



# Amdocs NaaS solution profile



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## Amdocs NaaS solution: strategy overview

**Amdocs' NaaS solution is designed to enable operators to rapidly launch new enterprise services. Based on Amdocs' service and network orchestration platform, the solution is offered with pre-integrated packages such as SD-WAN with automated VNF and service lifecycle management.**

In addition to providing time to market advantages, Amdocs' solution focusses on agile service innovation through automated service chaining and lifecycle management, integration with BSS for service monetisation, automated service provisioning and self-service experience. It abstracts away many of the complexities involved in designing, provisioning and operating enterprise services such as VNF onboarding, service stitching, and ongoing service operations – these are often based on manual processes that stretch out launch timelines and result in high opex, weakening the competitive position of the operators.

The pre-integrated SD-WAN NaaS package version of the solution provides a turnkey option enabling operators to take advantage of the Amdocs certified VNF catalogue, native integrations with leading SD-WAN and VNF vendors, and a use case library.

Both solutions offers flexible deployment choices, where the entire solution could be deployed in an on-prem telco cloud or in the public cloud (eg: AWS, Azure), or in a hybrid model. The NaaS marketplace capability via self-service access provides a superior 'app store' experience to enterprises with automated network and service orchestration in the backend, resulting in a significantly lower opex.

Figure 1: Key data

<b>Company details</b>	Founded in Israel in 1982, now headquartered in Chesterfield, Missouri, USA
<b>Revenue</b>	USD4.1 billion (FY2019)
<b>Key customers for NaaS solution</b>	Comcast Business, Globe Telecom, SES, Vodafone Ziggo
<b>Partnerships for NaaS</b>	AudioCodes, AWS, Azure, Cisco, F5, Fortinet, Juniper Networks, Netscout, Nuage Networks, Palo Alto, Versa Networks, Velocloud, Vmware
<b>Professional services, products and solutions</b>	<ul style="list-style-type: none"> <li>▪ Amdocs Service and Network Automation for NaaS and VNS</li> <li>▪ Amdocs NFV SD-WAN/NaaS Package</li> </ul>

Source: Analysis Mason

## Amdocs NaaS solution: analysis

Amdocs' NaaS solution is an attractive proposition for operators that want to win in the managed enterprise services market. With built in automation across the network and service lifecycle, it enables operators to rapidly launch, provision and assure new SD-WAN based services at a fraction of the opex compared to traditional approaches.

- This solution strengthens Amdocs' position in the rapidly growing network orchestration and WAN-SDN market segments, which are expected to reach USD 5.9B (CAGR of 53.3%) and USD 4.5B (CAGR 37.9%) by 2023 respectively<sup>1</sup>.
- Operators will like the fact that it abstracts the complex service and network lifecycle processes associated with VNFs by automating the cross-domain orchestration across multi-vendor data-centre/cloud and WAN SDN domains.
- The service and network automation solution enables increased service agility through rapid VNF onboarding, service design, service chaining, and service management.
- The cloud hosted model on popular hyperscalers simplifies operations, improves capex efficiency and allows rapid scale up (or scale down) of resources based on demand.
- The pre-packaged SD-WAN/NaaS offer supporting out of the box service templates and pre-integrated VNFs provides a turnkey option for operators looking to rapidly bring to market managed SD-WAN services.

Figure 2: Key strengths and weaknesses

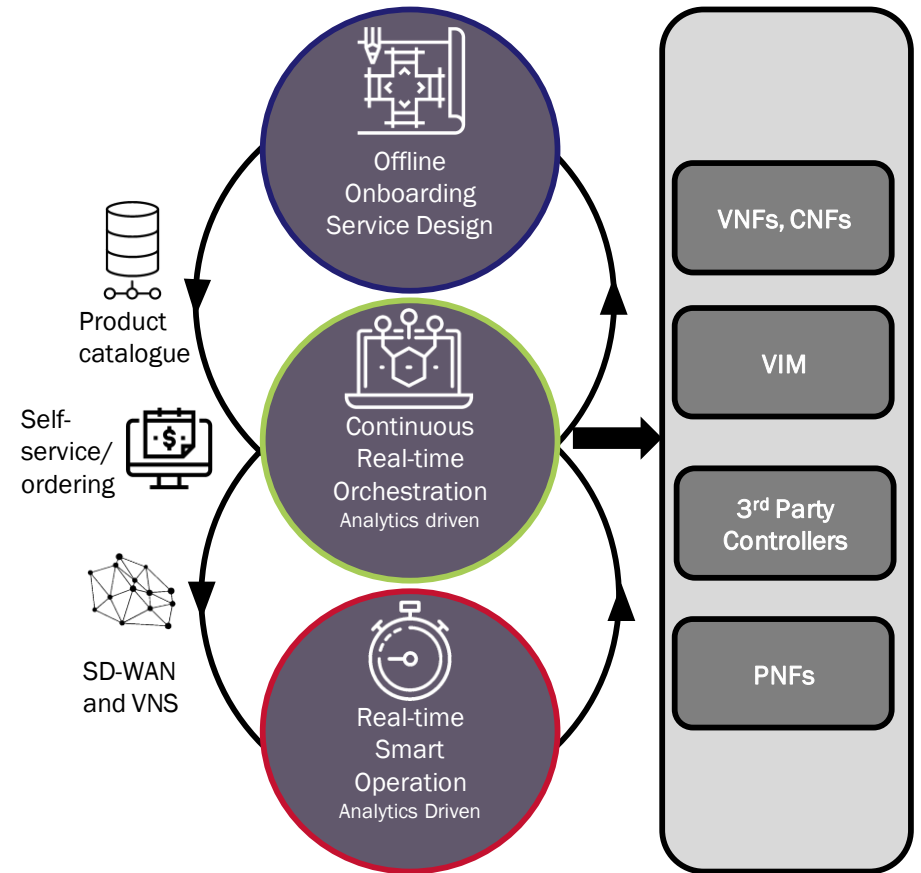
Strength	Description
Flexible deployment model	On-prem, cloud-hosted and hybrid deployment models provides choice for operators.
Open, standards-based solution	The service and network automation solution offers a strong set of capabilities such as onboarding new VNFs, CNFs, rapid service composition and lifecycle management. It supports open industry standards to simplify integration with the ecosystem (e.g. MEF APIs, TMF APIs, ONAP APIs, TOSCA models).
Proven deployments	Variety of operator deployments across geographies, telco and public clouds.
Automation	Strong emphasis on automation which is essential to reduce opex and deliver superior customer experience
Weakness	Description
May not appeal to 'DIY' operators	DIY operators may not like the fully pre-integrated solution approach as they may have their own framework and/or platform..
Limited assurance capabilities	Some operators may want more advanced pre-integrated capabilities for monitoring, ticketing and problem-resolution.
Possibility of high level of professional services	Operators may find that they will need to customise the NaaS solution to make it suitable to their business

<sup>1</sup> Refer to Network automation and orchestration: worldwide forecast 2019–2023: <https://www.analysismason.com/research/content/reports/nao-forecast-2019-2023-rma07/>

## Amdocs NaaS: key capabilities

- Amdocs' ecosystem of vendor partners combined with own integration services reduces the time and costs of onboarding SD-WAN and NaaS VNFs into the network. Operators can automate the creation of best of breed virtual network services by service chaining multi-vendor VNFs to create innovative service bundles.
- The NaaS solution provides proven approaches to integrate with the BSS, addressing the problem that many operators face today - SD-WAN solutions are deployed as operational siloes separate from billing functions.
- The proposition goes beyond just service and network orchestration and includes the building blocks, APIs and professional services for operators to construct enterprise self-service and marketplace portals. Enabling customers to pick and choose services through a digital marketplace of VNF and application partners will be instrumental to realizing the full promise of NaaS.
- These factors facilitate end-to-end lifecycle automation from the initial order to the orchestration of the live service. These factors drive down the cost of provisioning services to enterprises, making smaller accounts such as SMB customers a more viable market opportunity for operators.

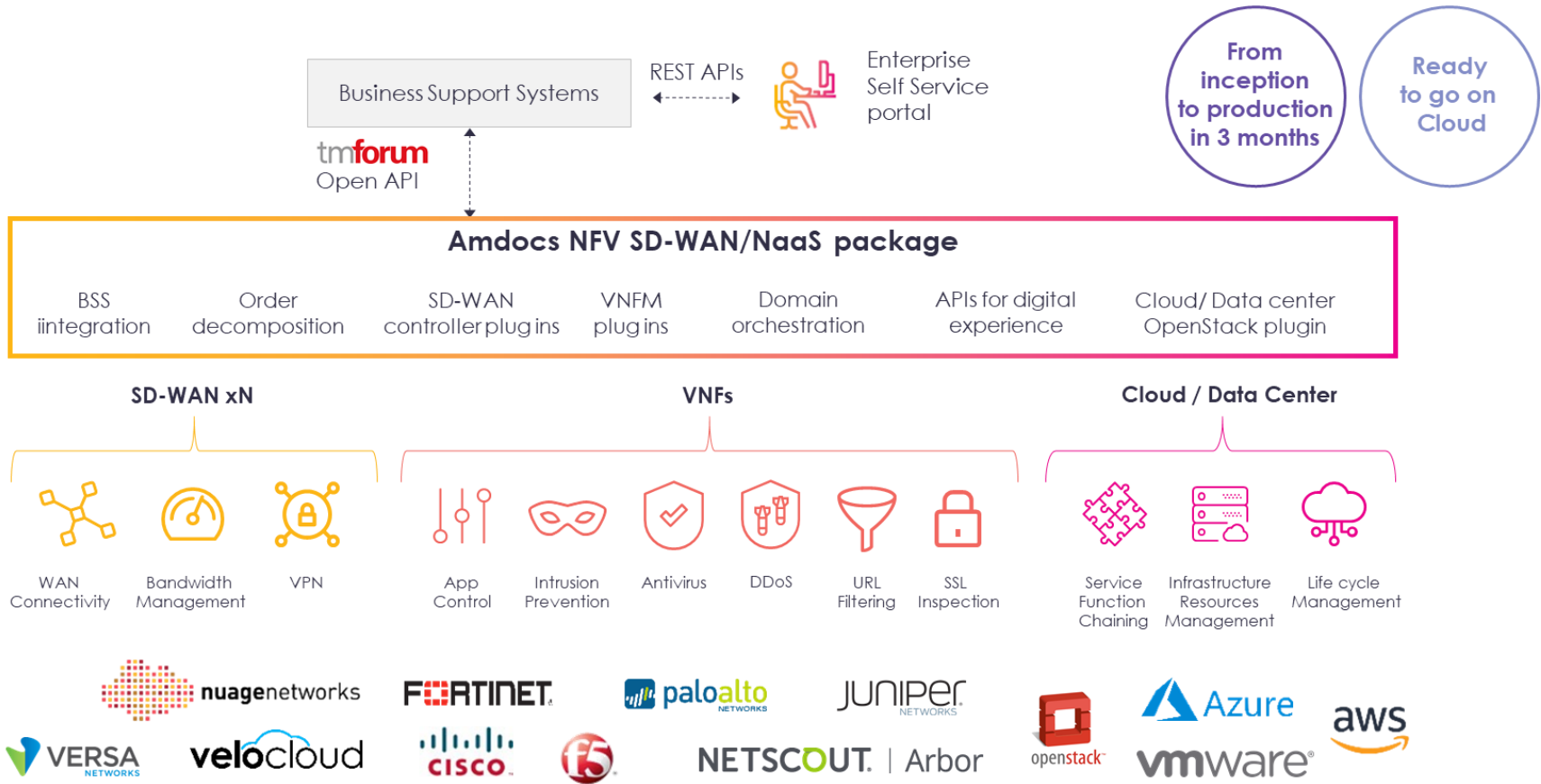
**Figure 3: Amdocs service and network automation lifecycle management**



Source: Amdocs

# Amdocs NFV SD-WAN/NaaS package

Simplifying and accelerating CSP journeys towards SD-WAN + VAS services



From inception to production in 3 months

Ready to go on Cloud

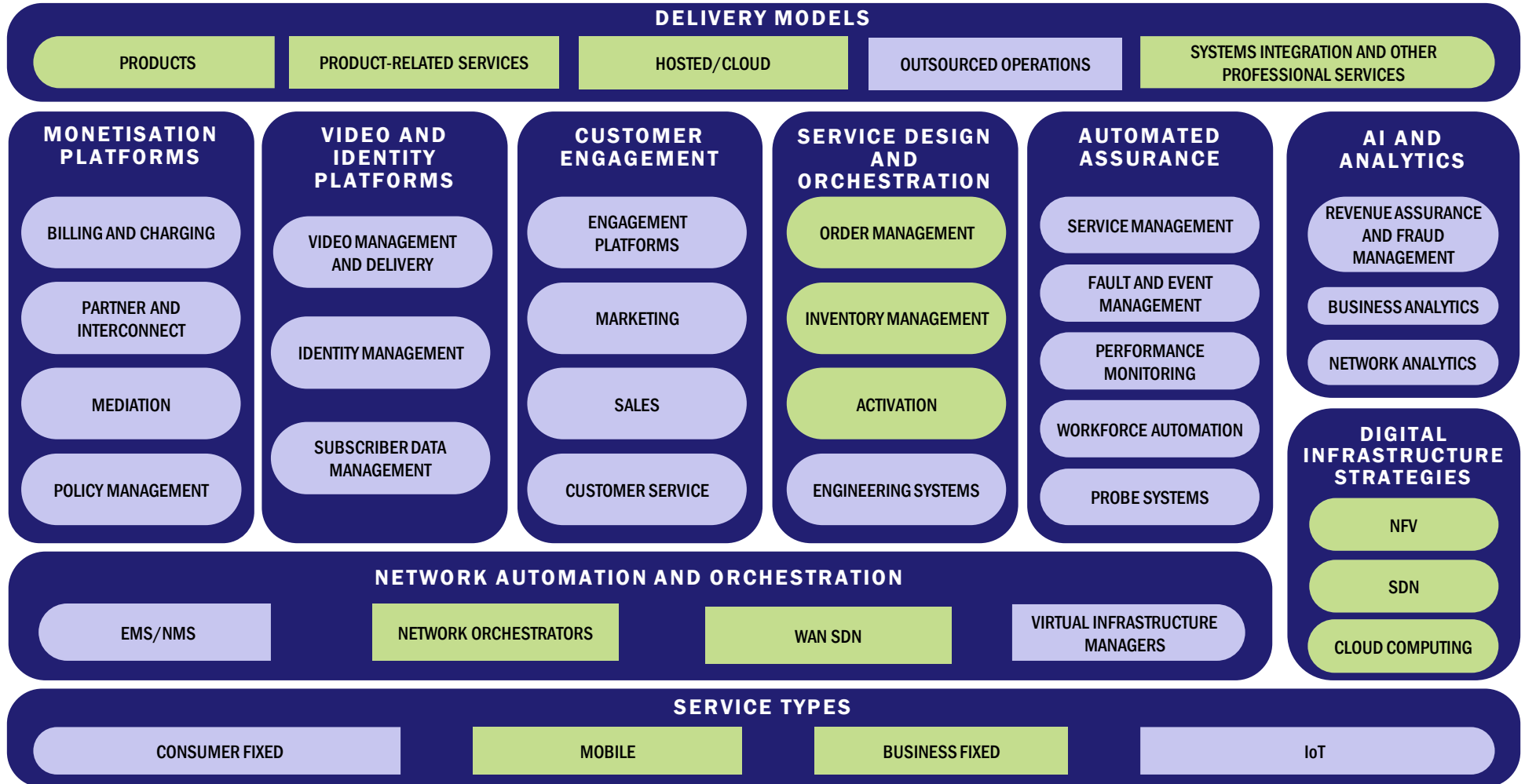
Source: Amdocs

# Solution summary

Figure 4: Amdocs NaaS solution summary

Product/Solution	Analysys Mason segment	Description
Amdocs Service and Network Automation solution for NaaS and VNS	NAO	<p>The Amdocs Service and Network Automation solution for NaaS and VNS is a orchestrator and automation platform for network services. It simplifies the lifecycle management of multiple VNFs and SD-WANs in a multi-vendor ecosystem. The solution can be deployed in on-prem, private cloud and public cloud environments and it enables orchestration of VNFs across these same environments.</p> <p>The orchestrator act as an abstraction layer between the BSS functions and the SD-WAN controllers and VNFs using TMF standardised APIs to communicate northbound with BSS applications. It includes a VNFM and integrates with the VIM to ensure adequate resources are allocated to the VNFs.</p>
Amdocs NFV SD-WAN/NaaS Package	NAO	<p>The Amdocs NFV SD-WAN/NaaS Package has the same functionality as the Amdocs Service and Network Automation solution for NaaS and VNS. It differs in that it is an out-of-the-box product, as it comes pre-integrated with leading vendors' VNFS. It is validated and tested and has pre-built service templates and basic use cases.</p>

# Amdocs NaaS solution in Analysys Mason telecoms software taxonomy



Amdocs NaaS solution components in Analysys Mason taxonomy

## Significant customers

Amdocs has supported a variety of service providers in automating and orchestrating services across a variety of networks and clouds. Additionally, its pre-packed NFV solutions have helped accelerate deployments over multiple datacenter and cloud infrastructures, and Amdocs' capabilities have enabled CSPs to create digital self-service and marketplace portals.

Figure 5: Key deployments

Customer	Country	Scope
Globe Telecom	Philippines	Globe Telecom deployed Amdocs' NaaS solution on its own data centre, based on Openstack. The project objectives are to automate and simplify virtual network services and enabled Globe to expand its customer base beyond large enterprises to SMBs. The solution allows Globe agility to provision VNFs and VNSs from a variety of vendors and host them in a cross-domain ecosystem meeting various customers needs. For example, SD-WAN, security, VoIP and anti-DDoS functions are hosted on Globe's telco cloud, while the virtual firewall is deployed on uCPE. Amdocs also aides Globe in constructing a self-service portal for enterprise customers to select their own service packages.
Comcast Business	USA	Comcast Business selected the Amdocs Service and Network Automation for NaaS and VNS solution as the core foundation for its ActiveCore SDN platform. The solution enables Comcast to provide SD-WAN and virtual network services to any size of business as well as increasing the manageable load of service orders from hundreds to thousands.
SES	Global	SES deployed the Amdocs NFV SD-WAN/NaaS pre-integrated package on the Azure public cloud to support its new managed enterprise VNS offerings, with SD-WAN being the first service launched. The solution integrated with SES' existing BSS functions through TMF APIs and took six months to completely deploy.
Vodafone Ziggo	Netherlands	VodafoneZiggo deployed the Amdocs service and network automation solution on its own data centre, based on Openstack, to automate the lifecycle of its enterprise network and value-added services. Amdocs solution enables VodafoneZiggo to reduce their TCO by moving away from costly on-premises hardware to virtual network and VoIP capabilities deployed in their NFV cloud data center. Amdocs solution's NFVO and VNFM enables VodafoneZiggo utilizing cloud infrastructure resources more efficiently to rapidly scale and spin up innovative services for their enterprise customers



## About the authors



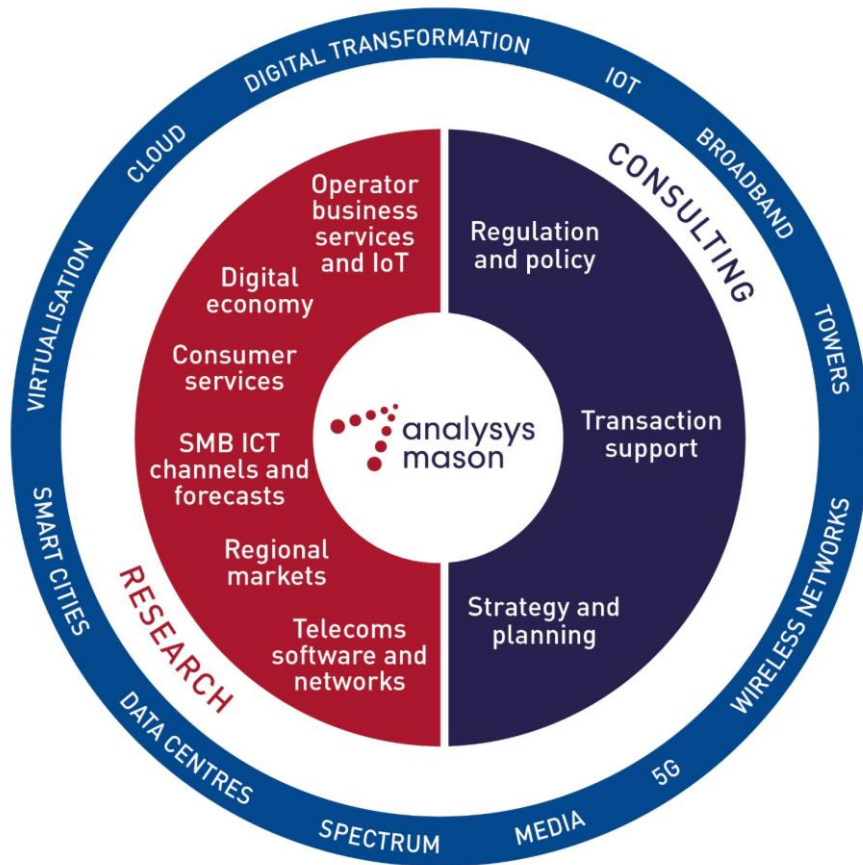
Anil is the lead analyst on network and service automation research that includes the Network Automation and Orchestration, Automated Assurance and Service Design and Orchestration research programmes, covering a broad range of topics on the existing and new-age operational systems that will power operators' 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. In addition to producing both quantitative and qualitative research for both programmes, Anil also works with clients on a range of consulting engagements such as strategy assessment and advisory, market sizing, competitive analysis and market positioning, and marketing support through thought leadership collateral. 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.



**William Nagy** (Analyst) is a member of the *Telecoms Software and Networks* research team in London, contributing to various research programmes with a focus on *Automated Assurance*, *Service Design and Orchestration* and *Forecast and Strategy*. He previously worked with the regional markets team. William holds a BSc in Physics from Queen Mary University of London.

# Analysys Mason's consulting and research are uniquely positioned

## Analysys Mason's consulting services and research portfolio



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We are future-focused and help clients understand the challenges and opportunities that new technology brings.

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We offer detailed insight into the software, infrastructure and technology delivering those services.

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- Network Traffic
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- Telecoms Software Market Shares
- Network-focused**
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- Service Design and Orchestration
- Automated Assurance
- Network Automation and Orchestration
- Digital Infrastructure Strategies

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- Monetisation Platforms
- AI and Analytics



## Digital economy programmes

- Digital Economy Strategies
- Future Comms

## Operator business services and IoT programmes

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- Large Enterprise Emerging Service Opportunities
- SME Strategies
- IoT and M2M Services
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## SMB ICT channels and forecasts programmes

- Managed Service Provider Strategies
- Cyber Security

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- Americas
- Asia-Pacific
- Middle East and Africa
- European Core Forecasts
- European Telecoms Market Matrix
- European Country Reports

## DataHub

- ~2500 forecast and 250+ historical metrics
- Regional results and worldwide totals
- Operator historical data

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- Scarce resources: radio spectrum management, auction support, numbering...
- Ex-post/abuse of dominance
- Postal sector



## TRANSACTION SUPPORT

- Commercial due diligence
- Technical due diligence
- Mergers and acquisitions (M&As)
- Debt and initial public offerings (IPOs)
- Joint-venture structuring
- Mid-market financial sponsors

## STRATEGY AND PLANNING

- Commercial expertise
- Technology optimisation
- New digital frontiers

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