NTT DATA
Trusted Global Innovator

5G

NAAS

The game-changing new approach to higher value enterprise business services.

Helping Telcos and MNOs transform their competitive position in the business marketplace.

Network as a Service (NaaS) brings together 5G technology, programmable networking solutions (such as SDN) and rapid service provisioning techniques to offer customized, targeted connectivity services for the business market. NaaS delivers network slices dynamically, with cloud native user experience, while meeting demanding Quality of Service (QoS) requirements, using AIOps.
With NaaS, Telcos can offer a winning combination of quality, scalability and speed, bringing a cloud-like experience to business customers of every size.

What is Network as a Service?

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Higher value services, improved profitability and competitiveness

For enterprises competing in virtually every industry sector, the market has become more global, more distributed and more collaborative. Businesses want secure connectivity wherever and whenever they need it. They do not want to spend time over getting started, nor do they want take high risks or tie up their capital in upfront investments.

They want a “cloudlike” experience: scalable services, immediately available, payment only for what you use, via OpEx, not CapEx. They expect outstanding Quality of Service and complete security as standard, and they want all of this right now. Thanks to NTT DATA’s new approach to 5G NaaS, Telcos and Mobile Network Operators can deliver up to and beyond even the highest expectations, anywhere and anytime.

What's special about NaaS?

NaaS uses 5G capability to configure and deliver connectivity

NaaS uses 5G capability to configure and deliver connectivity to enterprise clients with a level of speed and efficiency that has never been available before. The service has been specifically designed to operate in the same way as hyperscale cloud: provisioning a service that is configurable to very precise specifications, can be ready for use in hours, not weeks or months, and does not require any special design, engineering or other preparation work.

Using NaaS, enterprises can now access, not just their own private space in a virtual datacenter owned by a hyperscale cloud company, but working environments that connect locations, individuals, groups and even external partners- wherever in the world they are.

A service tuned for flexible, scalable enterprise working

The introduction of 5G technology means that the entire network is inherently programmable, and that enables a revolution in service design. NTT DATA's NaaS solution is built around 4 layers of capability:

Customer portal
Enabling authorized users to configure their own service, set the required business rules and agree cost parameters.

Network Management Systems
With the OSS framework treated as pure cloud, and BSS decoupled from network resources.

Network Virtualization Platform
Capable of extension to public cloud and internet to build distributed, hybrid platforms for enhanced flexibility and rapid deployment.

Shared Network Resources Using an extended ecosystem of trusted providers, enabled by Blockchain, to create a truly global platform, with rapid inclusion of third-party resources via APIs, enabling connectivity access across the world at low cost to customers.

Taken together, this enables Telcos to provide a range of advanced digital services that can be built upon network slices, and that link any desired location to any other. The cloud-like ease of use, cost-efficiency and almost limitless scalability means that enterprises can now access connectivity services that are exactly right for their needs, and stay focused on current requirements, no matter how fast and unpredictably these may change.

The service that Telcos and MNOs have been waiting for

5G NaaS means that Telcos and MNOs can offer a new source of added value to their own clients, and that could be a game-changer for their long-term competitive position.

Maximize the potential of 5G

The NTT DATA approach to NaaS uses 5G capability to create a programmable network, capable of incorporating other connectivity and computing resources into a hybrid platform with no limit to its reach. 5G also enables full mobility services as an integral part of the solution offered.

Bring cloud experience to the connectivity market

NaaS is designed to work according to cloud rules. Customers configure their own services and set the business rules that define scope and permissions. The customer is in control at all times, while also benefitting from the low cost and usage simplicity that only a shared platform can offer.

Business partnering for evolution and growth

By adopting NaaS as a key tool for connectivity, enterprises gain an extra level of agility at once. They can define, provision and deploy the connectivity they need at no notice and low risk. As they build their strategic business plans, having their connectivity provider at the table will be a normal part of their business-as-usual approach. That will lead to a step chan change in status and value for all Telcos, and for MNOs, in particular.

Vendor agnostic, no lock-in

The 5G NaaS service is based on true web-native technology. It uses open components compliant with TM Forum Open Digital Architecture (ODA) to ensure that customer facing service components are decoupled from the network platform. This means that the service delivered to customers will evolve naturally, as network architecture develops. B2B clients do not have to invest in their own networks, nor worry about incompatibility with new technologies. NaaS is always current, always best practice.

Built for partnering, focused on security

NaaS is designed for collaboration, at every level, from shared resources and design, through to environments that share network resources, enabled by Blockchain, to make the network deployment more efficient. Security is built into the service from the ground up, with multiple systems to identify issues, analyze trends, eliminate threats and avoid any danger of outages. Security and partnering go together by design, enabling Telcos and MNOs to deliver for their end user customers with confidence, always.

Key Features

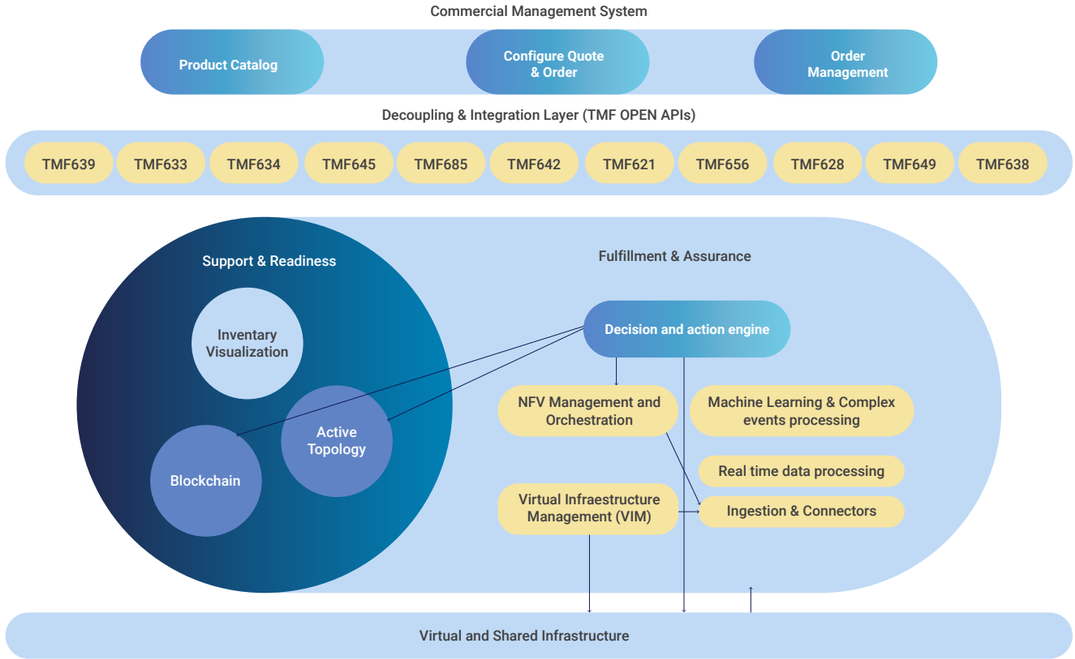
The NTT DATA 5G NaaS approach is based on decoupled layers of components, with REST APIs enabling rapid configuration of customized services for multiple customers. Network slicing is used to provide secure, private environments to many different customers across a global shared infrastructure. Technology features include:

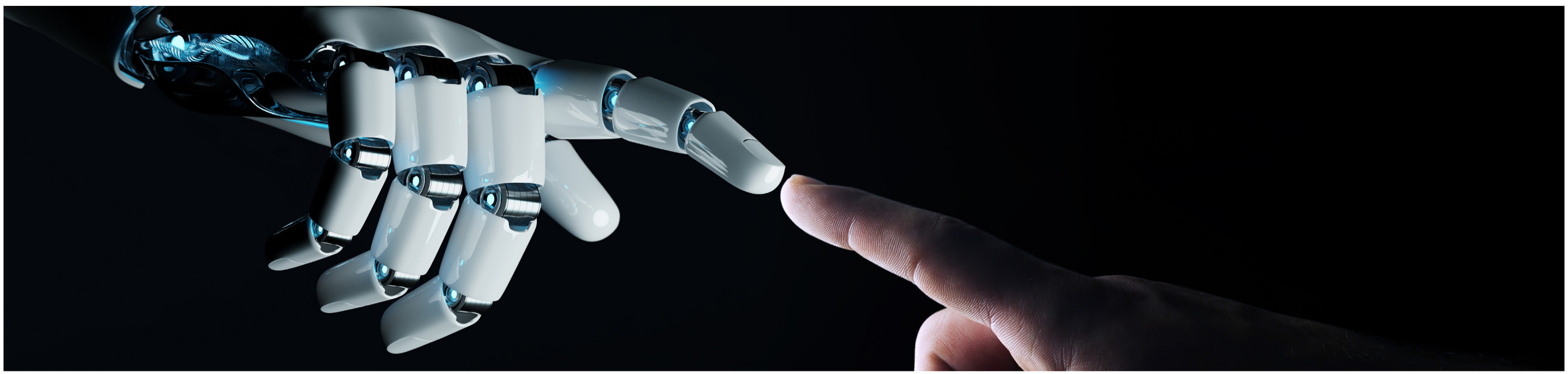
Integrated SD-WAN as a Service, with orchestration plane responsible for onboarding SD-WAN branch devices into the SD-Wan underlay; management plane responsible for configuration and monitoring, while the control plane manages network topology; and the data plane forwards packets as instructed by the control plane.

Open standards for all key components, including open source NFV manager and orchestrator, which interfaces between the control plane and end points (branch devices); SD-Wan controller, which connects branch devices and distributes routes and policy information; and branch devices, providing secure data plane connectivity and responsible for traffic forwarding, security, encryption, Quality of Service (QoS) and other functions.

Virtual tunnels, which can be configured across any suitable network component, utilizing third party connectivity, fixed line as well as 5G, public internet or existing Telco MPLS. The default status is mesh format, in which all branch devices can connect with all others and share data according to agreed business rules.

The network topology is shown below, and this demonstrates the ways in which discrete functional layers decouple components and capabilities, enabling speed and flexibility of a kind that has previously only be seen in hyperscale cloud services.





Putting 5G NaaS to work

Enterprises are already making use of connectivity on demand to improve corporate agility and gain a competitive edge in the market.

Use Case 1: Rural mobile services

A Mobile Network Operator is working with NTT DATA to deliver enhanced broadband services to customers in remote, rural areas. The cost structure of the business means that fast roll-out of lean, low cost solutions are essential, as a more conventional approach is not practicable, due to the low margins and cost-sensitivity of the service.

The company in question is now working with NTT DATA to use NaaS as the basis for its targeted Rural Network as a Service strategy. The solution uses AI to optimize data flows across the network, which uses vertical prioritized applications on an innovative foundational framework. In the drive to “connect the unconnected”, the lean and agile nature of NaaS has proved a game-changer, and provides a template for implementing high quality services in corporate and other community contexts.

Use Case 2: Extending SD-WAN

Wide Area Networks have been used by large enterprises for the past decade or more to enable distributed operations more efficiently.

In most cases this has involved heavy capital investment in dedicated circuits and proprietary software for everything from access management to control and monitoring solutions, through to cyber-security.

Today, 5G NaaS is being used to deliver the private WAN experience using entirely shared components and resources, reducing costs and accelerating provisioning. Early adopters include banking providers, manufacturers centralizing control of asset fleets, and content providers using on demand connectivity to share bandwidth-heavy content across the shared network.

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Why Choose NTT DATA?

NTT DATA combines the capabilities and experience of a global telecommunication and mobile network provider, with an exceptional pedigree as IT service provider, specialist applications developer and industry subject matter expert. We bring together all the skills needed, therefore, to build and evolve the advanced networking solutions that enterprises of every size and in every market require.

We are proven innovators, with an annual R&D budget of around 2 billion USD. As a global business, we developed NaaS originally for our own use, and have proven the concept in action for ourselves before taking it to market. NTT DATA is a leading proponent and support of Open Standards, placing us in a leadership position for concepts built on collaborative working, co-creation and joint innovation.

As a strong commercial player, with a decades-long commitment to the telephony and mobility markets, we are a natural go to market partner for any telco determined to move up the value chain and become an essential service provider to ambitious enterprises, today and into the future.

We are **EXPERTS**

We are **INNOVATORS**

We are **LEADERS**

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