CONSUMER SMARTPHONE ANALYTICS:
APPLICATIONS AND SERVICES

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About this report

This report analyses real-world smartphone usage data to answer questions about the status of apps and services. The report looks at consumer engagement with various apps and services (such as communication, browsing and entertainment) and examines relationships between key usage metrics, such as time spent, data traffic generated and network used.

The report also provides recommendations for operators concerning their mobile data monetisation strategies.

It is based on data collected by Verto Analytics using a passive on-device monitoring app during July and August 2016.

SURVEY OUTLINE	GEOGRAPHICAL COVERAGE
The analysis is based on data provided by Verto Analytics, collected using a passive on-device monitoring app called Smart Panel. The app tracks: ▪ app download and usage ▪ system processes ▪ data traffic by each app/process ▪ voice traffic ▪ web browser activity.	▪ Germany ▪ India ▪ United Kingdom (UK) ▪ United States of America (USA)

KEY QUESTIONS ANSWERED IN THIS REPORT

- How much time is spent on smartphones on average and how is this distributed across various apps and services?
- How much data is generated by each app or service (and relative to time spent)?
- Which networks are used for which apps and services, and to what degree?
- When is usage more active and why?
- What is the overall penetration of various app types and services?
- How many distinct app types and services does an average smartphone user use? How does this vary across the panel?

WHO SHOULD READ THIS REPORT

- Strategy and planning executives who are responsible for mobile operators' apps, services and communications strategies and partnerships with OTT players.
- Executives in mobile operators' technology and innovation teams who are responsible for developing apps and services.
- Marketing executives at vendors of communication services equipment and software, because it will help them understand the needs of their operator customers and their end users.

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TV/video apps and services generate the most traffic per unit of engagement time

TV/video and social networking are the two main app types and services that generate engagement and data traffic.
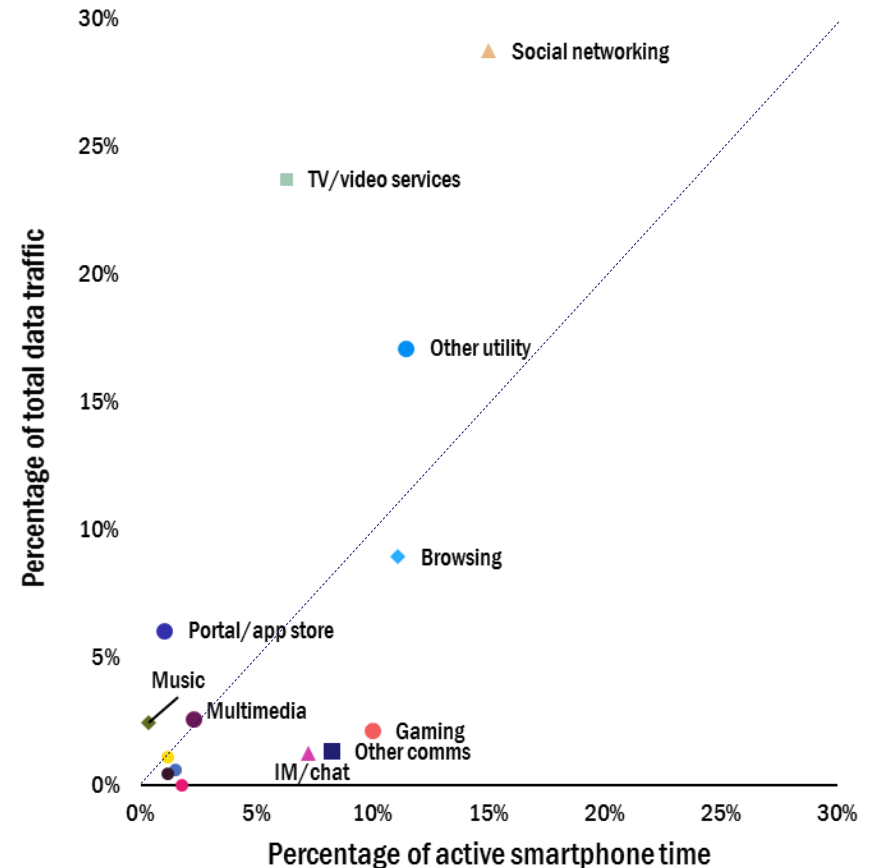
The combination of apps for TV/video services and social networking account for more than half of the traffic. These two app types also generate more traffic per time unit spent on them, as shown by their presence on the left side of the dotted line. Both are also likely to appear in browsing, as some video and social networking usage is likely to occur there.

Gaming, one of the more engaging app types in terms of time spent, generates disproportionately low data traffic. Within this sub-category, many individual games have low penetration levels but a lot of time is spent on each. This contrasts with social networking in which often one app, namely Facebook, accounts for most of both the active smartphone time spent and data traffic.

IM and chat apps also generate disproportionately low data traffic compared to the engagement time, although they include apps, such as WhatsApp and Facebook Messenger, both with relatively high penetration rates on smartphones.

The 'other utility' sub-category is influenced heavily by some users, especially in India, who use smartphones for file sharing and torrent downloads, as well as connecting to VPN networks.

¹ Please see Taxonomy slide for how we classified 'categories of activity' and their sub-categories of 'app types and services'.

Figure 2: Time spent compared with total data traffic consumed, by app types and services[1], Wi-Fi and cellular [n = 8408]

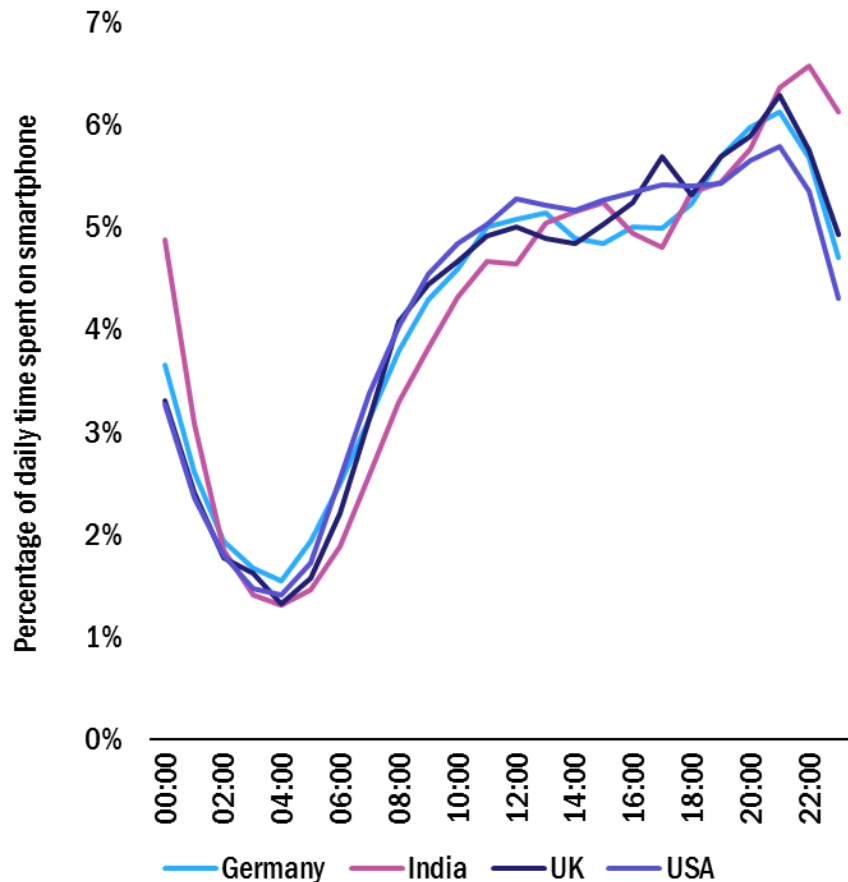Source: Analysys Mason, Verto Analytics

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Time spent on smartphones spikes in the evening in all four countries

Figure 15: Share of active smartphone time by time of day [*n* = 8408]

Source: Analysys Mason, VertoAnalytics

The time spent on smartphones is distributed across the hours of a single day in relatively predictable ways, but some differences are noticeable between countries.

The most common observation is that, in each country, the engagement time spikes at night before falling to its lowest level after midnight and during the early morning hours. In the four countries, between 26% to 30% of total smartphone time occurs after 19:00. The peak hours are 21:00 and 22:00.

- The high proportion of smartphone usage in the evening is most visible in India and the UK.

- US users are more uniform in how terms of how much time they spend on their smartphones during the day. That being said, the evening spike in the USA amounts to a total of 51 minutes after 19:00.

- Between 09:00 and 17:00, the share of time spent on smartphones does not change radically across the hours. However, there are some small local peaks, such as those around lunchtime and end-of-work.

Between 09:00 and 17:00, smartphone data traffic is more biased toward the cellular network than at other times; Wi-Fi becomes prevalent during the evenings (see next slide).

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About the authors

Kerem Arsal (Principal Analyst) leads Analysys Mason's *Mobile Services*, *Mobile Devices* and *Convergence Strategies* research programmes. Kerem advises operators on strategic and tactical decisions on key issues relating to these three programmes, including mobile data monetisation, service design and pricing, customer retention, device sales and multi-play take-up and bundling, especially in the context of fixed–mobile convergence. Previously, Kerem was a research manager at Pyramid Research, where he was responsible for setting the research agenda across multiple programmes and regions. He also led numerous projects around operator strategies, as well as in demand assessment and commercialisation of new products in the consumer and enterprise segments.

Giulio Sinibaldi (Research Analyst) focuses on data collection and analysis for the Consumer Services research practice. Before joining Analysys Mason, Giulio was an intern at the Italian permanent mission to the United Nations in Geneva, and in the Market Intelligence team of Philips Electronics (H&W) in Amsterdam. He holds a BSc and MSc in Economics and Social Sciences from Bocconi University (Italy), which included an exchange at Georgia Institute of Technology (Atlanta).

Martin Scott (Principal Analyst) co-ordinates Analysys Mason's research initiatives related to media, TV, fixed broadband and convergence. He manages the *Video Strategies* and *Fixed Broadband Services* research programmes. Martin has held numerous positions within Analysys Mason during the last 10 years, including heading the company's Consumer Services, Data and Regional Markets practices. He also launched Analysys Mason's Connected Consumer Survey and Consumer smartphone usage series of research. His areas of specialisation include telco TV strategy, OTT video and media, consumer smartphone usage, the bundling and pricing of multi-play services, including quadruple-play bundling, customer satisfaction and consumer-facing marketing strategy. He also specialises in statistics, surveys and the analysis of primary research.

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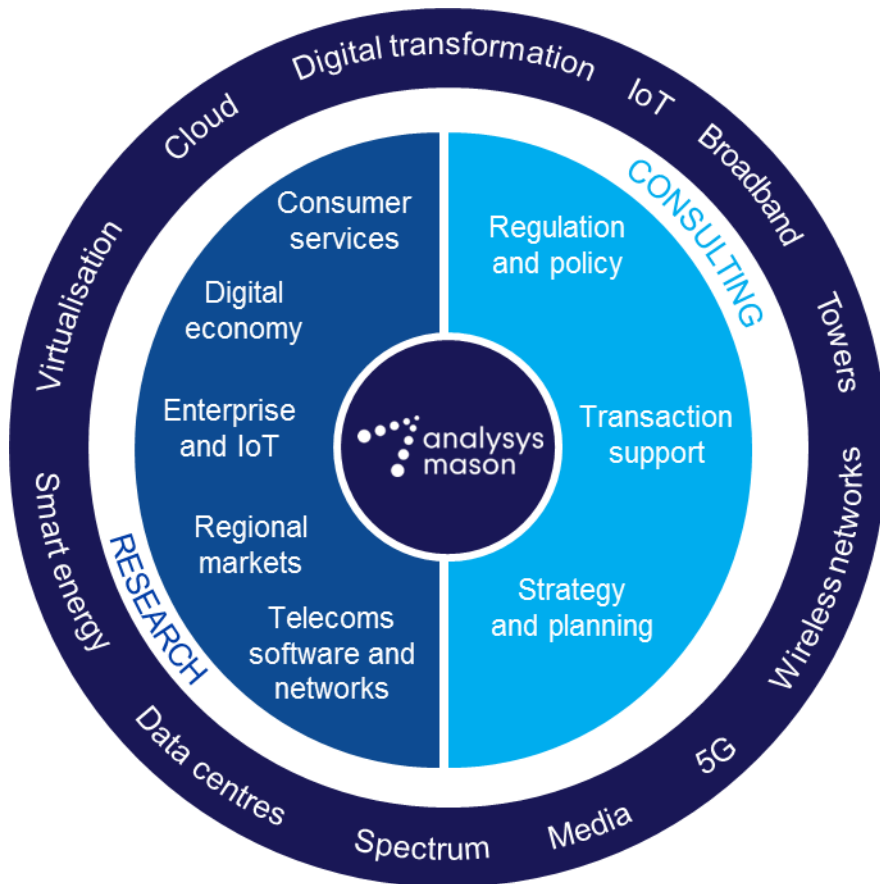
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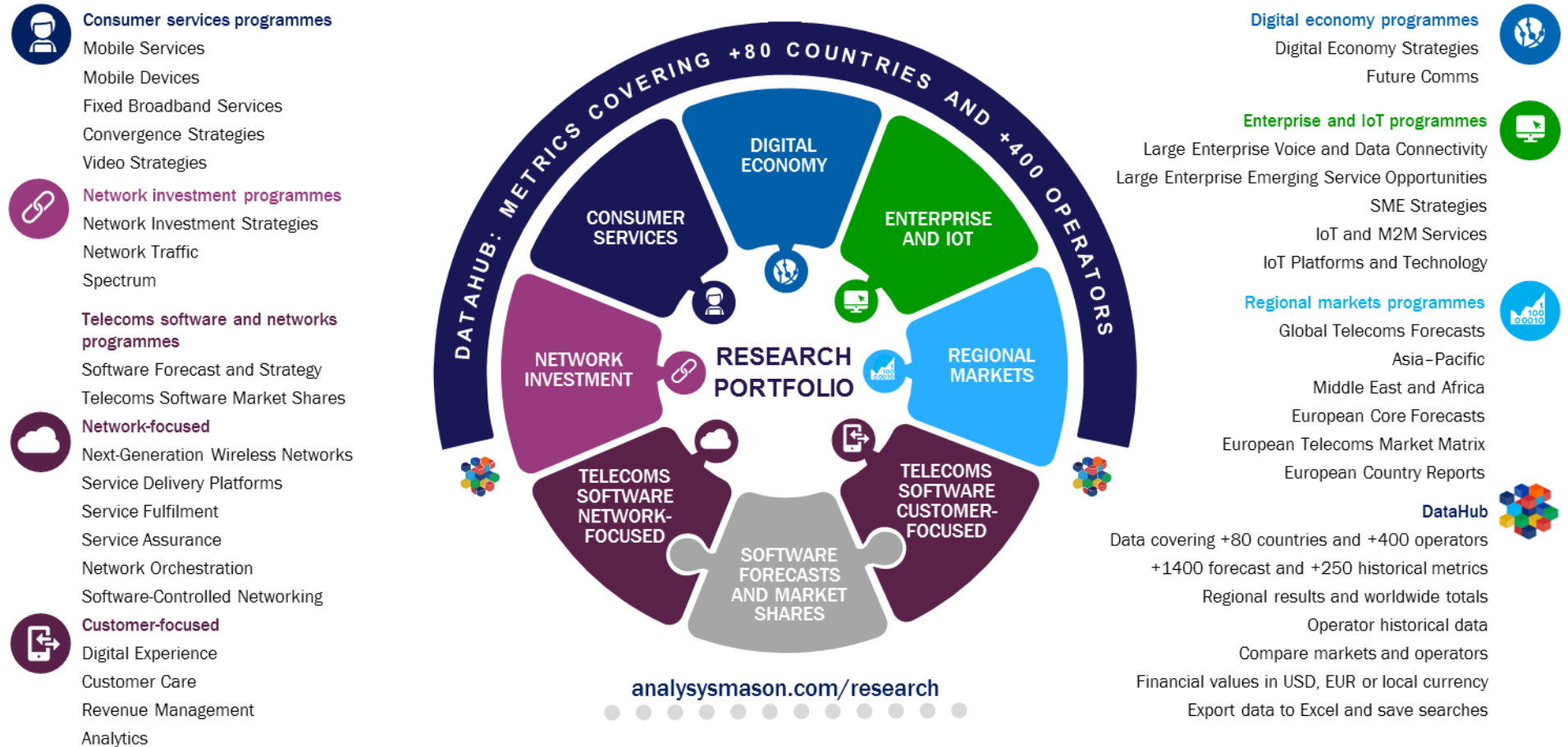- We are future-focused and help clients understand the challenges and opportunities that new technology brings.

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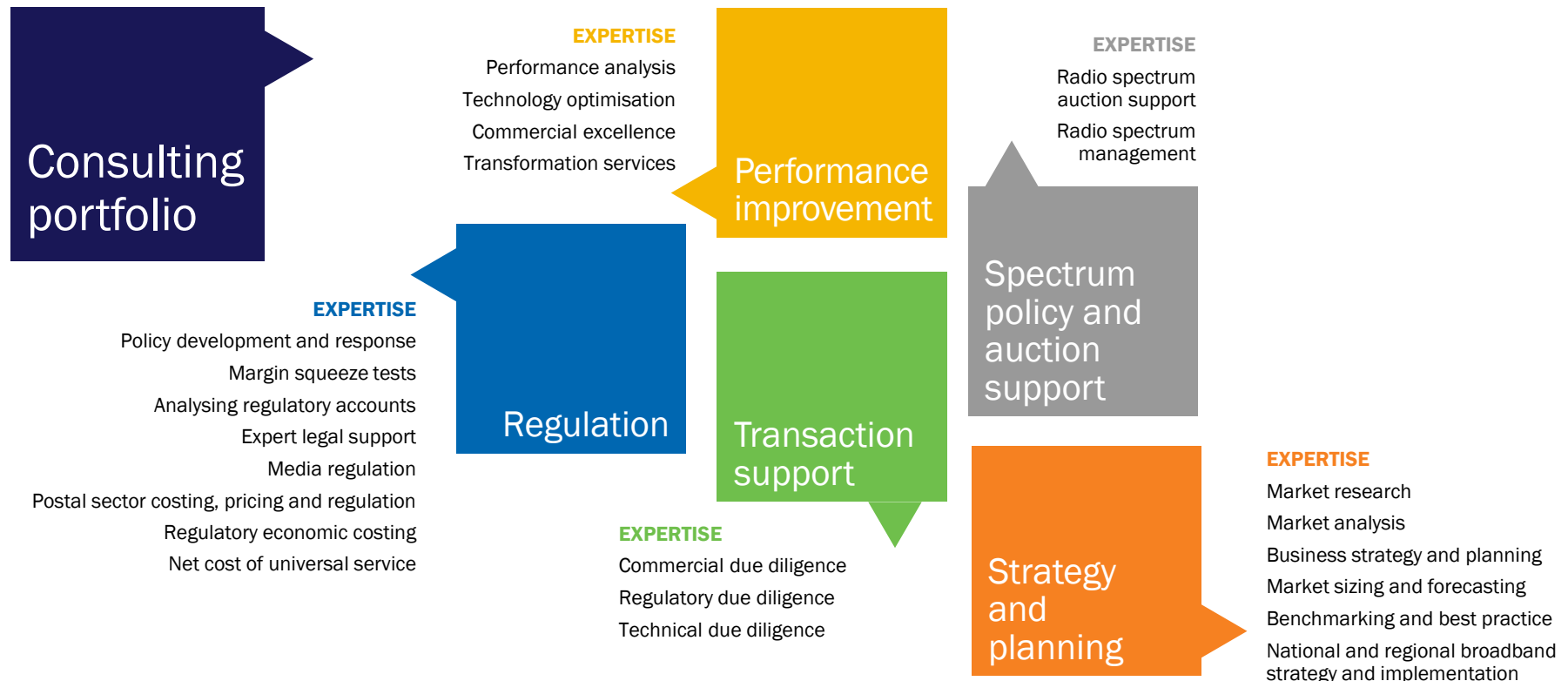
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