the 5G value plane

Transformational binding of network, IT, Cloud and enterprises empowering cutting edge 5G monetization

The current production state of 5G is far from the promised end goal. While 5G radio is proving useful for boosting throughput, to realize its full potential, 5G must be more than just "4G on steroids". Functionally, much of the monetization potential will follow deployment of standalone (SA) 5G cores. But for CSPs to fully realize this potential and secure 5G return on investment, monetization must take a more prominent focus.

One of the key industry concerns is to not repeat the industry paradigm of 4G. While this earlier technology delivered a dramatic boost to throughput, it required significant investment by operators to deploy, acquire additional spectrum, and densify their RAN. Yet from a

monetization perspective, in many cases, 4G led to an "unlimited data bundle" price war, causing a negative effect on key metrics such as revenue per bit and customer lifetime value. This often-seen race to the bottom consequently damaged profitability across the industry.

Importantly, this was not due to a lack of exciting services from the perspective of the end users. Rather, the value of the opportunity was seized upon by OTTs who could adapt their applications and services sufficiently to rely on "best effort" connectivity. Yet for CSPs, the net result was being locked into a pure "connectivity provider" role, and therefore a marginal part of the total revenues that ensued.

So what will be different? Not 4G+newer OTTs, but enhanced Operator positioning

From OTT to NES

5G now provides an opportunity for CSPs to shift their position. While many potential 5G-specific use cases exist, their commonality lies in that each one requires tailored network performance to support it. CSPs now have multiple 5G network currencies they can expose, enabling them to shift from the role of transparent OTT supplier to unique Network Embedded Service (NES) enabler.

Expanded 5G assets (partial list):

- Latency
- Speed
- Coverage
- Capacity
- Density
- Reliability
- Slices
- Edge resources
- Number of connected devices
- Variety of device types
- Frequencies
- CNFs/VNFs
- APIs
- Partnerships
- Data
- Monitoring apps

CSPs: The NES enabler

NES simply will not exist without CSP support. Traditionally, CSP assets were limited to providing coverage and throughput. Yet as the network transitions from a physical, static entity to a dynamic, virtualized, software-defined and cloud-enabled ecosystem, CSPs are now in a position to encompass a much a wider – and significantly more monetizable – ecosystem.

But leveraging these new and expanded resources also requires a fresh outward-looking platform approach. Such a platform must support two key principles:

- Support for a dynamic, open service lifecycle, encompassing creation, consumption, interaction, monetization and analysis, with ongoing permutations and real-time responsiveness

- Removal of complexity, seamless exposure and systematically removing barriers to innovation between the business, IT and network at each stage, bringing the full value of 5G to end-users (enterprise or consumer)
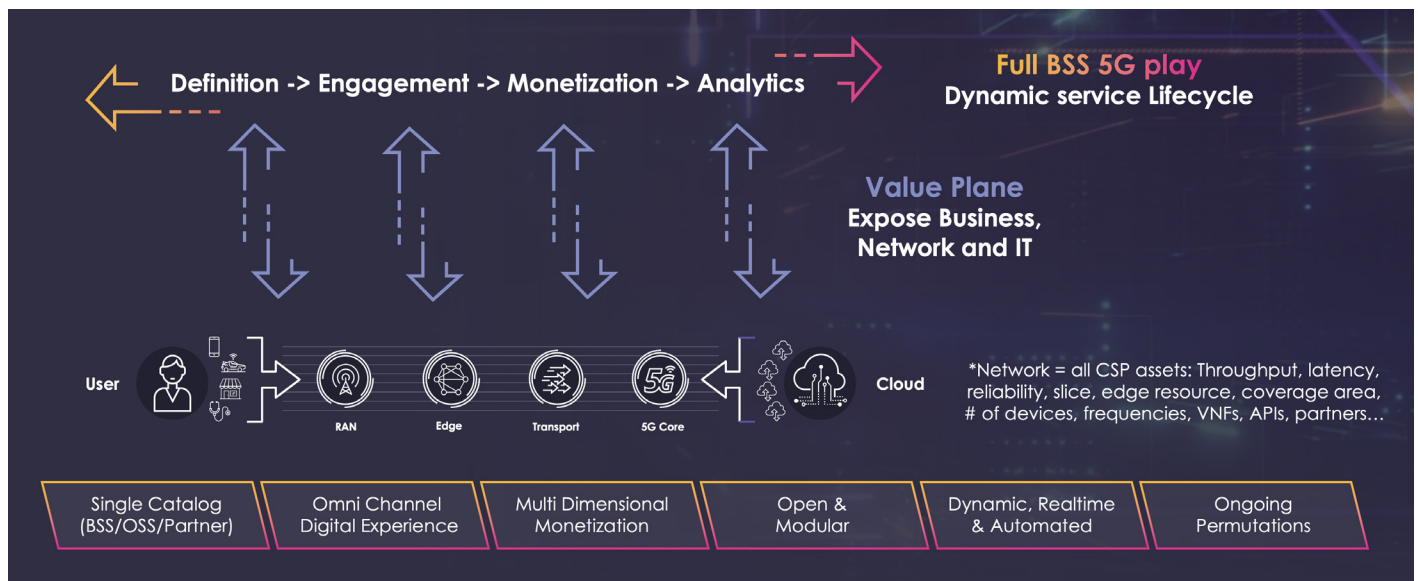
The 5G Monetization Platform

To empower innovative NES, this exposure will be needed at every stage of the service lifecycle. At a high level, the expanded service's lifecycle can be explored across four stages:
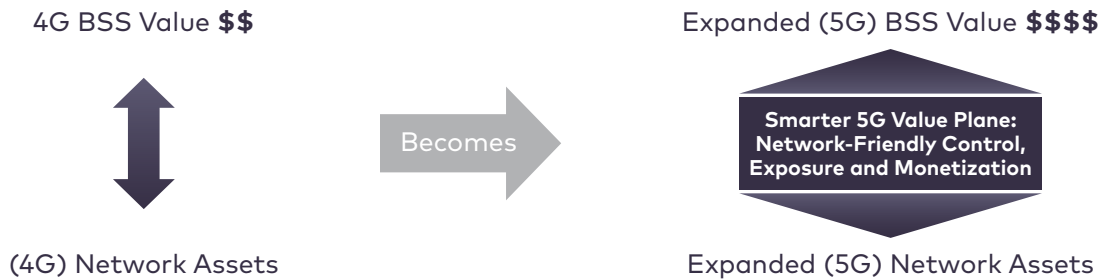
- **Definition:** During the service definition, unique network capabilities, attributes and value-driven integration points must be configured and priced as an integral part of the offering. These definitions become the 'currencies of 5G'

- **Engagement:** Service ordering triggers the relevant charging, policy and network configurations needed for the specific characteristics, needs and duration of the service. Furthermore, enterprise and partner portals can expose real-time network performance and pricing relative to SLAs

- **Monetization:** As various plans may be charged based on usage, charging must occur in real time according to the specific service utilized. The accurate "bill" must be exposed to customers in a clear manner adapted to their needs, reducing bill shock and enabling potential upsell packages

- **Analytics:** This is a key consideration in this new and dynamic ecosystem. Analytics are crucial from an operational perspective – exposing serviceability and availability of appropriate network services to users, as well as from a monetization angle – determining which services and pricing models are optimal and able to be adjusted in real time

The Value Plane

According to TM Forum, BSS will provide 72% of the value derived from 5G. Indeed, 5G introduces many more available functions and network attributes, which, in order to become of value, must be better managed and exposed through to the BSS. Crucially, *these functions and attributes are no longer just a means of delivering a service, but will become part of the proper functioning of the service itself.*

5G Value Plane: Position & Requirement

4G BSS Value **$$**

Expanded (5G) BSS Value **$$$$**

Becomes

Smarter 5G Value Plane: Network-Friendly Control, Exposure and Monetization

(4G) Network Assets

Expanded (5G) Network Assets

This exposure is manifested through Amdocs' 5G Value Plane, which bridges IT and business functions with the 5G network. Extending beyond the tightly coupled charging and policy functions and managed by a centralized catalog, the Value Plane acts as a centralized "5G brain" across business, IT and network, and makes possible enriched data and monetization for the expanded 5G ecosystem.

With 5G, policy is no longer just a network control mechanism but a means to build, deliver and dynamically adapt the network for individual 5G services. With its integration with more powerful 5G charging, it enables

limitless offers with divergent network characteristics to have different pricing and charging rules, as well as appropriate SLAs.

To enable the agility to rapidly develop, launch, manage and monetize new offers, 5G policy and charging functions in the Value Plane need to be integrated to the service catalog in existing and evolving BSS stacks, as well as to the wider 5G network. This will open new revenue streams, enable the development of new business models and dramatically improve the ability to monetize the 5G network.

5G Strategic Architecture
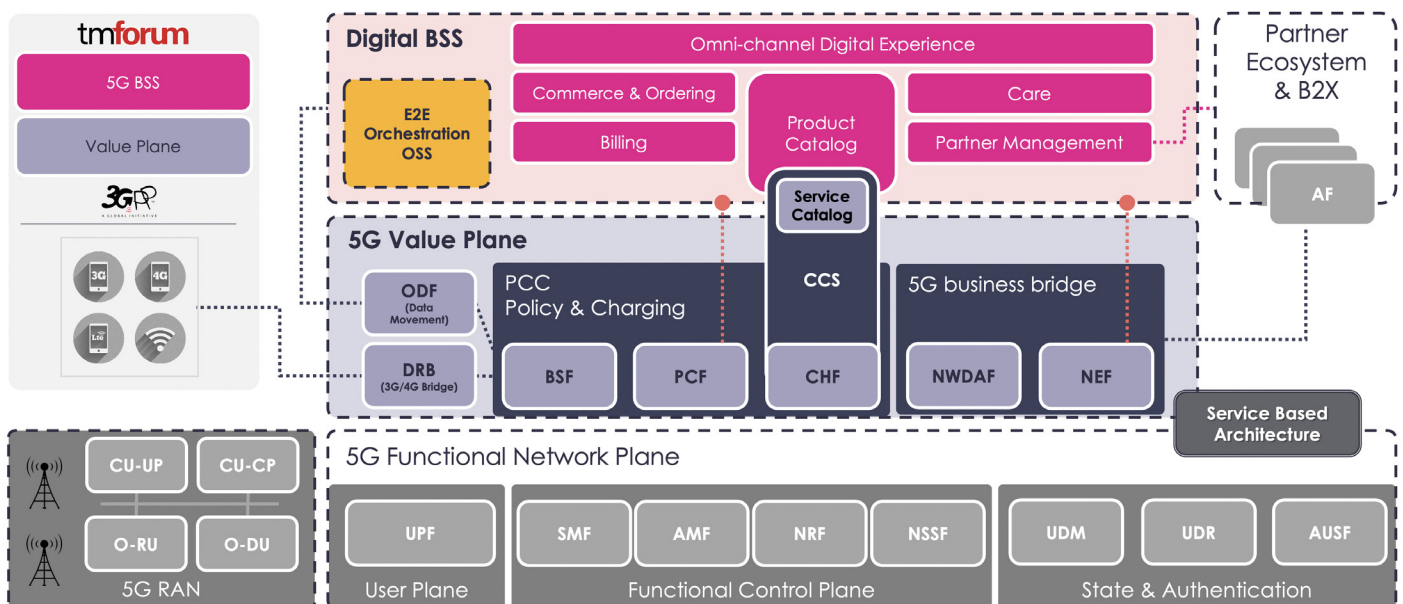
Finally, by leveraging the cloud-based Value Plane as part of a 5G platform, cloud business models can now be exposed from the network. This includes supporting on-demand real-time consumption of a wide range of resources and services, with innovative pricing and cloud-era exposure.

To fully leverage their 5G assets for monetization, service providers must adopt a clear 5G mindset. While in the past it was sufficient to focus on the search for a specific ROI use case, only the holistic approach above will enable the ability to effectively compete and succeed in this rapidly evolving and increasingly competitive 5G era.

> **It's not just about connecting people or things anymore, it's about the experience delivered once they are connected.**

For more details visit www.amdocs.com/5g-value-plane

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