



# Telecoms software and services: consolidated worldwide forecast 2019–2023



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## About this report

This report provides forecasts for communications service provider (CSP) spending on telecoms-specific software and related services, including in the traditional BSS and OSS application categories, as well as for network function virtualisation (NFV) and software-defined networking (SDN) and cloud computing categories. It provides details on spending by delivery type, service type, sub-segment and region. The report also provides recommendations for how vendors and CSPs can approach the demands of the telecoms industry.

The report forecasts spending in each of the specific segments covered in the Analysys Mason telecoms software taxonomy. This report is a consolidation of published reports in all software segments and also provides an overall forecast.

### KEY QUESTIONS ANSWERED IN THIS REPORT

- What is the overall size of the telecoms software and services market?
- What are the key drivers of change in the next 5 years that will push total spending over USD100 billion?
- What are the different drivers and growth rates of CSP spending on software products and related professional services?
- How does spending vary according to major application segment, region and service type?
- What are the major drivers and inhibitors that will affect growth rates in the telecoms industry?

### GEOGRAPHICAL COVERAGE

- Worldwide
- Central and Eastern Europe
- Developed Asia-Pacific
- Emerging Asia-Pacific
- Latin America
- Middle East and North Africa
- North America
- Sub-Saharan Africa
- Western Europe

### SUB-SEGMENT COVERAGE

- AI and analytics (AIA)
- Automated assurance (AA)
- Customer engagement (CE)
- Digital infrastructure (DI)
- Monetisation platforms (MP)
- Network automation and orchestration (NAO)
- Service design and orchestration (SDO)
- Video and identity platforms (VIP)

### WHO SHOULD READ THIS REPORT

- Vendor product management teams that are responsible for feature functionality and geographical focus, and product marketing teams that are responsible for market share growth and expanding into new areas.
- Vendor strategy teams that need insight into where growth is slowing and increasing across different segments, regions and service types.
- Professional services vendors that want to understand the growth opportunities for the next 5 years.
- CSP strategists that need to understand where technology innovations are creating disruption and deployments are growing, to help them focus as they set out in their digital transformation journeys.

## Three key trends expected during 2019–2023

1

**Digital transformation will be a key driver of telecoms software revenue growth as CSPs move to automate operations and harness analytics.**

.....

CSPs are moving to digitalise, digitise and virtualise operations through intelligent automation, utilising operational data and virtualising the network. Customer-focused automation initiatives for service management and customer engagement will increasingly use AI and workloads will be migrated to cloud-native operations. Network function virtualisation (NFV) and software-defined networking (SDN) will play a major role in enabling automation and agile orchestration.

2

**CSPs will need to undergo networks and operations transformations in order to reap the revenue and cost benefits of 5G.**

.....

Many new and promising 5G-based enterprise services require network slicing and edge clouds, which take advantage of the increased speed and capacity offered by 5G. However, network and operational complexity will also increase with 5G and CSPs will need to automate and optimise operations to ensure that all aspects of the end-to-end network are efficient and meet performance expectations and opex reduction goals.

3

**Enterprise services such as SD-WAN and edge computing will drive revenue growth as CSPs offer new services and deliver them swiftly.**

.....

SD-WAN is becoming a core business service for CSPs and a key area of CSP investment. Demand for edge clouds will rise as enterprises seek operational efficiency with acceptable latency for a new set of applications. Beyond the services themselves, CSPs will need to invest in order management and delivery systems, as well as assurance and analytics systems for the most-agile and differentiated services.

## Dashboard: telecoms software and services worldwide forecast

### KEY MARKET TRENDS FOR 2019–2023

- CSP software spending will increase and then rise steadily at a CAGR of about 7% during 2020–2023 as CSPs in developed regions aim to offset stagnant or declining revenue with more-efficient operations.
- Network cloudification, virtualisation and automation are the core drivers of revenue growth. CSP spending will shift from hardware to software as NFV/SDN and cloud-native solutions proliferate.
- Product spend will overtake professional services spend in 2022 as CSPs seek out standardised, minimally-customised vendor solutions and use supported open-source products, and as VNF revenue rise.

Figure 8: Telecoms software and services overall revenue, worldwide, 2018–2023<sup>1</sup>

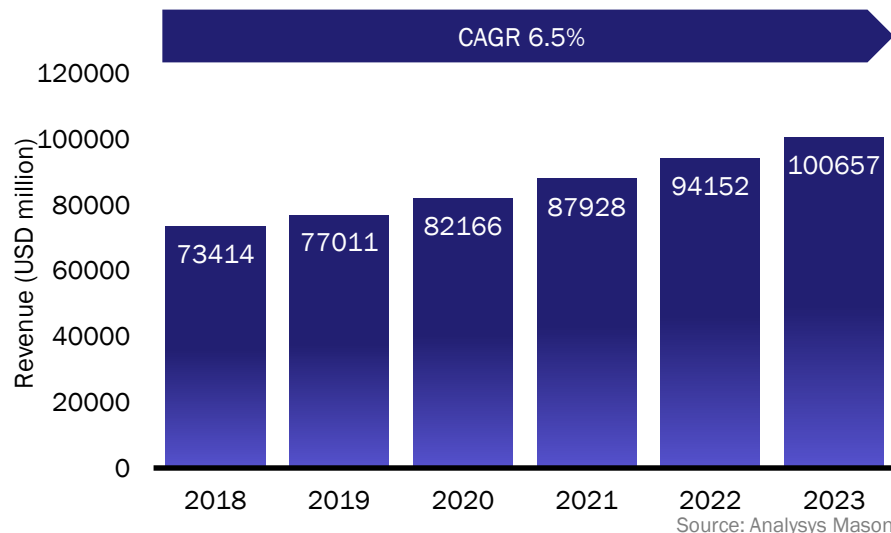


Figure 9: Telecoms software and services overall revenue by segment, worldwide, 2018–2023

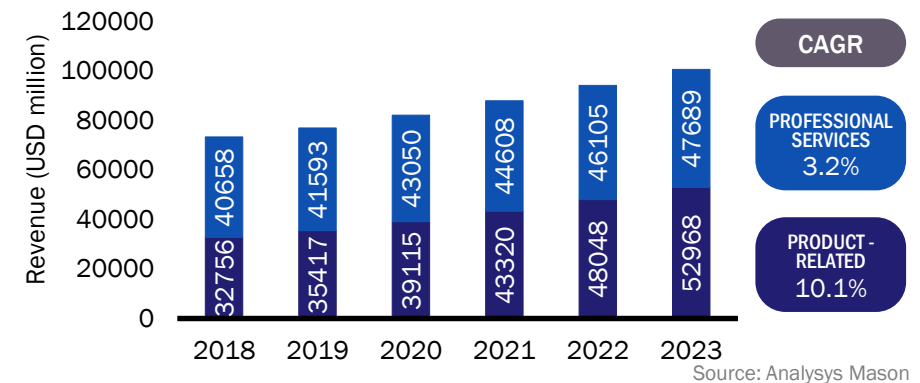
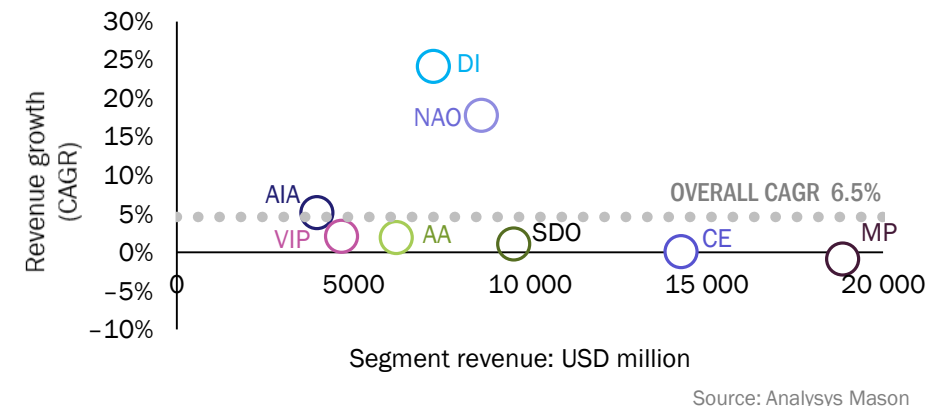


Figure 10: Telecoms software and services overall revenue 2018, and CAGR 2019–2023, by sub-segment, worldwide



<sup>1</sup> This forecast report removes over USD3 billion in annual TAS spending that was in last year's report. Please see page 4. Also, digital infrastructure data included throughout this report have been reduced to eliminate revenue counted in other segments (NAO, AA and SDO) but also rolled up into DI.



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## About the authors [1/2]



Dana Cooperson (Research Director) is the research director for Analysys Mason's six software and networks technology research programmes. Her team's mission is to help customers to progress toward and benefit from a more automated, autonomous, cloudified future, rather than be threatened by this market shift. Her areas of expertise are intelligent fixed and mobile network infrastructure, automation and operations. Dana's research and consulting focuses on the communications software/network market and technology best practices required for digital business transformation and enabled by the integration of NFV, SDN and other IT technologies for virtualisation, cloudification and automation.



John Abraham (Principal Analyst) leads our digital transformation research, including three research programmes: *Customer Engagement*, *Monetisation Platforms* and *Digital Experience*. His areas of focus include customer journeys and experience, the impact of 5G on BSS systems, telecoms enterprise opportunities, cost transformation, ecosystems and value chains, and micro-services-based architecture models. John has over a decade of experience in the telecoms industry. At Analysys Mason, he has worked on a range of telecoms projects for operators in Africa, Europe, India and the Middle East. Before joining Analysys Mason, he worked for Subex, a BSS vendor, and before that for Dell in India. John holds a bachelor's degree in computer science from Anna University (India) and an MBA from Bradford University School of Management (UK).



Justin van der Lande (Principal Analyst) leads the *AI and Analytics* research programme, which is part of Analysys Mason's Telecoms Software and Networks research stream. He specialises in business intelligence and analytics tools, which are used in all telecoms business processes and systems. In addition, Justin provides technical expertise for Analysys Mason in consultancy and bespoke large-scale custom research projects. He has more than 20 years' experience in the communications industry in software development, marketing and research. He has held senior positions at NCR/AT&T, Micromuse (IBM), Granite Systems (Telcordia) and at the TM Forum. Justin holds a BSc in Management Science and Computer Studies from the University of Wales.



## About the authors [2/2]



Anil Rao (Principal Analyst) is the lead analyst for the 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.



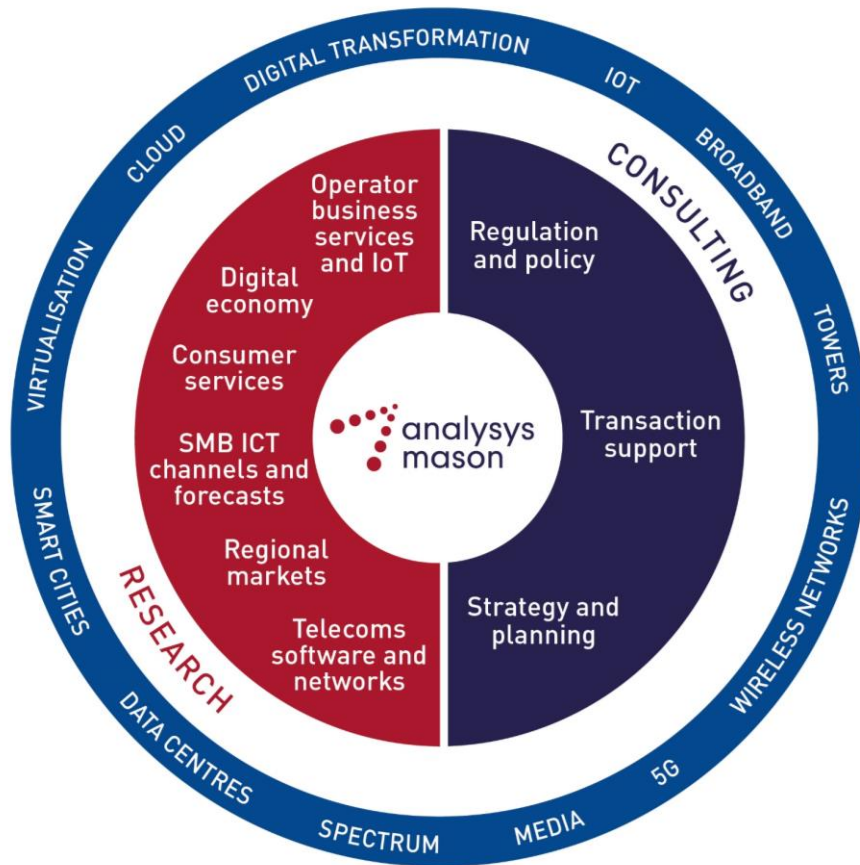
Gorkem Yigit (Senior Analyst) is the lead analyst for the *Video and Identity Platforms* programme and a contributor to the *Digital Infrastructure Strategies* and *Network Automation and Orchestration* programmes, focusing on producing market share, forecast and research collateral. He started his career in the telecoms industry with a graduate role at a leading telecoms operator, before joining Analysys Mason in late 2013. He has published research on NFV/SDN services business cases, identity management in the digital economy, and has been a key part of major consulting projects including Telco Cloud Index and IPTV/OTT procurement. He holds a cum laude MSc degree in Economics and Management of Innovation and Technology from Bocconi University (Milan, Italy).



**William Nagy** (Analyst) is a member of the *Telecoms Software and Networks* research team in London, contributing to various research programmes such as *Automated assurance* and *Forecast and strategy*. He was previously a member of the *Regional Markets* team. William holds a BSc in Physics from Queen Mary University of London.

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## Analysys Mason's consulting services and research portfolio



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We deliver tangible benefits to clients across the telecoms industry:

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Monetisation Platforms  
AI and Analytics



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Future Comms

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- Technical due diligence
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- Debt and initial public offerings (IPOs)
- Joint-venture structuring
- Mid-market financial sponsors

### STRATEGY AND PLANNING

- Commercial expertise
- Technology optimisation
- New digital frontiers

**PUBLISHED BY ANALYSYS MASON LIMITED IN JANUARY 2020**

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