RESEARCH FORECAST REPORT

LPWA NETWORKS FOR IoT: WORLDWIDE TRENDS AND FORECASTS 2015–2025

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About this report

Low-power, wide-area (LPWA) is a term used to describe a type of network designed to support the IoT. LPWA networks provide a low-cost, low-power alternative to cellular.

This report presents our detailed 10-year worldwide forecast for LPWA network device connections, LPWA connectivity-related average revenue per connection (ARPC), and LPWA connectivity-related revenue.

We focus on the LPWA connectivity market in this report. Our cellular M2M connectivity forecast is available on Analysys Mason's website.[1]

We provide a forecast for eight regions and 74 countries in the accompanying data annex. We forecast six industry sectors and provide detailed forecasts on 22 applications within those sectors. We have also included an 'Other' sector to capture new use cases.

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 (CEE)
- Developed Asia–Pacific (DVAP)
- Emerging Asia–Pacific (EMAP)
- Latin America (LATAM)
- Middle East and North Africa (MENA)
- North America (NA)
- Sub-Saharan Africa (SSA)
- Western Europe (WE)

KEY METRICS

- Low-power wide-area (LPWA) network device connections
- LPWA connectivity-related average revenue per connection (ARPC)
- LPWA connectivity-related revenue
- Six industry sectors and 22 LPWA applications (not including 'Other') within those sectors
  - Agriculture
  - Industrial
  - Logistics and tracking
  - Smart buildings
  - Smart cities
  - Utilities

[1] See Analysys Mason's *Cellular M2M device connections and revenue: worldwide trends and forecasts 2015–2025* at www.analysysmason.com/cellular-M2M-connections-Feb2016

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Worldwide: LPWA networks could grow to 3.5 billion connections in 2025, with several sectors contributing to growth

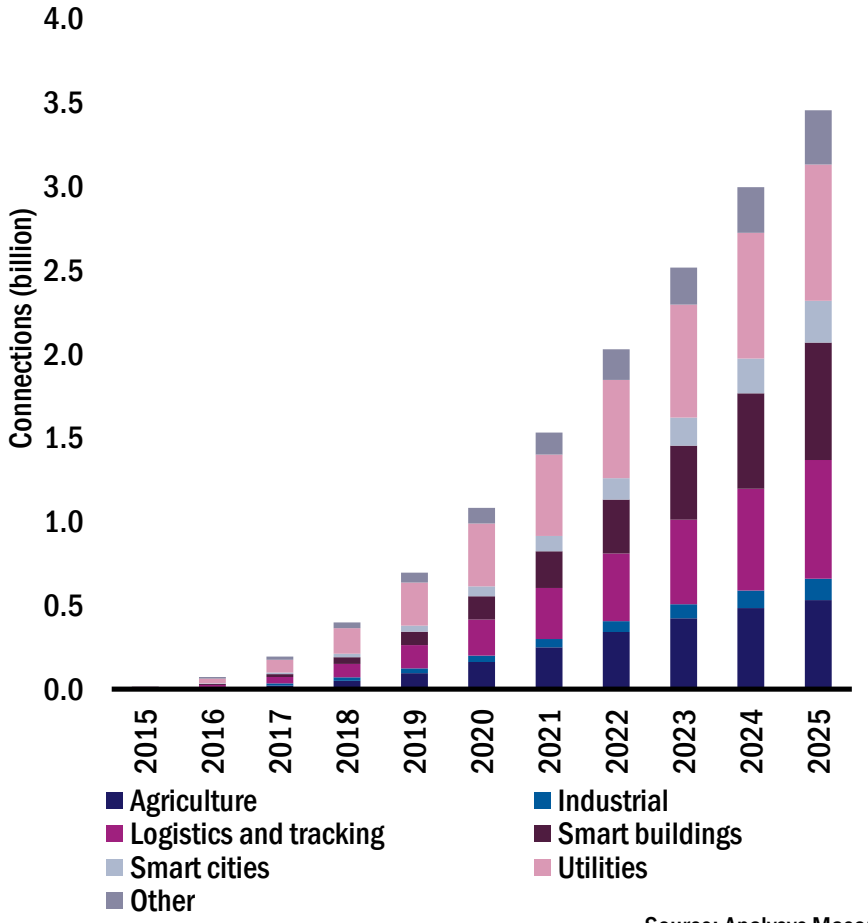
LPWA networks have the potential to grow to 3.5 billion connections, but no single sector is driving overall growth. This is in contrast to M2M networks, where automotive and transport applications dominate.

The early years of LPWA networks have seen significant activity in several sectors.

- **Utilities and smart grid.** Proprietary technologies, such as Ingenu's RPMA and Sensus' FlexNet networks, are already supporting millions of endpoints for smart grid and smart metering applications. We expect this category to grow further.
- **Smart buildings.** There is strong potential for LPWA networks in smart building applications, especially where regulation plays a prominent role in safety. Equipment to detect and monitor smoke and fire is increasingly regulated.
- **Logistics and tracking.** LPWA networks will be deployed to support tracking of high-value enterprise and consumer assets. This market is at an earlier stage for most applications.

We have assessed demand for the 22 applications covered in this report, as the market is relatively immature. This is discussed in more detail later in this section.

Figure 1: Potential LPWA connections, 2015–2025



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Worldwide: LPWA connections will overtake those of cellular M2M by 2019 and will be almost triple the number of M2M connections by 2025

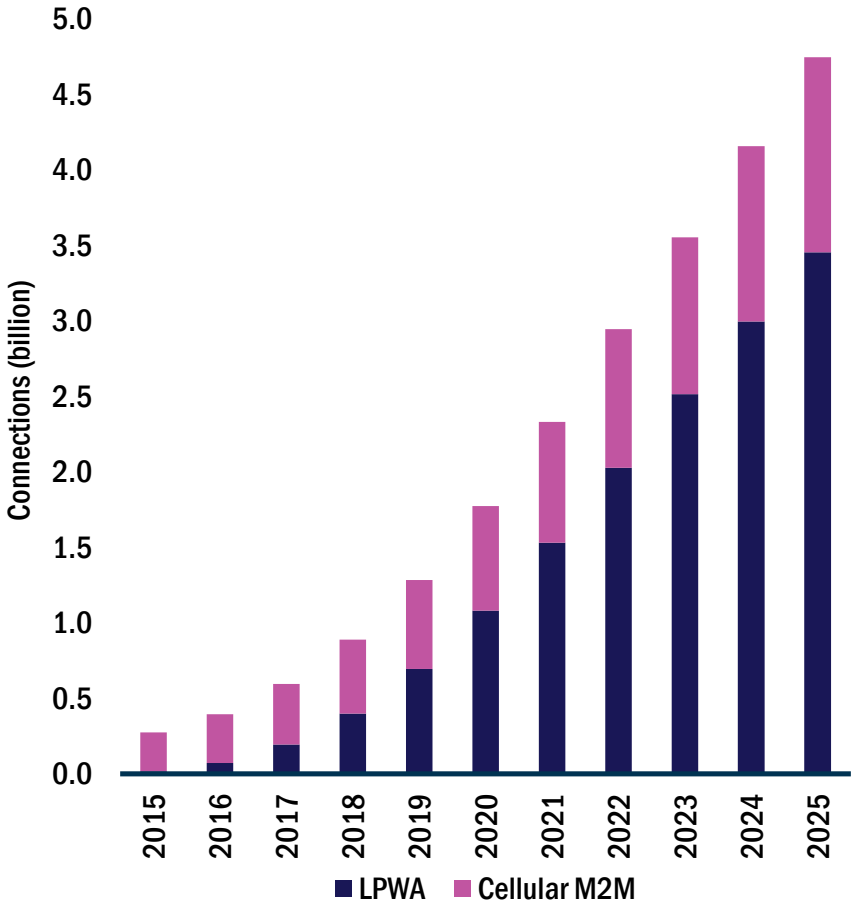
We expect LPWA networks to support more connections than cellular M2M networks in 4 years, despite the nascent state of the technology This is largely due to latent demand for a low-cost, wide-area solution, which also meets the requirements of low-power, low-bandwidth devices.

Cellular M2M networks have played a strong role in supporting M2M applications. However, these are only appropriate for applications that require mobility or high bandwidth, and where investment in a more expensive solution is supported by the business case. Until recently, there was a gap in the market for a lower cost communications solution, which technologies such as LoRa and SIGFOX are now beginning to fill.

Cellular M2M networks will grow to 1.3 billion connections in 2025, giving a CAGR of 18%. In contrast, LPWA networks will grow from a small base of 18.5 million connections in 2015 to 3.5 billion in 2025 – a CAGR of 69%.

Cellular M2M networks are dominated by a single sector (automotive and transport), which will comprise around 65% of global connections in 2025. Conversely, no single sector will dominate the LPWA market, with sectors as diverse as utilities, smart grid and tracking all driving adoption of LPWA connections.

Figure 6: LPWA and cellular M2M connections, 2015–2025



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FORECAST METHODOLOGY AND ASSUMPTIONS

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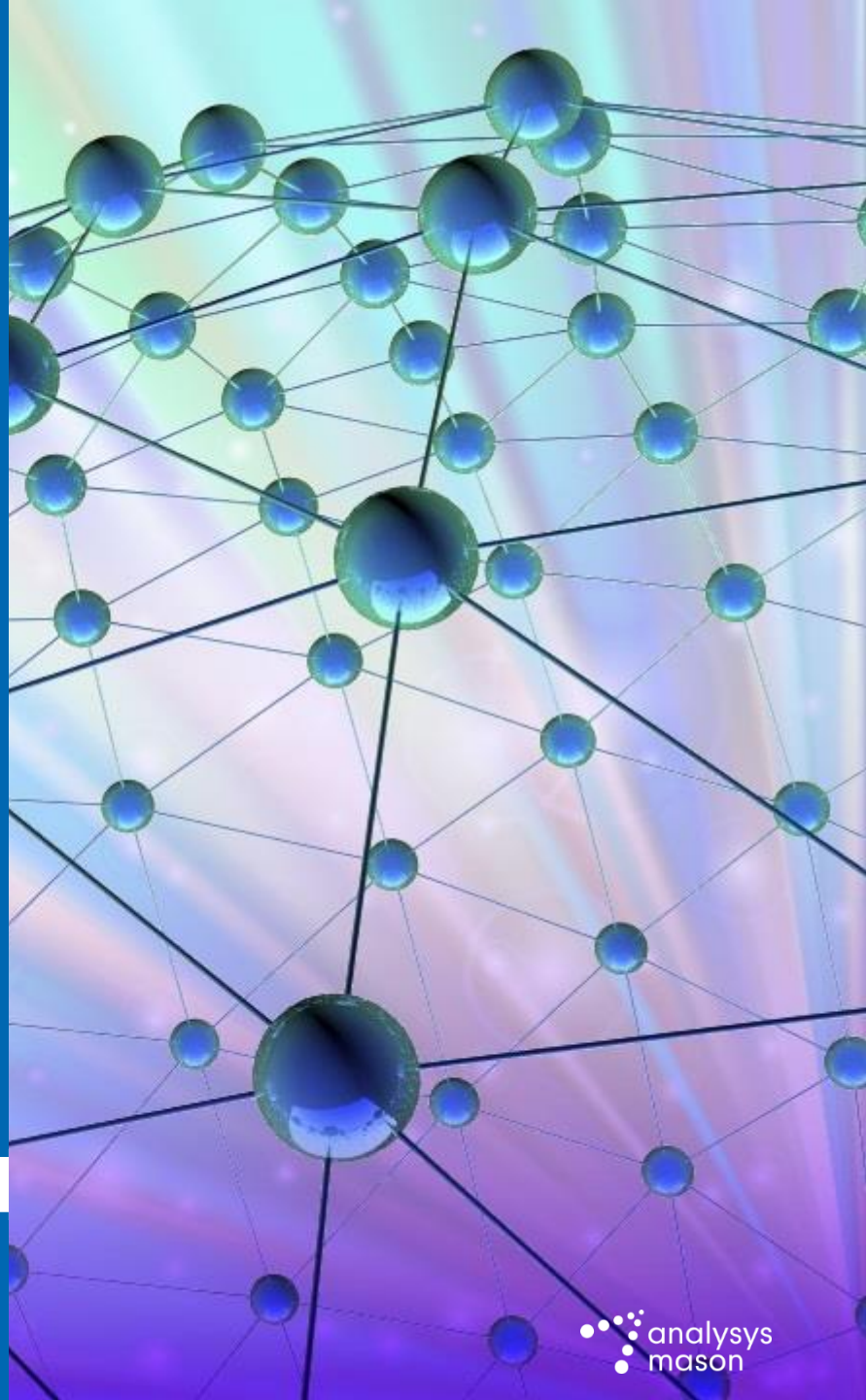

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About the author

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.

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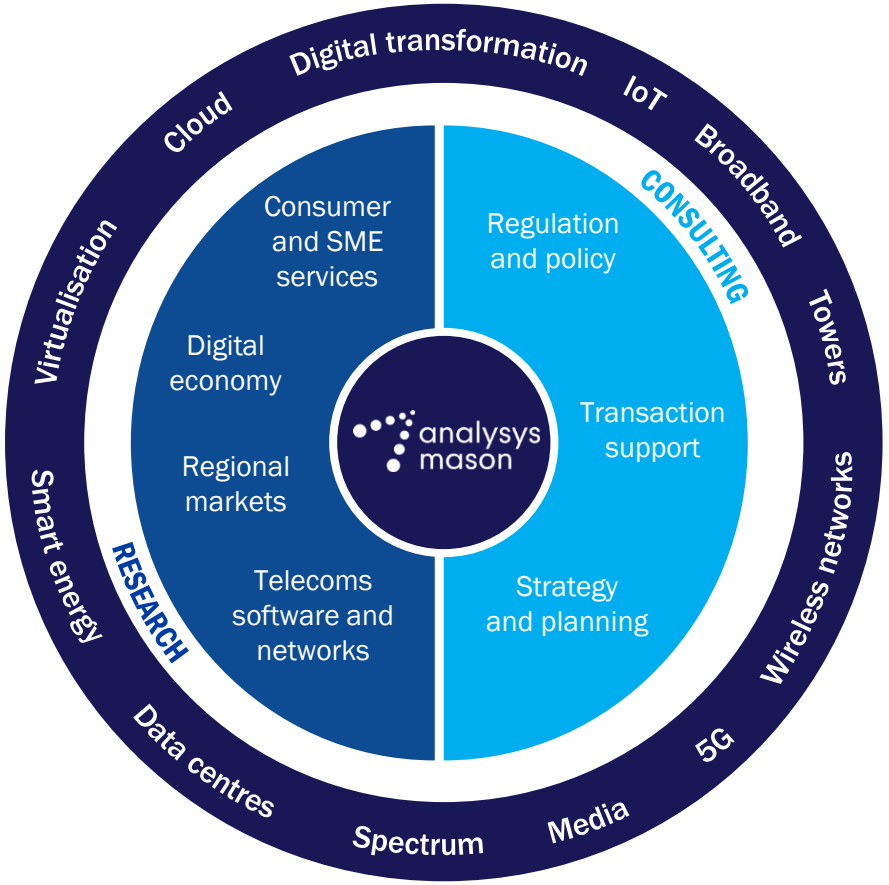

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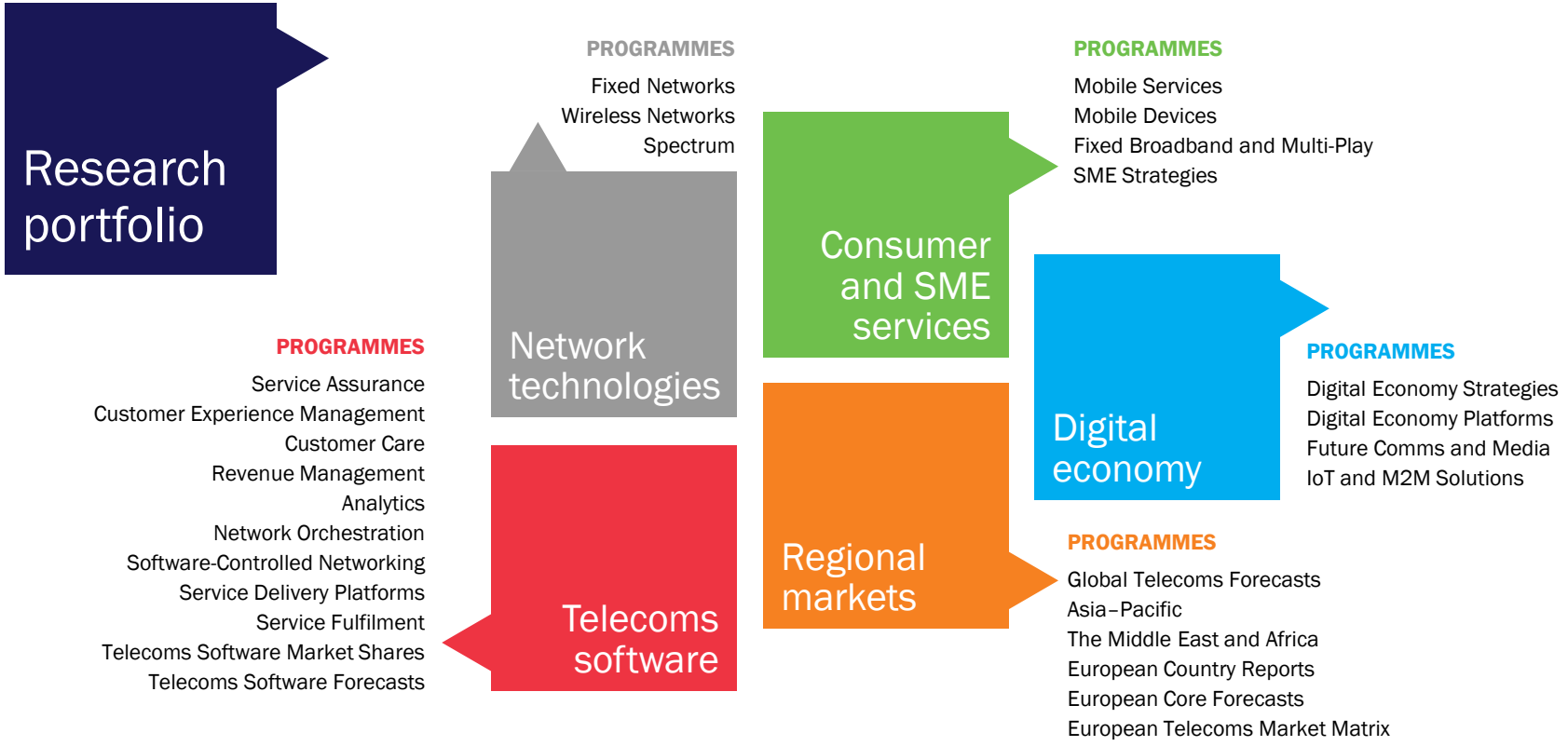

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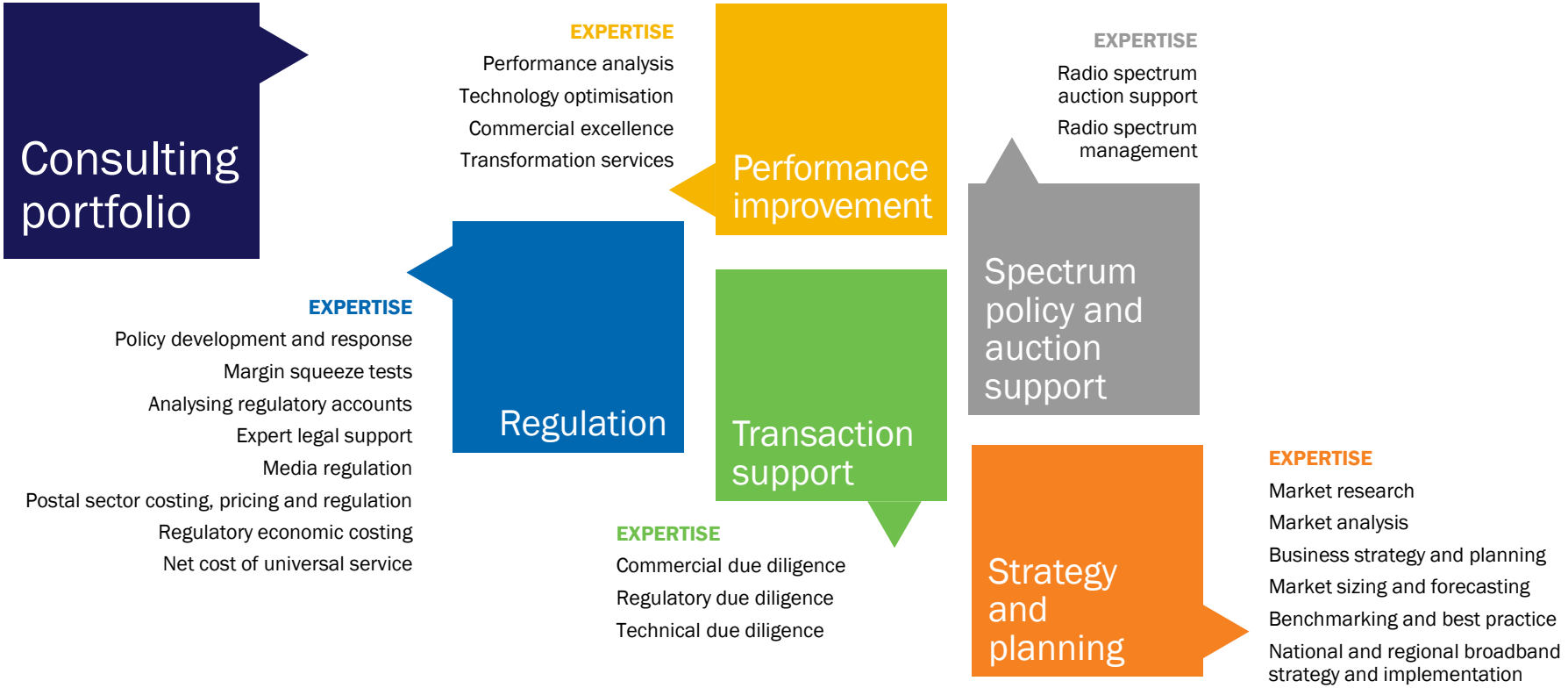

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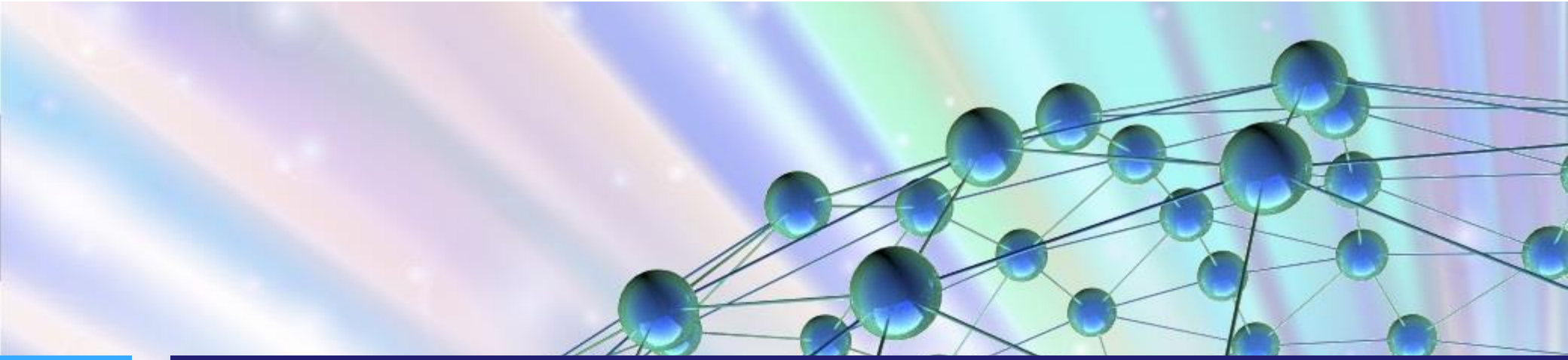

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