End-to-end **network slicing**

Fit-for-purpose virtual networks that enable business model innovation across a wide range of use cases and industry verticals.

Monetization

Charging and **Billing** manages the rating, charging, and billing cycles as well as the partner, supplier, and customer contracts.

Mediation processes CDRs while caring for real-time stream data processing.

Exposure enables niche growth in the value chain and monetization of network-slicing capabilities to the broader ecosystem by exposing network attributes via APIs.

Automation

Multi-domain service orchestration and assurance care for orchestration, assurance, and lifecycle management functions for E2E services providing slice-based service automation, open APIs, and adapter frameworks to the monetization layer.

Services inventory and **common topology** store and manage the physical, logical, virtual, and service resources.

- **Domain network management** provides management functions for RAN, transport, and core domains.
- **Customer service analytics** cares for operational and business SLA fulfillment.
- **Resource orchestration** orchestrates, and manages lifecycle PNFs, VNFs, and CNFs.
- **Service activation** manages activation in the network components.

RAN

RAN slicing dynamically optimizes the radio resources allocation and service differentiation within and between slices for guaranteed SLA fulfillment for different traffic categories.

A granular level of network performance observability is provided for effective network slicing orchestration.

Transport

Map network slices traffic into transport resources that match the required SLA by using SDN controllers and transport orchestrators to the RAN and core management domains.

Consider the capabilities and capacity of the transport infrastructure when selecting enablers (e.g., VPNs over IP-MPLS, SR-MPLS, SRv6, H-QoS, and URLLC).

Core

Enable defining network slices with dedicated or shared user-plane, control-plane, or data-plane network functions (NF). When the control-plane and data-plane functions are dedicated, the slice constitutes a fully independent logical network. Deployment dedicated user-plane closer to the user ensures low latency, allowing the user data traffic to stay on-premises.

Functionalities like NSSF and URSP enable dynamically placement of a UE on a slice and to steer traffic from one slice to another according to defined policies for guaranteed SLA fulfillment.