

Sub-Saharan Africa telecoms market: trends and forecasts 2019–2024



Alex Boisot, Francesco Bellomo, Yushan Chen and Karim Yaici

January 2020, based on data up to 2Q 2019



REPORT COVERAGE

**Connections** 

Handset, mobile

broadband,<sup>1</sup> loT<sup>2</sup>

Mobile

Key performance indicators

Revenue

Service,<sup>3</sup> retail

Prepaid, contract

Mobile

## About this report

## This report provides:

- a 5-year forecast of more than 180 mobile and fixed KPIs for Sub-Saharan Africa, as a whole and for 11 key countries
- an in-depth analysis of the trends, drivers and forecast assumptions for each type of mobile and fixed service, and for key countries
- an overv topics, i means o
- a summ recomm

Our forecasts experts from o consulting div our robust set and in-house methodology definitions, to



rview of operators' strategies and country-specific in order to highlight similarities and differences by of a cross-country comparison mary of results, key implications and mendations for mobile and fixed operators.  s are informed by on-the-ground regional market our topic-led research programmes and our ivision, as well as external interviews. In addition to et of historical data, our forecasts draw on a unique e modelling tool, which applies a rigorous	<ul> <li>Cameroon</li> <li>Côte d'Ivoire</li> <li>Ghana</li> <li>Kenya</li> <li>Nigeria</li> <li>Rwanda</li> <li>South Africa</li> <li>Sudan</li> <li>Tanzania</li> <li>Uganda</li> <li>Zambia</li> </ul>	<ul> <li>Prepaid, contract</li> <li>2G, 3G, 4G, 5G</li> <li>Smartphone, non-smartphone</li> <li>Fixed</li> <li>Voice, broadband, IPTV, dial-up</li> <li>Narrowband voice, VoBB</li> <li>DSL, FTTP/B, cable, BFWA, 5G, other</li> </ul>	<ul> <li>Handset, mobile broadband, 1 loT<sup>2</sup></li> <li>Handset voice, messaging, data</li> <li>Fixed</li> <li>Service, 3 retail</li> <li>Voice, broadband, IPTV, dial-up, specialist business services</li> <li>DSL, FTTP/B, cable, BFWA, other</li> </ul>
y (reconciliation of different sources, standard			ARPU
cop-down and bottom-up modelling).		Voice traffic	Mobile
Our forecasts are refined throughout the year. This report presents the results at the time of publication and will continue to give useful background information about key drivers. However, we recommend that you always use the Analysys Mason DataHub to view the latest data associated with this report.		Fixed and mobile  Outgoing minutes, MoU	<ul><li>SIMs, handset</li><li>Prepaid, contract</li><li>Handset voice, data</li></ul>

Geographical

(SSA)

individually

Regions modelled

Sub-Saharan Africa

Countries modelled



<sup>&</sup>lt;sup>1</sup> Includes USB modem, and mid- and large-screen, but not handset-based data.

<sup>&</sup>lt;sup>2</sup> IoT connections and revenue figures include mobile services only.

<sup>&</sup>lt;sup>3</sup> Service revenue is the sum of retail and wholesale revenue.

# Contents [1]

### 8. Executive summary and recommendations

- 9. The telecoms revenue in Sub-Saharan Africa will grow strongly during the forecast period, mainly driven by an increasing appetite for mobile data
- 10. A healthy economic prognosis for the region will lead to strong growth in disposable incomes, and will thus help to grow telecoms ARPU
- 11. Geographical coverage: the adoption of next-generation access (NGA) fixed broadband will increase the most in Ghana, Nigeria and South Africa
- 12. Key trends, drivers and assumptions for the mobile and fixed markets
- 13. Regional forecasts and cross-country comparison
- 14. Market context: GDP per capita will continue to act as one of the primary limiting factors of faster telecoms revenue growth
- 15. Key mergers, acquisitions and market entries
- 16. Key drivers at a glance for each Sub-Saharan Africa market
- 17. Market overview: mobile revenue growth will slow down as some markets begin to saturate; fixed broadband revenue growth will accelerate
- 18. Mobile: the strong take-up of 3G and 4G (and to a lesser extent 5G) will lead to rapid growth in mobile data usage
- 19. Mobile: mobile penetration will increase across the region as increasing network coverage is balanced by the decreasing need for multiple SIMs
- 20. Mobile: growing data consumption and the migration to 4G services will have an inflationary effect on ARPU, but strong market competition will limit this effect
- 21. Mobile: operators in SSA will shift towards a data-centric model as cheap smartphones and LTE coverage become ubiquitous
- 22. Fixed: fixed-wireless will remain the dominant broadband access technology, but fibre will start to catch up in terms of the number of connections

- 23. Fixed: fixed broadband penetration will only increase slightly during the forecast period
- 24. Fixed: ASPU will remain largely stable on a regional level because increased NGA penetration will be offset by the natural decline in access prices
- 25. Fixed: the penetration of fixed broadband will grow rapidly, but the adoption of the service will remain largely confined to a small niche of customers
- 26. Specialist business services: the majority of business services revenue in SSA will be generated in Nigeria and South Africa
- 27. IoT: the number of cellular M2M connections will grow significantly, but M2M will remain a niche segment
- 28. Pay TV: total revenue growth will be driven by the increased take-up of DTH and pay-DTT services
- 29. Individual country forecasts
- 30. Ghana: mobile revenue growth will slow down during the forecast period; fixed broadband revenue will grow rapidly from a small base
- 31. Ghana: mobile data traffic will more than triple over the forecast period thanks to rapid growth in LTE coverage and take-up
- 32. Ghana: the mobile segment will begin to saturate and the adoption of fixed broadband will remain confined to a small niche of customers
- 33. Ghana: forecast changes
- 34. Kenya: fixed broadband service adoption will benefit from continued operator investment
- 35. Kenya: the strong take-up of 4G and the introduction of 5G will drive mobile traffic; fibre will consolidate its dominance in the broadband segment



## Contents [2]

- 36. Kenya: Safaricom will face stiff competition following the merger of Telkom Kenya and Airtel
- 37. Kenya: forecast changes
- 38. Nigeria: the mobile market will continue to show strong potential for growth despite uncertain economic conditions
- Nigeria: increasing smartphone affordability and operators' LTE network expansions will sustain the take-up of 4G services and drive data usage
- 40. Nigeria: mobile revenue will grow strongly as penetration continues to increase at a steady pace
- 41. Nigeria: forecast changes
- 42. South Africa: the high disposable income will support the growth in the demand for telecoms services but will be offset by slow economic growth
- 43. South Africa: the number of prepaid connections will grow, so the contract share of mobile connections will remain unchanged despite net growth
- 44. South Africa: the number of 4G connections will grow in the short term, but 5G will be the technology of choice for high-value consumers by 2024
- 45. South Africa: forecast changes
- 46. Tanzania: mobile service revenue will grow moderately over the forecast period due to competition and new regulations
- 47. Tanzania: price competition in the mobile market will drive ARPU down; fixed-wireless will be the most-widespread broadband technology in 2024
- 48. Tanzania: there is potential for growth in the number of mobile connections, but the penetration of fixed services will remain limited
- 49. Tanzania: forecast changes
- 50. Uganda: the mobile market will gradually recover following a significant contraction in 2019

- 51. Uganda: the 4G share of mobile connections will grow to over a third by 2024 due to the demand for data services
- 52. Uganda: there is potential for a mobile market recovery, but poverty and a large rural population will hinder future growth
- 53. Uganda: forecast changes
- 54. Methodology
- 55. Our forecast model is supported by sound market knowledge
- 56. Examples of forecast input drivers
- 57. Key drivers at a glance table: methodology [1]
- 58. Key drivers at a glance table: methodology [2]
- 59. About the authors and Analysys Mason
- 60. About the authors
- 61. About the authors
- 62. Analysys Mason's consulting and research are uniquely positioned
- 63. Research from Analysys Mason
- 64. Consulting from Analysys Mason



# List of figures [1]

- Figure 1: Telecoms and pay-TV retail revenue by type and total service revenue, Sub-Saharan Africa, 2014–2024
- Figure 2: Growth in telecoms retail revenue and nominal GDP by country, Sub-Saharan Africa, 2018–2024
- Figure 3: 4G/5G share of mobile connections and NGA share of fixed broadband connections by country, Sub-Saharan Africa, 2018 and 2024
- Figure 4: Summary of key trends, drivers and assumptions for Sub-Saharan Africa
- Figure 5: Metrics for the 11 countries modelled individually in Sub-Saharan Africa, 2018
- Figure 6: Recent and upcoming market structure changes in Sub-Saharan Africa
- Figure 7: Major forecast drivers: current situation (2018) and future trajectory (2019–2024), by country, Sub-Saharan Africa
- Figure 8: Total fixed and mobile telecoms service revenue, Sub-Saharan Africa (USD billion), 2014–2024
- Figure 9: Mobile connections by type, Sub-Saharan Africa (million), 2014–2024
- Figure 10: Telecoms retail revenue and growth rate by service type, Sub-Saharan Africa, 2014–2024
- Figure 11: Fixed connections by type, Sub-Saharan Africa (million), 2014–2024
- Figure 12: Mobile connections by generation, Sub-Saharan Africa (million), 2014–2024
- Figure 13: Mobile ARPU by type, Sub-Saharan Africa (USD per month), 2014–2024
- Figure 14: Contract share of mobile connections (excluding IoT), Sub-Saharan Africa, 2014–2024

- Figure 15: Mobile data traffic per connection, Sub-Saharan Africa (GB per month), 2014–2024
- Figure 16a: Mobile penetration by country, Sub-Saharan Africa, 2014–2024
- Figure 16b: Mobile penetration by country, Sub-Saharan Africa, 2014–2024
- Figure 17a: Mobile ARPU by country, Sub-Saharan Africa, 2014-2024
- Figure 17b: Mobile ARPU by country, Sub-Saharan Africa, 2014-2024
- Figure 18: Broadband connections by technology, Sub-Saharan Africa (million), 2014–2024
- Figure 19: Fixed retail revenue by service, Sub-Saharan Africa (USD billion), 2014–2024
- Figure 20: NGA broadband household penetration and NGA share of broadband connections, Sub-Saharan Africa, 2014–2024
- Figure 21: Fixed internet traffic per broadband connection, Sub-Saharan Africa (GB per month), 2014–2024
- Figure 22a: Fixed broadband household penetration by country, Sub-Saharan Africa, 2014–2024
- Figure 22b: Fixed broadband household penetration by country, Sub-Saharan Africa, 2014–2024
- Figure 23a: Fixed broadband access ASPU by country, Sub-Saharan Africa, 2014–2024
- Figure 23b: Fixed broadband access ASPU by country, Sub-Saharan Africa, 2014–2024
- Figure 24: Total market revenue from specialist business services, Sub-Saharan Africa, 2014–2024
- Figure 25: Total IoT value chain revenue by sector, Sub-Saharan Africa, 2014–2024



# List of figures [2]

- Figure 26: Retail revenue from pay TV, Sub-Saharan Africa, 2014–2024
- Figure 27: Total fixed and mobile telecoms service revenue, Ghana (GHS billion), 2014–2024
- Figure 28: Mobile connections by type, Ghana (million), 2014-2024
- Figure 29: Telecoms retail revenue and growth rate by service type, Ghana, 2014–2024
- Figure 30: Fixed connections by type, Ghana (thousand), 2014–2024
- Figure 31: 4G, 5G and contract share of mobile connections, Ghana, 2014–2024
- Figure 32: Mobile ARPU, fixed voice ASPU and fixed broadband ASPU, Ghana (GHS per month), 2014–2024
- Figure 33: Mobile data traffic per connection, Ghana (GB per month), 2014–2024
- Figure 34: Broadband connections by technology, Ghana (thousand), 2014–2024
- Figure 35: Total telecoms service revenue current and previous forecasts, Ghana, 2014–2024
- Figure 36: Total fixed and mobile telecoms service revenue, Kenya (KES billion), 2014–2024
- Figure 37: Mobile connections by type, Kenya (million), 2014–2024
- Figure 38: Telecoms retail revenue and growth rate by service type, Kenya, 2014–2024
- Figure 39: Fixed connections by type, Kenya (thousand), 2014–2024
- Figure 40: 4G, 5G and contract share of mobile connections, Kenya, 2014–2024
- Figure 41: Mobile ARPU, fixed voice ASPU and fixed broadband ASPU, Kenya (KES thousand per month), 2014–2024

- Figure 42: Mobile data traffic per connection, Kenya (GB per month), 2014–2024
- Figure 43: Broadband connections by technology, Kenya (thousand), 2014–2024
- Figure 44: Total telecoms service revenue current and previous forecasts, Kenya, 2014–2024
- Figure 45: Total fixed and mobile telecoms service revenue, Nigeria (NGN trillion), 2014–2024
- Figure 46: Mobile connections by type, Nigeria (million), 2014–2024
- Figure 47: Telecoms retail revenue and growth rate by service type, Nigeria, 2014–2024
- Figure 48: Fixed connections by type, Nigeria (thousand), 2014–2024
- Figure 49: 4G, 5G and contract share of mobile connections, Nigeria, 2014–2024
- Figure 50: Mobile ARPU, fixed voice ASPU and fixed broadband ASPU, Nigeria (NGN thousand per month), 2014–2024
- Figure 51: Mobile data traffic per connection, Nigeria (GB per month), 2014–2024
- Figure 52: Broadband connections by technology, Nigeria (thousand), 2014–2024
- Figure 53: Total telecoms service revenue current and previous forecasts, Nigeria, 2014–2024
- Figure 54: Total fixed and mobile telecoms service revenue, South Africa (ZAR billion), 2014–2024
- Figure 55: Mobile connections by type, South Africa (million), 2014–2024
- Figure 56: Telecoms retail revenue and growth rate by service type, South Africa, 2014–2024



# List of figures [3]

Figure 57: Fixed connections by type, South Africa (million), 2014–2024

Figure 58: 4G, 5G and contract share of mobile connections, South Africa, 2014–2024

Figure 59: Mobile ARPU, fixed voice ASPU and fixed broadband ASPU, South Africa (ZAR per month), 2014–2024

Figure 60: Mobile data traffic per connection, South Africa (GB per month), 2014–2024

Figure 61: Broadband connections by technology, South Africa (million), 2014–2024

Figure 62: Total telecoms service revenue – current and previous forecasts, South Africa. 2014–2024

Figure 63: Total fixed and mobile telecoms service revenue, Tanzania (TZS trillion), 2014–2024

Figure 64: Mobile connections by type, Tanzania (million), 2014-2024

Figure 65: Telecoms retail revenue and growth rate by service type, Tanzania, 2014–2024

Figure 66: Fixed connections by type, Tanzania (thousand), 2014-2024

Figure 67: 4G and contract share of mobile connections, Tanzania, 2014–2024

Figure 68: Mobile ARPU, fixed voice ASPU and fixed broadband ASPU, Tanzania (TZS thousand per month), 2014–2024

Figure 69: Mobile data traffic per connection, Tanzania (GB per month), 2014–2024

Figure 70: Broadband connections by technology, Tanzania (thousand), 2014–2024

Figure 71: Total telecoms service revenue – current and previous forecasts, Tanzania, 2014–2024

Figure 72: Total fixed and mobile telecoms service revenue, Uganda (UGX trillion), 2014–2024

Figure 73: Mobile connections by type, Uganda (million), 2014–2024

Figure 74: Telecoms retail revenue and growth rate by service type, Uganda, 2014–2024

Figure 75: Fixed connections by type, Uganda (thousand), 2014-2024

Figure 76: 4G and contract share of mobile connections, Uganda, 2014-2024

Figure 77: Mobile ARPU, fixed voice ASPU and fixed broadband ASPU, Uganda (UGX thousand per month), 2014–2024

Figure 78: Mobile data traffic per connection, Uganda (GB per month), 2014–2024

Figure 79: Broadband connections by technology, Uganda (thousand), 2014–2024

Figure 80: Total telecoms service revenue – current and previous forecasts, Uganda, 2014–2024

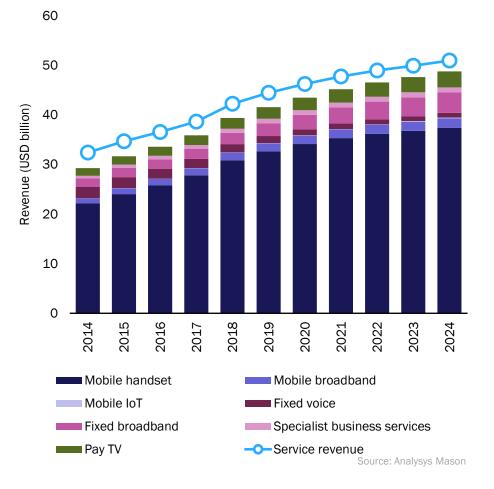
Figure 81a: Methodology for attributing scores to each element in the key drivers table (current and future) and impact of high scores

Figure 81b: Methodology for attributing scores to each element in the key drivers table (current and future) and impact of high scores



# The telecoms revenue in Sub-Saharan Africa will grow strongly during the forecast period, mainly driven by an increasing appetite for mobile data

Figure 1: Telecoms and pay-TV retail revenue by type and total service revenue, Sub-Saharan Africa, 2014–2024



Mobile services will continue to generate the vast majority of the telecoms revenue in Sub-Saharan Africa (SSA), and fixed services will remain largely niche.

The total telecoms service revenue in Sub-Saharan Africa will be USD50.9 billion in 2024, which is an increase of 20.5% since 2018. Revenue from fixed services will remain small, but it will account for a larger share of the total revenue.

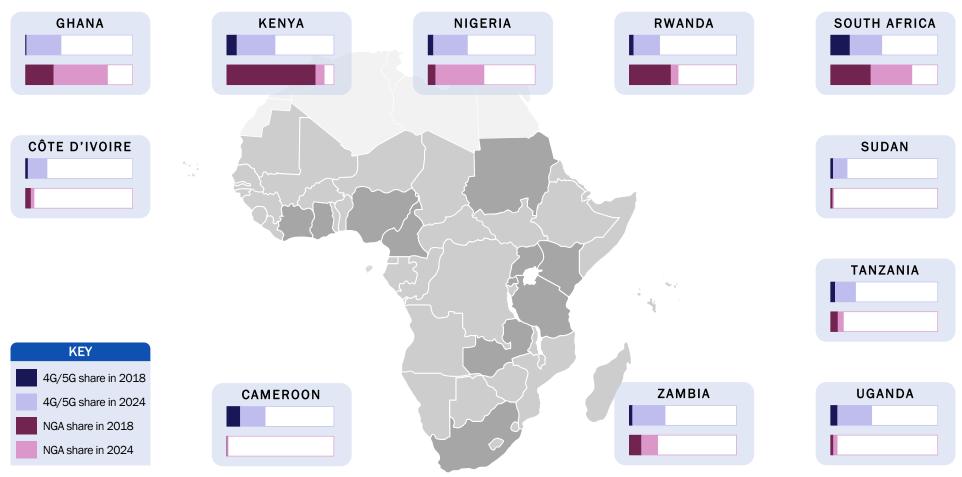
Many mobile operators in the region are shifting towards datacentric models thanks to the influx of cheap smartphones and the ongoing deployment of 3G and 4G networks. The revenue and number of connections in the fixed broadband segment will remain small compared to that in the mobile segment, but the take-up of fixed broadband services will grow, thanks to a rapid increase in the size of the middle-class population, demographic shifts and expanded infrastructure coverage.

Digital services, particularly mobile financial services, will be an important revenue growth opportunity for operators. Many operators already offer financial platforms and intend to further diversify their portfolio of services. Government and regulatory intervention will have both positive and negative effects on operators. Crackdowns on illegal and unregistered SIMs will result in a short-term slowdown in revenue growth, but government initiatives to deploy fibre backbone networks in large markets such as that in Nigeria will stimulate the demand for fixed broadband services.



# Geographical coverage: the adoption of next-generation access (NGA) fixed broadband will increase the most in Ghana, Nigeria and South Africa

Figure 3: 4G/5G share of mobile connections and NGA share of fixed broadband connections by country, Sub-Saharan Africa, 2018 and 2024<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> For a full list of countries modelled as part of the Sub-Saharan Africa region, please see the accompanying data annex. Mobile connections exclude IoT connections. NGA share of fixed broadband connections is calculated as cable, VDSL and FTTP/B connections (that provide access speeds of 30Mbit/s or more) divided by the total number of fixed broadband connections.







Executive summary and recommendations

Regional forecasts and cross-country comparison

Individual country forecasts

Methodology

About the authors and Analysys Mason



## About the authors



Alex Boisot (Research Analyst) is a member of the regional markets research team in London, contributing primarily to the *Telecoms Market Matrix* and *European Country Reports* research programmes. Alex holds a BA in Philosophy, Politics and Economics from the University of East Anglia. He conducted research on the impact of telecommunications technologies on modern societies during his studies, writing his dissertation on e-government and e-democracy.



**Francesco Paolo Bellomo** (Research Analyst) is a member of the Data Team in London, contributing primarily to the *Telecoms Market Matrix* and *European Country Reports* research programmes. Francesco holds a BSc in Economics and Finance from Queen Mary, University of London, and a MSc in Finance from Warwick Business School.



**Yushan Chen** (Research Analyst) is a member of the data research team in London, contributing primarily to the *Telecoms Market Matrix*, *European Country Reports* and *Global Telecoms Data* research programmes. She holds an BCom in Finance and Business Technology Management from the University of British Columbia, and an MSc in e-Business Management from the University of Warwick.



## About the authors

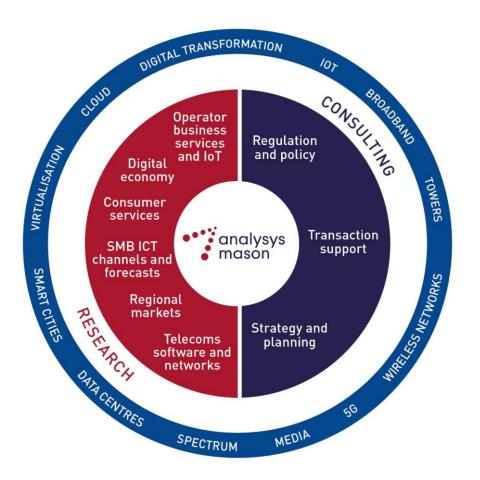


Karim Yaici (Senior Analyst) is a lead analyst for Analysys Mason's *The Middle East and Africa* regional research programme. His primary areas of specialisation include operators' digital strategies, new telecoms opportunities and challenges, and consumer trends in MEA. He is also a regular speaker and moderator at regional telecoms events. Karim has provided recommendations to operators, telecoms solution vendors and regulatory bodies on areas encompassing market review, investment potential, best practices and strategic responses to competitive threats. He has also carried out a number of operational benchmarking studies and contributed extensively to the market assessment and forecasting of different verticals in the telecoms industry. Karim holds an MSc in Information Systems Management from the University of Southampton and a PhD in human–computer interaction from the University of Surrey.



# Analysys Mason's consulting and research are uniquely positioned

## Analysys Mason's consulting services and research portfolio



## Consulting

We deliver tangible benefits to clients across the telecoms industry:

 communications and digital service providers, vendors, financial and strategic investors, private equity and infrastructure funds, governments, regulators, broadcasters and service and content providers

Our sector specialists understand the distinct local challenges facing clients, in addition to the wider effects of global forces.

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

## Research

Our dedicated team of analysts track and forecast the different services accessed by consumers and enterprises.

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

Clients benefit from regular and timely intelligence, and direct access to analysts.



# Research from Analysys Mason

#### Consumer services programmes

Mobile Services

Mobile Devices

Fixed Broadband Services

Convergence Strategies

Video Strategies

#### Operator investment programmes

Operator Investment Strategies

Network Traffic

Spectrum

# Telecoms software and networks programmes

Software Forecast and Strategy

Telecoms Software Market Shares

#### Network-focused

Next-Generation Wireless Networks

Video and Identity Platforms

Service Design and Orchestration

Automated Assurance

Network Automation and Orchestration

Digital Infrastructure Strategies

#### Customer-focused

Digital Experience

Customer Engagement

Monetisation Platforms

Al and Analytics



#### Digital economy programmes

Digital Economy Strategies
Future Comms

#### Operator business services and IoT programmes

Large Enterprise Voice and Data Connectivity
Large Enterprise Emerging Service Opportunities
SME Strategies
IoT and M2M Services
IoT Platforms and Technology

#### SMB ICT channels and forecasts programmes

Managed Service Provider Strategies

Cyber Security

#### Regional markets programmes

Global Telecoms Data
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

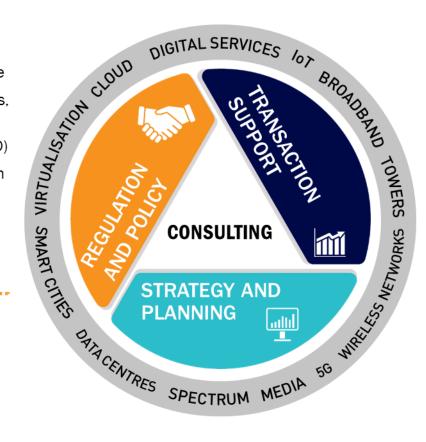
Operator historical data



# **Consulting from Analysys Mason**

### REGULATION AND POLICY

- Policy development and response
- Ex-ante market reviews, remedies, costing ...
- Universal Service Obligation (USO)
- Scarce resources: radio spectrum management, auction support, numbering ...
- Ex-post/abuse of dominance
- Postal sector



analysysmason.com/consulting

## 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



