



Sports tech

TRANSFORMATION HANDBOOK

2022

Transformation is in our DNA

The public health and economic crisis triggered by COVID-19 has focused our minds on the need for **a swifter economic and social transformation** – the only way we can count on a full recovery and get back on track for growth.

We believe that **digitalisation is key** to making this transformation possible. Technologies such as 5G, cloud storage, cybersecurity, AI, big data and IoT will be game-changing – as demonstrated by our extensive catalogue of solutions, applications and use cases. Our capacities and experience make us the perfect partner for businesses and local authorities as they take on the digital challenge.

We stand for a **fair, inclusive and sustainable digital transformation**. Our mission is to harness technology for people and planet, lightening the environmental load and offering our clients solutions that get them working more efficiently and sustainably.



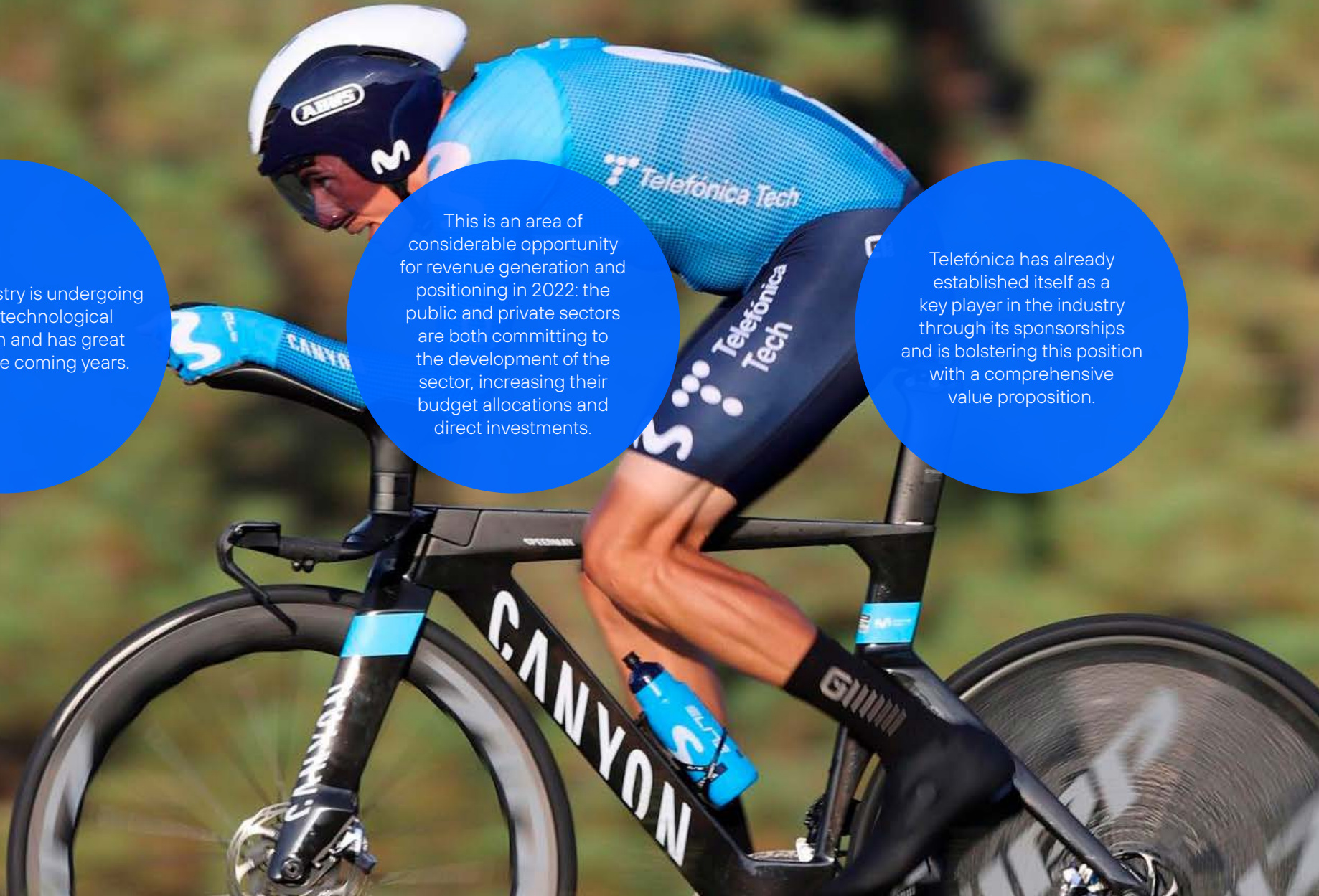
Sport:

a key sector for society and the economy

The sports industry is undergoing a process of technological transformation and has great potential for the coming years.

This is an area of considerable opportunity for revenue generation and positioning in 2022: the public and private sectors are both committing to the development of the sector, increasing their budget allocations and direct investments.

Telefónica has already established itself as a key player in the industry through its sponsorships and is bolstering this position with a comprehensive value proposition.



How we're revolutionising sport

ROYAL SPANISH ATHLETICS FEDERATION

SPORTS PERFORMANCE

We are working with the Royal Spanish Athletics Federation to develop a bespoke tech solution, to improve athletes' performance. The solution extracts data from sensors attached to athletes' bodies, providing relevant technical assistance to athletes and their coaches during training, giving them a completely legal competitive advantage, thanks to the use of artificial intelligence.



EUROPEAN TOUR

SPECIFIC 5G COVERAGE FOR EVENTS

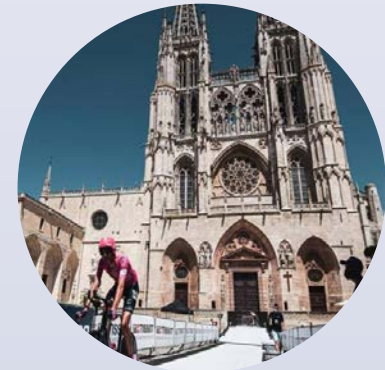
For the first time ever, Telefónica and the European Tour are rolling out specific 5G coverage for events at the Acciona Open de España. 5G will enable the use of connected drones to improve broadcast coverage, as well as a range of media and broadcast services and faster WiFi speeds for viewers.



LA VUELTA CYCLING TOUR

IMPACT ANALYSIS FOR SPORTING EVENTS

Telefónica Tech analyses the potential audiences of the first stage of the Vuelta a España cycling tour, focusing on the three main areas for mobilising cycling fans: physical mobility of potential live spectators, TV audiences in Spain (MovistarPlus+ platform) and digital media and social networks.





TESTIMONIALS

What our clients say...



● ● ● Raúl Chapado Serrano | **Royal Spanish Athletics Federation**
Chairman

"A new model, for a new era, with a high potential for growth and international expansion, using proactive interaction to explore new horizons and formats when it comes to elite sporting performance. This partnership represents a new dimension of sports preparation for elite athletes, who are now interconnected through the use of technology and a digital environment, which incorporates artificial intelligence and big data to enhance their performance."

Michael Cole | **European Tour FC**
CTO ● ● ●

The European Tour Group has made a significant drive towards technological innovation in recent years, and we are constantly assessing the latest technology to enhance our fans' experience – both on and off the course – while further optimising the efficiency of the rollout and operation of our tournaments. A golf tournament is one of the most complex operational challenges in sporting competitions when it comes to providing the media coverage it requires, as well as being a unique platform to test the benefits that technology such as 5G can bring. With the help of Telefónica, the Acciona Open de España tournament was a major milestone in our ambition to leverage 5G technology in our future global events."



● ● ● Javier Guillén | **Unipublic / Vuelta a España**
Managing Director

"The conclusions and direct returns were clear to see from the 100,000 people who came to Burgos on the starting weekend of La Vuelta. The money spent by institutions so that La Vuelta could start in Burgos was not a cost but an investment, and one that Burgos so richly deserved. This was undoubtedly an unforgettable edition of La Vuelta."

Royal Spanish Athletics Federation:

rendimiento deportivo



The various methods currently available for analysing the technique are slow to implement, expensive and difficult to access, as they require specialised and customised biomechanical studies. Athletes and their coaches can rely on this solution, which uses IoT and big data to extract data from sensors attached to athletes' bodies, providing relevant technical assistance in real time and accessible from any device.

OBJECTIVES

The objective was to enhance sporting performance through immediate, sustained and personalised support. This support is enabled by selecting high-precision parameters, then managing, assessing and interpreting them using artificial intelligence.

BENEFITS

- Continuous monitoring of sports performance.
- Inputs for athletes' technical improvement.
- Data-driven decision making.
- Democratisation of technology.



FURTHER INFORMATION

Press release: [Telefónica Tech and the Royal Spanish Athletics Federation team up to improve athlete performance.](#)

European Tour: temporary 5G networks

5G

EDGE
COMPUTING

DRON

BROADCAST
TV

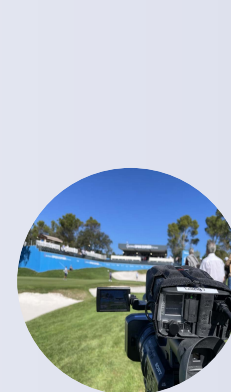
In collaboration with the European Tour, Telefónica rolled out a temporary 5G network made specifically for the ACCIONA Open de España, at Madrid's Club de Campo golf course. It was active from 7 to 21 October 2021 and this was the first professional golf tournament in Europe to apply this technology to its communications and TV broadcasts. Temporary coverage was deployed in both the 3.5 GHz and 26 GHz frequency bands, enabling various use cases, from TV broadcasting using drones and sensor connectivity on the golf course, to 5G internet connectivity to run the WiFi networks in VIP areas.

OBJECTIVES

The objective for the European Tour was to obtain more agile, efficient connectivity, enabling it to launch innovative new services at its competitions, to enhance the fan experience in a much easier way, while also improving the efficiency of the deployment and operation of one of the most complex sporting events to televise.

BENEFITS

The ET deployed between 30 and 40 kilometres of fibre for a four-day tournament. 5G is a technology with the potential to simplify the entire deployment process. For example, it offers much greater flexibility for placing cameras on drones, providing services to viewers and enabling novel solutions to be trialled at a much lower cost. 5G also helps to encourage remote production. Typically, 300 technicians and 40 cameras are sent to each tournament. 5G can help to slim these numbers, which will in turn reduce the overall carbon footprint.



FURTHER INFORMATION

Press release: [Telefónica and the European Tour deploy event specific 5G coverage.](#)

Vuelta a España cycling tour: impact analysis for sporting events

**BIG
DATA**

IoT

AI

La Vuelta 2021 cycling tour paid tribute to the eighth centenary year of the Cathedral of Burgos, with two stages passing through the city. This event helped to showcase the cathedral to the world in its centenary year, so it was viewed and commented on by a global audience of millions of cycling fans. Telefónica Tech analysed the impact of this event via the physical mobility of potential live spectators (mobile data), TV audiences in Spain (MovistarPlus+ platform) and digital media and social networks

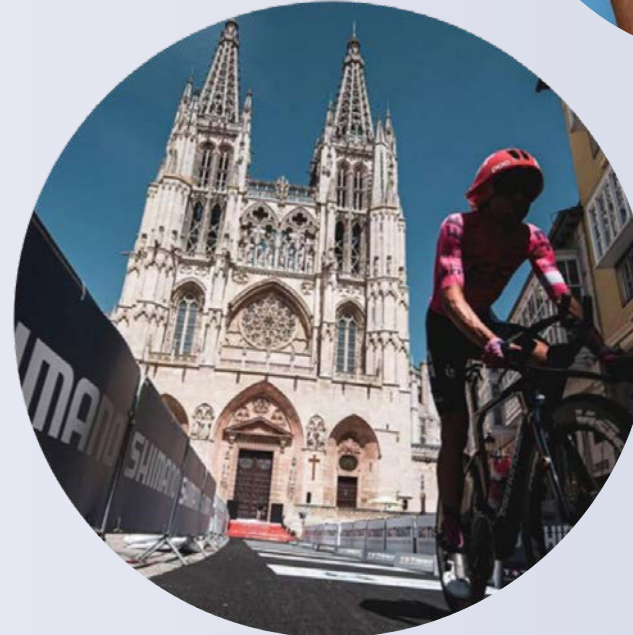
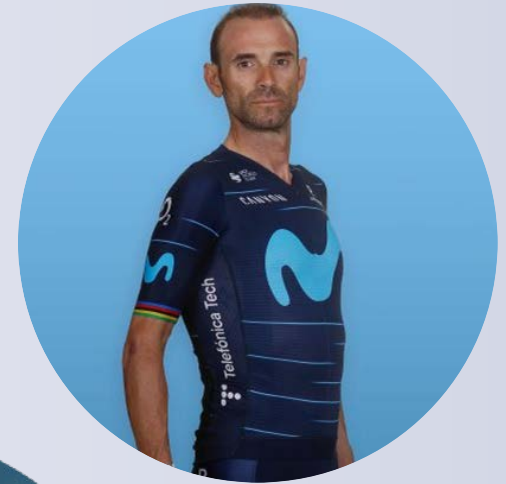
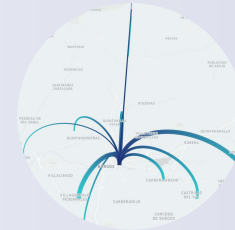
OBJECTIVES

The objective was to quantify the visibility given to the cathedral on its eighth centenary, by analysing the audiences viewing the two stages (14-15 August 2021) of the Vuelta a España cycling tour as it passed through Burgos.

BENEFITS

Quantifying the impact of hosting a sporting event:

- In terms of mobility, more than 100,000 people were physically present around the race route, 8,000 of whom were visiting from other provinces.
- On TV, the three days of broadcasting were followed by more than 1.6 million viewers around the country.
- The global audience reached across digital channels (online news and social media) exceeded 460 million people.



Other cases from the sector

Technological solutions focused on improving the end-user experience, player performance and digitalising club's physical spaces – stadiums, etc.

ATLÉTICO DE MADRID FC: DIGITALISATION OF SPACES



Thanks to advanced data analytics, we can apply the latest advances in sports science, big data, artificial intelligence and machine learning to develop training plans and create analytical tools that can give additional insights into an athlete or team's performance as they compete.



REAL-TIME SPORTS SENSORISATION



Thanks to our 5G coverage and edge computing centres, we rolled out a sensorisation solution via which the data gathered from the players is processed in real time and performance stats are projected in augmented reality on the game's live video stream. This allows the coach and technical team to make better-informed decisions during the match or training session.



THE BIGGEST INSTALLATION OF 5G COVERAGE OF ANY STADIUM IN EUROPE



Thanks to our new connectivity and computing capabilities, we rolled out a solution that enabled the automatic broadcasting of football matches thanks to 5G coverage and edge computing. The sporting event is automatically broadcast via a system of artificial intelligence that also uses additional solutions such as Heat Map and Kiss Cam.



MATCH PREPARATION AND STATS ON ADVERSARIES



Thanks to AI and the digitalisation of hundreds of thousands of data points, we have developed a unique tool that provides countless stats on Carolina's direct rivals, such as detecting their strengths and weaknesses, or the most likely trends for winning strokes.



Other cases from the sector

Technological solutions focused on improving the end-user experience, player performance and digitalising club's physical spaces – stadiums, etc.

360° BROADCASTING EVENTS WITH 5G



We're developing the use of 5G for broadcasting sporting events. The new technology offers a new immersive way of watching events in real time via virtual reality without having to be physically in the place where the event is taking place.

SPORTS TECHNOLOGY FOR CYCLISTS



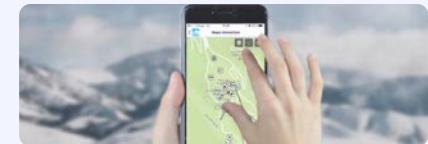
Thanks to advanced data analytics, we can apply the latest advances in sports science, big data, artificial intelligence and machine learning to collect data such as speed, pedal power and cadence, gradients and GPS positioning. This data is stored and later analysed across three phases: descriptive, predictive and prescriptive.

RECRUITING NEW PLAYERS



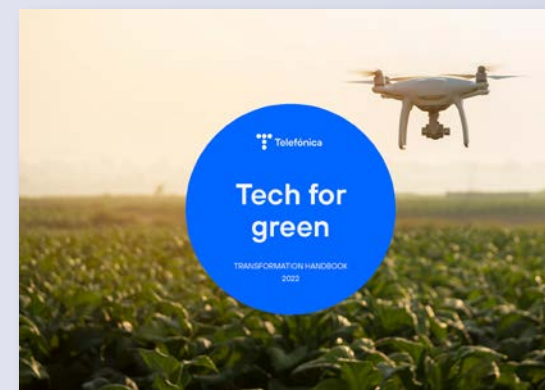
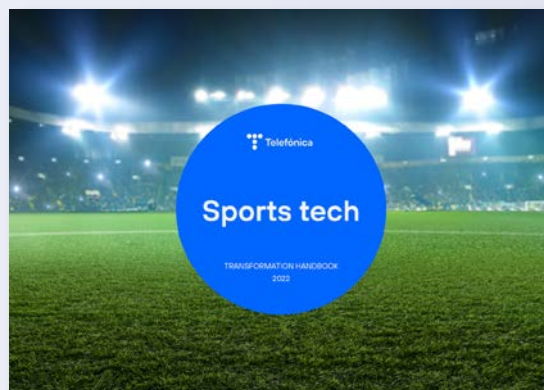
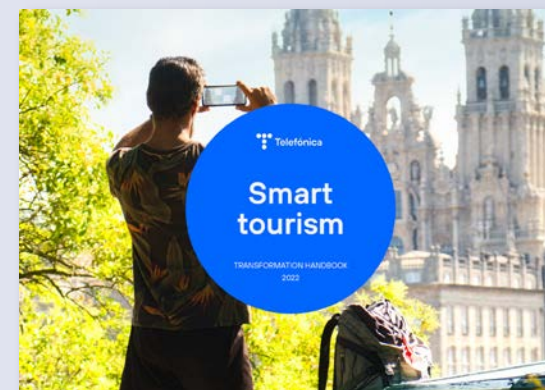
A large part of every club's budget goes on strengthening their team lineup with new players that will be profitable both in the sporting sense and economically speaking. Together with Movistar Students, we have developed a big data transfer tool which allows clubs to identify the best players from the national and international markets. This tool has been successfully applied in other sports such as football.

ENHANCING THE USER EXPERIENCE

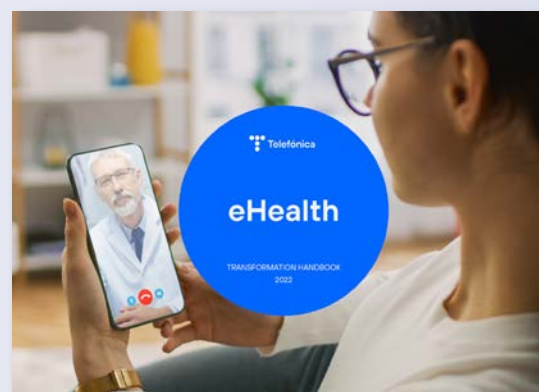


Big data, drones, artificial intelligence and IoT are some of the innovative technologies that are reshaping sports fans preferences and their habits, helping to create unforgettable experiences.

Transformation handbook collection



Transformation handbook collection



Want to *find out* more?

telefonicatech.com