

MWC2023 MAKING SUSTAINABILITY HAPPEN

Transformation Handbook

With almost 100 years of experience working in an ever-changing world, we have learnt that when we combine talent with human creativity, we can bring about greater social progress, and that technology is a key factor in unlocking that talent.

Our commitment to progress based on innovation, sustainability and inclusion, only makes sense if we use this technology for the benefit of everyone, everywhere, across all nations. Because making our world more human means we can help people and the planet.

That's why we're committed to the SDGs by driving **sustainable and inclusive development** in the countries where we operate, building a greener future and harnessing **the power of digitalisation to tackle climate change**.

We currently use 100% renewable energy at our own facilities in Europe, Brazil and Peru, and we've reached 79.4% globally. We also helped our clients to **reduce their CO₂ emissions by 8.7 million tonnes** in 2021, equivalent to the amount of carbon absorbed by 143 million trees.

At Telefónica, we believe that **a connected world should be a sustainable world**.

MAKING SUSTAINABILITY HAPPEN

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Smart Farming

Precision agriculture

Precision farming is already being used as a solution on various farms in Andalusia, Castilla La Mancha, Extremadura and Galicia, mainly in vineyards, olive groves and orchards. This solution enables farmers to make better decisions when managing their farms, **resulting in more sustainable and efficient production, optimising resource use** (fertilisers, pesticides, water) and reducing associated costs. Decisionmaking is improved thanks to IoT devices that monitor the soil and climate, and multi-spectral imagery from satellites that helps to analyse how each crop is performing. The platform uses artificial intelligence algorithms to provide data on the **risk of fungal disease**, while also **reducing the time spent on procedures such as creating a digital field notebook**.





• Digital transformation of agricultural farms to achieve more efficient and sustainable production through datadriven decisions.

• Optimise time spent on farm management by digitalising agricultural tasks.

Results

• Improved knowledge of crop, environment and soil conditions.

• Efficient planning of field work and resource use (fertilisers and pesticides), reducing costs while increasing yields and efficiency.

Pest and disease prevention.

• Optimise management time with tools such as the field notebook.

• Ability to react quickly and **adapt production processes** in response to unforeseen events and changes in the environment.

Discover

Infographic "Technology for smart agriculture"





Smart Irrigation Management

Fruit farm Frutas Mifra has installed a **smart irrigation management system** that allows it to monitor the health of its crops from anywhere, at any time. By combining devices from our partner Spherag with Telefónica Tech's NB-IoT connectivity, each irrigation valve can be programmed to open and close according to the needs of each crop, as measured by climate and soil sensors. This technology and connectivity enables the farm to **optimise its use of water and fertilisers, reducing costs and improving farm management**.







Digitalising the farm for more efficient and sustainable production, using resources such as water and fertiliser only when the crop needs them, reducing consumption and saving costs.

Results

Digitalising the farm has been a real game changer for Mifra, reducing fertiliser use by 25% and water consumption by 30% over the course of one growing season, while also improving time management for farming activities. Since the smart irrigation management system can be controlled remotely, from anywhere at any time, this allowed more time to be spent on other important tasks and management work at the farm.



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Video "Mifra: a clear example of the advantages of AgroTech".



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Succes case "Mifra: benefits of Agro Tech solutions on farms."



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Infographics "Technology for smart agriculture.



5G C-V2X

Precise RTK positioning

5G Cooperative Drones

Telefónica has worked with the Spanish Postal Service (Correos) to develop a secure and reliable system for delivering parcels to mobile delivery points, using smart, connected drones to overcome the challenges of last-mile delivery in urban areas. The project consists of flying a group of drones that communicate with each other and with a series of connected urban components. Its aim is to successfully deliver a parcel to a mobile collection point, whilst encountering another drone or a restricted area warning along the way.





In the future, the use of drones in urban environments is set to grow exponentially. Such a large number of drones can only fly safely if they are coordinated with each other and with the Smart City in real-time, which we have achieved thanks to direct C-V2X communication between drones and drone to infrastructure. In addition, when drones are flying in the more confined parts of the city, we need to track them with pinpoint accuracy in order to guide them safely through the air.

Correos played a vital role in making this project a reality. Their experience and knowledge of what they needed from drones to deliver parcels, enabled us to work together on new solutions to add even more value to their business.



The main objective of the project -which uses C-V2X (connected vehicle) and RTK technology to enable precise tracking- is to assess how the 5G network can help develop and deploy services using drones in urban environments. In this project, we are demonstrating how 5G can meet the needs of drones flying in urban areas. We also want to be ahead of the curve with a new, faster and more sustainable parcel delivery system that allows customers to "take" their own collection point with them wherever they go.

Results

We were able to overcome the challenges posed by this project and achieve some amazing results, including:

• Adapting connected vehicle technology to the world of drones, demonstrating how C-V2X is ideal for this type of communication, and pushing for it to be standardised in the world of drones, beyond its current application in connected vehicles.

• Developing intelligence that allows drones to make their own decisions in real time.

- Using an accurate low cost tracking system.
- And of course, combining all of this technology to produce a state-of-theart parcel delivery system.

Once again, it is clear to see how 5G, with its low latency and high bandwidth, is key to the development of drone-based use cases. Low latency is crucial for real-time, cooperative communication between drones and connected objects.



Video "Package delivery with 5G drones."

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What they say about us





"Thanks to the smart irrigation solution developed by Telefónica Tech and Spherag, we've managed to create a smart farm. We have managed to save 25% on fertilisers and 30% on water, while significantly optimising the time we spend on farming tasks."

Diego Vicente Gimeno

Production Manager at Frutas Mifra



"Telefónica has brought its holistic vision to the IoT Nodes project in Valencia, which will allow us to make great strides in our digital transformation to build a more sustainable, efficient and connected city. A city where technology can increase our energy efficiency and offer new services to people."

> Pere Fuset Digital Agenda Councilor



"With more than 300 years of experience, Correos knows how to adapt to changing times and is constantly looking for innovative solutions that add value to its logistics chain. New technology is absolutely essential in this endeavour."

Maria Dolores Climent Head of Strategy at Correos



What they say about us



IoT Nodes

IoT nodes essentially aggregate data from multiple sensors, actuators and components from different sources associated with devices, collecting any data of interest and any variations of that data. These nodes can make a value assessment and then transmit this information to the Global Building Management Platform and the Smart City Platform, where action can be taken on these devices if necessary.











Our initiative aims to provide valuable services to residents and visitors, make public services more efficient, and develop and implement policies to make public data more transparent and reusable, in order to create new services or improve existing ones. The initiative focuses on sports facilities, museums, markets and schools, as well as the launch of a global building management platform and an energy management module, which will be integrated into the city platform.

Results

The project is currently underway and will analyse IoT sensor data from more than 190 buildings, enabling these sensors to be managed and responded to from the Smart City Platform. This will help reduce overall CO₂ emissions and improve resource efficiency, while creating an efficient inventory of municipal resources and allow the implementation of BIM systems in municipal buildings.



Master Data Management



Digitalisation of processes

At the German sportswear manufacturer JAKO AG

As technological innovation accelerates, fashion companies have the **opportunity to serve their customers better while creating a more efficient, responsive and responsible business**. To succeed in the fashion industry, every detail matters, from the shade to the fade, the cut and line to the fabric and size. Everything needs to be under control and accounted for. As a sportswear manufacturer, JAKO finds itself in exactly this situation. They have a whole range of industry-specific requirements that had to be taken into account when a **new ERP solution was implemented as a platform for future digitalisation**.





JAKO had various reasons for introducing a new ERP system. It was particularly important for the company to be able to lay a stable foundation for further growth and various new processes. **The efficiency** of the logistics and billing processes had to be at the maximum level.

Another focal point was **monitoring** of availability, which needs to be continuously guaranteed day and night to be able to communicate availability of the products to the customer at any given time. The system also forms the basis for further digitalisation.

Results

By switching to the new industryspecific solution, various processes at JAKO were streamlined and optimised massively. They are now able to accelerate their business using an integrated ERP solution specifically designed for the fashion industry across the whole company.

For example, with **central master data management, the data is consolidated in a central database so that groupwide reporting is possible**. The master data was completely revised and restructured in order to use the standardised solution as much as possible.

JAKO offers various value-added services at the customer's request and integrates these into various logistics processes via the sales orders. Numerous interfaces such as logistics conveyor technology, an existing AutoStore warehouse system, Tradebyte, and web shops are now tightly connected.



Discover

"JAKO AG: With teamwork to a successful ERP project".



IT Lifecycle Services

Sustainable IT

Circular Economy

Supported by BMI and Telefónica Tech's Joint Partnership

Telefónica Tech's IT Lifecycle Service is helping **global roofing manufacturer**, BMI, recover the value from legacy IT while improving its **sustainability position**. This initiative will cut **1 Million KG of CO**₂ **and reduce e-waste by 6,000 KG over 2 years**.

Objectives

E-waste has become one of the world's fastest-growing streams on the planet. The latest Word Economic forum data puts the latest estimated annual figure at 57.4 billion tonnes. **BMI had a large quantity of old, decommissioned computers and devices taking up much-needed space across the EU**. They wanted to find a sustainable but secure way to reuse, repurpose or recycle these IT assets.

Results

By using Telefónica Tech's Service, **BMI** is recovering the value from legacy **IT while improving its sustainability position**. Repurposing, reselling and/ or recycling 3000 units over 2 years will save:

- 1M KG of CO₂ saved through goods reused, removing the need to remanufacture.
- 6K KG not destined for landfill.
- 76 M litres of water saved.
- 4.8 M tonnes of earth not mined.



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Case study "BMI and Telefónica Tech's Joint Partnership Supports...".



Download case study



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What they say about us





"From the very beginning, we were convinced that with BE-terna we would have a partner with great industry experience at our side who could provide us with optimum solution concepts and ideas for the special challenges in the textile trade that we are regularly confronted with."

> Maik Weber Project Manager at JAKO AG



"At BMI we think big and continuously invest in new technologies in the market. Telefónica Tech has been able to provide solutions from classic technologies to the cloud, to adopting more advanced technologies such as blockchain. They have also played an important part in supporting us in our sustainability journey. Telefónica Tech has been a very proactive and valuable partner for us, not only providing solutions but also educating us and bringing insights from other companies."

> Antonio Bonillo Head of Technology, BMI Group

What they say about us





Find out more in our

Transformation Handbooks

