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NETWORK SLICING: THE FUTURE OF CONNECTIVITY IN A 5G AND FIBRE ERA

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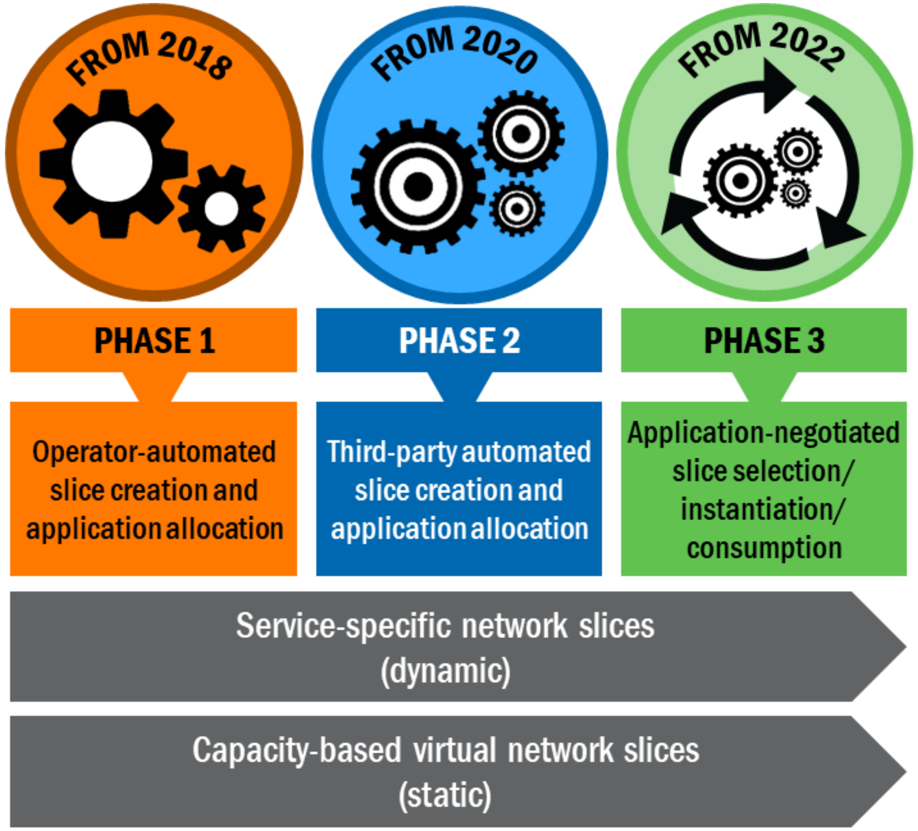
Key takeaways

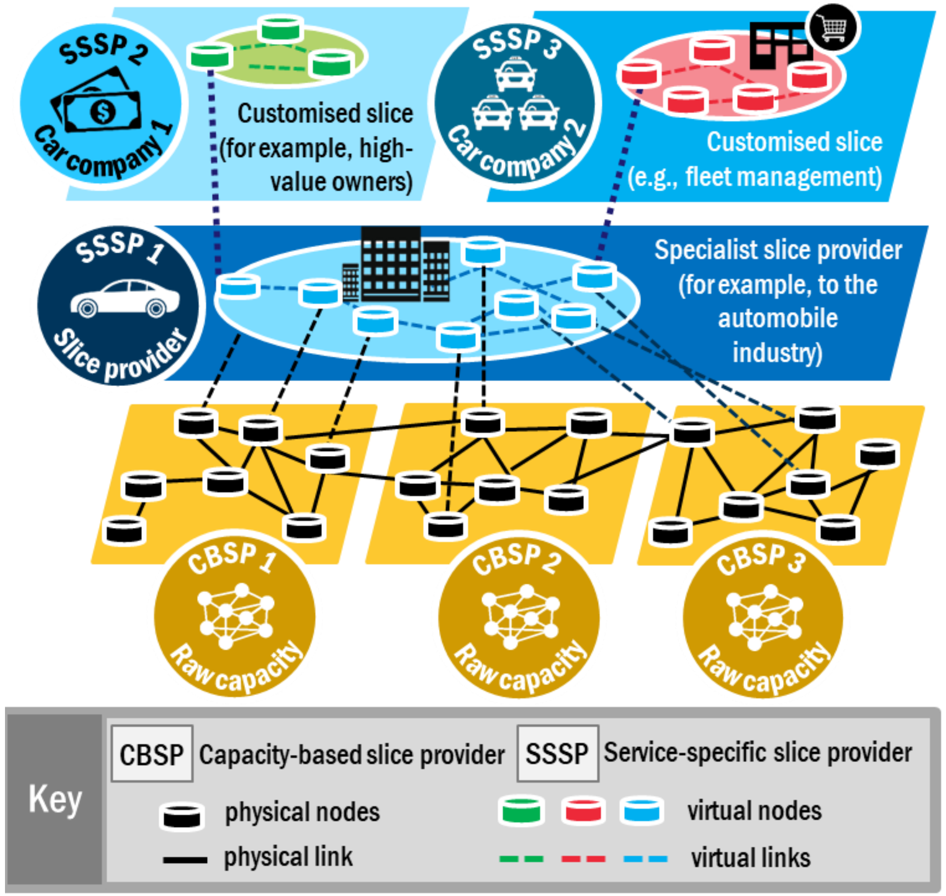
- In future virtualised telecoms networks, applications will automatically navigate an optimal path through a highly responsive network, representing the logical evolution of what we now call slicing.
- Connectivity and services will be transformed in three phases: capacity-based slices → single-tenanted, service-specific slices → application negotiated slices
- Network slicing will change the economics of the connectivity business enabling new providers and new use cases, and transforming many industry verticals

The network of the future will be sliced on different levels to support a wide range of service models and highly flexible resource usage



Network slicing provides an end-to-end logical (virtual) network with dedicated capacity and/or other service-specific characteristics

Hierarchy of physical/logical network slicing, shown using an example from the automobile industry



Source: Analysys Mason

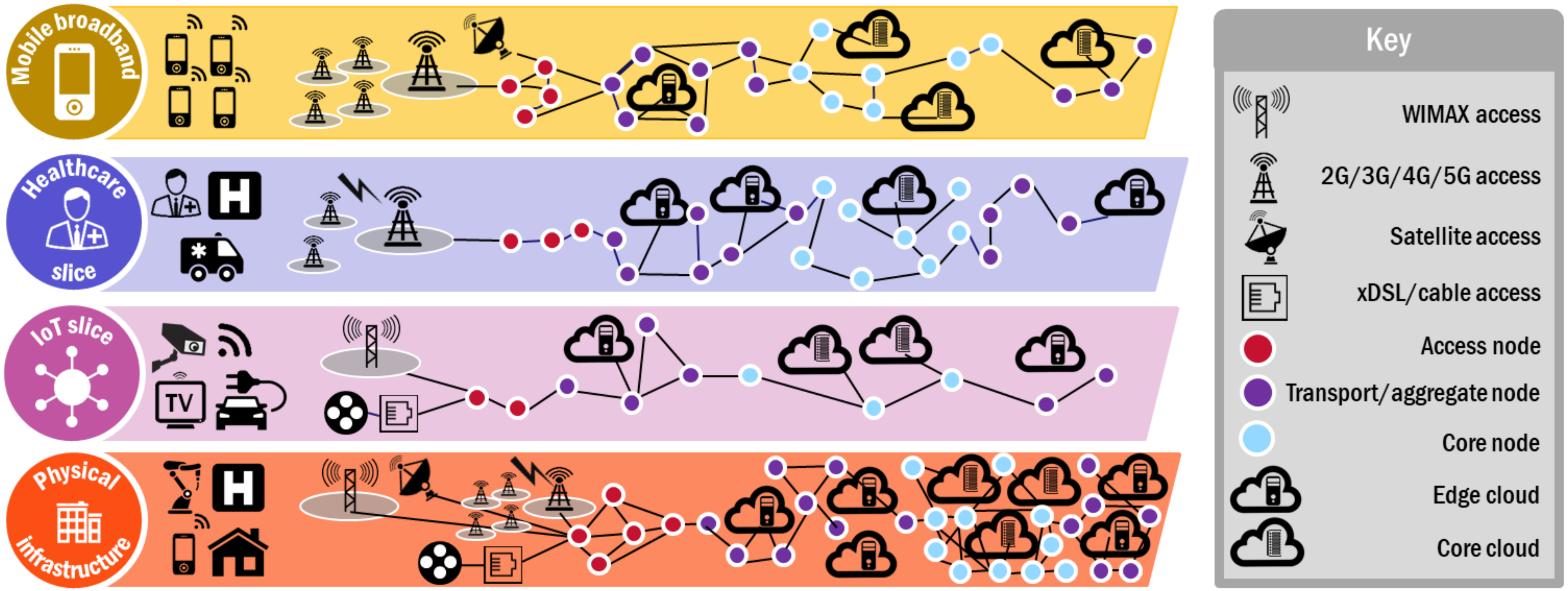
Virtualisation will enable 'slicing' of the physical network into separate virtual networks, providing differentiated latency, performance, reliability, availability tuned for each use case/service

Network slices are end-to-end, virtualised connections across multiple network domains, including fixed/mobile access, transport and data centres

Network slices are created on-demand and independently controlled, managed and customised, with a degree of isolation previously achievable only with dedicated physical networks.

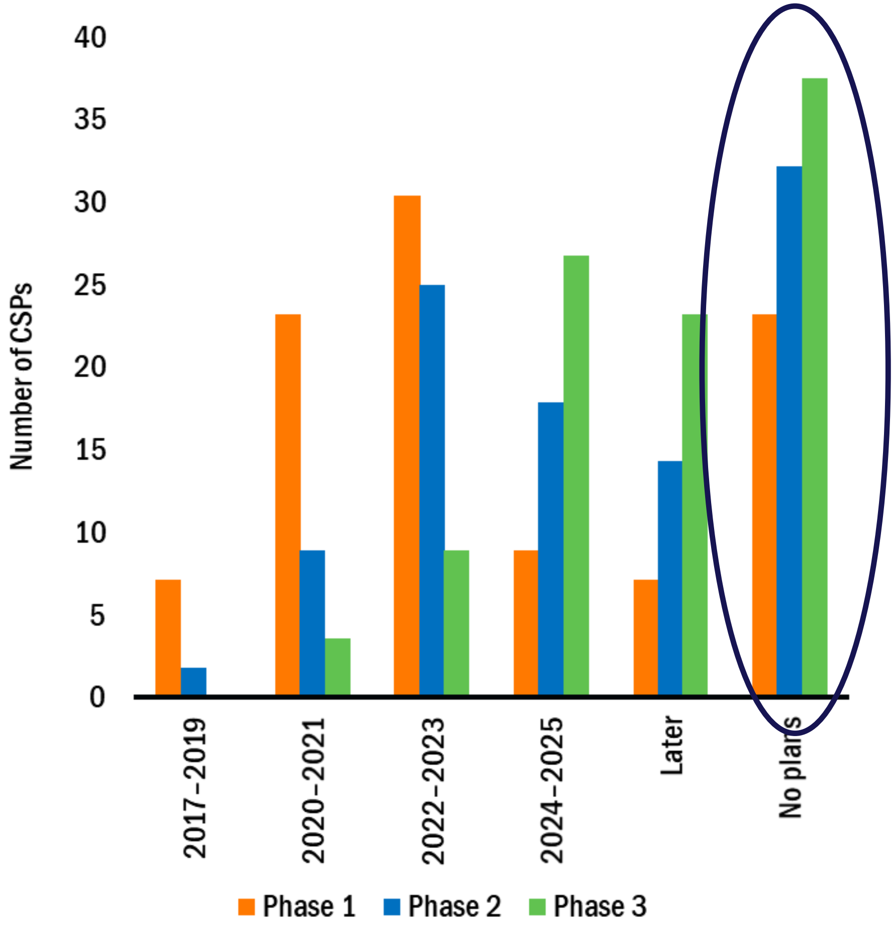
There is little consensus on how many slices will be created, but the industry should plan for a large number, crossing many CSPs' networks

Conventional view of network slicing (Source: Analysys Mason and IEEE Communications Magazine)



It is essential that established operators start to build their strategy now

When, if at all, would you anticipate deploying each of the network slicing stages?[1]



According to the results of a survey conducted by Analysys Mason, 23% have no plans to do slicing at all, while a further 9% will stay at Phase 1, and a further 6% at Phase 2

Operators staying at Phase 0 or 1 will find their revenues harder to defend and their share of the value chain diminished, unless they can invest in physical infrastructure at sufficient scale

For NFV/SDN, 52% of operators say they have not identified concrete business gains beyond cost reduction. Slicing is a key way to derive more value from their virtualisation investments.

[1] Source: Analysys Mason's survey of 56 Tier 1 CSPs worldwide, November 2017

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Anil Rao, Principal Analyst, Telecoms Software and Networks, Analysys Mason: With over 15 years' experience in the telecommunications industry, Anil has broad ranging experience in designing and implementing telco network and operations solutions for both fixed and mobile operators. In his current stint as an industry analyst, Anil focuses on how network virtualisation, 5G and IoT will impact operations and enables telcos and industry players explore new business models and revenue opportunities.

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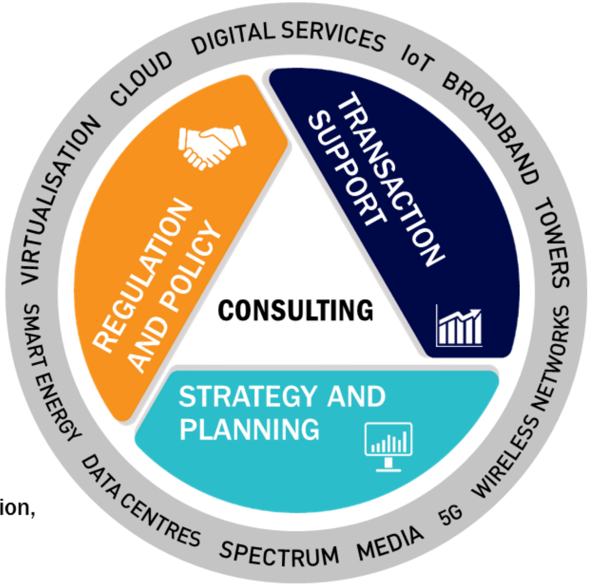

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