



Case Study:

Tier-1 Telco's NaaS and NaaS Service Factory Powered by Sea Street



Two years ago, a national Tier-1 Telco came to Sea Street with an audacious goal: To eliminate 80% of the cost per kilobit across their network while improving new product time to market and service reliability. Though deep cooperation and a series of trials and workshops we proved that our StratOS platform for model-based, cross-domain AI operations could meet their needs, and together we are on our way to delivering their goal.

Using the StratOS platform, Sea Street is now deploying Network-as-a-Service (NaaS) abstraction and a NaaS service factory for this national scale Tier-1 Telco. Sea Street's StratOS provides the Telco with NaaS abstraction across all of its networking assets: wired/wireless, physical/virtual, and legacy/cutting edge, including 5G. Sitting south of the OSS/BSS platforms and north of the domain managers and orchestrators, StratOS provides:

- Abstraction and convergence of WAN, optical, packet core, NFV/NFVI, voice core and CPE resources.
- Cross-domain service composition.
- Service-level autonomous operations including closed-loop assurance, healing, failover, optimization and automated upgrade/maintenance.
- Gap-filling for domain managers with missing features/capabilities.

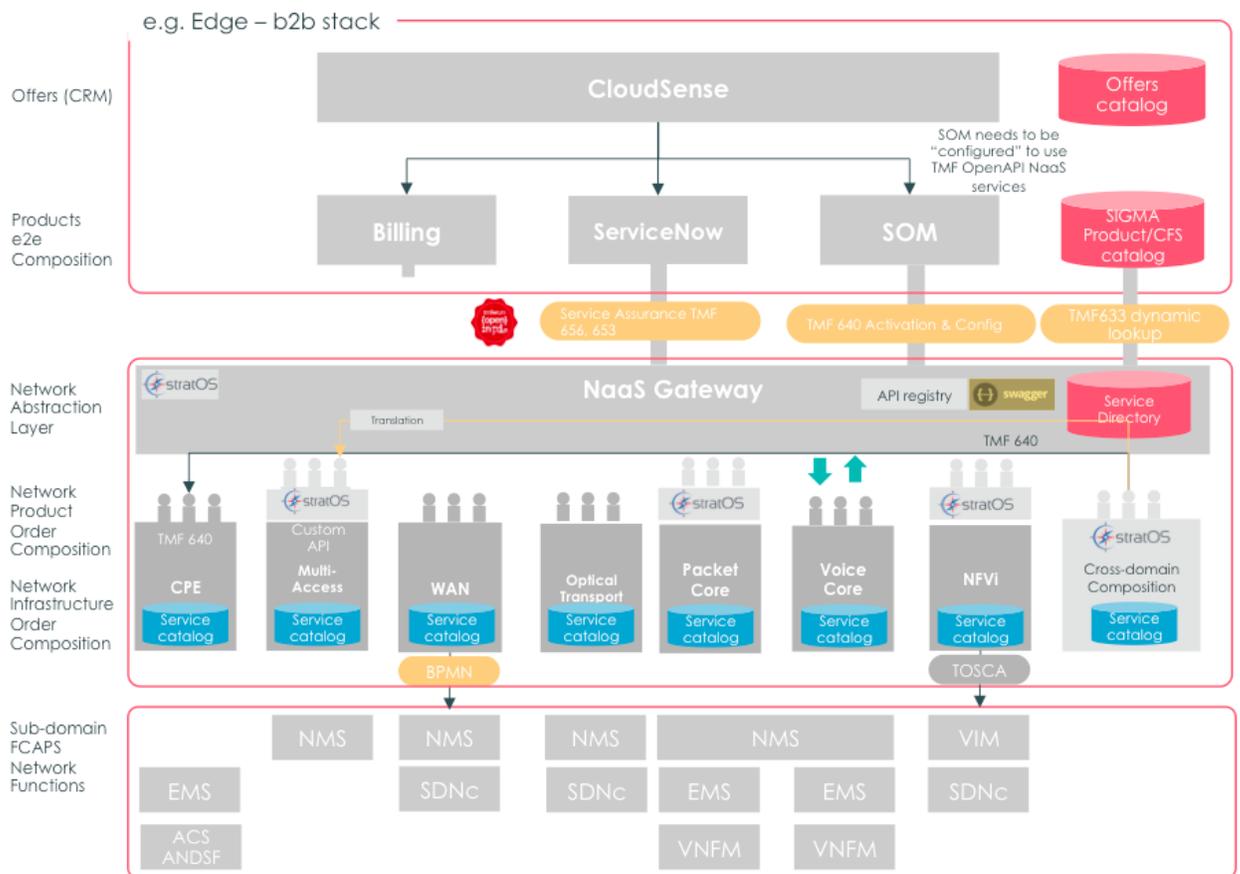


Figure 1: Sea Street as NaaS, Cross-Domain Composer and select Domain Managers

This Tier-1 Telco's NaaS provides full decoupling of services from the specific network resources. It specifies the contract for the underlying resources to provide their capabilities northbound. When a service is fulfilled against the NaaS, resource selection is automatically optimized for cost, performance, resiliency and availability to suit the needs of the service. The service itself remains abstract and portable across resources and as the needs of the service change (e.g. dynamic SLA) or new resource capabilities become available the service will be re-optimized by StratOS.

Complementing the NaaS is a Service Design Factory powered by Sea Street's M7 methodology and service design tools. The service design factory enables rapid creation of new services that consume the NaaS resources. Service design starts with a product definition and decomposes the product into a service contract that represents the full scope of features, options and SLAs that will be available to customers. This includes the features and options for the service, plus the business logic for assurance, optimization, healing and maintenance of the service across its lifecycle. The product requirements and the operational business logic are then rendered as a set of goal-seeking intent models that together describe the service type.

Service Design Lifecycle

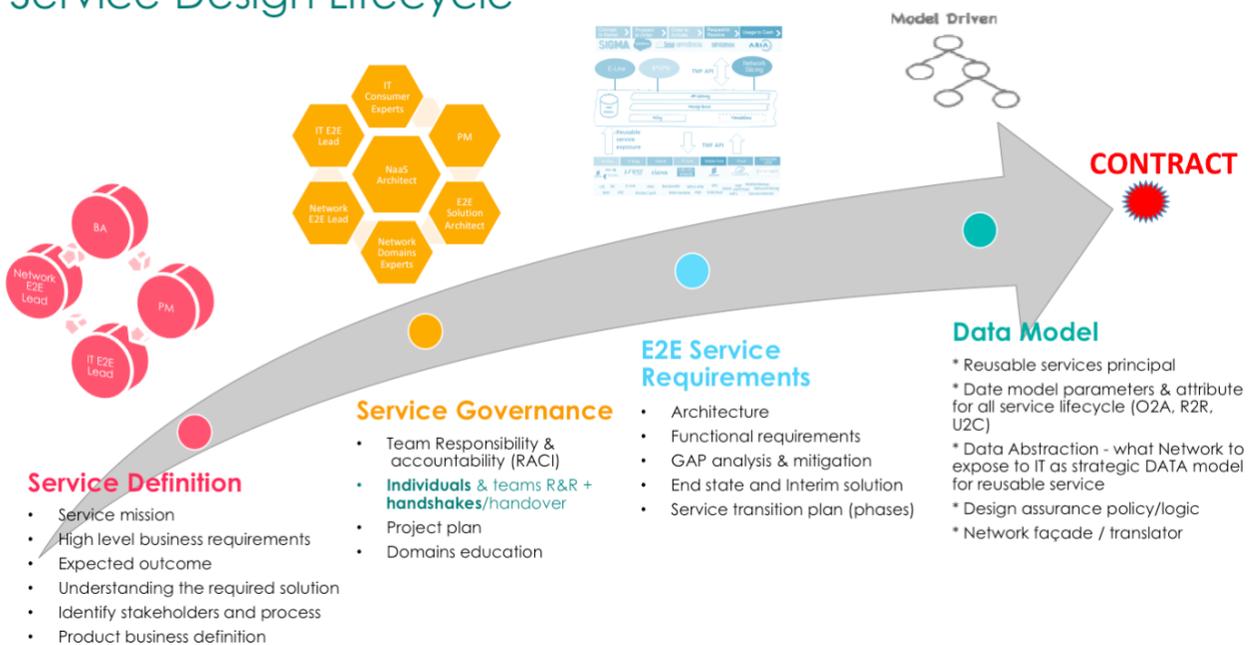


Figure 2: The Service Design Lifecycle

When an order occurs, an instance of the model set representing the service type is spawned, is populated with the appropriate properties for the customer and the service is fulfilled against the NaaS. The instance of the service is 'born' and models that define the intent and operational business logic for that service instance engage to execute closed-loop assurance and closed-loop optimization from that moment on. As conditions change over time though resource changes, maintenances, outages, customer changes and the like, the service instance model actively manages NaaS and other resources cross-domain to ensure that the intent of the service is continuously met.



Using the service factory approach the various product and engineering departments in the Tier-1 will steadily automate the operations of their 82 network services. The Sea Street platform is fully capable of handling non-network services such as video, voice and IT as well. Because StratOS supports tenancy, each team within the company can compose and manage its own service designs. Tenants can re-use services created by other groups and by Sea Street but only get to modify the fundamental properties of the service components they own responsibility for. The organization structure is preserved even as a common solution is used for products company-wide.

Sea Street's StratOS platform also makes it easy for domain owners in this Tier-1 to operate independently. Since the NaaS layer specifies the contract with the resources and since Sea Street can abstract any set of domain managers, each domain owner is free to specify managers and orchestrators as they see fit provided they meet the needs of the services.

Using Sea Street for the NaaS and the Service Design Factory approach, this Tier-1 is making huge strides toward their 80% cost reduction goal. Specific improvements include:

- A common approach to service design across all network resources and all products that consume those resources. Easy creation of cross-domain product offerings such as 4G backup for terrestrial links.
- Reduction in service design time from greater than 6 months to less than 6 weeks.
- Full lifecycle autonomous operations for services, including closed-loop assurance, healing, optimization, maintenance, upgrade and compliance/SLA.
- Abstraction of services from the resources that fulfill them, enabling freedom of choice across suppliers and continuous cost and performance optimization.
- Simple introduction of product enhancements as new resource features become available.
- Low model overhead with high reuse across product designs.
- The ability to automate both greenfield products and existing brownfield offerings.
- Dramatically reduced OPEX, improved reliability and full AI Ops.

If you would like to know more about StratOS or this case, would like to see a demo, or learn about using StratOS to manage your operational challenges, please contact us at:

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End of Case Study
