

MWC2024

100 Years
Leading Change



INNOVATION

Transformation Handbook



MWC2024

100 Years Leading Change

We've turned 100 years old. A century of making our world more human by connecting people's lives. What a ride!

But now, it's not time to get nostalgic. It's time to prepare for a new era. Because in these times we live in, we are witnessing a strange paradox: while the life expectancy of people is getting longer and longer, the life of companies is getting shorter and shorter. For a company to survive for more than a hundred years is a complete anomaly. And this anomaly can be explained by a single reason: its ability to change.

Telefónica's history is one of anticipating change. We were born as a voice company and moved to data, from copper to fibre, from operating in a single country to becoming a global company. A company forged, from its very foundation, in change.

And now we are committed to change again. Change to lead a new era of progress. A revolution capable of rewriting history of businesses and people... and yes, also our own.

There is great value to be captured by the telco industry. Times that are opening a new world of business opportunities, where Open Networks are key to foster innovation while driving profitable and sustainable growth. With this goal ahead of us, it is not time to ask "What if..."? but "How we will make it happen".

We've been doing it for a hundred years, imagine what we can do in the next 100.

CASE INDEX

04

HORSE

05

Heathrow
Airport

06

Bodegas
Borsao

08

GoFit

09

Inmersive
experience: Civitas
Metropolitano

10

Remote
Digital
Twin

12

Chainlink:
blockchain
transactions

13

Nova Labs:
mobile
coverage

14

Matsuko:
holographic
meetings

HORSE

Horse Holding, the Renault Group’s combustion and hybrid engine subsidiary has entrusted Telefónica Tech with the protection of its Valladolid plant, where more than 8 million vehicles and 34 million engines have been manufactured in its more than 50 years of history.

Link: [Press Release](#)



Goals

The agreement signed by both companies involves the deployment of Aristeo, a pioneering cyber security solution developed by Telefónica Tech at its Cyber Security Center. This solution is specialized in Industry 4.0 and is located in León (C4IN), to capture and analyze threats in industrial environments based on a network of decoys exposed on the Internet that uses real hardware to confuse attackers. The implementation of Aristeo in Horse’s factory will be carried out on several decoys that the engine company itself is configuring to adapt Aristeo to its particular casuistry and to be able to extract the maximum knowledge.

Results

Aristeo’s potential lies mainly in the fact that, by using real hardware instead of virtualized environments, the platform has the ability to capture the cyber threats that really affect the industrial sector. This allows early identification of trends and even previously unknown vulnerabilities, thus extracting valuable information about the attacks received (their strengths, weaknesses, and behavior in each part of the system through which they pass) so that companies can adopt or reinforce their cyber security measures in a preventive way.



Big Data • Skills & Managed Services • Advanced Analytics

Heathrow Airport

Telefónica Tech provides Heathrow Airport with capabilities and managed services. So, the UK's largest airport has access to the best data skills and a managed service that enables the company to use data in optimizing its cargo terminal, retail partnerships and airport operations as air travel and commerce changes according to global demands and regulations.

Link: [Web](#)



Goals

The 2019 implementation of Heathrow's data lake program began in parallel with a restructuring of Heathrow Airport's technology operations. The enhanced approach to data and a new operating model enables Heathrow to better understand the value that data and technology bring to the business. Microsoft developed and delivered the initial data lake in collaboration with Heathrow Airport. Having a data lake in place, Heathrow Airport needed a data experience that was flexible and able to respond to the airport's changing needs.



Results

Heathrow Airport now has the agility to analyze its data and gain business insights down to the granular level of a day. Telefonica Tech took Heathrow's existing retail data systems, improved the data ingestion process, and created a new interface that, in turn, enables retailers operating from Heathrow to become data-driven organizations. HIP has also provided the airport with the ability to analyze all areas of its operations down to details such as how users travel to and from the airport, as well as how these behaviors might be affected by more flexible working policies in the future.

WMS Tool • MES System • Strategic Consulting • Blockchain

Bodegas Borsao

Bodegas Borsao, an internationally recognized wine producer, is the leading winery in the Campo de Borja appellation, exports to more than 50 countries and has more than 2,100 hectares of vineyards and 375 growers. In order to strengthen its position in the global market and improve the efficiency of its processes, it has opted for the digital transformation of its winery. Telefónica Tech has helped Bodegas Borsao through our company Geprom to technologically evolve its intralogistics management and design a fully digitalized winery.

Links: [Press Release](#) • [Web](#)



Goals

We have carried out a digital transformation consultancy and designed an implementation plan for two industrial digitalization systems connected to the ERP: the WMS tool, aimed at enhancing the management of its raw materials and finished product warehouse, and the MES system to optimize production. The automation of workflows and the integration of systems has enabled it to simplify its processes, save time and facilitate daily tasks. In addition, it has enabled a global vision of its production processes, which facilitates decision making. Thanks to all this, Bodegas Borsao has been able to increase the control of its operations to focus on the quality of its product.



Results

Bodegas Borsao has achieved greater optimization of its warehouse, more control of the entire production life cycle and an increase of more than 10% in productivity. It has also achieved digitalization that takes into account industry standards (ISA-95) to work according to the best industrial practices in an optimal and robust way at the IT and operational level. All this has provided an advanced degree of technological maturity for the winery, which will enable it to integrate, in the medium term, Blockchain and Artificial Intelligence to improve its business, which will mean higher levels of transparency, traceability and efficiency in its operations.

Testimonials

HORSE

"HORSE was born with the vocation of being a data-driven company and that is why cybersecurity is so important to us. Our processes are fully digitised and Aristeo provides us with a better preparation to defend ourselves against possible cyber-attacks. Having the support of a leader like Telefónica Tech gives us peace of mind and allows us to focus on developing our business: offering environmentally friendly mobility solutions that are accessible to the greatest number of people."

[María Luisa Redondo](#)

CIO of HORSE

"The digitisation and automation of industrial processes generate significant business efficiencies, but can also, in many cases, provide a fast-track route for cybercriminals. Aristeo will provide HORSE with extra predictive intelligence with trend analysis of real attacks that will help them to assess their protection levels and prevent potential attacks. The knowledge gained from this project will undoubtedly boost Aristeo's capabilities in the automotive field and strengthen the quality of its intelligence".

[Alberto Sempere](#)

Director of Services, Innovation and Partnerships at Telefónica Tech

Heathrow Airport

"The goal has not been to eliminate these puddles, but to make sure Heathrow gets the maximum value out of the data; for example, these data puddles can be really good for prototyping or business innovation. That's why we don't try to reduce them. Focusing on centralization can reduce the value to the business."

[Andy Isenman](#)

Head of Technology: Cloud and Data, Heathrow Airport

"What's really exciting is now we've got a foundational data platform at Heathrow, with the ability to pull in data from different areas of the business, we can start to leverage some of the exciting new technologies that are emerging, such as Azure generative AI and OpenAI. Leveraging this technology for new use-cases will be an exciting step forward for Heathrow and our partnership."

[Nick Baladi](#)

Commercial Sales Director, Adatis, part of Telefónica Tech

GoFit

GoFit is a leading company in sports and physical activity with 20 years of experience that bases its activity on the development and promotion of large sports complexes. They have 1,000 employees, more than 200,000 customers and 18 sports centers in Spain and 2 in Portugal. Telefónica Tech and the chain of wellness sports centers GOfit are applying video analytics solutions based on AI to create a new management model that optimizes facilities, maximizes investment in the equipment of the centers, better plan staff schedules and improve the user experience.

Links: [Press Release](#) • [Success Case](#)

Goals

It was essential for GoFit to understand the analysis of the flow and use of the areas and machines deployed in order to be able to make data-driven business decisions. The implemented solution, based on technology from the Canadian company C2RO and included in Telefónica Tech’s portfolio, allows reusing existing cameras and processing video images in real time through the use of algorithms and artificial intelligence, as well as obtaining detailed anonymized information on customer use of the different areas of the gym.



Results

Thanks to video analytics, GOfit can know the real-time traffic in each of its sports centers, the demographic profile of its customers, the time spent in the different areas, the occupancy of the rooms, pool, locker rooms and other points of interest, and the most common route sequences. All this is broken down by hours and days of the week to facilitate greater security and better customer comfort. This information is consolidated in a dashboard to facilitate decision-making, such as the management and optimization of resources and personnel, the activities that generate the highest demand, and the redistribution of machines or expansion of equipment with the highest occupancy.

5G • 4K • WebRTC • 360° Video • Real Time

Immersive experience in Civitas Metropolitano stadium

Telefónica has developed a pioneering solution together with Atlético de Madrid to view the last two matches of the 22/23 season from the Civitas Metropolitano, in an absolutely immersive and differential way using the latest virtual reality glasses technologies, 4K content transmission in real time, and 360° content viewing.

Links: [Press Release](#) • [News](#) • [Web](#)

Goals

Give the AT Madrid fan the possibility of watching football matches in a totally disruptive and differential way by placing 360° cameras in privileged places on the field, just behind the goal, in the bench area, press area, production control area of the stadium, etc.

The 360° cameras allow the audience a total immersion in the content and a new way of experiencing the match. Additionally, the fan can also choose to enjoy relevant pre-recorded club situations such as the locker room or the centenary match with the supporters.

The experience can be viewed from virtual reality glasses, tablet or PC, simply using the browser, without the need for an specific application.

Results

The results are very good. During the sessions with the fans, it is observed that they are hooked by the ability to choose from where they want to watch the game at any given time and that together with the immersion capacity provided by 360 technology, the user is immersed in a totally new and absolutely differential. The quality of content and the placement of the cameras is key, since it is the way to attract the user's attention and get them to experience a new way of watching football.

Connectivity is a fundamental pillar of this solution, both the deployment of fiber and 5G technology in the stadium are necessary to be able to transmit 4K content with the necessary quality and in real time, key values in this proof of concept.



5G • Robotics • Computer Vision • 3D mapping • Cloud

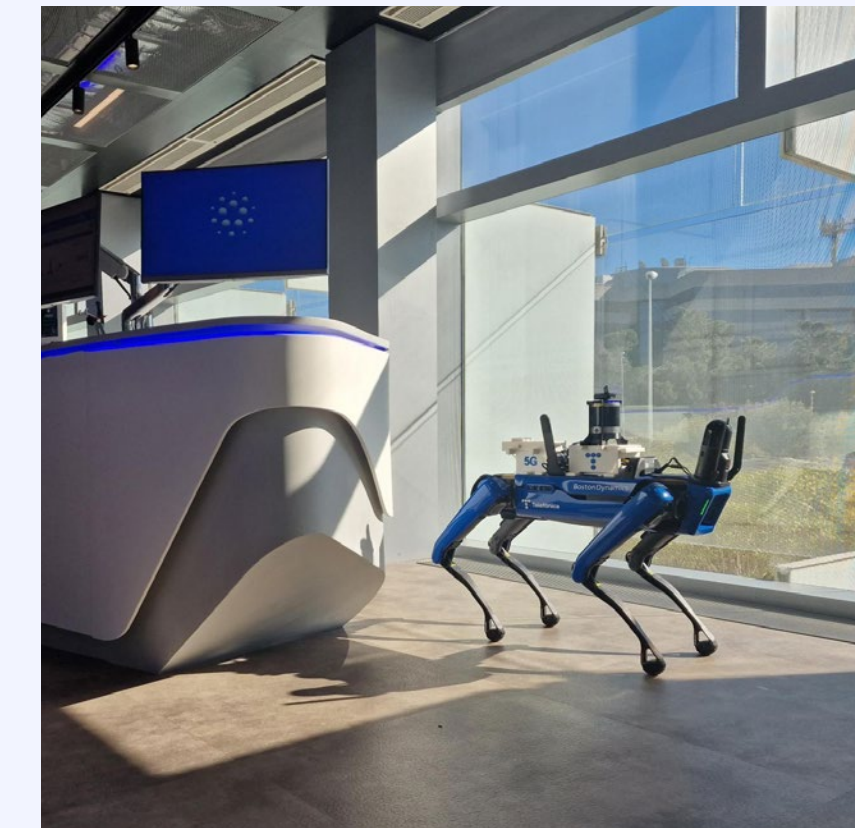
NeRF cloud-based Remote Digital Twin

Service robotics, coupled with 5G technology, cloud computing and the latest three-dimensional image processing algorithms (called NeRF algorithms - Neural Radiance Fields) allow us to recreate three-dimensional objects or spaces based on the mobility of the quadruped robot Spot, from Boston Dynamics, and a high-definition RGB camera mounted on it.

Link: [Use Case](#)

Goals

The project aims to recreate three-dimensional objects and spaces in an innovative and cost-efficient way, since it uses an HD camera that sends dozens of images per second to Google Cloud Platform where, thanks to NeRF algorithms, the three-dimensional re-creation can be incorporated into construction projects (BIM or digital twins) or entertainment (VR/metaverse).



Results

We have managed to render and model objects in 3D in very short times, relying on autonomous routes of our Spot robot, connected by 5G to Google Cloud Platform. This technology, still in its early stage, will allow our Industrial customers to perform 3D surveys of spaces, parts or packages to feed their digital twins and incorporate high-value volumetric information to their processes. In this proposal we show how to incorporate the latest technology in terms of capture and modeling in a simple way, as an example of the multiple cross-cutting applications of a technological trio such as robotics, 5G and the processing potential of the cloud.

Testimonials

Bodegas Borsao

"Measuring, controlling and reducing the costs of bottling and storage processes is our challenge in an environment of maximum competitiveness with companies in the sector and falling consumption in all markets. Decisions regarding both processes, together with those related to quality, must be precise in order to offer the best service and thus be able to differentiate ourselves from our competitors."

[Emilio del Caso](#)

General Manager of Bodegas Borsao

"The wine sector faces the challenge of digitally transforming itself to be more competitive. The integration of WMS and MES systems in the day-to-day operations of Bodegas Borsao gives them an unprecedented competitive advantage by having a global vision of the production process and the ability to make better decisions aimed at improving business planning. Digitising wineries means simplifying processes, saving time, facilitating work and achieving better results."

[Dario Cesena](#)

CEO of Geprom, *Part of Telefónica Tech*

GoFit

"We help GoFit to evolve its business with this project thanks to advanced technological solutions that maximize the profitability of investments in the company's assets, such as machines and guided classes, while meeting the needs of the user."

[Esther Cardenal](#)

Senior Product Manager for IoT and Big Data, Telefónica Tech

"This is a landmark project in the application of technology to the improvement of our services and another step in the company's ongoing disruption in the search for the best possible experience for our customers. Technology can and must be an ally in the construction of an active and sustainable society."

[Manuel Estébanez](#)

CIO of GoFit

Civitas Metropolitano



"We knew that Telefónica was capable of responding to the challenge. We wanted to complement the experience in the stadium with an immersive experience in which the fan could choose the 360 camera to which they connect and enjoy the match with virtual reality glasses in real time thanks to the connectivity of the stadium. 5G Multicam not only met but exceeded expectations."

[Alejandro Ugarrio Andrés](#)

Atleti Lab Director and Digital Development Deputy Director



SIM Swap API • Web3 • Smart Contracts

Chainlink, safer blockchain transactions

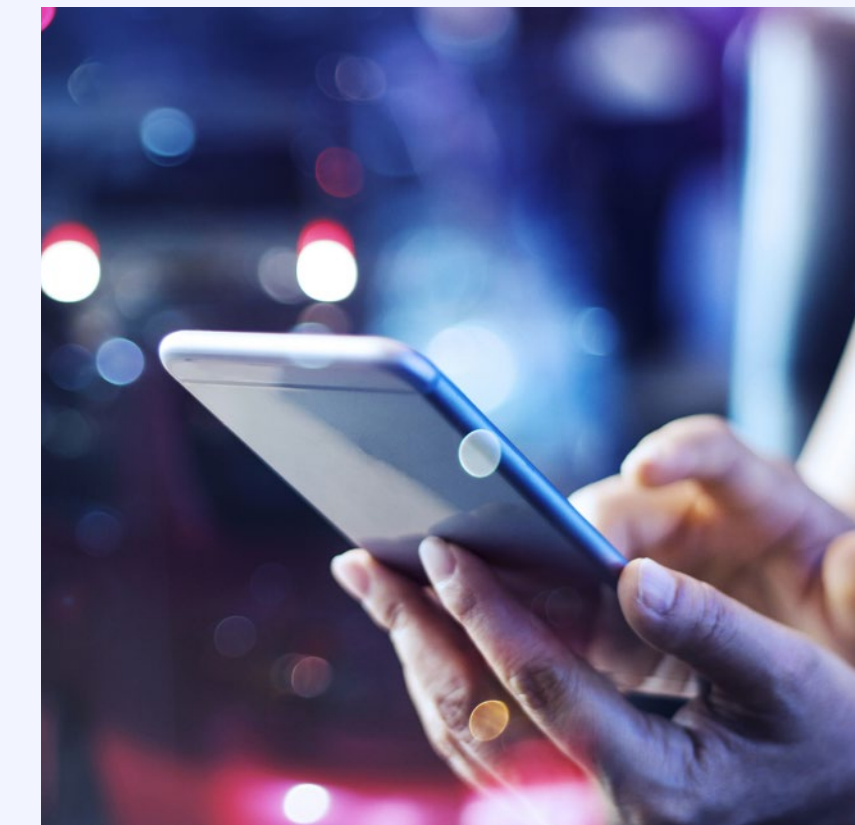
Chainlink Functions is the industry-leading solution that enables developers to connect Web3 smart contracts to any data source or API securely and reliably. The telco Vivo (Telefónica Brazil) has been the first to open its network capabilities to Web3 developers, in this case using Chainlink Functions and GSMA Open Gateway's [SIM Swap API](#), in the Polygon PoS network. This makes possible, for example, to incorporate an extra layer of security to blockchain transactions, allowing smart contracts to make information requests to the API to verify that a device's SIM card has not undergone any unauthorized changes.

Links: [Web](#) • [Press Release](#)



Goals

The collaboration between Chainlink and GSMA Open Gateway aims to open up the network's capabilities to developers in Web3 environments, to set a new standard for security in blockchain transactions. It also provides an additional layer of security to smart contracts by integrating the functionality of detecting changes in the state of a SIM card through Chainlink Functions and the SIM Swap API.



Results

We were able to link telco capabilities with blockchain technology using the Polygon PoS network. We enhance the security of smart contracts by enabling the verification of data from different sources by using Chainlink Functions to perform customised calculations, such as SIM card change detection. In addition, this integration has a significant impact on two-factor authentication (2FA) processes and the detection of potentially fraudulent actions before creating new user accounts on web3 dapps and DeFi services.



SIM • OpenWiFi • Connectivity • Telecommunications

Nova Labs, mobile coverage wherever you are

Nova Labs is an innovative company focused on the development and commercialisation of decentralised wireless communication networks based on Helium technology.

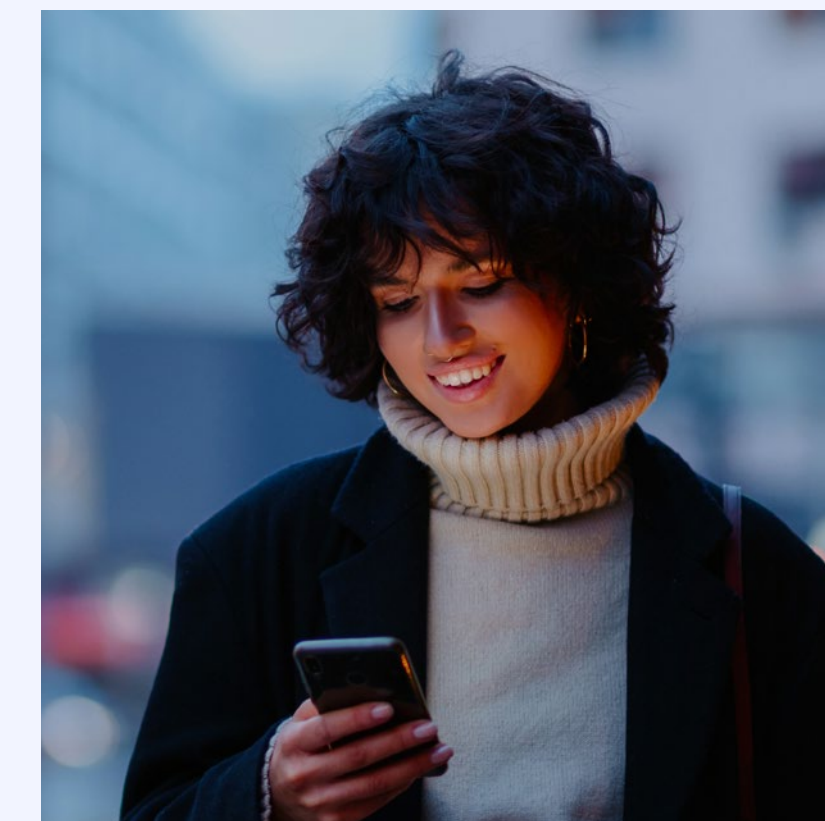
The collaboration between Telefónica and Nova Labs, aims to integrate Helium Mobile Hotspots technology in Mexico, enabling the expansion of Telefónica's coverage in specific areas of the country, and the offload of mobile data traffic to the Helium network in a first pilot with existing customers.

In this way, Telefónica Mexico will offer its customers access to a mobile data coverage service, thanks to a controller developed by Telefónica and Novalabs based on the Open WiFi standard of the Telecom Infra Project (TIP).

Links: [Web](#) • [Press Release](#)

Goals

Telefónica and Nova Labs have developed a pioneering solution for Telefónica customers to connect to Helium's mobile hotspot WiFi network in a secure and controlled way using their SIM.



Results

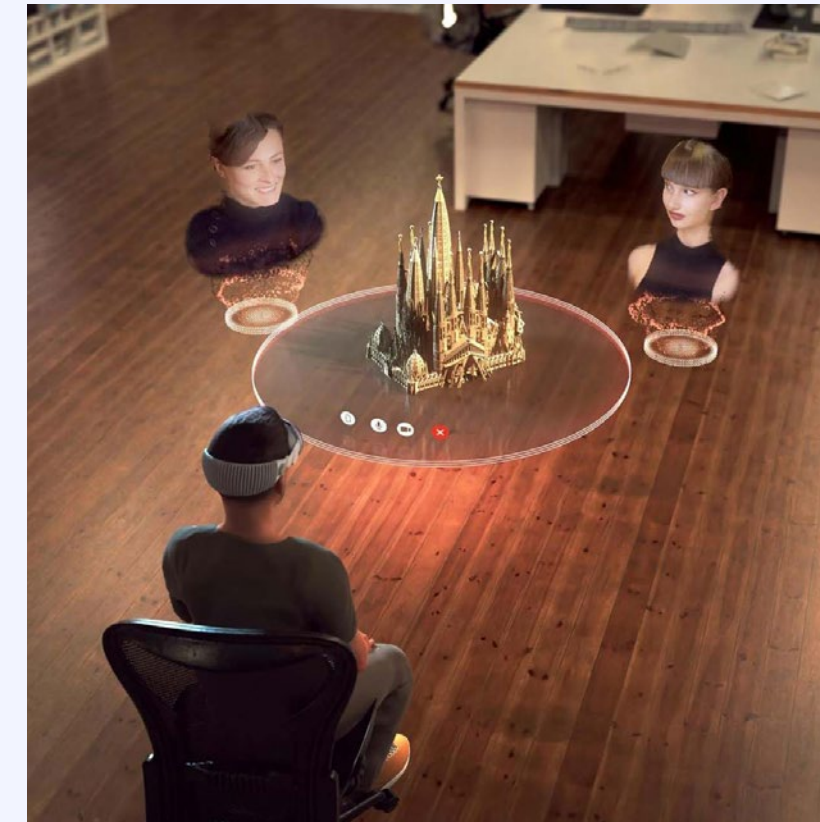
We will be able to improve access to mobile data coverage for Telefónica's customers, while maintaining control over the user experience by using the same SIM cards and associated Telefónica systems. In addition, this project reduces the cost of telecommunications infrastructures and their environmental impact.

5G • Future Comms • Generative Artificial Intelligence
Edge • Spatial Computing

Holographic meetings for the people

Telefónica, MATSUKO and Nvidia announce the launch of a spatial computing experience of holographic meetings, which will enable creators to connect and collaborate seamlessly as holograms in real time. The collaboration of Telefónica, MATSUKO and Nvidia opens the doors to the democratization of holographic meetings. With just their smartphone camera, people can enter holographic meetings as real themselves in 3D and share their 3D creations. This offers a new and immersive way of meeting and collaborating.

Links: [Video of holographic meeting in Apple Vision Pro](#)
[Article in Telefónica Empresas](#) • [Press Release](#)

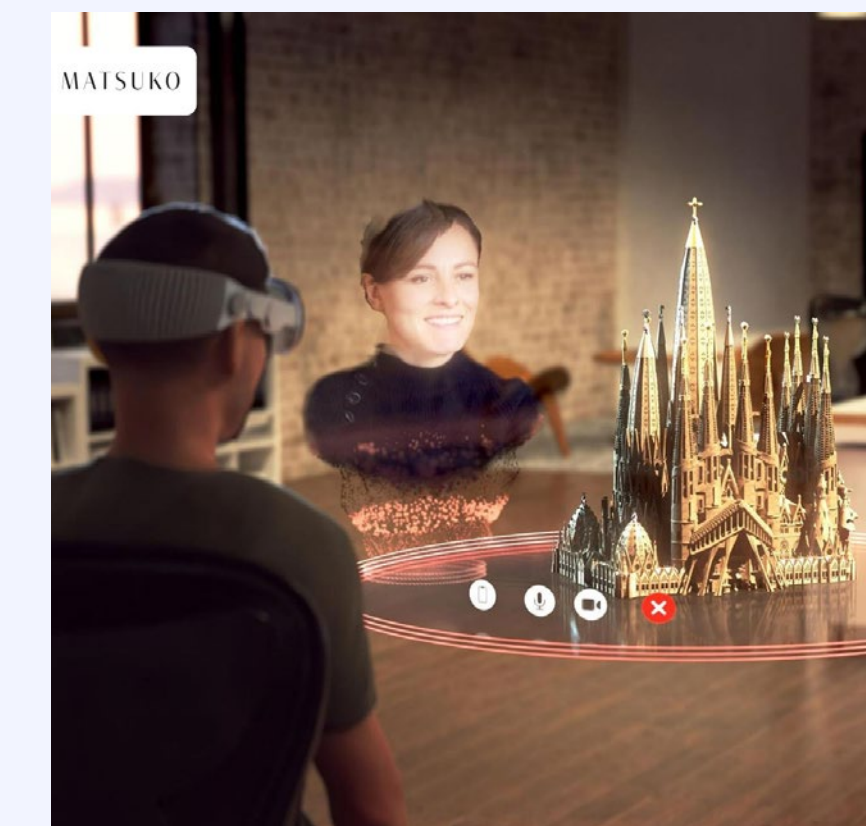


Goals

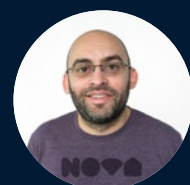
MATSUKO is the world's easiest spatial computing holographic application in the world as it allows to transmit real people into a 3D environment instead of avatars with just the camera of an iPhone. The immersive call experience leverages the power of the 5G and Edge, and the evolved capabilities such as slicing and Network APIs of Telefónica, as well as Nvidia's Maxine AI platform for natural eye contact and accurate facial expressions in their holographic meetings.

Results

Spatial computing is taking over in 2024. MATSUKO, Nvidia and Telefónica have achieved a major breakthrough by enabling everyone to enjoy real presence during 3D meetings. Users will be able to interact with their colleagues and their 3D projects holographically, as if they were in the same physical space, without any delays, misunderstandings, or 2D limitations. People experience much more closeness, engagement and productivity as a result.



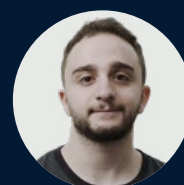
Testimonials



Nova Labs

"We are excited to partner with Telefónica to integrate our Helium Mobile Hotspot technology and expand coverage for their customers. Nova Labs has solved one of the main challenges for telecommunications and pioneered a solution that supports secure data offload that can be implemented globally. This is a major advancement for the telco industry and will significantly reduce infrastructure cost while maintaining high quality service."

[Amir Haleem](#)
CEO at Nova Labs



Chainlink

"We're excited to collaborate with Telefónica to help prevent SIM swap attacks and extend the ways in which the industry-standard Chainlink platform underpins blockchain security. With Chainlink Functions and GSMA's Open Gateway's SIM Swap API, applications on the Polygon PoS network can help verify that a device's SIM card has not undergone any unauthorized changes."

[Johann Eid](#)
Chief Business Officer, Chainlink



MATSUKO

"We chose Telefonica for the democratization of holographic calls because it is a natural evolution of our long-term cooperation. Technically, the attributes of 5G connectivity (high speed, high bandwidth and low latency) allow us to overcome some of the challenges in creating realistic 3D human holograms. From the business perspective, Telefonica supports us in reaching B2B customers and accelerates bringing holographic communication to the market."

[Maria Vircikova](#)
CEO of MATSUKO



Find out more in our

Transformation Handbooks

