



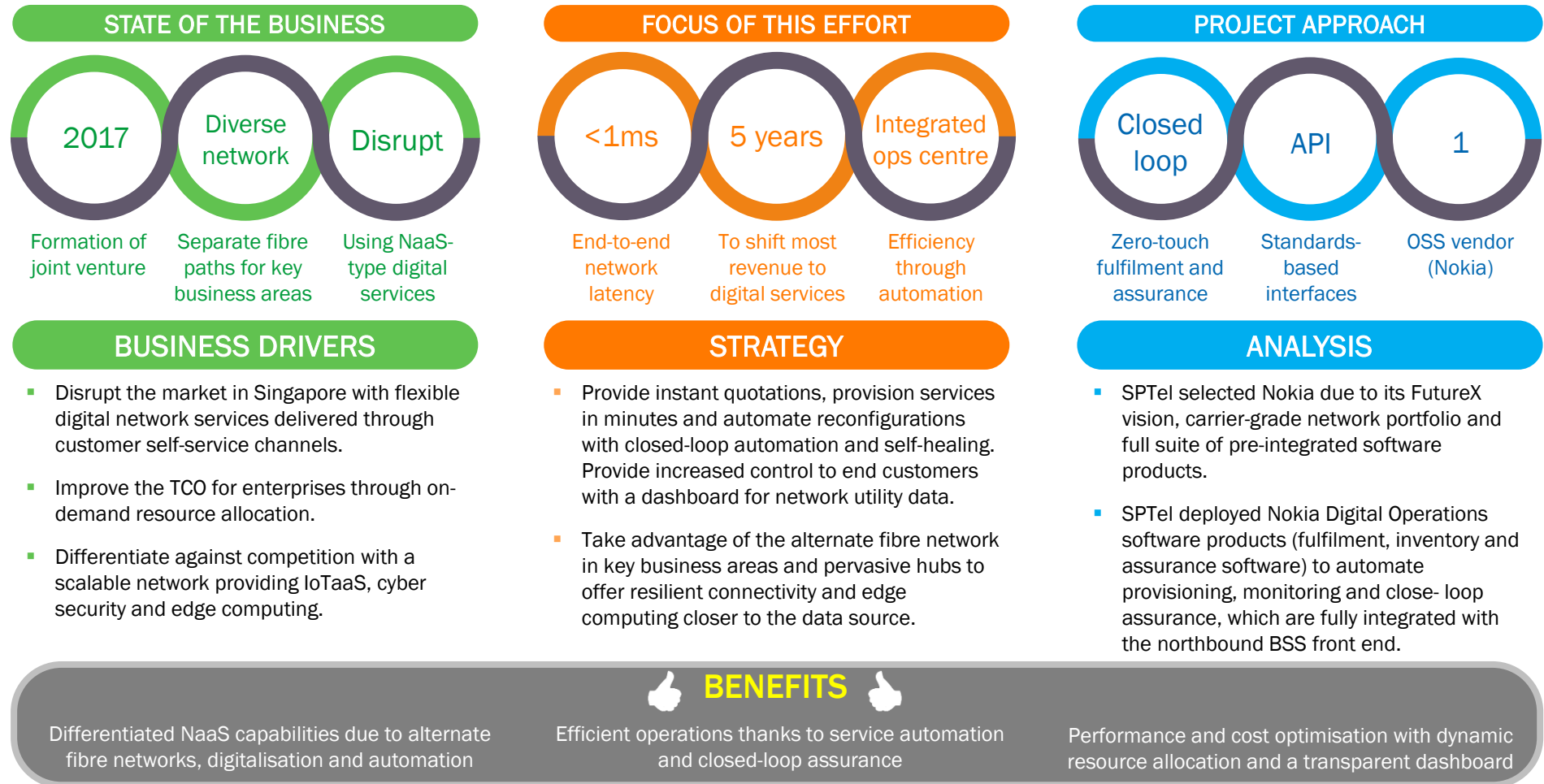
SPTel: harnessing the power of software-defined networking to automate operations and disrupt the B2B services market



Anil Rao



SPTel B2B vision and strategy overview



Source: Analysys Mason

Business challenges and key drivers of the project

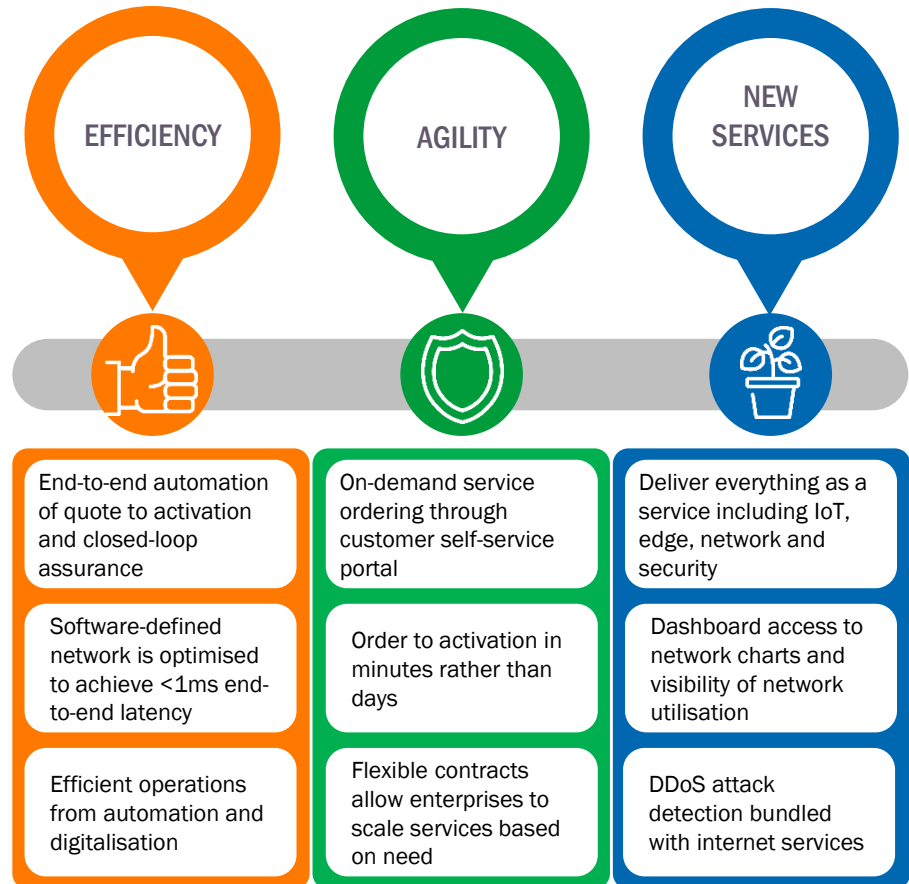
SPTel recognised an opportunity to disrupt the enterprise services market in Singapore by providing on-demand network services based on a fully automated SDN-based fibre network.

SPTel's infrastructure uses an alternative fibre network that is highly resilient and provides network diversity. It uses unique fibre pathways that combine leased SP Group infrastructure and its own fibre pipes, which are laid alongside the power network cables. SPTel launched IoT-aaS (2018), SDN (June 2020), an SD-WAN extension to the home (September 2020) and NFV for cloud-based network and security services (December 2020) in order to address the growing demand for dynamic connectivity services and as-a-service business models.

SPTel is also deploying several edge cloud locations across Singapore to enable data processing closer to the source. Edge clouds are more responsive than public clouds, and are more cost effective and scalable than on-premises deployments. SPTel's service portfolio positions it as a strong disruptor in the mature enterprise market in Singapore, which is currently dominated by the large converged operators.

SPTel is already seeing significant demand for its SDN-enabled NaaS and is receiving positive feedback from its customers such as NEO & Partners Global. It expects that the take-up of these services will grow in the next 5 years; it will therefore need a highly automated network and service automation platform to be able to deliver these services at scale and offer superior end-to-end digital experiences.

Figure 1: Business factors that are driving the transformation project



Source: Analysys Mason

Analysis – SPTel chose Nokia as the OSS component provider in order to automate the service provisioning, monitoring and closed-loop assurance of the B2B services

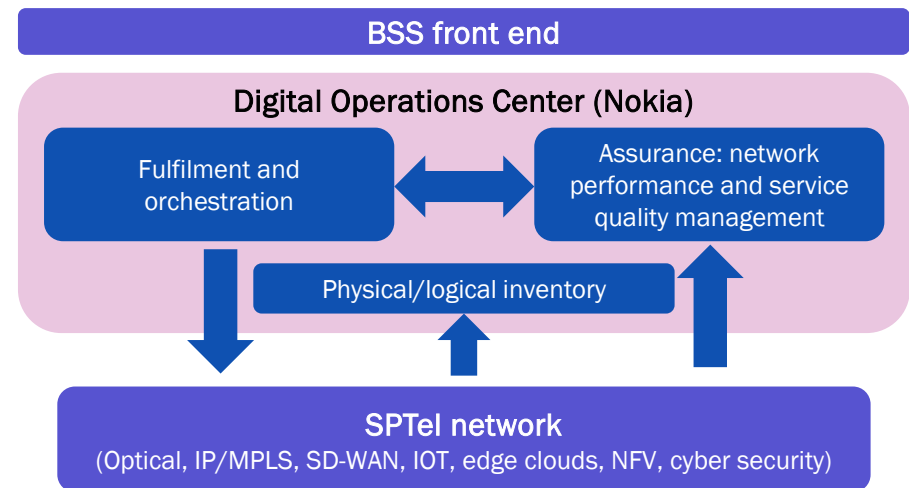
Service agility and zero-touch operations are the key cornerstones of SPTel's strategy.

SPTel conducted an extensive competitive process during which it assessed multiple vendors on their technical abilities, product roadmaps and visions. At the end of the process, SPTel chose Nokia because its FutureX vision aligned well with the operator's own digital networks strategy. Nokia's software portfolio also provided the requisite technical capabilities to achieve the expected level of service agility and efficient operations, especially around closed-loop automation.

Nokia has deployed its Digital Operations software products at SPTel. These include the following three key functional components.

- Physical and logical inventory to record the network and service model data for use by both fulfilment and assurance services.
- Fulfilment and orchestration to perform the automated order-to-activation process.
- Assurance to monitor and assure the physical network and services.

Figure 2: Nokia's OSS implementation at SPTel



Source: Analysys Mason, Nokia and SPTel

Key benefits

1

Differentiated NaaS capabilities due to alternate fibre networks, digitalisation and automation

SPTel has enabled software-defined networking on top of a physically separate fibre network core from the incumbents. SPTel is using route optimisation for self-healing to deliver higher network resiliency and <1ms latency. It is deploying automated OSS for a digitalised order and provisioning process, as well as for improved control and visibility for the end customer over network utility and optimisation opportunities.

2

Efficient operations thanks to service automation and closed-loop assurance

The integrated operations centre, based on automated OSS, combines network and security monitoring for improved responsiveness. SPTel can use the self-healing capabilities of the SDN and the ability to pinpoint problem areas more quickly to run the IOC with a lean team and still deliver responsive services, alert customers of a DDoS attack and provide notifications when bandwidth utilisation reaches alert thresholds or there is service quality degradation.

3

Performance and cost optimisation with dynamic resource allocation and a transparent dashboard

The automated OSS enables SPTel to be truly agile as it enables the virtual deployment of new customer service requests. This will be a critical capability as the operator looks to expand its business into new service areas (such as edge clouds) and as-a-service business models. It will allow SPTel to become a true partner to enterprises that are accelerating their digitalisation.

The background features a dark blue-grey grid pattern. Overlaid on this is a semi-transparent 3D bar chart with four bars of increasing height from left to right. The bars are rendered in a dark grey color with some shading to give them a three-dimensional appearance.

FURTHER INFORMATION

Further reading

Strategy report	Network automation: a solution framework for service agility and cost economics in cloud-enabled 5G networks	Anil Rao	Network automation: a solution framework for service agility and cost economics in cloud-enabled 5G networks
Video and podcast	Automation in the 5G era: a discussion between Analysys Mason and Telia	Anil Rao and Asa Nielsen (Telia)	https://www.analysysmason.com/research/content/videos/automation-5g-telia-rma01-rma02-rma07/
Forecast report	Automated assurance: worldwide forecast 2020–2025	Anil Rao and William Nagy	https://www.analysysmason.com/research/content/reports/automated-assurance-forecast-2020-rma01/
Forecast report	Service design and orchestration: worldwide forecast 2020–2025	Anil Rao and William Nagy	https://www.analysysmason.com/research/content/reports/service-design-orchestration-forecast-rma02/

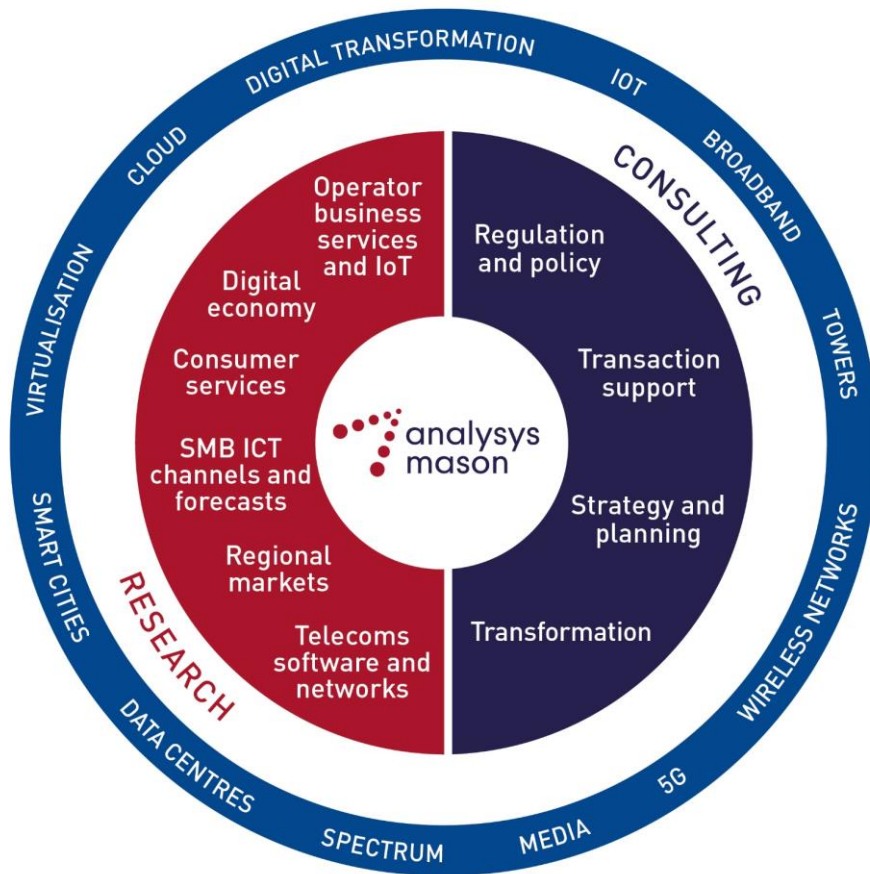
About the author



Anil Rao (Principal Analyst) is the lead analyst on network and service automation research that includes the *Network Automation and Orchestration*, *Automated Assurance* and *Service Design and Orchestration* research programmes, covering a broad range of topics on the existing and new-age operational systems that will power operators' digital transformations. His main areas of focus include service creation, provisioning and service operations in NFV/SDN-based networks, 5G, IoT and edge clouds; the use of analytics, ML and AI to increase operations efficiency and agility; and the broader imperatives around operations automation and zero touch networks. Anil is also a frequent speaker and chair at industry events, and holds a BEng in Computer Science from the University of Mysore and an MBA from Lancaster University Management School, UK.

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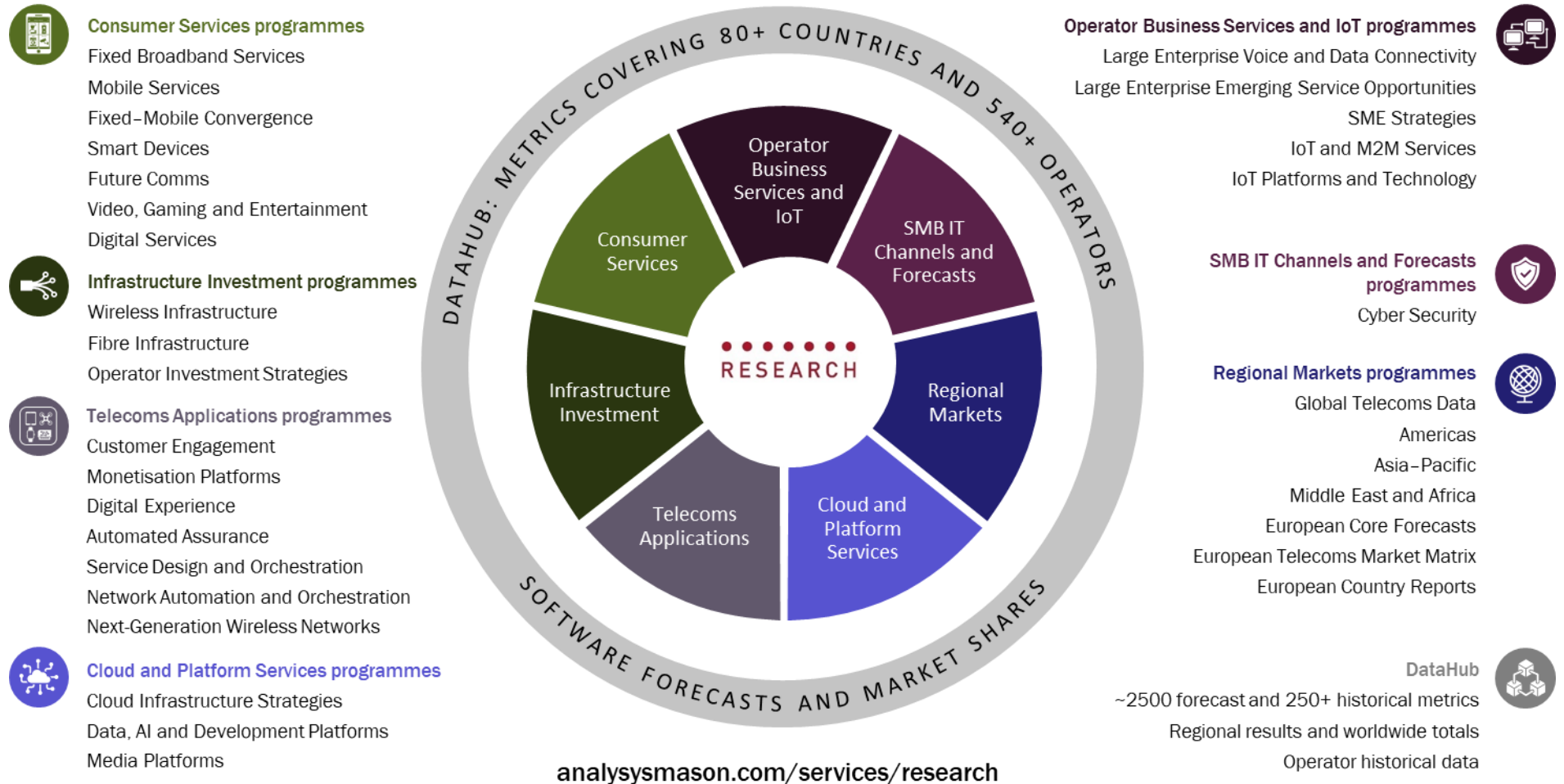
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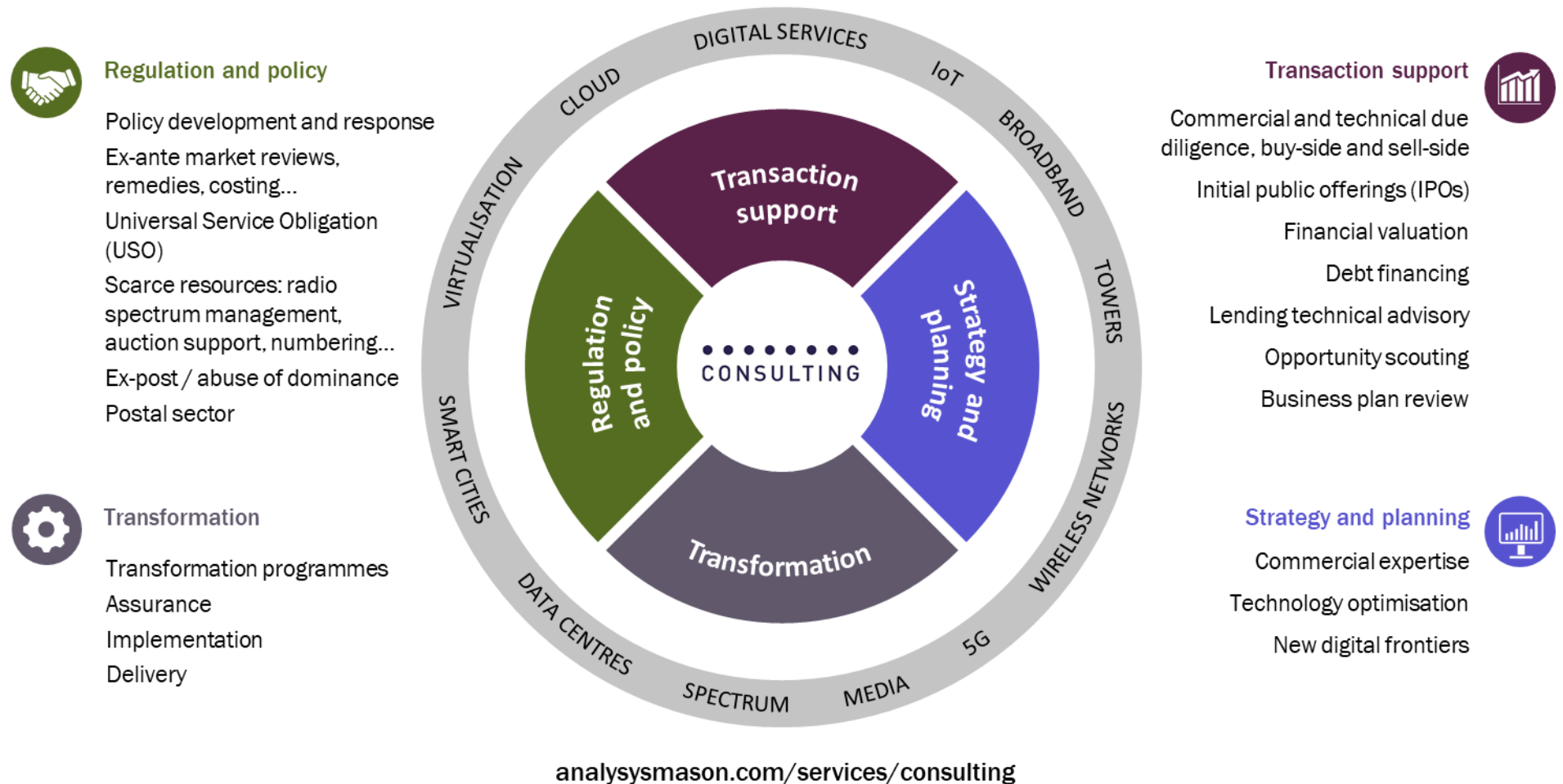
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PUBLISHED BY ANALYSYS MASON LIMITED IN JANUARY 2021

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