

Digitalisation, automation and 5G will drive telecoms software spending to USD95.1 billion in 2022

March 2019

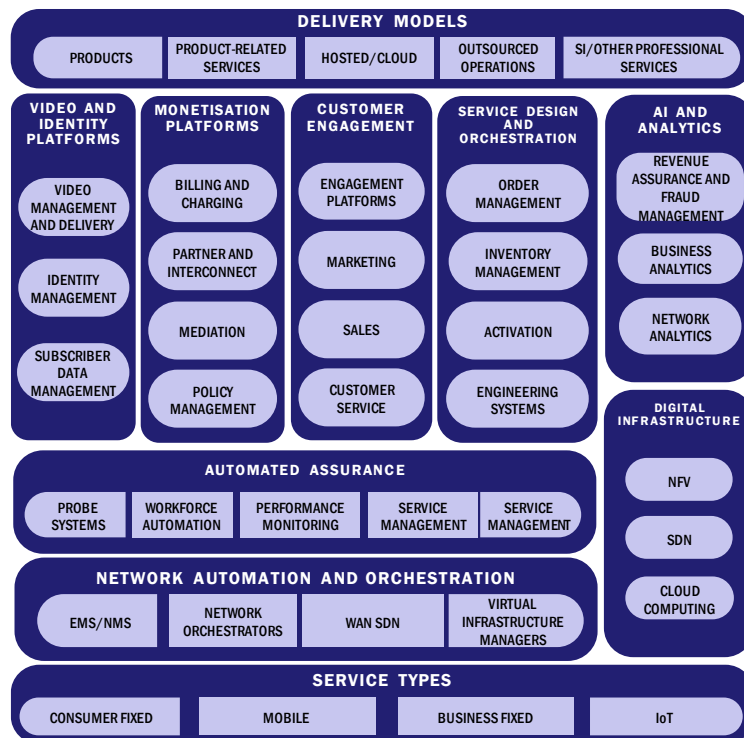
Dana Cooperson

Analysys Mason forecasts that the revenue from the telecoms software and related services market will grow from USD74.9 billion in 2017 to USD95.1 billion in 2022 (at a CAGR of 5%). This will be largely driven by growth in spending for digital transformations, network and operations automation and 5G deployments. Digital infrastructure and network automation and orchestration will be the highest-growth software segments, and NFV and SDN spending growth will play a large role in both cases. Revenue growth in more-established software systems (such as monetisation platforms and customer engagement platforms) will be limited or non-existent because the growth in spending for more-modern, cloud-based and cloud-native replacement systems that support digitalisation will be counterbalanced by spending declines for traditional systems.

Digital transformation, operations automation and 5G deployments will drive revenue growth

Figure 1 shows Analysys Mason’s telecoms software market taxonomy.

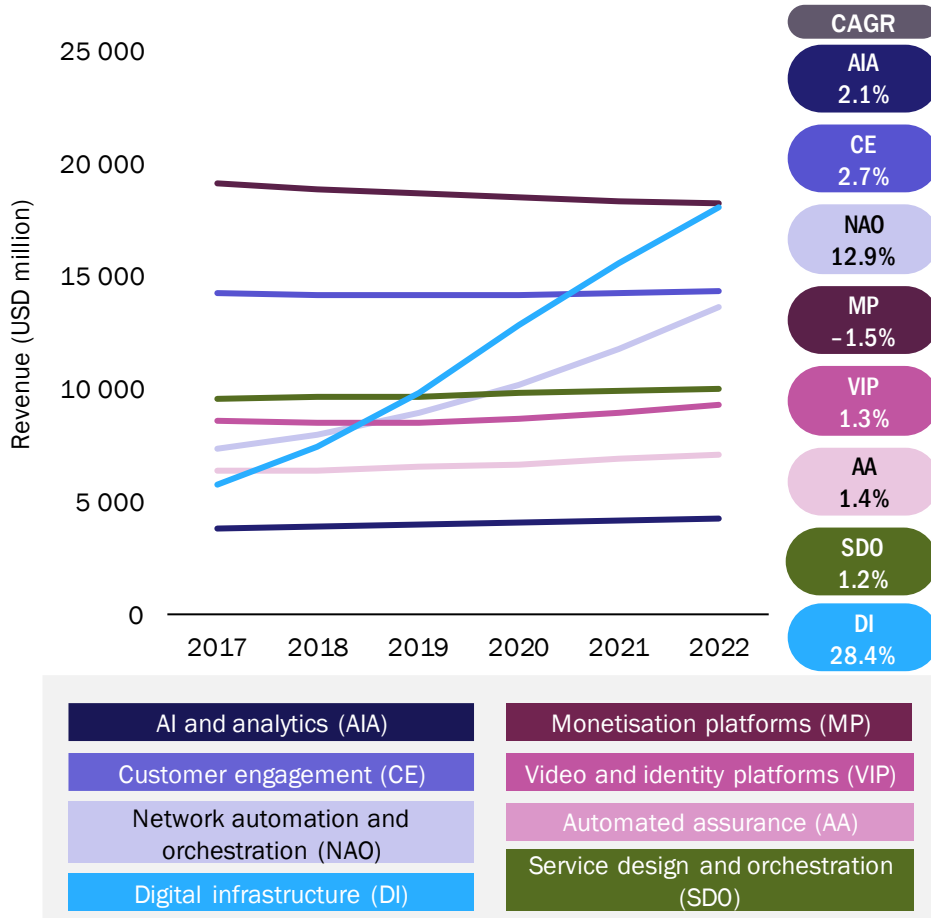
Figure 1: Analysys Mason’s taxonomy of software product segments, delivery models and service types



Source: Analysys Mason, 2019

Analysys Mason splits the market into eight product segments that are delivered using five models and that support four communication service types. Figure 2 shows our telecoms software and services market forecast split into these eight product segments. Communications service providers (CSPs) are avoiding, or at least limiting, investments in established software systems and are instead investing in new solutions as they strive to become more digitalised, virtualised, automated and cloud-native. The twin goals of this evolution are improved cost-efficiency and support for more-dynamic, personalised services. Automation processes, such as those for enterprise service management and customer engagement, will increasingly use analytics and AI to assess real-time data from a wide range of sources and suggest actions based on rules and policies.

Figure 2: Telecoms software product-related and professional services revenue by segment, worldwide, 2017–2022¹



Source: Analysys Mason, 2019

Overall, CSP software spending growth will largely be balanced by a decline in CSP spending on hardware. CSPs’ communications service revenue is flat, and they are under pressure from investors to limit increases in capex and opex as a percent of revenue.

Product-related spending growth will mainly be driven by a rapid growth in the adoption of NFV-, SDN- and cloud-computing-based deployments, as well as an increase in commercial product availability. Software (particularly customer-facing software such as customer engagement solutions) will increasingly be delivered as a service (SaaS); SaaS-based spending will grow at a CAGR of 21% (2017–2022) to USD6.3 billion. The increasing use of open-source software will change the product revenue mix from being predominantly licence-

¹ See [Telecoms software: consolidated worldwide forecast 2018–2022](#) for spending breakdowns by product and professional services, geography and service type, and for details on spending drivers at the software segment and sub-segment level.

based to being formed from software-related service subscriptions. Vendors will need to carefully manage the shift in delivery from traditional models to support subscriptions and SaaS, and must consider any implications that the shift may have for revenue accounting and investor expectations.

CSPs want to reduce their dependence on professional services

Growth in professional services spending will mainly be driven by NOC consolidation, SOC implementation and systems integration for NFV. NFV/SDN, OSS transformation and integration will be the biggest professional services spending growth drivers, but CSPs' desire for software productisation and componentisation will limit the increase in service spending.

Professional services accounted for 56% (USD41.9 billion) of CSPs' software and services spending in 2017. We forecast that services spending will grow to USD47.5 billion in 2022 (at a CAGR of 3%), but that it will form only 50% of the total spend because product spending will grow by 8% during the same period. CSPs would like to limit their future professional services spending as much as is practical. They are tired of paying for expensive, lengthy customisations of monolithic software solutions that tie them to a single vendor and that vendor's timeline. They want more flexibility to only use professional services providers for the new and complex tasks for which they lack expertise or staffing, while having access to more modular and minimally-customised products that are underpinned by open-source software or other collaborative development options.

5G may get all the press, but the growth in software spending will largely be driven by fixed infrastructure and enterprise services

We expect that only 15% of the growth in telecoms software spending between 2017 and 2022 will come from mobile networks, and that this growth will largely be for 5G network builds (and LTE network expansions) and the nascent support for slicing and edge computing. Consumer-focused software systems in this segment are mature, and as such, will only lead to incremental spending changes.

In contrast, 70% of software spending growth between 2017 and 2022 will come from the business fixed services segment. Spending in this segment will be the result of CSPs launching vCPE-based services such as SD-WAN and other NFV/SDN-based enterprise digital services.

CSPs will spend so that they can automate previously manual processes to provision and operate fixed network infrastructure. IP/optical infrastructure is becoming more programmable, and fulfilment, management and other automation tools (including SDN-based tools) can use this programmability to improve operations efficiency. In addition, flexible new digital enterprise services (such as SD-WAN and vCPE-based services) offer revenue growth opportunities and defend against competitors' moves. CSPs need to invest in the automation of service delivery and lifecycle management to give customers greater control, deliver the services more rapidly and reduce opex. A growing number of CSPs will increase their spending in order to improve the enterprise service ordering experience (through the use of self-service portals) and support more-dynamic monetisation approaches.