Telefónica
Global Solutions

Dynamic Network 2030 Vision

Navigating the future with
NaaS-Powered Global Connectivity

WHITEPAPER

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Introduction

Dynamic Network-NaaS 2030

Navigating the Future with NaaS-Powered Global Connectivity

By 2030, Telefónica Global Solutions **Dynamic Network** will redefine connectivity through a standards-based Network-as-a-Service vision - empowering automated, modular, and programmable network services, removing the barriers of complexity in enterprise connectivity through platform based managed solutions.

Built on a fully programmable infrastructure, our autonomous network will enable customers, partners, and developers to interact with connectivity as if it were software. It will dynamically manage 100% of traffic, leveraging AI agents to ensure compliance, accelerate operations, and maintain optimal performance.

User experience: Simplification and Efficiency

Our vision is to be a trusted partner for our clients, offering network and connectivity services, leveraging highly automated tools and solutions tailored to customer needs. Through our intuitive web-based customer portal **EYE**, users will be able to provision services with ease, achieving seamless global coverage with just a few clicks. This portal will offer a streamlined experience, allowing customers to manage their connectivity efficiently and effectively.

In line with our commitment to innovation, Dynamic Network will embrace the concept of Network as Code. This groundbreaking approach will enable users to programmatically manage their network configurations through APIs, providing them with unprecedented flexibility and control over their connectivity solutions. One of the most exciting advancements is definitely the integration of Self-X capabilities, which promise to revolutionize how networks are managed and optimized. Self-X capabilities represent a significant leap forward in network management, enabling users to autonomously purchase, deploy, configure, modify, monitor, optimize, heal, and protect the purchased services. These capabilities enhance efficiency, scalability, reliability, and security.

By leveraging APIs, customers will be able to customize and automate their network settings to precisely meet their requirements, whether it be adjusting bandwidth allocation, implementing security protocols, or optimizing traffic routing. Furthermore, these APIs will facilitate seamless integration with existing systems, ensuring interoperability and compatibility with a wide range of platforms and applications.

In essence, Dynamic Network will not only provide connectivity services but also empower our clients to shape and adapt their networks according to their evolving business needs, heralding a new era of customizable and programmable connectivity solutions.

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Accessing the network: Automated Last Mile Management and Dynamic Connectivity

Dynamic Network will offer an **advanced last mile solution** integrating multiple technologies such as 5G, eSIM, LEO and internet broadband. Regardless of the access technology, this last mile connectivity will be enriched as we currently do with Enhanced Internet, combining the affordability of regular internet with the reliability and security of a private network. This approach will help manage data traffic from offices or remote users that use regular internet or dedicated connections by guiding this data through our global network and connecting it directly to major cloud services and other company locations.

We aim to automate the management of the last mile, including quoting, validation, ordering, and provisioning, **striving for zero-touch processes**. This streamlines the quotation and delivery process, making it more efficient and cost-effective, while improving customer satisfaction through better tracking and reliability.

In essence, Dynamic Network's advanced last-mile solution **represents a paradigm shift in how connectivity is conceptualized and delivered**. To accomplish this goal, it's imperative that we maintain ongoing collaboration with operators worldwide. This collaborative effort ensures not only seamless integration and automation throughout all phases of last-mile connectivity but also underscores the importance of continually refining and establishing standards of interconnection and APIs.

International Private Network and Partner Fabrics: Robust and Customizable Infrastructure

Dynamic Network will be based on our international private network, integrating leading connectivity fabrics to achieve nearly limitless geographical coverage. While we remain committed to investing in our proprietary network to reinforce both bandwidth and virtualization capabilities, we recognize the value of extending interconnections with partner fabrics. Thanks to our TIER 1 international network of more than 100 PoPs in CNFs, +50 connections partnerships to the main public clouds and our agreements with more than 200 local access providers, we are able to offer our services in +170 countries with a robust, secure, and redundant connectivity, thereby expanding our coverage and enabling seamless traffic routing across any region of the globe. Additionally, by integrating with partner fabrics, we gain access to their direct interconnections with countless Cloud Service Providers (CSPs), Software as a Service (SaaS), and other platforms.

This integration not only allows us to utilize their network for middle-mile connectivity but also leverage their direct connections to CSPs, SaaS providers, and beyond. Consequently, **our customers benefit from unparalleled access to a diverse range of services and resources on a global scale, enhancing their connectivity experience and facilitating seamless access to critical digital assets.**

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Delivering SD-WAN-as-a-Service: Revolutionizing Network Connectivity

Clients will have the option to utilize **SD-WAN as-a-Service** with flexibility and ease, **via a subscription model hosted on the cloud**. This provides them with the freedom to tailor their network to the evolving needs of the business, scaling resources as needed and avoiding costly upfront investments in infrastructure. By adopting SD-WAN as a service, customers benefit from simplified management, faster deployment, and greater network visibility. Additionally, they can leverage advanced features such as traffic optimization, enhanced security, and the ability to prioritize critical business applications, all without compromising network performance or security. In summary, SD-WAN as-a-Service offers customers the agility and efficiency needed to drive their digital transformation cost-effectively and seamlessly.

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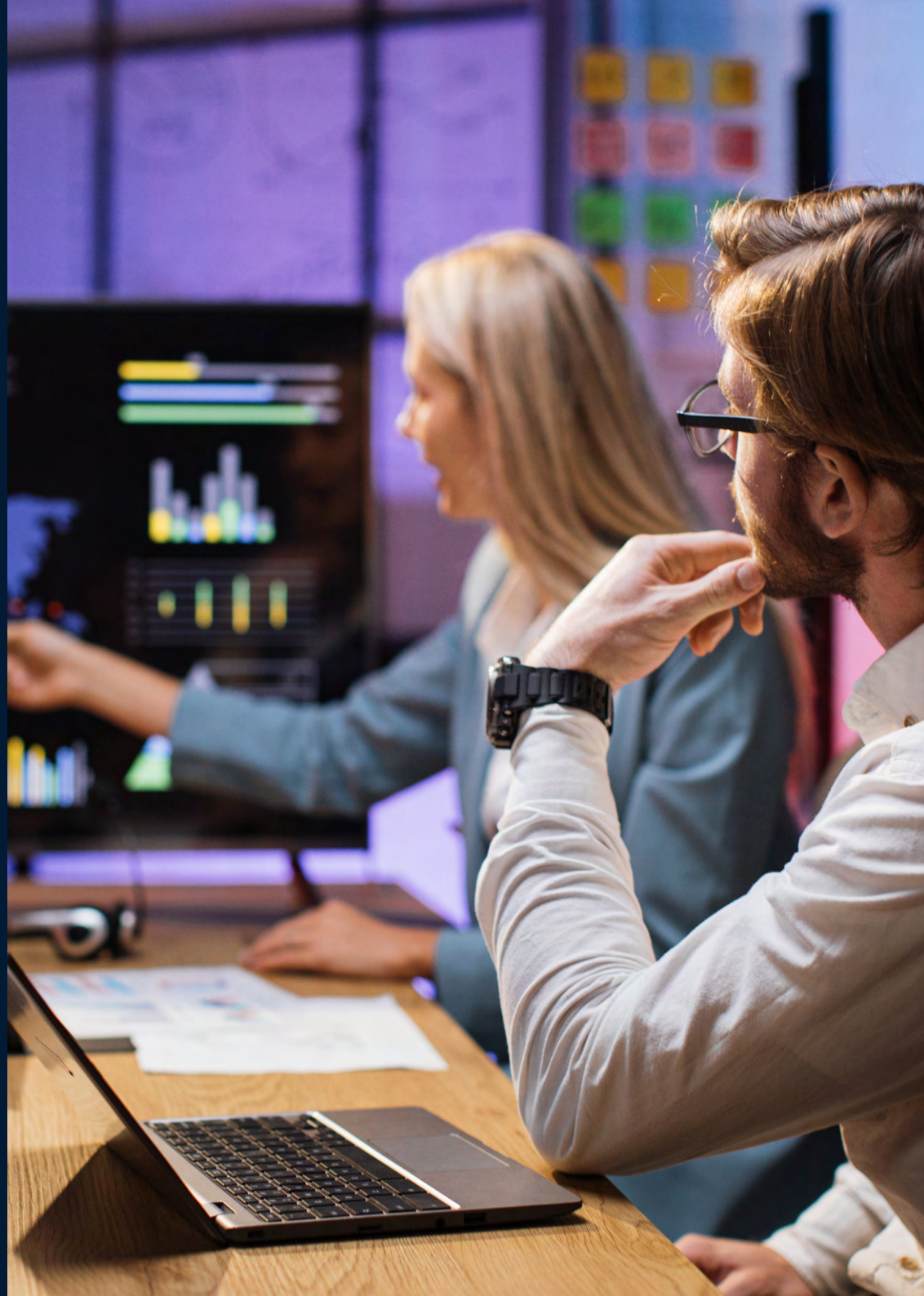
Artificial Intelligence: The Core of Automation and Optimization

Artificial intelligence (AI) will be a fundamental component of Dynamic Network in 2030. AI will be utilized to optimize network management, predict and resolve issues before they affect users, and enhance operational efficiency. Advanced automation will be achieved through AI, from configuring and provisioning services to monitoring and incident management.

AI within Dynamic Network will serve as a proactive advisor to clients, leveraging sophisticated data analytics and predictive modelling to propose strategic upgrades, cross-selling opportunities, and other tailored recommendations.

Dynamic Network will embrace intent-based networking, allowing applications to request and configure services automatically via intelligent APIs, giving customers full visibility and control, providing real-time insights into service behavior and user experience thanks to our integration with observability tools.

This holistic approach ensures that not only is connectivity consistently optimal but also that it actively contributes to the success and growth of our clients' businesses, aligning seamlessly with their evolving needs and objectives in the dynamic digital landscape.



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Dynamic Network today

In a world where enterprises demand faster, smarter, and more cost-effective connectivity, Telefónica is setting a new industry standard: **Enhanced Internet.** By delivering MPLS-grade performance at broadband costs with full automation, we are reshaping the future of global networking.

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It combines the affordability of regular internet with the reliability and security of a private network. This solution helps manage data traffic from offices using regular internet or dedicated connections. Unlike traditional internet, Enhanced Internet eliminates congestion, unpredictability, and security risks by ensuring that mission-critical traffic follows deterministic, SLA-backed paths across Telefónica's Tier-1 MPLS backbone. With self-healing automation, real-time cloud provisioning, and up to 90% packet loss reduction, it provides unmatched resilience, security, and speed for global enterprises. It also provides special access to **Telefonica Global Solutions** services, making it an excellent choice. In this sense, we have also launched a service that allows access to the leading **Cloud Service Providers** (CSPs) with direct interconnections, all with a digital and real time experience from a single portal. This service is called **Cloud Connect**.

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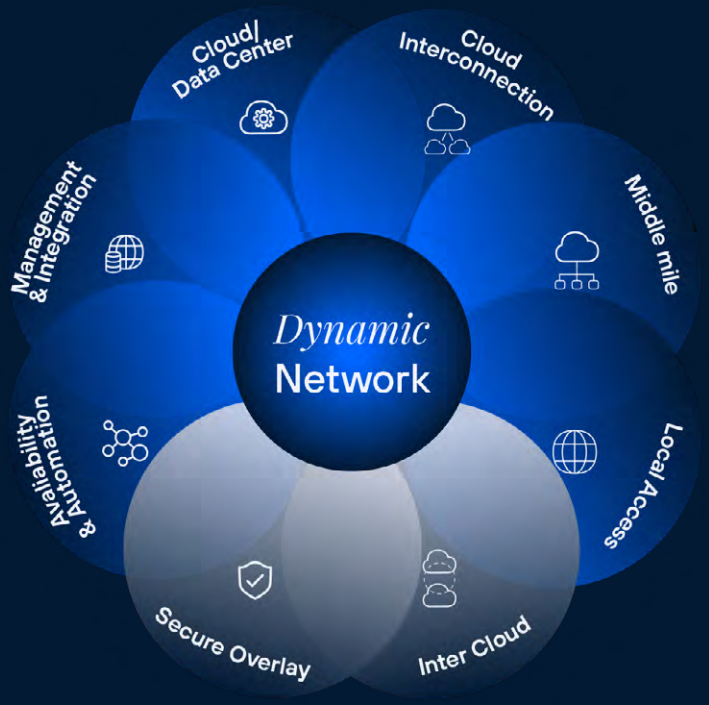
Global Colocation Services and Virtual Data Centers (Private Cloud). Resale of Cloud Services on Hyperscalers or SaaS licences

Direct interconnection with **major Public and SaaS Clouds**

E2E management of the entire service ecosystem, **integrating** solutions from multiple vendors at all layers, supporting customer **co-management** models in the solution



International transport over our **backbone network** between sites and to ICX with CSPs and CNFs*, offering guarantees and SLAs

Added value to the customer for the consumptions of services, making available **APIS or Portals** and enhancing **E2E automation**

Broad portfolio of **local multi-technology connectivity** services and extensive capillarity with a focus on Internet services, simplyifyng and unifying access management

Intelligent software-based traffic management (**SD-WAN**) with respective **security layer** (Incl. SASE)

Intelligence added to connectivity to **manage traffic between different Clouds** through agreements with new players

(*) CNF: Carrier Neutral Facility. Ej. Equinix