Analysys Mason's research predictions for the telecoms software and networks market in 2023

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The biggest issue for telecoms operators in 2023 will be coping with inflation and particularly rising energy costs. After a decade of low inflation and low interest rates, telcos, like other businesses face the problem of managing rising costs and uncertainty about how much they can increase their own prices to cope. These economic uncertainties will affect telcos' decisions about investing in networks and software. They will place a greater emphasis on efficiency, and will continue with automation efforts that they initiated during the pandemic.

Operators will maintain fibre and 5G investment plans

Telcos need to find growth; the promise of higher-volume, low-latency services such as cloud gaming, AR/VR/metaverse and, increasingly, digital businesses will prompt continued 5G and fibre investments. Telcos often overlook the fibre aspect but it is crucial for both fixed broadband and underpinning 5G. Telcos will continue to depend on and expand their joint-venture partnerships to support these investments.

Cloud is becoming the biggest technology issue for telecoms

Demand for multi-cloud connectivity will drive the launch of new solutions

Enterprise demand for SLA-based, on-demand multi-cloud connectivity and network-as-a-service (NaaS) platforms will accelerate because many businesses will need cloud interconnection, app-to-app networking, and zero-trust security and data-sovereignty-compliant traffic management across multiple public clouds and SaaS providers. Telcos with large enterprise/B2B divisions will increasingly prioritise multi-cloud network investments using software-defined and cloud-native IP networking technologies to gain ground against the challenger, alternative service providers that dominate the market today.

Public cloud providers will continue to win 5G network infrastructure customers but their tactics will vary

Telcos will continue to push forward on their 5G cloud-native network transformation for standalone (SA) core and virtualised RAN, and will increasingly use PCP-based cloud stacks (mainly on-premises/sovereign clouds) and private DIY cloud models. Cloud infrastructure providers (PCPs and IT vendors) will play a leadership role in creating Open RAN ecosystems, working with network function vendors and ISVs to create pre-validated/pre-integrated ecosystems for highly performant and economically viable cloud-native Open RAN solutions. Cloud-native automation using native Kubernetes and open-source technologies such as Nephio will continue to be nascent but will gain increasing support from vendors and telcos, and the industry will collaborate to expand the scope from 5G cloud-native networks to other domains (such as transport) and legacy infrastructure.

Gaming and metaverse use cases will increase interest and investment in the interconnect edge

The need to push cloud workloads closer to the edge to address user latency and security issues will continue to drive data-centre owners, public cloud providers and telcos to invest in the metro edge. However, the interconnect edge will emerge as a key battleground for edge-native pre-metaverse use cases, which will be contested by a wave of new hybrid content delivery/edge-native cloud players, established CDN providers and public cloud providers. The industrial edge market will benefit from initiatives by large industrial system providers to rearchitect their product portfolios and develop digital twins but will remain fragmented and confused in 2023.

Telcos will prioritise digital transformation spend on data management and AI as the foundations for future operations

Telcos will strike new deals to de-silo organisational data in the cloud as the need to apply AI to next-generation networks – 5G today and 6G towards the end of the decade – becomes more urgent. Telcos are learning from early adopters of cloud-based (including public cloud-based) approaches to holistic data management as a foundation for advanced, data-enriched AI modelling and we expect the current momentum around telco acquisition of data and AI platform services to grow. This will put further pressure on BSS/OSS vendors to adapt to telcos' new operational platform architecture.

Networks will need to be more efficient

Amid the 6G hype the industry will evaluate real options for next-generation connectivity

R&D and spectrum/regulatory work on 6G is already underway, but the rest of the industry will attempt to address issues related to use cases and convergence with fixed and non-terrestrial access in 2023. This will prompt important discussions about whether 6G will be an extension of 5G or something radically new that is driven by a wider community of stakeholders than 5G.

Global economic pressures will affect telcos more generally on the revenue rather than the spending side, but will accelerate automation initiatives

Recession and cost-of-living crises in particular countries will squeeze consumers' budgets, and put pressure on telco revenue. However, we do not expect significant deferral of capex projects, and on the spending side, the chief impact of the economic situation will be intensified pressure on vendors to reduce prices, and an acceleration of ongoing initiatives to automate networks and business processes.

Open RAN will expand in rural and enterprise environments but the crucial Massive MIMO challenge will remain inadequately addressed

An ecosystem is developing around Open RAN in areas, such as rural extension and enterprise small cells, that are poorly addressed by traditional cellular architecture and operator models. These deployments will gather momentum in 2023 as organisations such as Telecom Infra Project address issues such as common testing models. However, significant challenges remain to achieve optimum performance in urban macro networks using Open RAN architecture, especially those incorporating Massive MIMO. These will take several more years to address to the satisfaction of large operators, and a separate and parallel ecosystem is likely to be established for macro Open RAN.

Telco spending on OSS/BSS will increase

Telco spending on SaaS will increase by 19% in 2023

This growth will come from both BSS and OSS application areas as telcos use hosted applications to help them to transform their current IT stacks to support new 5G services or use them to transform legacy systems to cloud-native, cloud-delivered hosted applications. Application vendors that traditionally sold on-premises applications will launch an increasing number of delivery options that will include SaaS.

Vendors will roll out more integrated OSS software solutions in 2023

These new OSS software solutions will closely integrate design, activation, monitoring and resource management functions. Suites that include their own development capabilities will experience the highest growth as telcos seek to build their own unique automations.

5G automation will take hold

High levels of automations will be developed to support more advanced 5G capabilities. This will help operators to support advanced enterprise services that seek to deliver highly predictable service quality and require dynamic optimisation of their underlying resources.