly enhancing their experience of the race.

Technology also gives race organizers a complete view of race operations, empowering them to make fast, informed, data-driven decisions to address any incidents in real time.

From in-depth analytics and visualizations to the digital twin of the event, 3D race tracker and an AI-enabled digital human, our solutions showcase the indomitable spirit of the riders in the peloton and help the organizers manage the race effectively and keep operations running smoothly.

## Solution

### Consistent experience across a challenging route

Each year, fans and riders wait in suspense to find out just where the race will take place, as the routes for the Tour de France and Tour de France Femmes avec Zwift change for each edition of the race. All they know for sure is that some of the stages will span remote parts of France and Europe.

This is the beauty of having an entire continent as your event location – but it's also a technological challenge.

With race officials and broadcasters moving to different cities and remote locations every day, the network has to be flexible and reliable enough to connect fans, organizers and officials to the race environment and the riders in real time.

In our first year as Official Technology Partner, our solution focused mainly on the IoT sensors attached to each bike. The raw data gathered from these tracking devices was processed by our cloud-based data analytics platform and enhanced with additional data, such as local weather conditions, to generate detailed insights using machine learning models. These insights were then shared across various race channels, including live broadcasts, applications and social media, providing fans with engaging, near real-time experiences.

Fast-forward through 10 years of constantly improving and evolving our solution, we now have a digital twin of the race. It combines layers of real-time information to create a digital version of the event, mirroring all its real-world complexities. The digital twin includes information on race vehicles, the publicity caravan, event assets, staff locations, the event village, occupancy of VIP and other zones, and even weather conditions. Race officials and security teams now have the necessary insights to make important decisions fast.

The digital twin allows us to further enhance the fan experience, with new visualizations and exciting stories being created every year. The Tour de France Fantasy League and the Tour de France Femmes Fantasy League offer another way for fans to engage with the race.

In 2022, we introduced our digital human, Marianne to further enhance the fan experience. This lifelike avatar, located in our Tech Truck at the event, answered questions and provided information around the Tour de France to NTT DATA clients.

## Outcomes

### For fans, race organizers and riders

Through a decade of partnership, the two organizations have continued to push the boundaries of what can be done with data. By connecting what's happening at the very edge of the network to passionate fans and race organizers, we've fundamentally changed the way the race is viewed and managed.

The technology platform powering the Tour de France ensures 100% uptime, so distributed, international teams can work together to ensure a great experience.

### Enhanced fan engagement

The Tour de France has successfully connected with millions of fans worldwide, providing them with rich and immersive experiences. Through the Race Center platform, fans can access real-time data, social media updates and commentary, including Fantasy Leagues and virtual time-trial gaps.

### Improved operational efficiency

The digital twin and real-time analytics give a complete view of events affecting the race as they unfold. This enables the organizers to proactively identify and address potential issues before they impact the race.

### A joint passion for innovation

The Tour de France and NTT DATA have fostered a culture of collaboration and innovation, constantly exploring opportunities that technology brings to these iconic races.

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Technology plays a vital part in helping us innovate at the speed fans expect from their mobile and cloud-based applications, all the while providing event insights, rich analytics, and intelligent digital solutions.

**Pascal Queirel**, Chief Technology Officer, A.S.O.