IOT CONNECTIVITY

Private Mobile Networks

HOW CAN TELEFÓNICA TECH HELP?

Industrial private mobile network to support the customer's critical operations and processes.

Private Mobile Networks or non-public networks (NPN) are dedicated LTE/5G networks intended for non-public (or private) use. These networks are specifically designed to interconnect all of a company's smart devices, forming systems that collect, monitor and analyze data to drive the digital transformation of your business.

Interest in private networks has increased exponentially in recent years. So much so that it is predicted that by the **year 2028** there will be **more than 12,000** deployments of this type of network worldwide.

Telefónica offers different types of architectures to adapt to your needs and specific use cases, such as:

- Optimize automatic logistics processes (internal and external).
- Make production lines more flexible, creating totally dynamic and mobile layouts.
- Control and operate heavy machinery and monitor the different subsystems to optimize industrial production.

WHO IS THIS SERVICE FOR?

The different sectors in which digitalization is playing a key role today are:

- Manufacturing
- Logistics (warehouse intra-logistics)
- Ports
- Mining
- Oil & Gas
- Campuses (hospitals, universities, shopping centers...)

OUR VALUE PROPOSITION

Our service

Wireless connectivity based on LTE/5G technology, designed to connect all the components of the production chain in the industrial sector with the flexibility that each customer needs, adapting to their specific requirements.

Our solution offers you a secure mobile network with an end-to-end operation service. The **elements of the network** consist of a dedicated radio access, an exclusive SIM for industrial customers, and the installation of the network elements (Radio Access Network and Packet Core).

We have **different types of architecture** in order to adapt to your needs:

- **Hybrid Private Network (LTE/5G):**
  Physical private network elements deployed together with the public network.
  - Option with access to a secure radio network, some centralized core elements, and with the possibility of Local Data Breakout (LBO).
  - Especially suitable for medium-sized companies.
  - Most frequent sectors: ports, campuses, manufacturing, and logistics.
  - This type of deployment helps overcome the problem of lack of dedicated spectrum, simplifies complexity, and reduces implementation costs.
  - It can be integrated with our MEC solution (see MEC section).

- **On-premises Private Network (LTE/5G):**
  Fully autonomous private network.
  - Dedicated spectrum, radio network access and custom core components at the client's facilities.
  - Designed for large companies.
  - Ideal for situations with little or no public coverage and a high level of demand in SLA (for example, mining, oil & gas, manufacturing...).

What does it allow you to do?

- **Optimize network coverage and performance:** Specifically designed to meet your needs and requirements, not those of the general public.
- **Traffic prioritization:** You can prioritize traffic according to the types of users in your organization and their specific needs.
- **Control and certainty:** It offers you greater control over the network as the owner. Local presence also reduces uncertainty in its operation.
- **Autonomy and latency:** Thanks to its integration with MEC, some network functions are located in the local environment, reducing the physical distance and the number of network hops required. This decreases latency and guarantees minimum survivability in case of failures, such as degradation or inactivity of the core network.
- **End-to-end connectivity:** Integrates connectivity between public (outside the factory) and private (inside the factory) mobile networks, without the need for complex hardware integration, using a single identification element (a single SIM).
- **Security and privacy:** Private data is processed locally and does not leave your premises. In addition, authentication and authorization procedures guarantee end-to-end security. Only valuable data is stored in the long term.
- **Reliability and interference:**
  - **No congestion:** The dedicated spectrum of a private network guarantees connectivity without congestion, high service availability and high SLAs.
  - **No interference:** Ideal for complex indoor spaces with metal shielding, such as industrial factories with large machinery. It is also useful in isolated or extreme outdoor environments that lacked coverage, such as oil pipelines, mines, ports, etc.

Benefits

The industrial network enables the critical operations of your business, ensuring the continuity of processes. It allows you to respond in real-time, with low latencies adapted to the criticality of your operations.

- **Optimize production processes:** It facilitates better communication at all levels, improving coordination and efficiency.
- **Avoid workplace accidents:** It generates a massive flow of data collected in your industrial environment thanks to devices connected to the network, integrated into vehicles, machines and employee safety elements. Alarms can be generated by analyzing this data and occupational hazards can be detected to prevent accidents.
- **Reduce environmental impact:** It controls energy consumption in production processes and monitors elements emitted into the atmosphere, contributing to a more sustainable environment.
- **Providing mobility and flexibility to production processes:** It eliminates cabling in industries to favor the rapid adaptation of production lines according to order requests. In sectors such as mining, it allows for more agile movement of equipment and resources.
- **Knowing the location of workers and assets:** It offers you visibility into the status of the *in/out-bound supply chain*, facilitating the management of the just-in-time method in your production chain.

Telefónica Tech's differential value

Developing mobile networks, integrating services on them and providing end-to-end maintenance of these networks and services has been our core business for over 30 years. As a result, we have outstanding experience in the design, deployment and O&M of mobile networks, including those dedicated to companies. These are some of our main capabilities:

Multi-site deployments:
We can carry out deployments to interconnect different sites of your company. For these cases, we work with a solution that combines a shared control plane and dedicated user planes on-premises.

Continuous handover:
Continuous handover between public and private networks through a single SIM.

Adaptability to your needs:
We offer a range of solutions designed to suit your sector, size, activity, use case and connectivity needs. You can choose between different architectures, such as hybrid and on-premises, depending on what best suits your business.

Innovation in the cloud and Edge: We are constantly working to integrate cloud and Edge solutions, thanks to our agreements with the market-leading hyperscalers.

End-to-end management from our NOC: Our Network Operations Center (NOC) centralizes and manages all the services we provide, ensuring comprehensive and efficient supervision.

Industrial solutions: We have a set of industrial solutions that may require the deployment and development of a private network for their implementation. These solutions not only justify, but also accelerate, the deployment of a private network.

Reliable and certified solutions: Telefonica has an open IoT laboratory, TheThinX, where our partners can certify and validate their new solutions and devices in real network conditions.

Agile integration into the Telefonica ecosystem: Our products are integrated into the Telefonica ecosystem, which allows us to respond quickly and nimbly to any business opportunity, meeting your needs.

We go beyond offering connectivity and use cases: We don't just offer you connectivity; we combine it with use cases, avoiding possible compatibility issues between solutions and devices, which could arise if you turned to several partners separately.

EQUIPMENT, TEAMS AND ACHIEVEMENTS

Our teams

Global and local capabilities

- A team of more than 100 people geographically distributed in the Telefónica Tech regions.
- **+30** product development experts.
- **+50** experts in pre-sales, bid management and business development.
- **+20** experts in operations, maintenance and service management.

Regional focus

- **Europe:** +20 sales and business development experts.
- **LATAM:** +15 sales and business development experts.
- **Global:** +5 sales and business development experts.

Achievements

Telefónica has more than 350 million users managed and supported on its cellular networks worldwide and is internationally recognized by customers and analysts.

- Industry IoT network leader (IDC & Analysys Manson).
- Gartner Magic Quadrant leader for IoT for the 11th consecutive time.
- Private LTE/5G Provider Champion (Kaleido Intelligence).
- GSMA Smart Manufacturing Chairman.

BUSINESS MODEL

We provide services for the installation, configuration, maintenance and operation of private networks.

Thanks to our knowledge and experience, we design, implement and configure your entire private network, choosing the best architecture, allocating the appropriate spectrum and optimizing the radio and core design to meet your needs in terms of performance, SLA and security, at minimum cost.

Once the private network has been deployed and the solutions integrated, we assume full end-to-end responsibility as the main integrator.

In addition, we offer end-to-end operation and maintenance services for the network and integrated services, all managed from our own NOC.

We offer two flexible service options, depending on your needs:

- **Classic Capex-Opex model:** You own the infrastructure and Telefónica manages the network for you.
- **Private Network as a Service:** The infrastructure is owned by Telefónica, and we offer you the network as a managed service.

RELATED SERVICES

Computer Vision

An integrated solution designed to optimize efficiency in end-to-end manufacturing processes. It enables the management of APS/SCM planning, DCS/SCADA/MES production, QMS quality control, SGA logistics, and GMAO maintenance.

Mobile Robotics

Automate recurring industrial processes such as load transportation and hazardous environment inspections, among others, more efficiently and with real-time activity traceability.

Predictive Maintenance

The industrial network supports critical business operations by ensuring continuity, flexibility, and process mobility, enabling the rapid adaptation of production chains. It provides real-time responsiveness with low latency, depending on business criticality.

Contact us to start the digital transformation of your organization.