



Monetisation platforms: worldwide forecast 2023– 2028



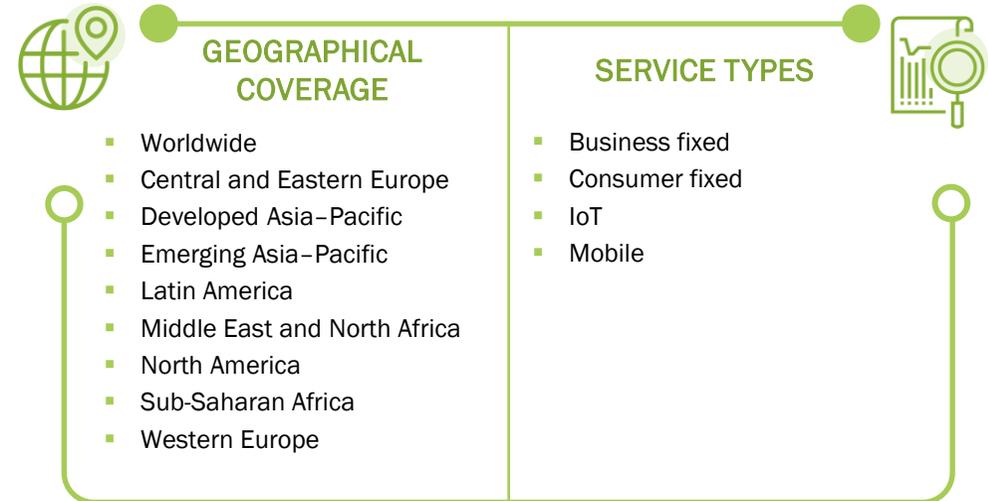
Justin van der Lande

About this report

This report provides forecasts for communications service provider (CSP) spending on monetisation platforms and related services for 2023–2028. It provides details on spending by delivery model, service type and region, as well as the major drivers, including 5G. The report also provides recommendations for vendors and CSPs.

The report is based on several sources, including:

- Analysys Mason’s research from the past year
- interviews with CSPs and vendors worldwide.



KEY QUESTIONS ANSWERED IN THIS REPORT

- What are the key trends and factors that will affect the monetisation platforms market during 2023–2028?
- What are the regional factors that will drive growth?
- What should vendors do to exploit new business opportunities?
- How will professional services for monetisation platforms perform during the forecast period?
- What are the major drivers that will influence CSP spending on monetisation platforms?

WHO SHOULD READ THIS REPORT

- Vendor strategy teams that need to understand how spending patterns are changing as CSPs seek to reduce spending on legacy systems and invest in adopting modern architecture frameworks.
- Product management teams that are responsible for feature functionality and geographical focus, and product marketing teams that are responsible for growth.
- CSPs that are planning to revamp their monetisation platforms and advance their digital transformation journeys.
- Professional services vendors that want to understand the growth opportunities over the next 5 years.



Executive summary and recommendations

Forecast

Overall telecoms market context

Market definition

About the author and Analysys Mason

Three key drivers of spending expected for this segment during 2022–2028

1

5G is the biggest factor influencing the pace and direction of CSPs' investments in this segment

5G-readiness will be the most significant driver of CSPs' spending on monetisation platforms during the forecast period. The significant investment in 5G and 5G SA in the future coupled to the monetisation for the new services and capabilities that these represent will continue to drive spend in each of the sub-segments. Changes to 3GPP standards will drive a need to update charging, rating and policy management systems.

2

The growing importance of new digital services and the channels in which they are sold will drive spending within all monetisation sub-segments

CSPs will focus on expanding their service types and the channels in which they sell them. These include new digital services related to the IoT/metaverse and other new digital services. In addition, CSPs must be able to offer their services through APIs to developers in a more compelling format sometimes termed "network or telco as a service".

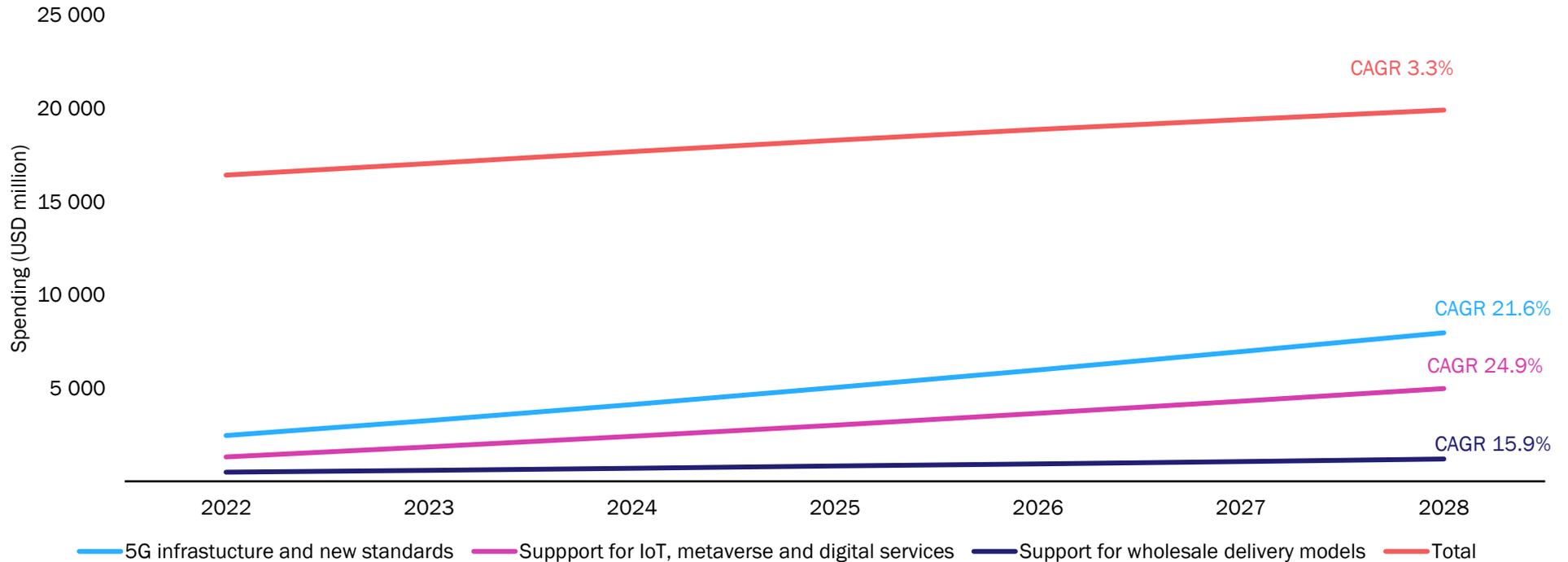
3

Support for wholesale offerings and partnerships

New requirements for wholesale are increasingly needed as 5G and fibre network operators look for new ways to monetise their assets. Wholesale requirements are moving from interconnect and roaming to the need to sell network-as-a-service solutions with dynamic use of network capabilities. Complex offerings based on 5G slices, different fibre operator network or digital assets partners are driving updates to current systems.

5G will be the main driver of new spending; growth rates are slightly lower in the billing and offer creation, and charging and policy management sub-segments

Figure 1: CSPs' spending in the monetisation platforms market, by driver, worldwide, 2022–2028



Source: Analysys Mason

Note that the drivers included in Figure 2 are not mutually exclusive, nor are they the only factors affecting overall revenue growth.

CSPs' spending on monetisation platforms will grow at a CAGR of just 3.3% during the forecast period. This a significant change compared with our previous forecast because inflation is helping to drive up costs worldwide. In addition, spending on partner management systems will increase at a CAGR of 5.5% because CSPs are partnering to create and offer new services and are also offering their services within external partner ecosystems.

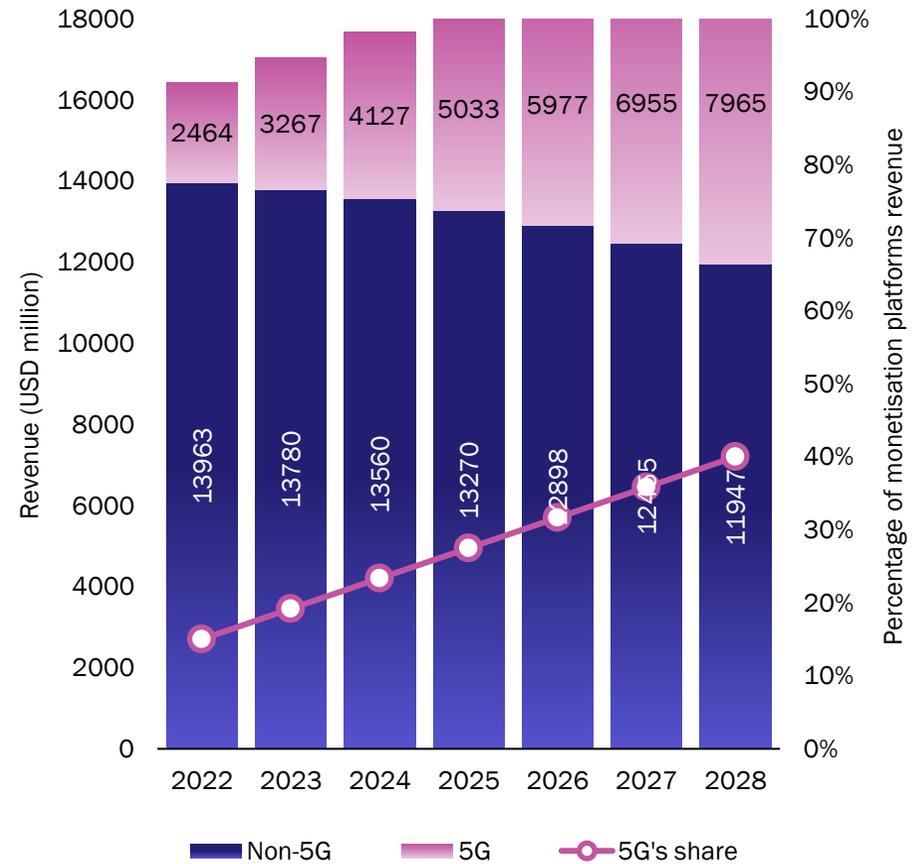
5G is the biggest factor influencing the pace and direction of CSPs' investments in the monetisation platforms segment

All new monetisation systems must be 5G-ready because CSPs consider this to be essential to futureproof their investments.

CSPs' spending on converged charging systems (CCSs) will grow during the forecast period due to the increased deployment of 5G SA. This will change the data structure and protocol from the incumbent diameter-based version to one that is HTTP/2-based for signalling and event tracking. CSPs will gradually stop maintaining separate OCS and CCS as the newer 3GPP standards begin to impact updates and deployed systems. The 3GPP standards provide some backwards compatibility, but CSPs aiming to reduce complexity will provide a converged CCS for all of their traffic in the long term and can benefit from new 5G SA opportunities.

5G enables CSPs to expose their network insights and capabilities to a much higher degree than was possible before. 3GPP's current release 17 and future releases will increase CSPs' ability to offer specific network insights and exposure in real time by using functions such as NWDAF, NEF and NSMF. The interconnections will be based mostly on standardised API calls. This will open a new door for innovative network monetisation opportunities and will lead to new applications and offerings in areas such as edge, network slicing and identification. CSPs will require an agile, configurable and highly scalable monetisation framework to support the new use cases.

Figure 2: 5G-related revenue in monetisation platforms, worldwide, 2022–2028



Source: Analysys Mason

The desire to generate revenue beyond connectivity is driving CSPs to introduce new service types, use new channels and form new partnerships

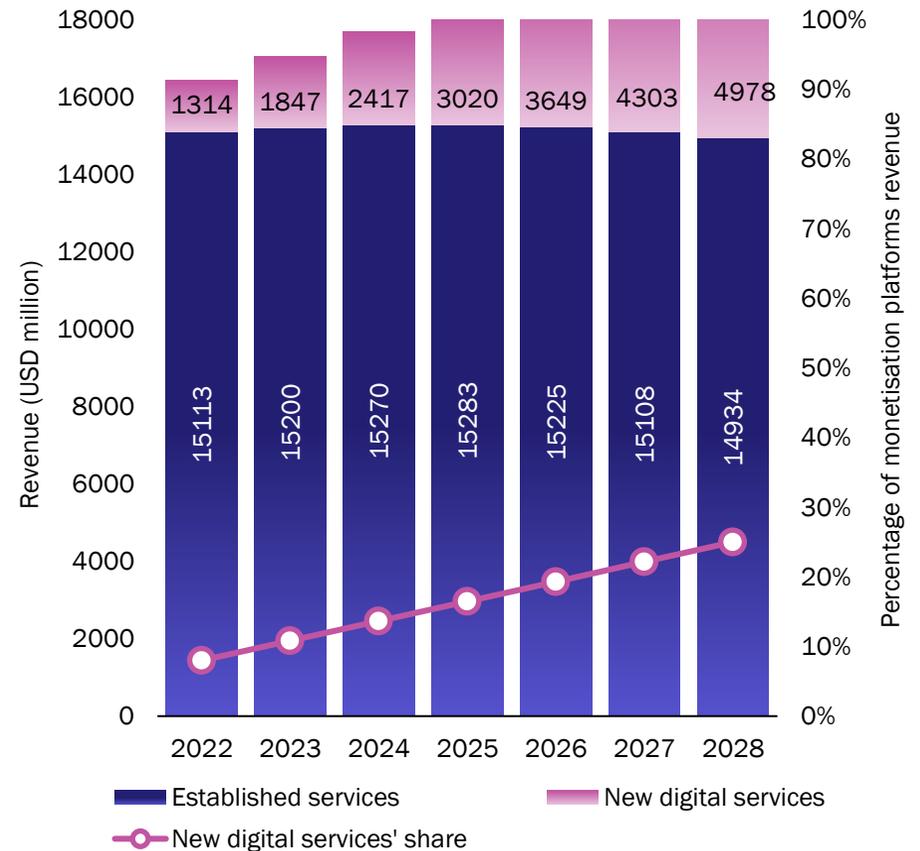
5G SA is expected to help stimulate new service offerings, but CSPs are not exclusively relying on it as they search for new revenue streams beyond connectivity. These include IoT, industry 4.0 and in support of the metaverse.

New services will increase CSPs’ need for flexibility in the charging of services that may include a mixture of rating options, but they will also need to be able to support different monetisation options found within non-telecoms partner ecosystems. Moreover, within the same service an ability to support multiple partner solutions with the possibility to rate/charge each element differently is needed.

With competition for new service offerings more likely to be from non-telecoms players, the ability to rapidly on-board new partners and offer self-service based approaches to administer and set-up support for their monetization options become evermore significant.

These requirements will drive a new wave of investment in monetisation platforms for partner management, charging/rating and billing solutions. Some CSPs may elect to standup new IT stacks to support new services, such as IoT, but still use a common charge/rating system. However, new partner management requirements are more likely to lead to a new solution charging/rating system being needed.

Figure 3: New digital services-based revenue in monetisation platforms, worldwide, 2022–2028



Source: Analysys Mason

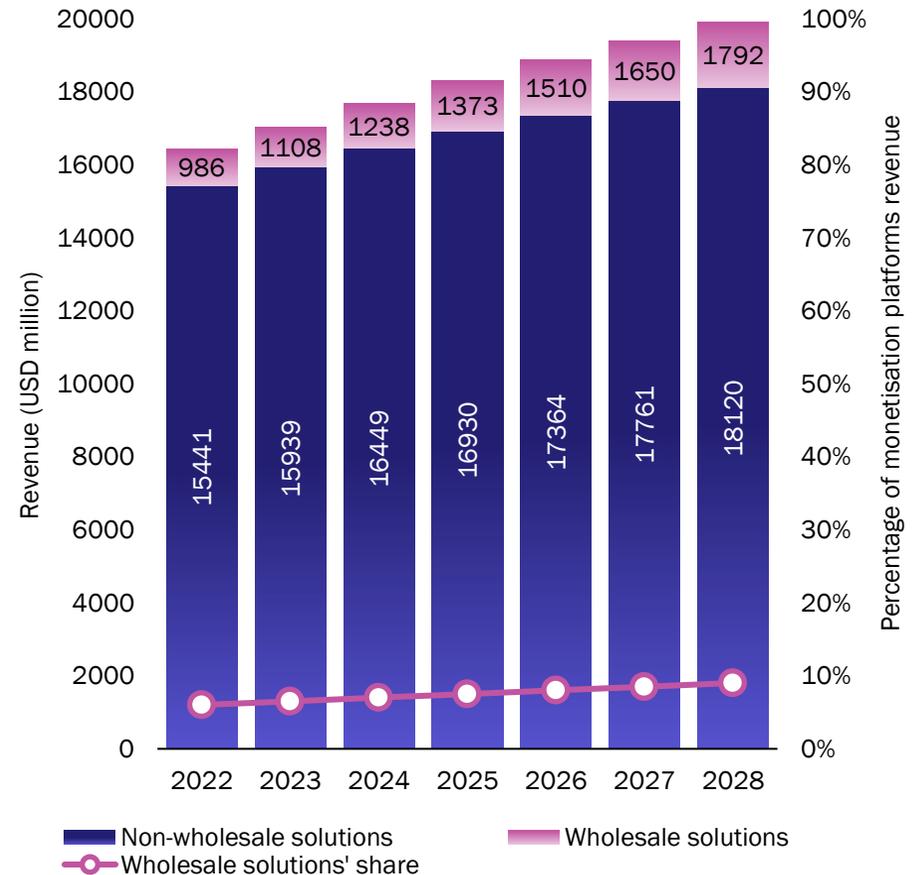
Wholesale systems are a small part of current monetisation solutions, but there are strong drivers for growth

CSPs' requirement for wholesale solutions is likely to grow during the forecast period.

The four areas that could have a significant impact on the growth in wholesale and any related solutions including monetisation platforms are as follows.

- The splitting of network operators into service companies and network companies is creating an 'internal' wholesale requirement that can also be exploited as an external interface.
- The selling of FTTH and 5G infrastructure as a wholesale offering has become a significant driver to help off-set their significant deployment costs and gain new revenue.
- The potential for MVNOs that support specific IoT or industry segments based on 5G/4G offerings.
- CSPs are increasingly turning to reseller partners to create services for end-user customers. CSPs need to be able to provide access to network services in as simple a way possible, such as through APIs in network-as-a-service offerings, to support their resellers partners.
- The support for national fibre networks is creating demand for wholesale for the national broadband providers.

Figure 4: Wholesale revenue in monetisation platforms, worldwide, 2022–2028



Source: Analysys Mason

Recommendations for vendors

1

Leading vendors should continue to encourage CSPs to deploy a 5G-ready CCSs, in a phased approach with the current billing systems using the established Bx interface, and support for current 4G/3G solutions.

3GPP-compatible solutions enable CSPs to migrate existing systems in parts, enabling some current investments to be used for some time. This extends to mediation systems, billing systems as well as rating and charging. However, the new CCSs will enable new revenue creation that 5G enables thanks to greater network exposure functions, vital for the success of 5G and 5G SA.

2

Vendors must take a global market perspective, beyond national boundaries that constrain most CSPs, in creating and developing of a digital marketplace to help CSPs create new revenue streams.

Developing digital market-place technology alone will not put vendors in a dominant and sustainable market position. Vendors must procure, collate and offer digital content alongside the technology to win market share with CSPs, offering them low risk, fast access to new revenue streams. Telecoms vendors have an opportunity to build their ecosystem before alternative, non-telecoms-specific vendors gain market advantage.

3

Vendors should consider how best to offer B2B-type functionality to current systems to better support wholesale in order to address new requirements within the market.

Vendors should offer wholesale solutions to address the shift in wholesale services, which includes the creation of NetCo/ServCo companies, the setting up of MVNOs to address new IoT solutions, NaaS offers for solution providers and access to fibre or 5G access networks.

Recommendations for CSPs

1

CSP must plan for how they intend to migrate to the new 3GPP standards; they will need to identify which systems will be retired, migrated or replaced, and in what timeframe.

Charging platforms have been convergent for many years and the 3GPP standard bodies are aware of the significant investment and complexity of currently installed systems. The new standards allow for migrations to be achieved in parts and run in parallel to using current systems. Vendors also offer standards-compliant solutions that offer further options for migration or continued use of current assets.

2

CSPs must build beyond traditional telecom revenue streams to counter act slowing connectivity services by offering new digital services and exposure of their capabilities through APIs to allow developers to create compelling services.

Next-generation partner management systems are crucial for effectively addressing emerging 5G-enabled and other use cases. CSPs' ecosystems can become an important differentiator for enterprise customers and prospects in the long term as partner ecosystems enable more compelling service offerings.

3

CSPs should prepare for mainstream monetisation functions to be hosted on the public cloud and delivered as SaaS.

Public cloud-based solutions will become widespread in the medium-to-long term, even for mission-critical functions. CSPs should plan for the eventual shift to the public cloud, both via a SaaS model and through shifting compute and storage away from their own data centres. CSPs should assess the costs and benefits of migrating their current systems to cloud-based infrastructure and prepare for medium- and long-term migration strategies.



Executive summary and recommendations

Forecast

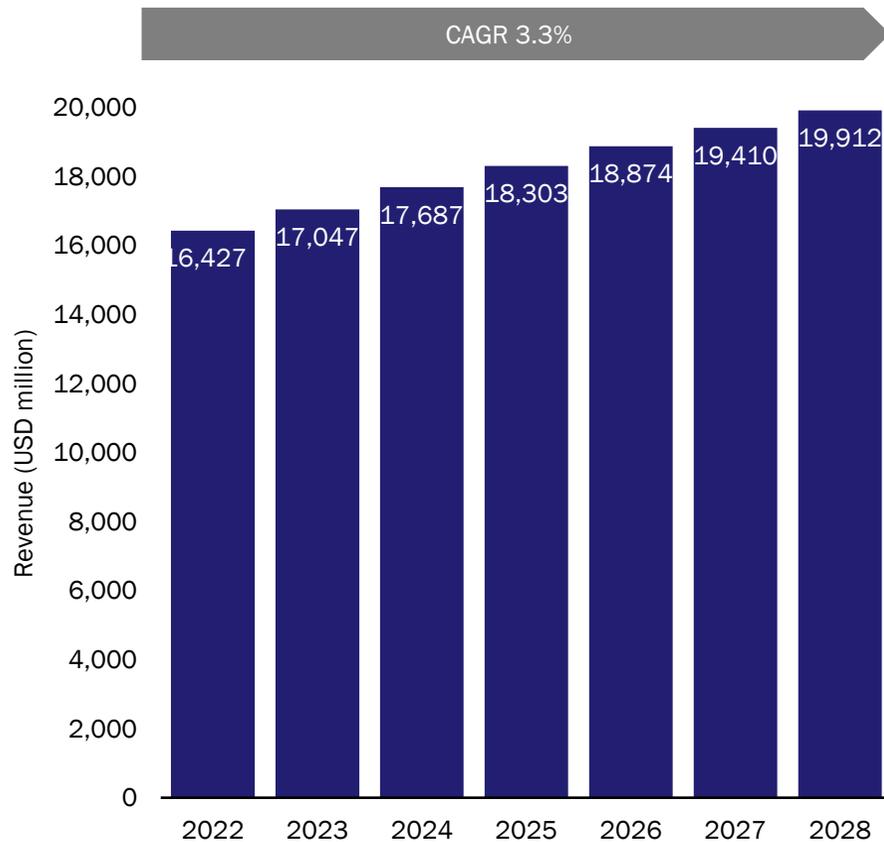
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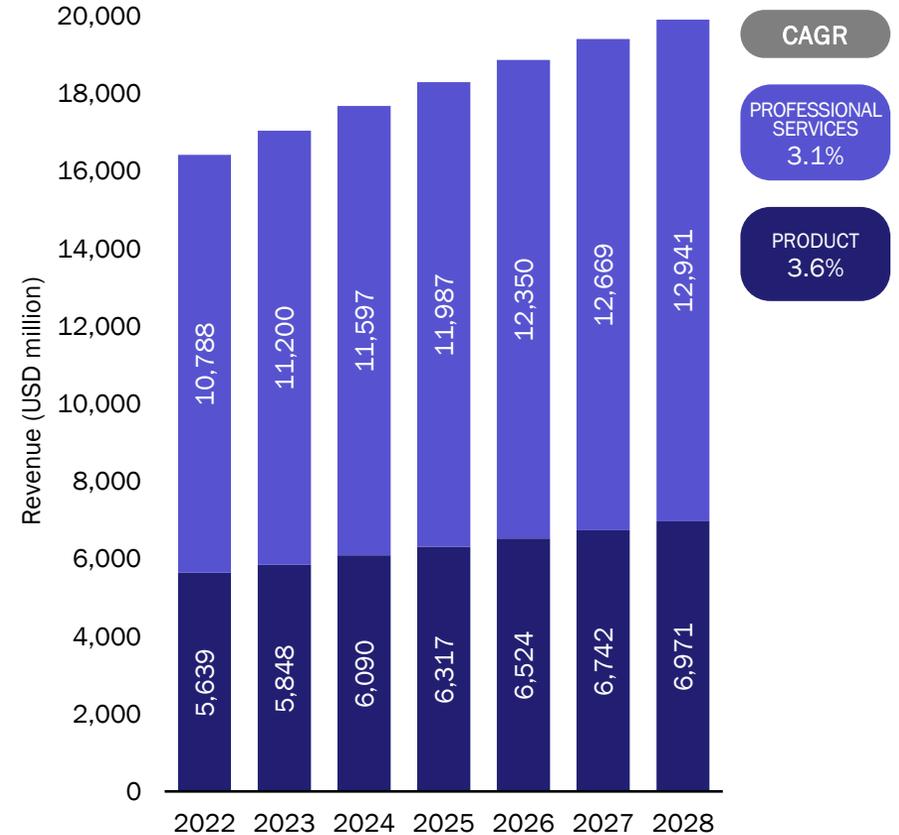
Monetisation platforms: total revenue worldwide forecast and revenue forecast by delivery type

Figure 5: Monetisation platforms total revenue, worldwide, 2022–2028



Source: Analysys Mason

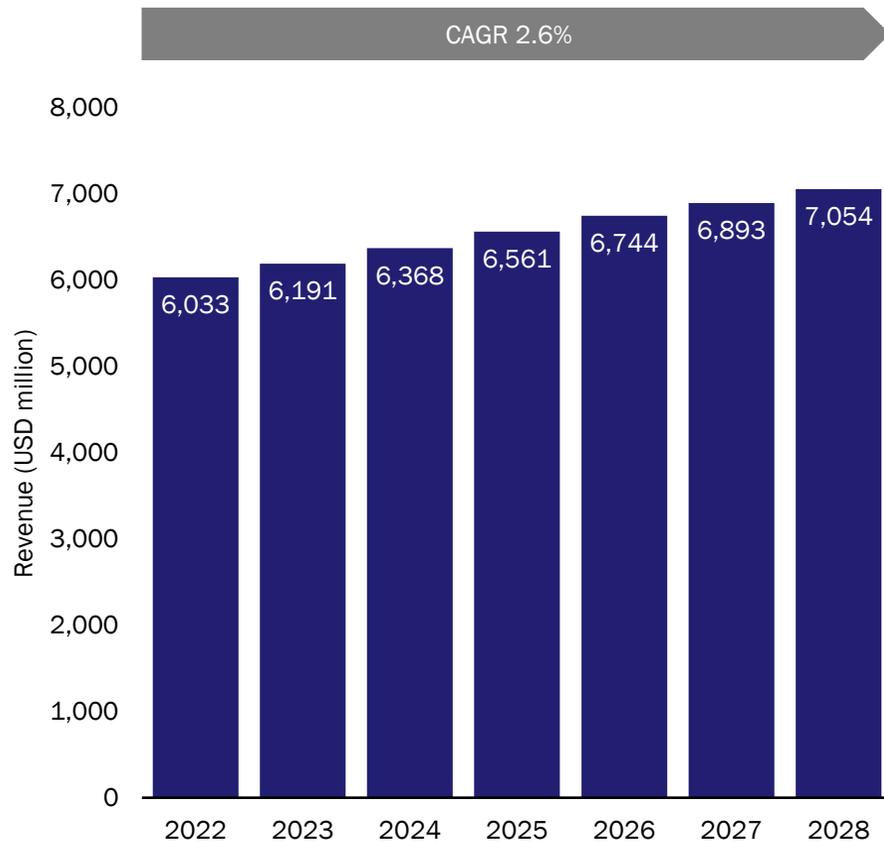
Figure 6: Monetisation platforms total revenue by delivery type, worldwide, 2022–2028



Source: Analysys Mason

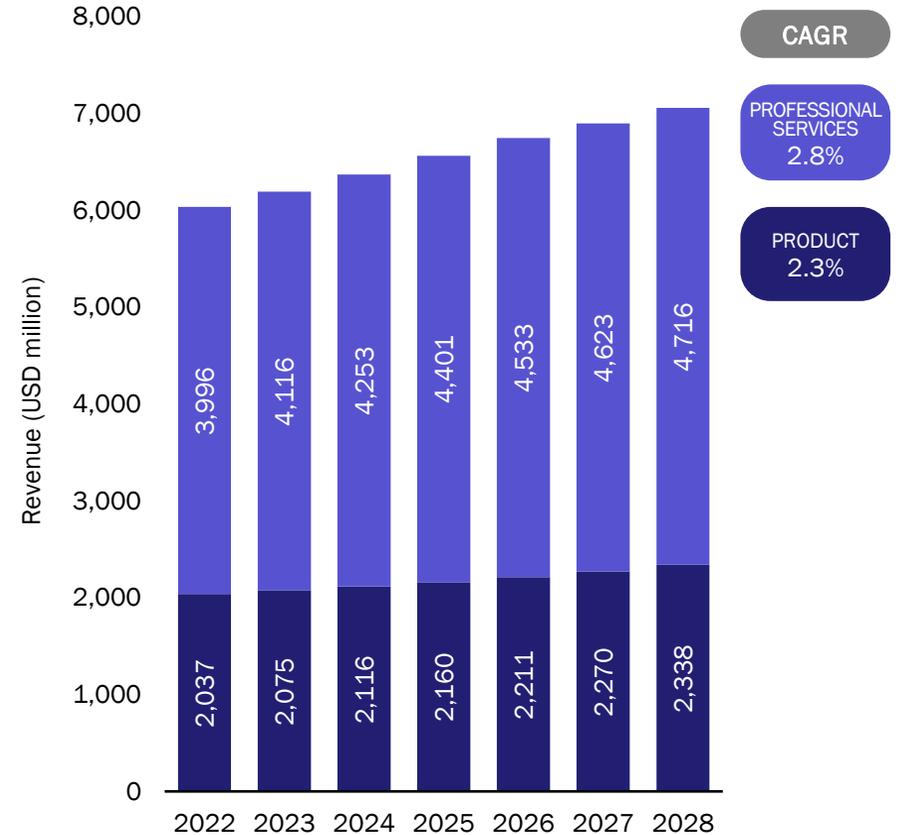
Billing and offer creation platforms: total revenue worldwide forecast and revenue forecast by delivery type

Figure 7: Billing and offer creation platforms total revenue, worldwide, 2022–2028



Source: Analysys Mason

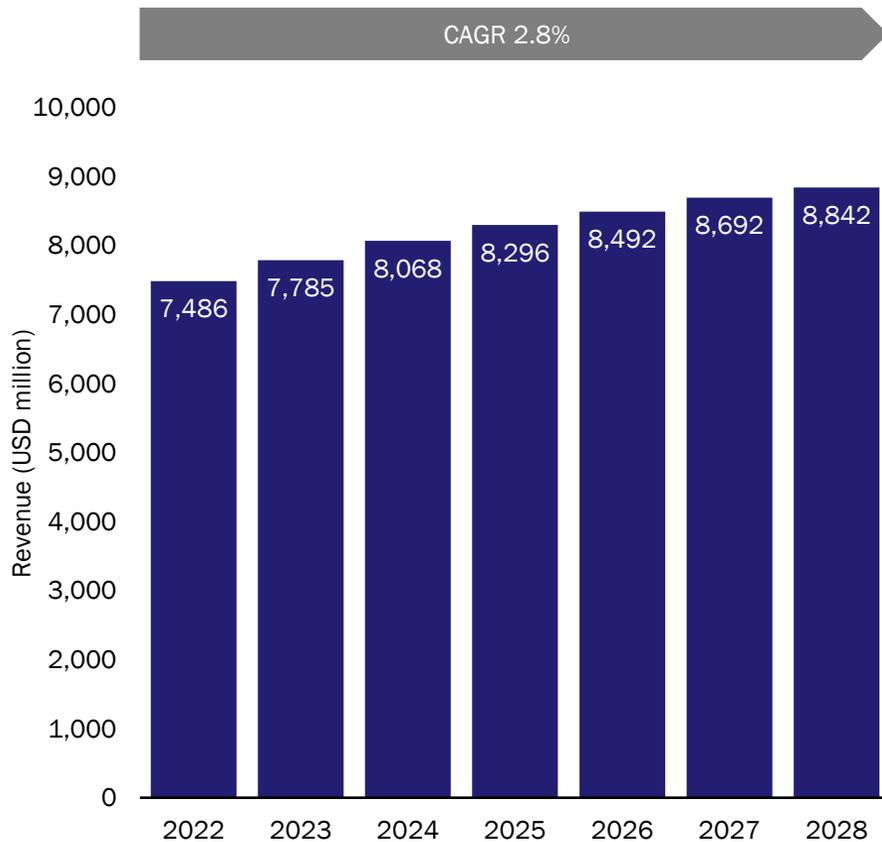
Figure 8: Billing and offer creation platforms total revenue by delivery type, worldwide, 2022–2028



Source: Analysys Mason

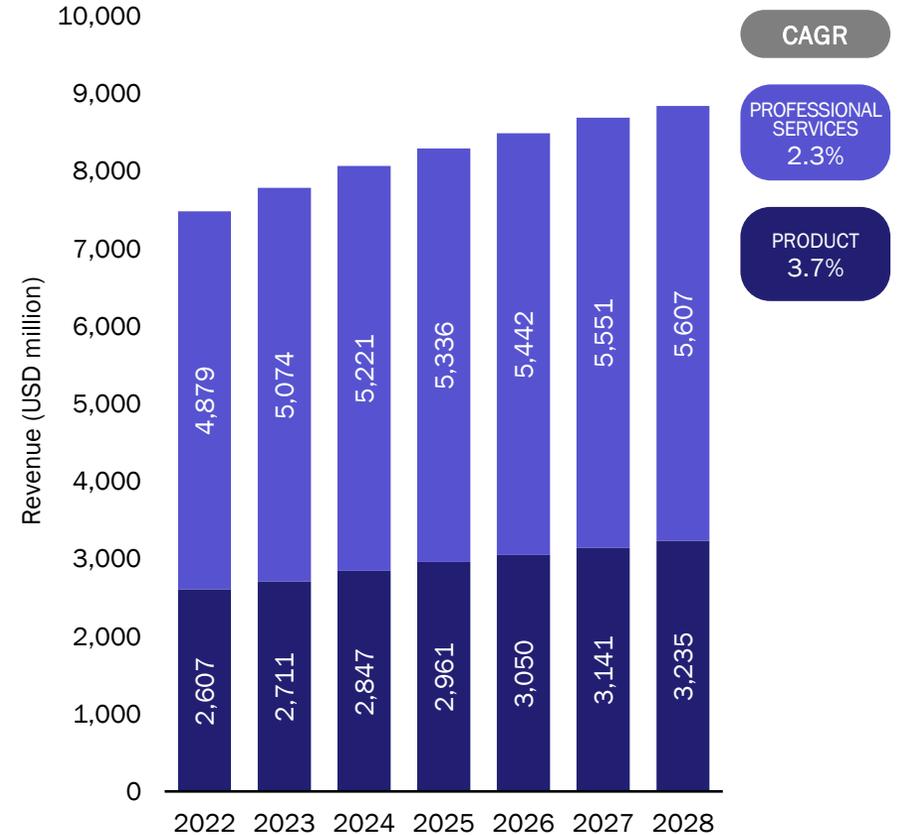
Charging, rating and policy platforms: total revenue worldwide forecast and revenue forecast by delivery type

Figure 9: Charging, rating and policy platforms total revenue, worldwide, 2022–2028



Source: Analysys Mason

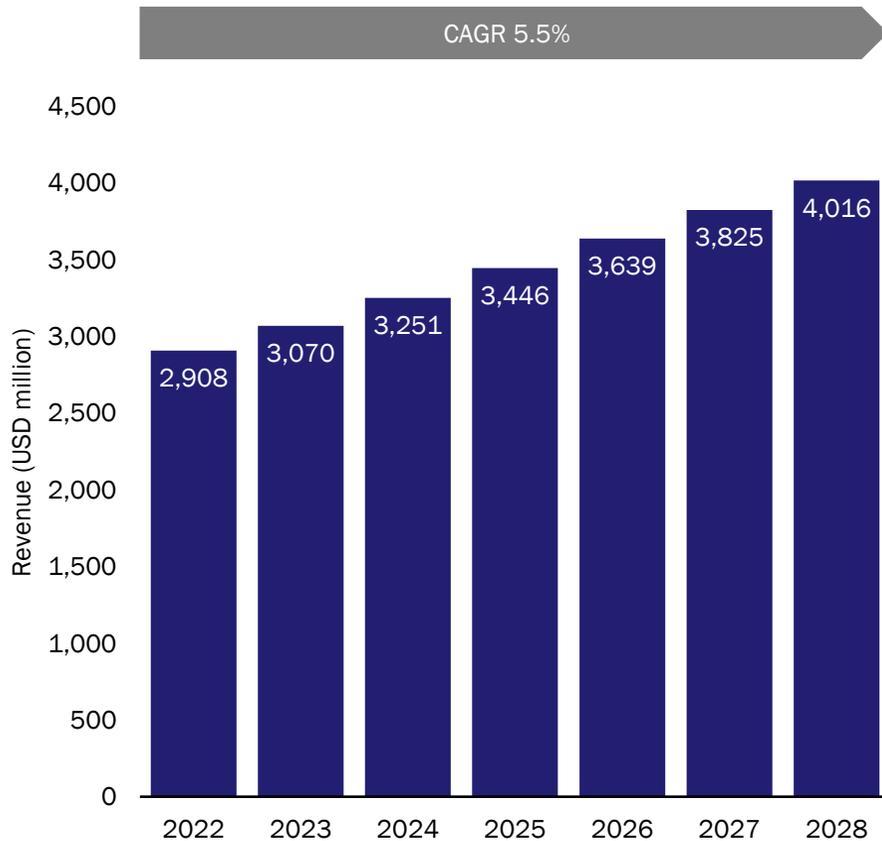
Figure 10: Charging rating and policy platforms total revenue by product type, worldwide, 2022–2028



Source: Analysys Mason

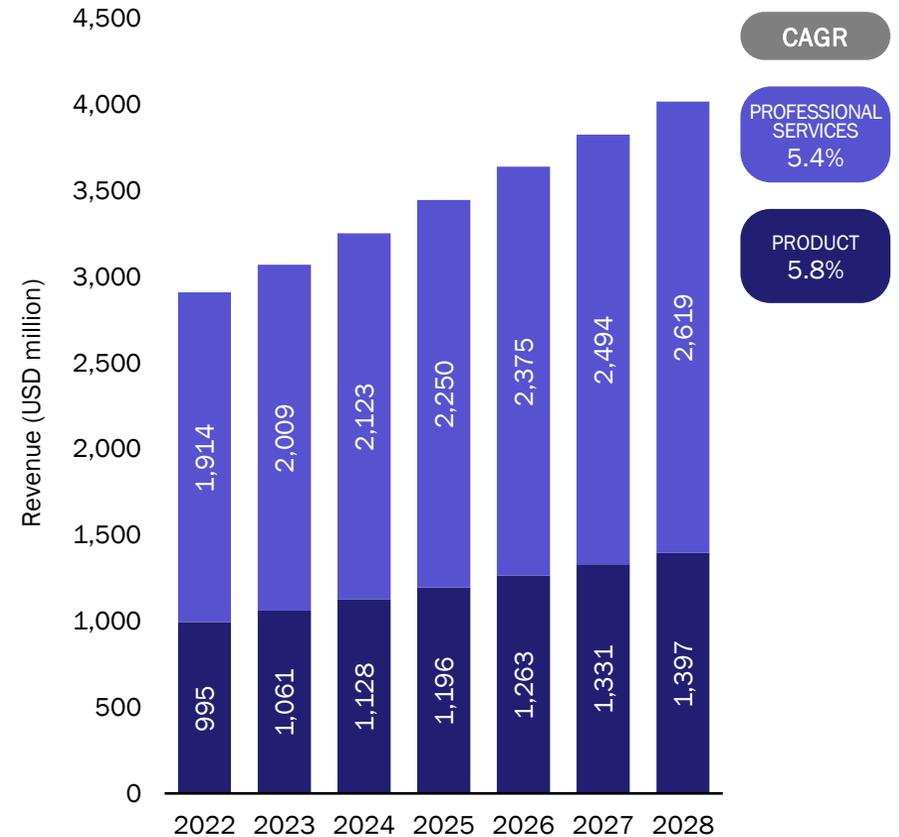
Partner management platforms: total revenue worldwide forecast and revenue forecast by delivery type

Figure 11: Partner management platforms total revenue, worldwide, 2022–2028



Source: Analysys Mason

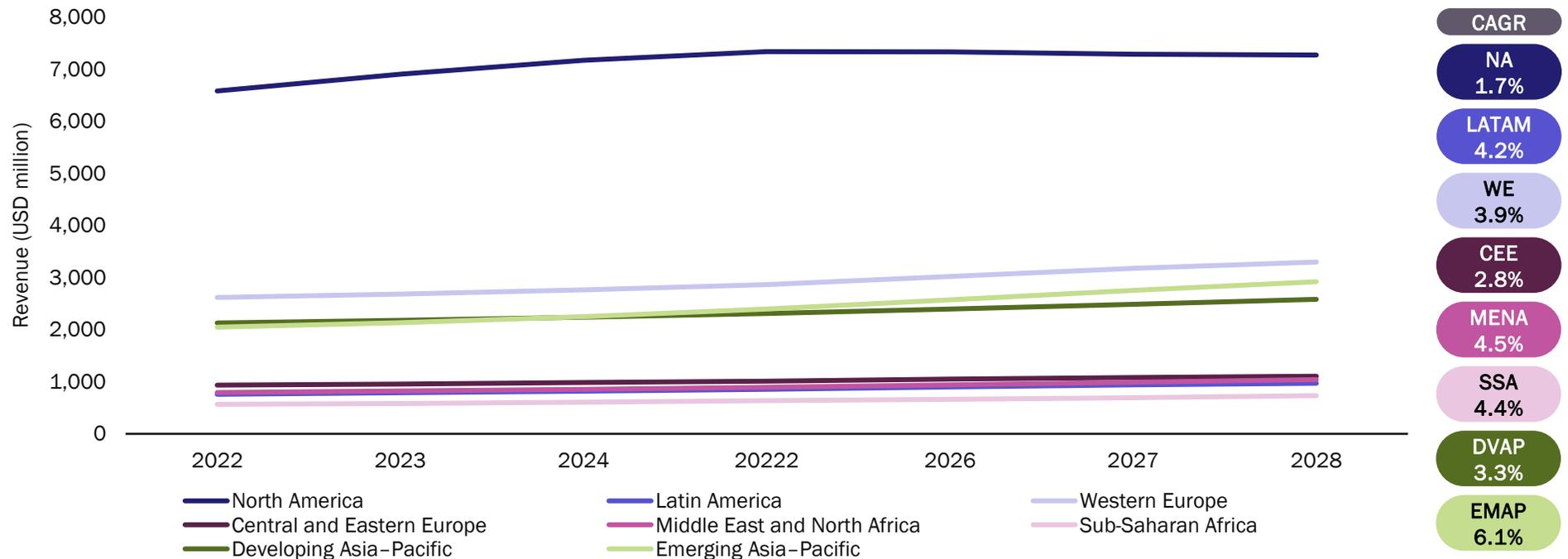
Figure 12: Partner management platforms total revenue by delivery type, worldwide, 2022–2028



Source: Analysys Mason

Forecast by region: spending will be highest in North America but will increase most quickly in emerging Asia–Pacific

Figure 13: Monetisation platforms revenue by region, 2022–2028

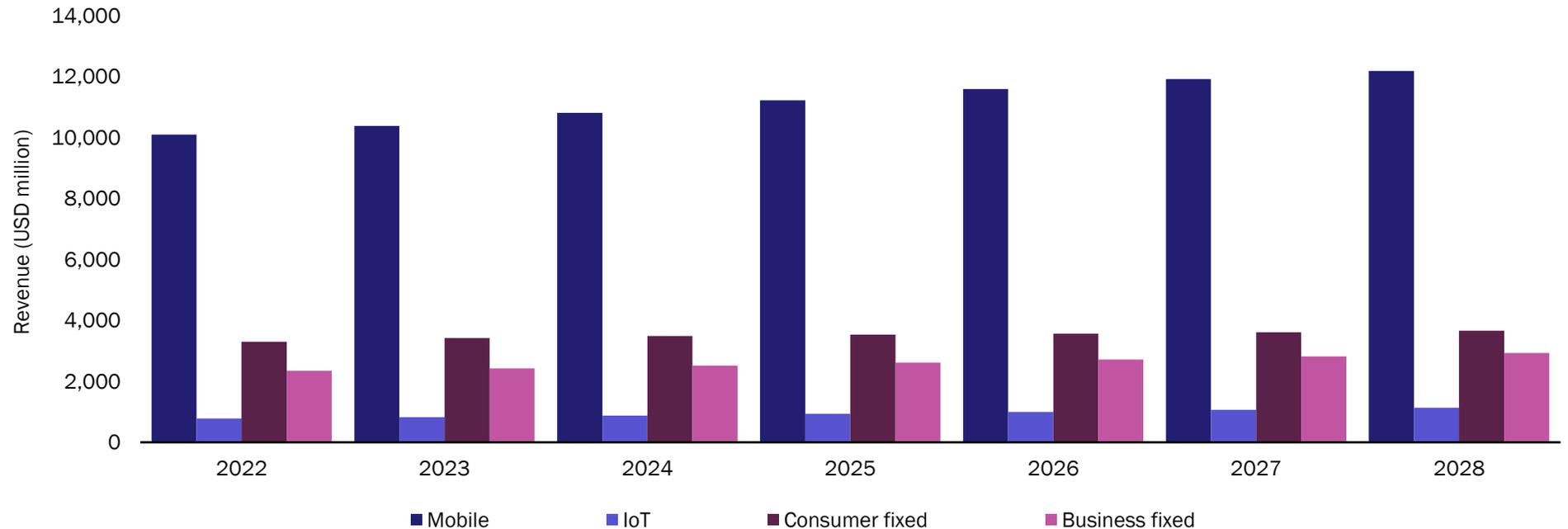


Source: Analysys Mason

5G will continue to drive spending on monetisation platforms in most regions, especially for charging systems. Other key drivers include the roll-out of fixed-line services in new regions, wholesale and business services offerings. In addition, markets where fragmentation may take place to create ServCos and NetCos, MVNOs, wholesale operators and other market changes are likely to create demand for changes within monetisation platforms. Such changes will occur mainly in regions where competition is at its greatest, such as Europe and parts of emerging Asia–Pacific.

Forecast by service: mobile services will continue to account for the majority of spending, even as investments in IoT and business fixed services increase

Figure 14: Monetisation platforms revenue by service type, worldwide, 2022–2028



Source: Analysys Mason

Mobile services will continue to account for most of the spending in the monetisation platforms sector. Spending on these services will grow only slightly due to ongoing 5G-related investments; this muted growth masks a period of extensive transformations and upgrades of legacy monetisation platforms that specifically affect mobile services. IoT-related spending will grow strongly from a smaller base. CSPs' spending on consumer fixed services in emerging markets will rise, but the overall spending on these services will decline thanks to the maturity of these services in developed markets. Spending on monetisation platforms for the business fixed market will increase steadily during the forecast period as CSPs invest resources in improving their monetisation capabilities for enterprise verticals.



Executive summary and recommendations

Forecast

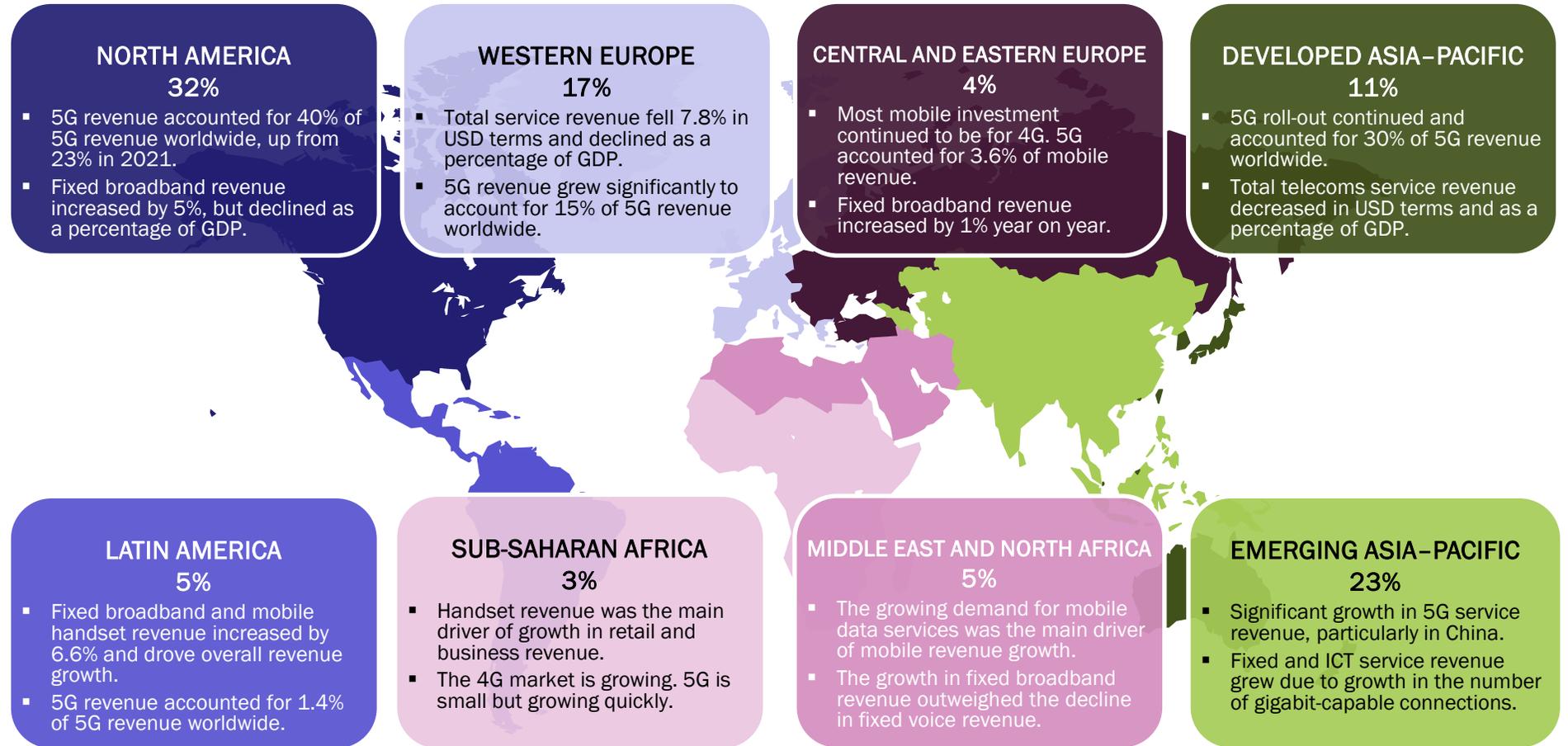
Overall telecoms market context

Market definition

About the author and Analysys Mason

Overall telecoms services: revenue split and trends for regional markets

Figure 15: Share of worldwide USD1.71 trillion telecoms service revenue and trends by region, 2022



Source: Analysys Mason

Overall telecoms services: regional service breakouts

Figure 16: Metrics for the eight regions modelled individually and worldwide, 2022

	Population (million) ¹	GDP (USD billion) ¹	GDP per capita (USD thousand) ¹	Telecoms revenue				Mobile SIM population penetration ²	Fixed broadband population penetration ³
				Mobile (USD billion)	IoT (USD billion)	Consumer fixed (USD billion)	Business fixed (USD billion)		
North America	377	27595	65	194	32	111	59	119%	91%
Latin America	663	5134	10	36	7	20	11	106%	55%
Western Europe	423	19 016	55	72	26	65	34	127%	84%
Central and Eastern Europe	381	5502	17	28	10	10	9	131%	64%
Developed Asia–Pacific	244	9448	47	73	21	32	20	120%	88%
Emerging Asia–Pacific	3980	25680	5	224	32	52	25	95%	60%
Middle East and North Africa	407	6218	28	39	8	12	10	114%	43%
Sub-Saharan Africa	1,436	1352	2	33	3	2	2	92%	3%
Worldwide	7911	99945	14	660	139	304	170	102%	58%

Macroeconomic and general regional factors (such as population) provide context for the telecoms revenue figures that we track in the Analysys Mason DataHub. The increasing take-up of FTTP/B and the migration of customers to plans with gigabit speeds in advanced regions drove fixed broadband revenue growth. The Middle East and North Africa and Sub-Saharan Africa lag behind the other regions in terms of fixed broadband penetration due to affordability constraints and limited network footprints. The roll-out of 5G networks and the launch of affordable 5G handsets boosted smartphone sales in Western Europe, North America, developed Asia–Pacific and China. 5G standalone and associated services are yet to make an impact on operational systems.

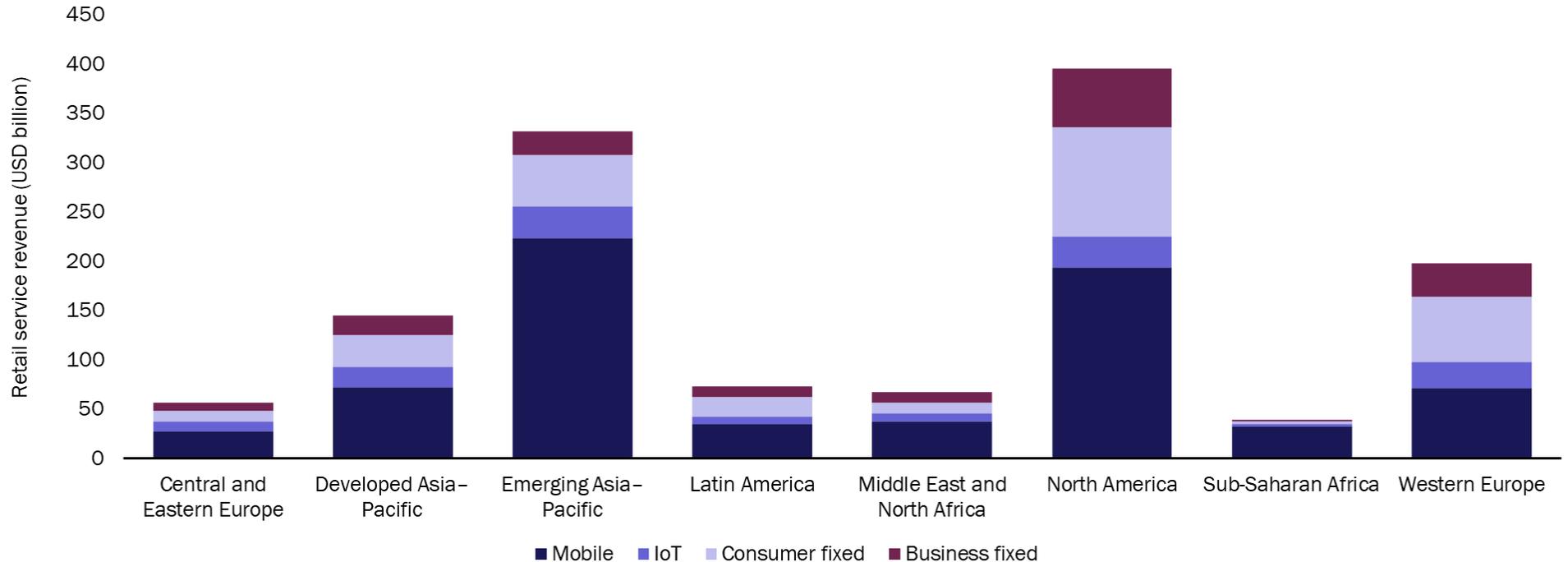
¹ Population data is from the *UN World Population Prospects*. GDP data is from the *IMF World Economic Outlook Database*.

² Includes IoT SIMs.

³ Total fixed broadband connections (Residential) expressed as a share of population.

Overall telecoms services: regional service comparison

Figure 17: Overall retail telecoms service revenue by region and service type, 2022¹



Source: Analysys Mason

North America was the largest market for telecoms services worldwide, but emerging Asia–Pacific became the largest market for mobile services, reflecting the growth of mobile internet revenue and other related services in China and India. Fixed-line services in Western Europe were a significant revenue stream, reflecting the ongoing roll-out of FTTP/B in many countries.

¹ Retail revenue based on historical data up to 2Q 2022 (publication date 21 June 2023). Total revenue for mobile/fixed services, excluding wholesale revenue (interconnection, hosting and roaming-in) and revenue from direct equipment sales. For more information, see Analysys Mason’s *DataHub*.

Overall telecoms services: key industry drivers in 2022

Figure 18: Key drivers of the telecoms software and services industry

Driver	Key elements	Discussion
5G	<ul style="list-style-type: none"> Impact of 5G NSA and 5G SA on operational systems Support for new monetisation needs from network slicing and monetisation of new services Optimised network planning 	Investment in 5G is the biggest single factor driving the telecoms software and services industry. Such investments drive software spending for the network itself, for network orchestration and automation, and for improvements to OSS and BSS. CSPs are preparing to launch 5G SA services. Open RAN is getting more attention from major CSPs. New smarter operational systems are needed to deal with complex new services, disaggregated networks and virtualised infrastructure.
Cloud	<ul style="list-style-type: none"> Moving current payloads to public cloud Shift to SaaS-based application delivery Completing cloud-native migration applications Support for Edge and network cloud computing 	Cloud computing is disrupting the way all industries work, including telecoms. The biggest near-term issue is moving existing payloads to the cloud. However, there is a greater emphasis on using software offered as a service, generally in the public cloud and for new cloud-native development, including of the network itself. Cloud-native network solutions are gaining attention and driving spending on telecoms software.
Enterprise services and wholesale	<ul style="list-style-type: none"> Support for private and hybrid private 5G Creation of new service partner ecosystems Enterprise digital experience/self-service SD-WAN support 	Private 5G networks are gaining traction in enterprise services and driving some spending for mobile equipment, edge computing and managed services. Enterprises now expect self-service to be as good as that offered by OTT players. New enterprise services are becoming reliant on partner ecosystems to deliver innovative services.
Digital transformation	<ul style="list-style-type: none"> Hyper-automation of operations processes like OTT players Use of ML and analytics and consideration of generative AI use cases Using cloud and SaaS to rationalise OSS/BSS systems 	Operators are deploying some new network domains with high degrees of automation. However legacy systems persist because it is difficult to justify retrospectively fitting older systems. Increased levels of automation are reducing network operational costs. The increased use of data-driven decisions is growing, with implementation of AI/ML addressing more complex processes. However, automation levels are low and use of generative AI is in its infancy. SaaS-based platforms are being used to help to rationalise OSS/BSS systems.
Network disaggregation	<ul style="list-style-type: none"> Impact of virtual networks Infrastructure separation and use of wholesale business models CPaaS 	Digital transformation has led to network disaggregation. The full vertical integration of networks and services is no longer necessary nor always efficient. Investors, such as towercos, fibrecos and hosting centres, provide wholesale access to fundamental infrastructure used by many retail service providers. Investment in wholesale services is growing and is becoming a bigger part of telecoms software opportunities.



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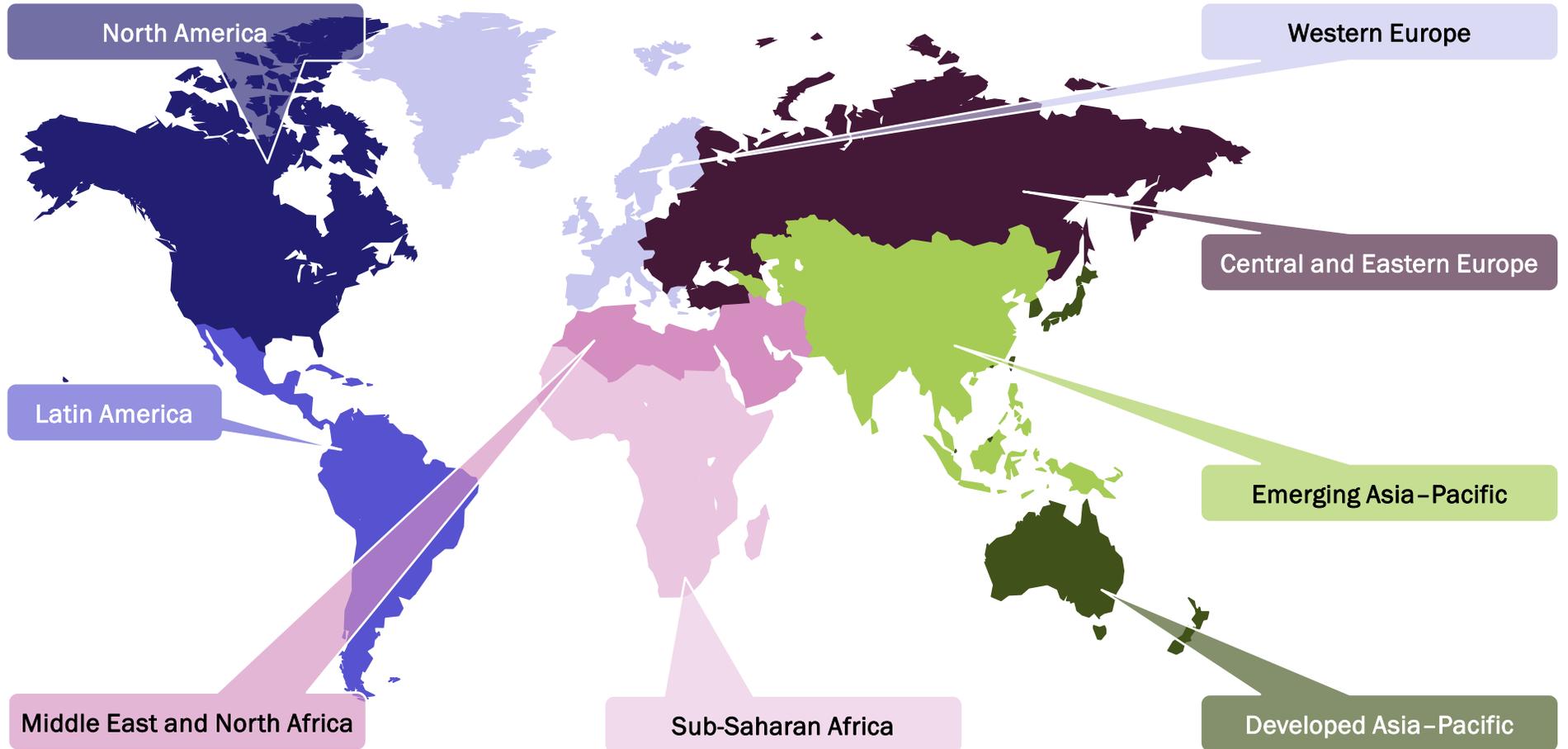
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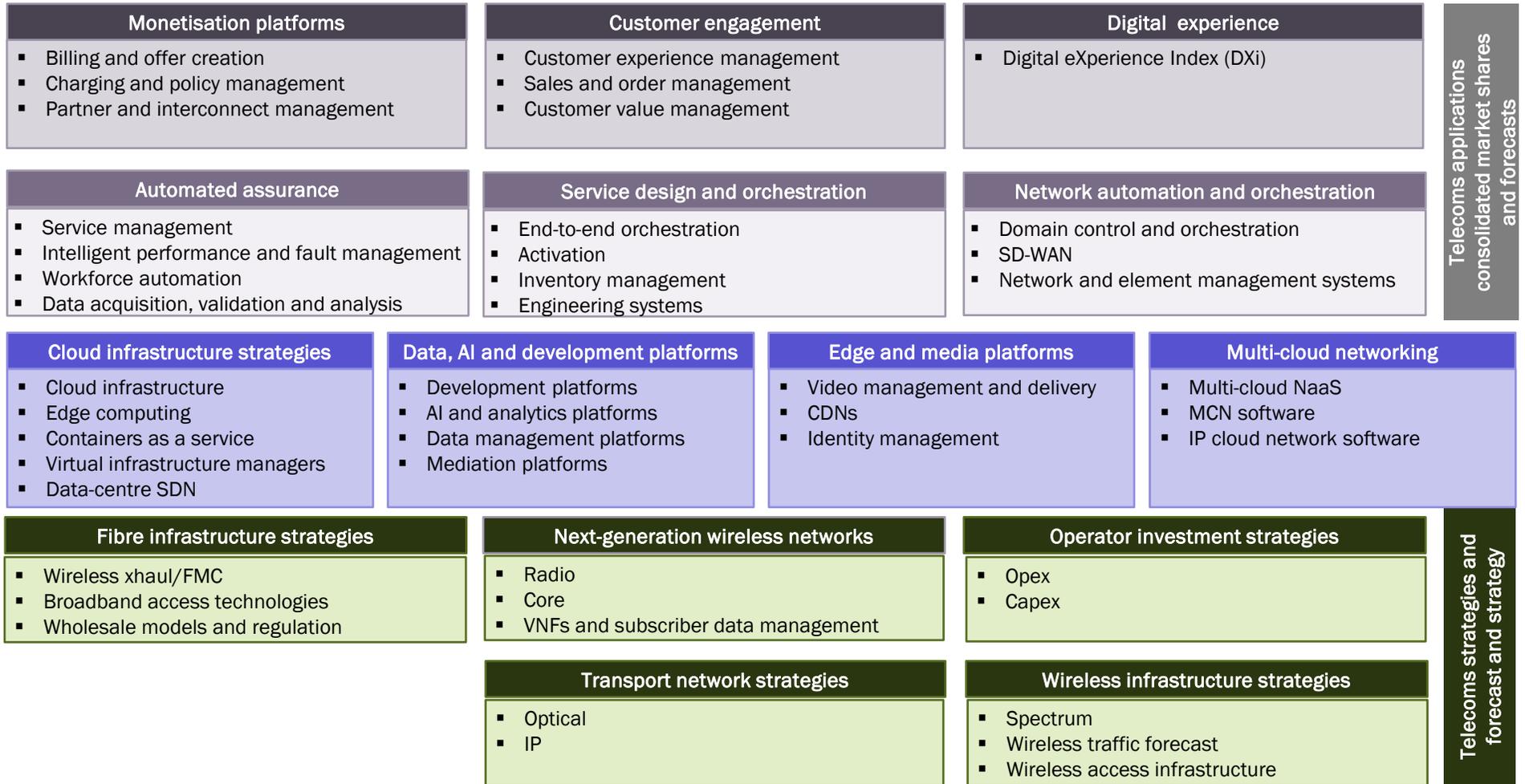
About the author and Analysys Mason

Definition of geographical regions

Figure 19: Regional breakdown used in this report



Taxonomy



Monetisation platforms sub-segment definitions [1/2]

Figure 20a: Definitions of monetisation platforms and its sub-segments

SEGMENT OR SUB-SEGMENT	DEFINITION
MONETISATION PLATFORMS	<p>Monetisation platforms include billing and charging systems, partner management and interconnect systems, policy management systems with mediation systems tracked. These systems enable CSPs to create track the use of their services, aggregate their records, compute charges, produce bills and process payments. The integrity of these systems is fundamental to CSP operations of setting, collecting and management of revenues for services and products.</p>
CHARGING AND POLICY MANAGEMENT	<p>The billing and charging segment is formed of three different types of systems.</p> <p>Prepaid billing deployments are only used by retail subscribers that credit their account before using a service. The credit is debited in real time as the service is used, and service is denied if the balance falls to zero. Subscribers have various means of ‘topping up’ their balances. Prepaid service systems must be able to rate service usage in real time and maintain a real-time account balance. They must also be able to interact with the network to redirect subscribers to top-up servers if the account balance drops to zero. Note that convergent platforms used purely for prepaid use cases are considered to be prepaid.</p> <p>Postpaid billing deployments are used by retail subscribers that are billed each month for the service they have used. Traditionally, postpaid billing systems work offline, using a monthly billing cycle. Modern postpaid billing systems include the ability to monitor usage in real-time and have enhanced capabilities, such as advice of charges. Postpaid billing includes rating events and combining the rated events with other aspects of the bill, including recurring charges, taxes, fees and other items that are independent of rated usage. Note that convergent platforms being used purely for postpaid use cases are considered to be postpaid.</p> <p>Convergent billing deployments support both prepaid and postpaid subscribers. They may also support hybrid accounts in which, for example, a family has a single account and some members of the family use prepaid, while others use postpaid accounts.</p> <p>Policy management is the practice of applying traffic management techniques using rules based on subscriber profiles. Profiles and rules are defined centrally and distributed to the policy enforcement points in the network to control a subscriber’s traffic. In 3GPP standards, policy management is implemented by the policy and charging rules function (PCRF), and policy enforcement by the policy and charging enforcement function (PCEF). We exclude policy enforcement products from our definition of policy management, which focuses on the PCRF and its various proprietary enhancements.</p>

Monetisation platforms sub-segment definitions [2/2]

Figure 20b: Definitions of monetisation platforms and its sub-segments

SEGMENT OR SUB-SEGMENT	DEFINITION
PARTNER AND INTERCONNECT	Partner and interconnect monetisation platforms are used for payments to and collections from service providers that co-operate with a CSP to provide services to its customers. This includes traditional voice termination (both fixed and mobile), roaming interconnection and interfaces (but not roaming service bureaux per se) and international route optimisation and settlements with traditional network operator partners and content providers.
BILLING AND OFFER CREATION	<p>The billing domain receives and processes CDR files from the core network charging/rating functions. These platforms can provide billing mediation and billing or other (for example, statistical) end applications. It traditionally is only applicable to offline charging (see "Online Charging System" for equivalent functionality in online charging). Telecoms billing is a process of collecting usage data aggregating it, applying required usage and rental charges, and finally generating invoices for the customers. The telecoms billing process also includes receiving and recording payments from the customers. Billing systems work with charging and rating engines through interfaces such as Bx in the 3GPP. Billing also provides bill presentment, collections and performs tax calculations.</p> <p>More recently, billing information is being used with generative AI to dynamically create new offers based on usage and other factors discovered in data and revenue related outcomes.</p>
MEDIATION (not covered)	<p>Mediation systems collect data from the network, format it and store it for specific uses, generally for billing systems, but also for various types of service assurance. We include all mediation in this segment. The mediation sub-segment now includes active mediation, which previously was included in the real-time charging (RTC) sub-segment of our service delivery platforms segment.</p> <p>Mediation systems are not specifically covered for market share.</p>

Definitions: product

Figure 21: Definition of product revenue

TYPE	DEFINITION
PRODUCT	<p>Product revenue includes that from licence software and maintenance, as well as a proportion of SaaS revenue that reflects the value of the software product used to provide the SaaS service. It also includes the proportion of the managed services revenue that reflects the value of the software product used to provide the managed services (see the 'Definitions: revenue distribution associated with delivery types' slide for more details).</p> <p>Product revenue also includes revenue from product-related services, such as installation, training and lifecycle management services related to a specific telecoms software deployment. This category also includes professional services related specifically to a supplier's own product. These are services that only the product supplier will be able to provide in nearly all cases. Services related to third-party products are part of the systems integration sub-category.</p>

Definitions: professional services [1/3]

Figure 22a: Definitions of professional services and its sub-categories

TYPE	DEFINITION
PROFESSIONAL SERVICES	Professional services revenue includes all software-related service revenue that is not explicitly tied to software products. This includes revenue from hosted/cloud, outsourced operations and systems integration and other services. These definitions include all the professional services that we previously covered, but we have adjusted the definitions of particular areas to embrace cloud as a way to provide hosted IT services and to reduce the number of distinct sub-segments for professional services.
HOSTED/CLOUD	Revenue from hosted/cloud delivery services includes that that is attributed to the vendor that hosts the product for the CSP. The product can be supplied by the vendor using its own or third-party infrastructure. The product can be delivered through a private traditional or cloud-based site, or on a public cloud.
OUTSOURCED OPERATIONS	This category accounts for revenue that is associated with managing systems for CSPs. It includes business process outsourcing (BPO). This category also includes revenue generated from outsourced operations that are professional or specialist services provided by external suppliers' human resources to operate and maintain a CSP's assets, which can include all related operational responsibilities. This involves the transfer of operations from a CSP to external suppliers. In this scenario, the assets (systems and software) are owned by the CSP and reside in the CSP's environment and the supplier manages the network from a CSP co-located site or other local or regional (for example, regional NOC) site. It includes responsibility for onsite operations and related activities in a particular country or region.
SYSTEMS INTEGRATION AND OTHER PROFESSIONAL SERVICES	This category covers all new development that is carried out uniquely for the CSP. This includes business consulting, design consulting, custom development and systems integration. Overall, systems integration accounts for the largest proportion of professional services, although any of the other areas may be the focus in any given deal.

Definitions: professional services – systems integration and other [2/3]

Figure 22b: Definitions of the systems integration and other professional services delivery type

TYPE	DEFINITION	
SYSTEMS INTEGRATION AND OTHER PROFESSIONAL SERVICES	SYSTEMS INTEGRATION	<p>Systems integration concerns the services required to manage and deliver major telecoms software projects in the OSS, BSS, NFV/SDN software and other applications areas to meet CSPs’ specific requirements. These are services that go beyond the boundaries of a single product or suite (such items are covered in the product-related services segment), and involve other systems in the CSP environment in order to meet the project’s requirements. This category includes, but is not limited to:</p> <ul style="list-style-type: none"> • integration with third-party (other vendor or proprietary) data sources, systems and interfaces, including VNF onboarding and data analytics/AI-driven automation applications • data loading and migration • customisation and configurations of software extensions and modules (without coding) to provide customised software features and capabilities, such as network equipment adapters, point-to-point interfaces and enterprise application integration (EAI) • detailed requirements, technical specifications and detailed designs • integration testing, not normal unit and functional system testing, such as for the integration of open multi-vendor components into a full stack solution (for example for open RAN implementations) • project management services. <p>Services related to third-party products (not owned by the supplier) are included in this systems integration sub-category.</p>
	BUSINESS CONSULTING	<p>Business consulting describes advisory services in the areas of business process, workflows, organisation issues and strategic planning, such as how to enter a market or how to package a service. This includes, but is not limited to transformational strategy, business case development and ROI modelling, business process re-engineering and optimisation, organisation restructuring, optimisation and change management, assisting CSPs to develop new products and services to deliver to their subscribers (ranging from tariffs to value-added services), go-to-market strategies, regulatory compliance review and reporting requirements and marketing and campaign strategies.</p>

Definitions: professional services – systems integration and other [3/3]

Figure 22c: Definitions of the systems integration and other professional services delivery type

TYPE	DEFINITION	
SYSTEMS INTEGRATION AND OTHER PROFESSIONAL SERVICES	DESIGN CONSULTING	Design consulting describes the provision of advisory design services prior to the implementation of a telecoms network, software and/or system in such areas as OSS, BSS and virtualised network or cloud architecture, automation, network planning and optimisation and data or information models. These services typically contribute towards developing requirements for procuring the systems and software needed. This category includes, but is not limited to network planning and optimisation designs for both fixed and mobile networks and their transition to virtual/hybrid networks, OSS, BSS, cloud and data analytics platforms, and integrated architectural design, developing technical requirement for tender documents, high-level migration plans and roadmapping, analysis of established systems, data modelling, high-level interface definitions and designs.
	CUSTOM DEVELOPMENT	Custom development refers to telecoms software that is written specifically for an individual CSP, typically as a result of its ownership of legacy and proprietary systems, software or interfaces. It includes any development that requires coding to meet an unusual requirement, such as the development of a customised application store on an SDP or Microsoft .NET platform, an API for interfacing with legacy or proprietary systems, data migration scripts and custom plug-ins for VNF or NFV/SDN-related functional integration. This is internal development that is typically performed by large CSPs. The spending in this category only includes CSP spending on paying other firms for custom development, not the spending required for their own staff to do custom development. This includes some applications development management (ADM).



Contents



Executive summary and recommendations

Forecast

Overall telecoms market context

Market definition

About the author and Analysys Mason

About the author



Justin van der Lande (Research Director) leads the *Applications* practice. 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.

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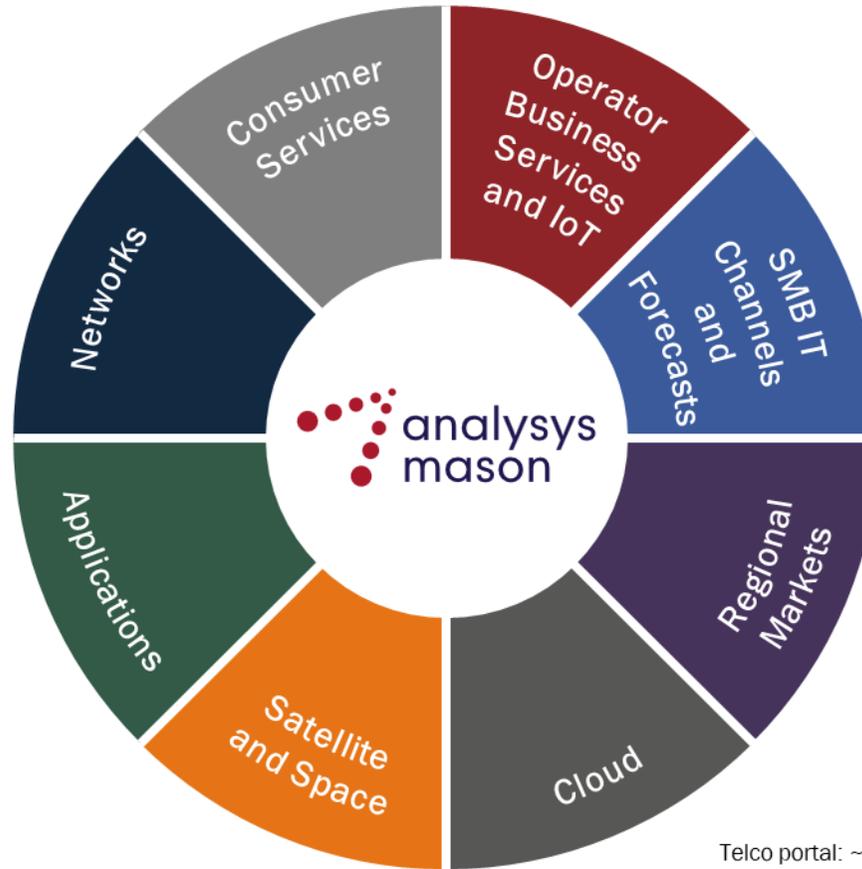
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- 
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 - Digital Experience
 - Automated Assurance
 - Service Design and Orchestration
 - Telecoms Software Market Shares
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Satellite and Space
 - Satellite Strategies for Telcos
 - Satellite Capacity
 - Satellite Infrastructure
 - Satellite Mobility



Operator Business Services and IoT

- Enterprise Services
- SME Services
- IoT Services
- Private Networks
- Cyber Security



SMB Technology Forecaster



Regional Markets

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



Cloud

- Cloud Infrastructure Strategies
- Data, AI and Development Platforms
- Edge and Media Platforms
- Multi-Cloud Networking



DataHub

- Forecast data for 80 countries



Telco portal: ~2800 forecast and ~320 historical metrics
 SMB Technology Forecaster portal: ~120 000 forecast metrics

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Our areas of expertise



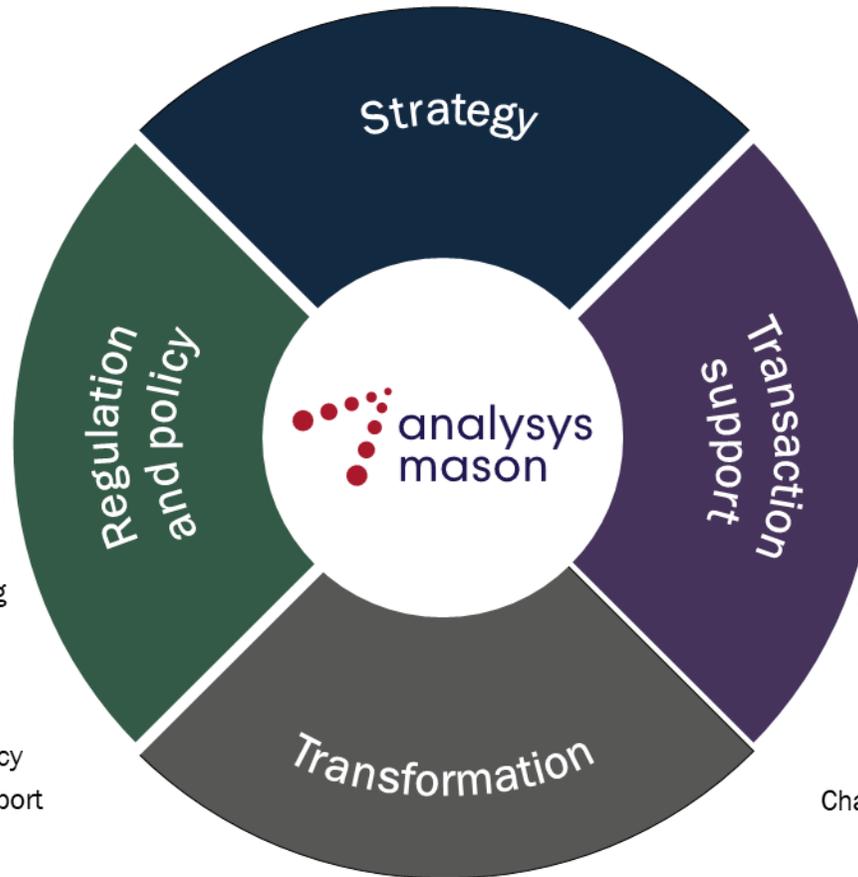
Strategy

- Corporate growth strategy
- Business unit strategy
- Infrastructure strategy



Regulation and policy

- Network and platform
- Public sector broadband intervention
- Accelerating digital transformation of society
- Price controls and cost modelling
- Regulatory accounting
- Regulatory benchmarking and analysis
- Spectrum management and policy
- Expert witness and litigation support
- Postal regulation and policy



Transaction support



- Commercial due diligence and market review
- Technical due diligence
- Post-merger integration
- Periodical business monitoring and loan technical advisory
- Opportunity scouting and pre-deal support



Transformation

- Business transformation
- Digitalisation
- Operational excellence
- Data, BI, steering and insights
- Change and programme management
- Sustainability

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