RESEARCH FORECAST REPORT

IoT VALUE CHAIN REVENUE: WORLDWIDE TRENDS AND FORECASTS 2016–2025

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About this report

This report analyses revenue from the IoT value chain including:

- revenue from mobile IoT (cellular 2G, 3G, 4G and 5G) and low-power, wide-area (LPWA) solutions
- revenue for the hardware, connectivity and applications value chain components, which can be further subdivided into value chain elements
- an analysis of key industry sectors.

The report also provides recommendations for network operators.

It is based on Analysys Mason's research with key industry stakeholders.

WHO SHOULD READ THIS REPORT

- Senior executives of M2M business units.
- Senior executives responsible for R&D and network innovation.
- Market analysts responsible for M2M market sizing.

GEOGRAPHICAL COVERAGE

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

- Full country level coverage of the forecasts is included in the DataHub.

KEY METRICS

- Revenue for mobile IoT and LPWA solutions divided into the following sectors.
  - Agriculture
  - Automotive (including connected car and fleet management)
  - Finance
  - Health
  - Industry
  - Tracking
  - Retail
  - Smart buildings
  - Smart cities
  - Utilities
  - Other
- Revenue for the following value chain elements.
  - Application
  - Application enablement platform
  - Connectivity service
  - Device
  - Hardware installation
  - Module
  - Systems integration

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Worldwide: Total revenue from the value chain for mobile IoT and LPWA connections will be close to USD201 billion by 2025

Total revenue from the value chain (comprising hardware, connectivity and applications) will grow at a CAGR of 18% between 2016 and 2025, almost reaching USD201 billion.

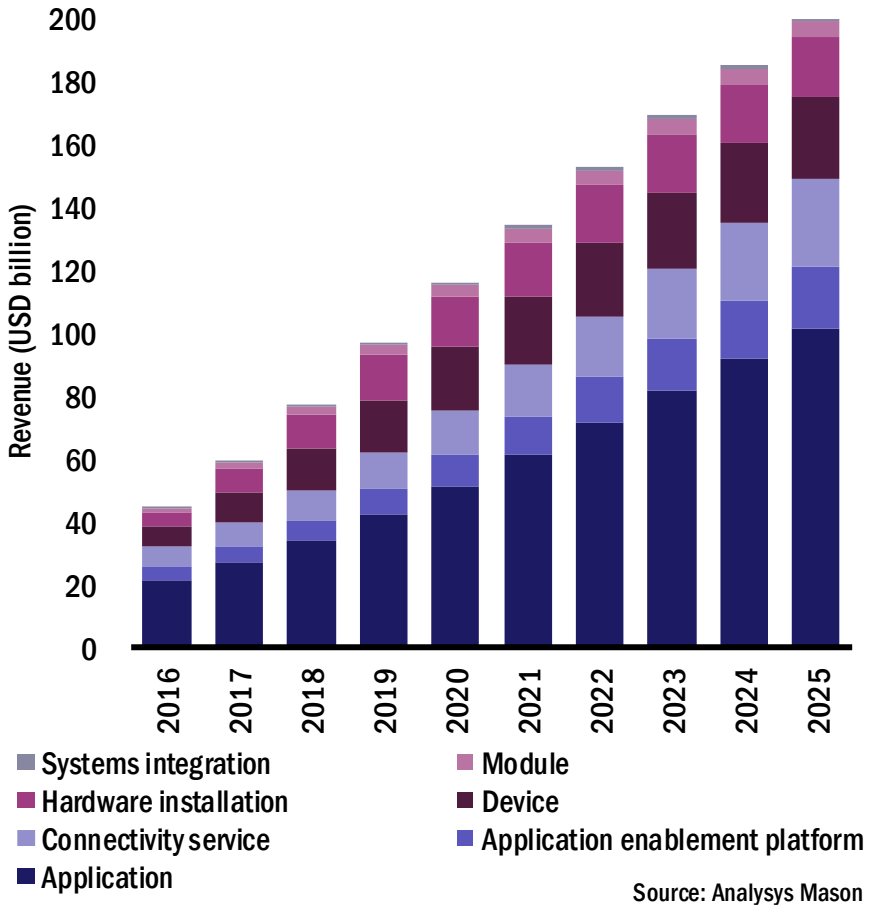
Our projections of total revenue from the value chain are based on Analysys Mason's mobile IoT[1] and LPWA[2] connections forecasts, in which we predict that:

- mobile IoT connections will grow from 317 million in 2016 to 1.3 billion in 2025
- LPWA connections will grow from 64 million in 2016 to 3.4 billion in 2025.

Average connectivity revenue per connection is small, despite significant growth in connections. Mobile operators and other players in the value chain are seeking additional incremental value by offering other components of the value chain, including hardware, devices and applications.

Participation in parts of the value chain beyond connectivity carries more risk, but also generates higher revenue and, typically, higher margins. This report quantifies the total revenue from the value chain for IoT applications using mobile and LPWA connections.

Figure 1: Total value chain revenue by value chain element, worldwide, 2016–2025



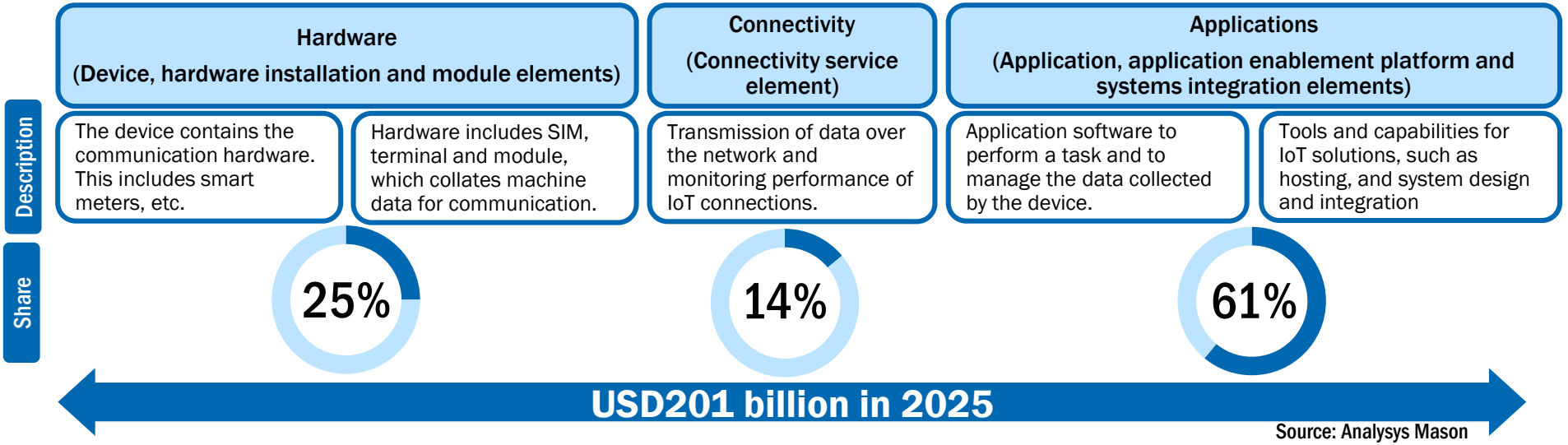
Source: Analysys Mason

[1] Mobile IoT includes 2G, 3G, 4G and 5G networks.

[2] For further details, see latest results from Analysys Mason's Datahub for mobile IoT and LPWA connections.

Worldwide: The applications component will contribute the largest share of revenue, reaching 61% by 2025

Figure 2: Percentage of total value chain revenue contributed by each component, worldwide, 2025



Source: Analysys Mason

The hardware component generates 25% of total revenue. Network operators may benefit from a share of this revenue, depending on the partnerships they have with device vendors and their roles in the value chain. Connectivity services, including revenue from connectivity and connectivity management, constitute 14% of total revenue. Connectivity typically has a relatively high margin, with EBIT margins often around 10%. Barriers to entry to the wide-area connectivity market are high for mobile IoT connectivity, but IoT can leverage an existing network serving many customers. However, the presence of LPWA connectivity in unlicensed spectrum has lowered its entry barriers.

The applications component will generate the vast majority of revenue: 61% of the total from the value chain in 2025. Software application development generates higher costs (as it requires specific skillsets and resources) and requires specialist sector knowledge. It is also increasingly subject to higher costs, including the requirement for built-in security. Mobile network operators are not typically equipped to provide application services, but will partner or build expertise in sectors where they are pursuing an end-to-end strategy. The share of revenue contributed by each category fluctuates very little between 2016 and 2025.

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About the authors

Michele Mackenzie (Principal Analyst) is an analyst for Analysys Mason's *IoT and M2M Solutions* research programme, with responsibility for M2M and LPWA forecasts. She has 17 years of experience as an analyst. She produces reports and forecasts on M2M and IoT in industry sectors, such as transport, healthcare and smart cities, and analyses the impact of IoT network technologies, such as LPWA networks. Prior to joining Analysys Mason in February 2014, Michele was a freelance analyst with a focus on M2M and IoT technology and trends. She has written reports for Machina Research and produced research for other clients in areas such as mobile broadband and digital media.

Andrew Cheung (Research Analyst) is a member of Analysys Mason's regional markets research team, contributing to *Telecoms Market Matrix*, *European Core Forecasts* and *European Country Reports*. Before joining Analysys Mason, he researched the calcification of polymeric heart valves. Andrew's prior internship experiences include enhancing the performance of fuel cells and analysing data from energy consumption. He holds a Master's degree in Chemical Engineering from the University of Cambridge.

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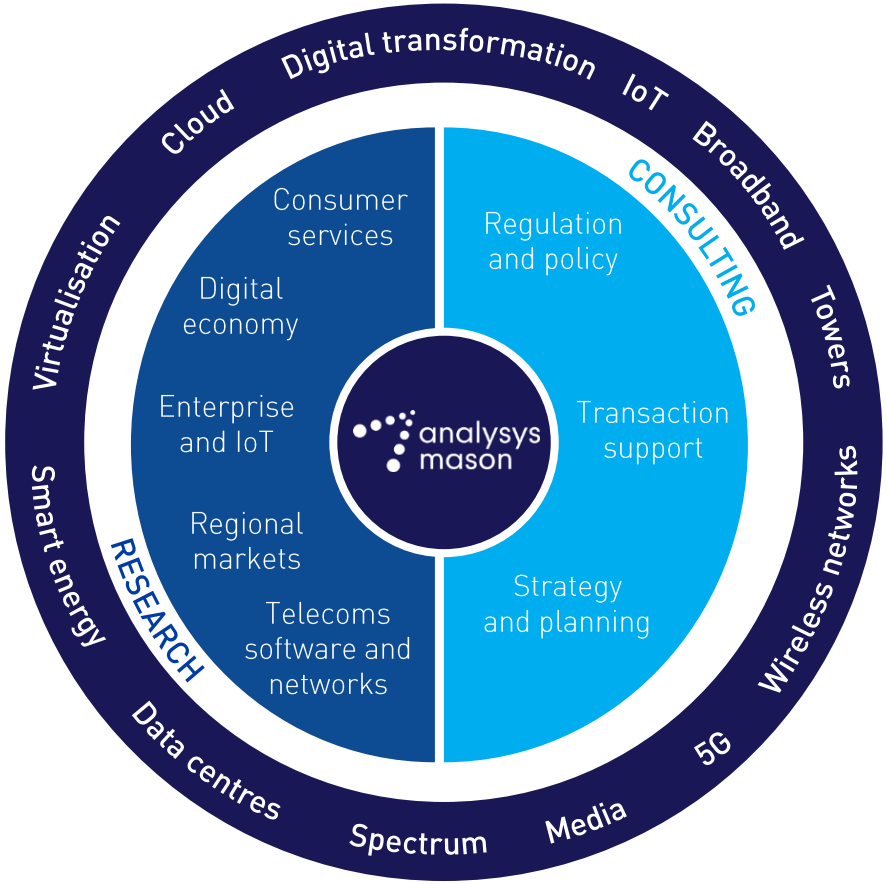

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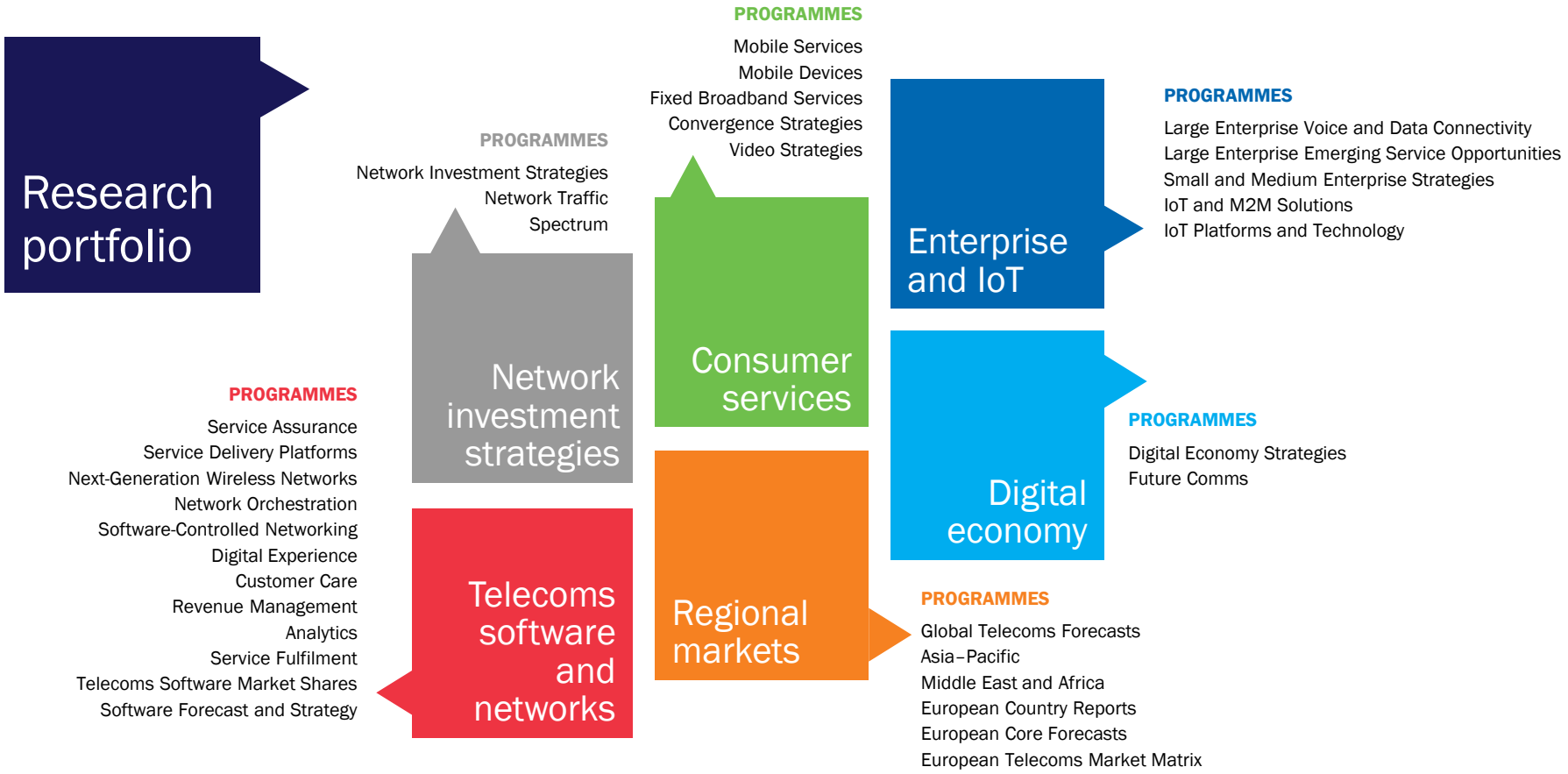

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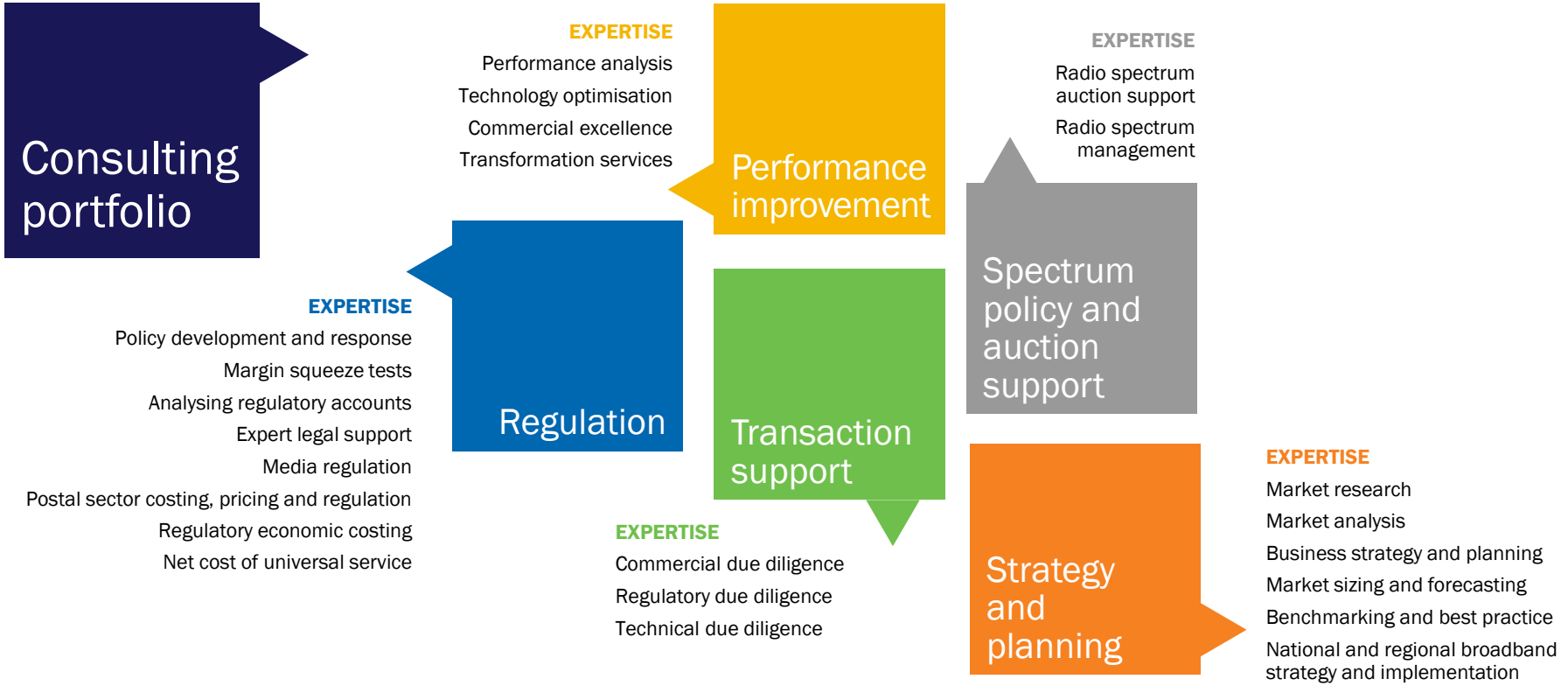

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