Session 7: Fireside Chat - The End of Telecoms History?

Not quite!

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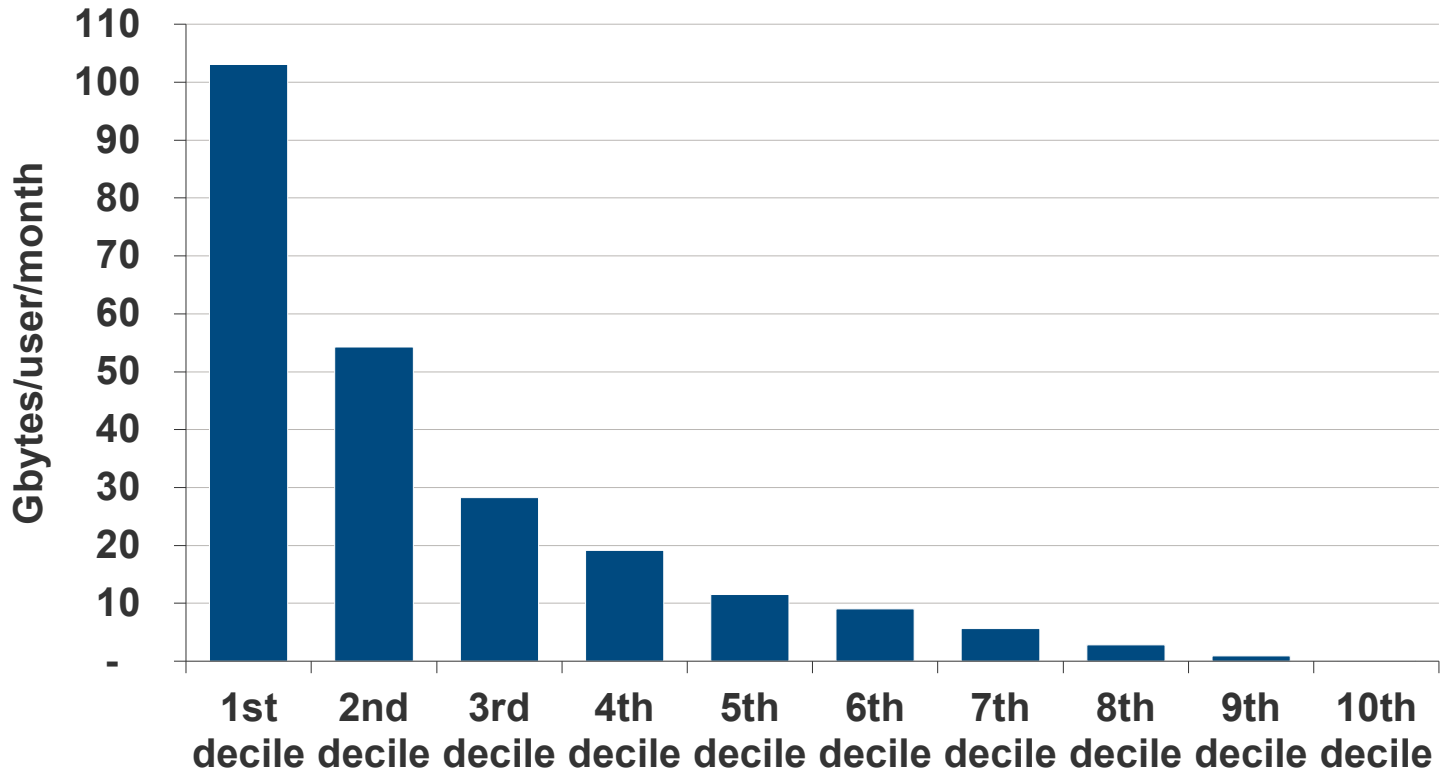
The top 10% of mobile data users already generate over 100 Gbytes of traffic per month

- In several networks the top 10% of mobile data users already generate over 100 Gbytes of traffic per month.
- It is highly unlikely that data usage will flatten out at 20 Gbytes / user / month.

Monthly mobile data usage of smartphone customers

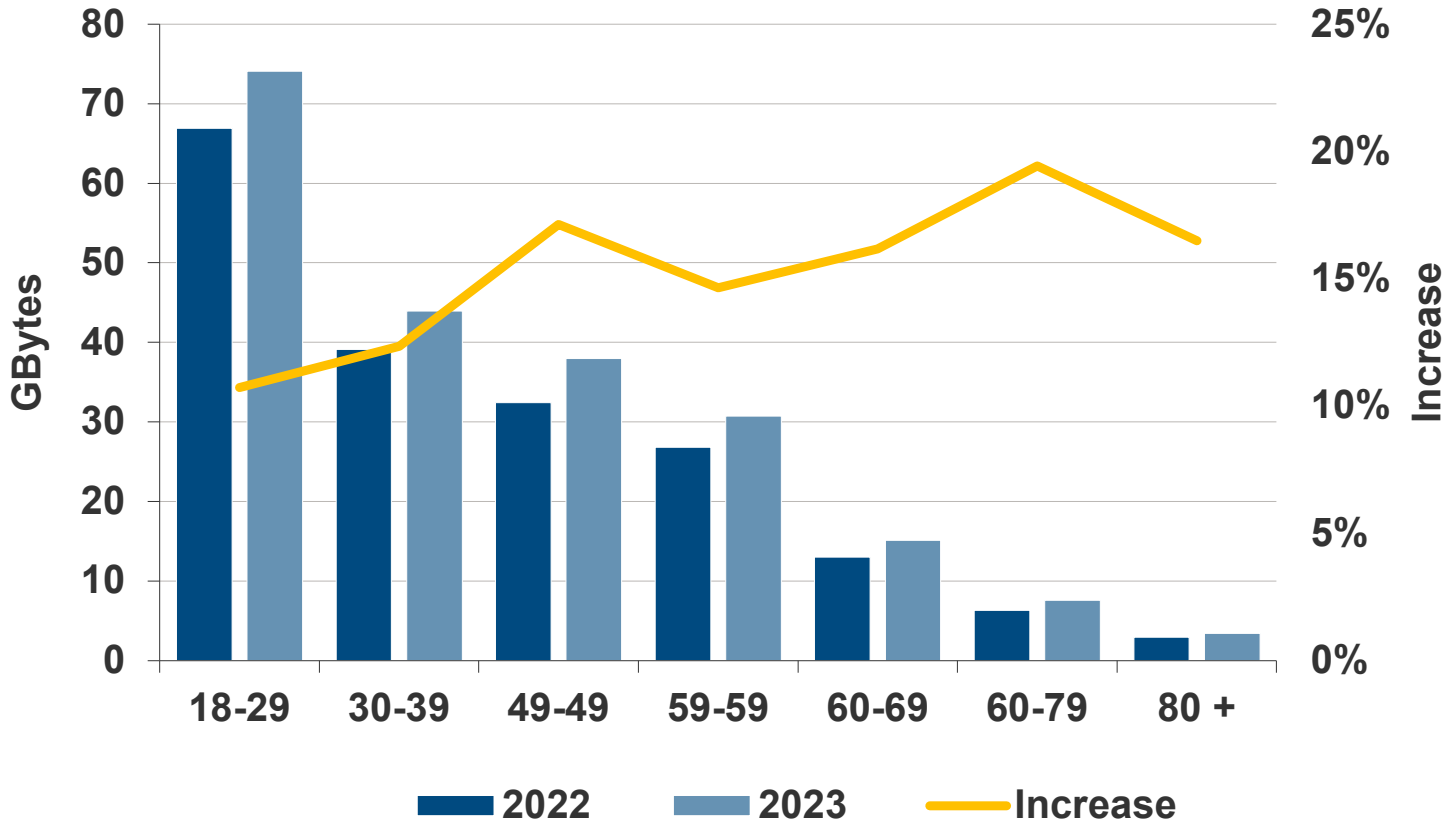


Source: A European operator

Age is the single biggest variable explaining differences in mobile data usage

- The chart shows monthly mobile data usage by age group in the DNA Finland network.
- Younger segments of the population use much more mobile data compared to older age groups.
- Data usage grew across all age groups.
- Younger people will not use ess mobile data as they become older.
- Coleago has data from two other mobile operators (confidential) showing a near identical pattern.

Monthly mobile data usage by age group

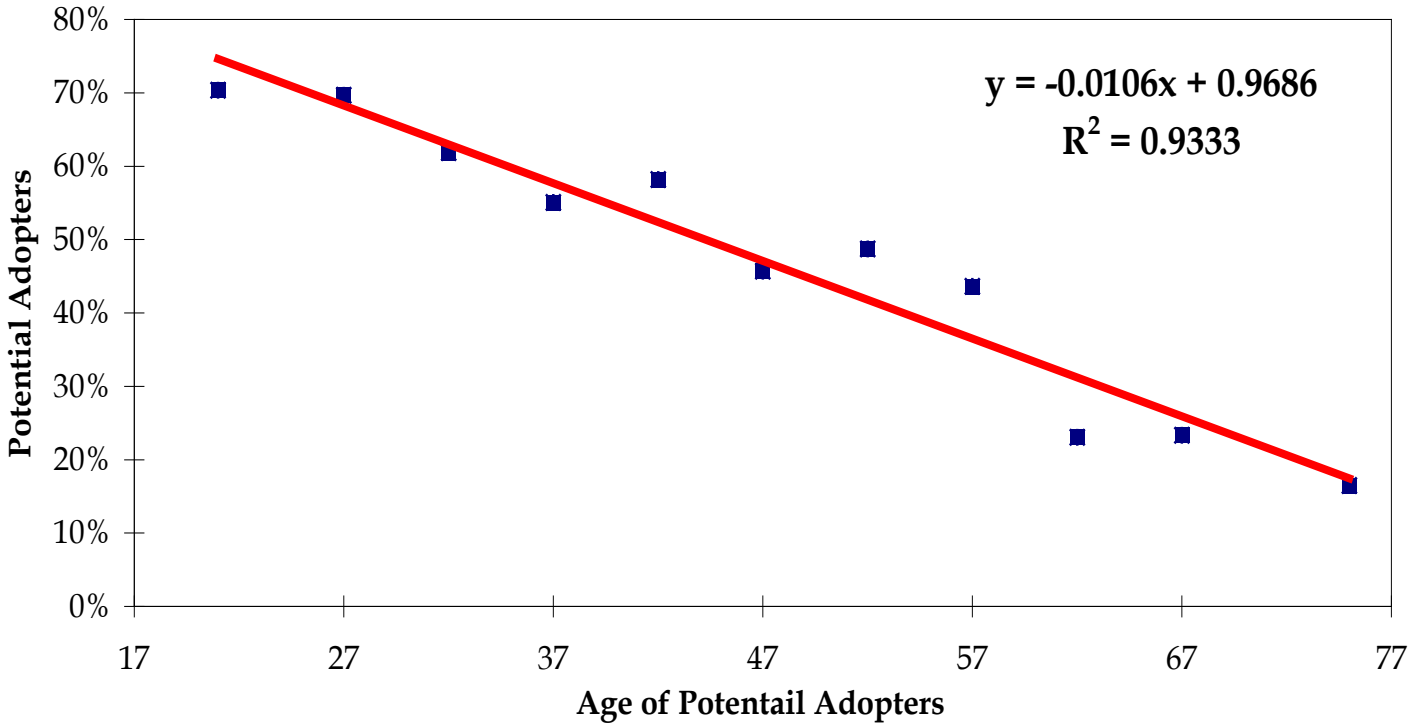


Source: DNA, Finland

The pattern in mobile data usage is reminiscent of the propensity to adopt GSM mobile in 1997

- Back in 1997, on average only 35% of the population showed an interest in adopting mobile.
- In younger age groups the willingness to adopt was close to 80%
- Now almost 100% of adults, teenagers, and many children have smartphones.

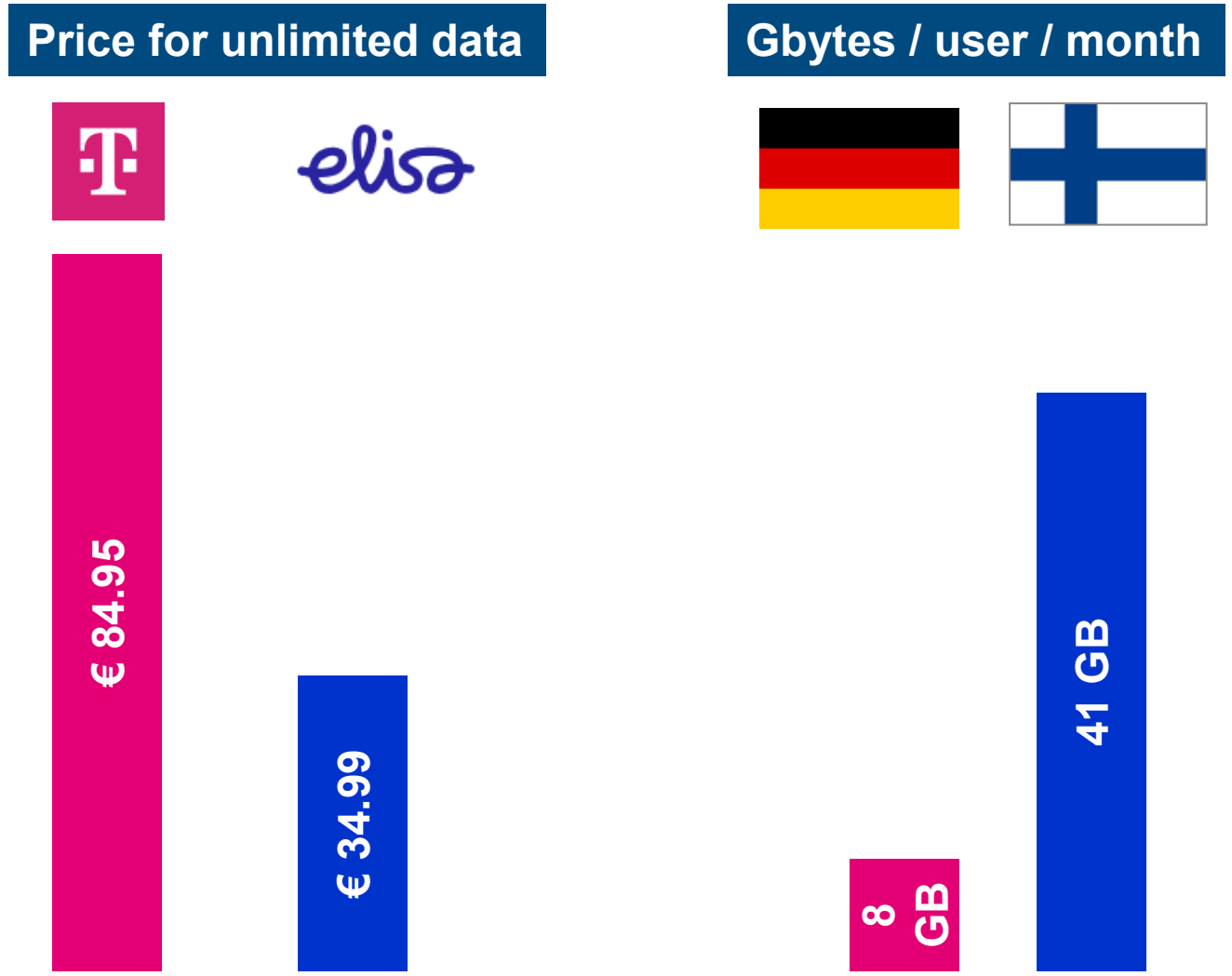
Propensity to adopt mobile by age in 1997



Source: A Western European country, sample 1,000 interviews 1997

Price is a key element in explain differences in mobile data usage between countries

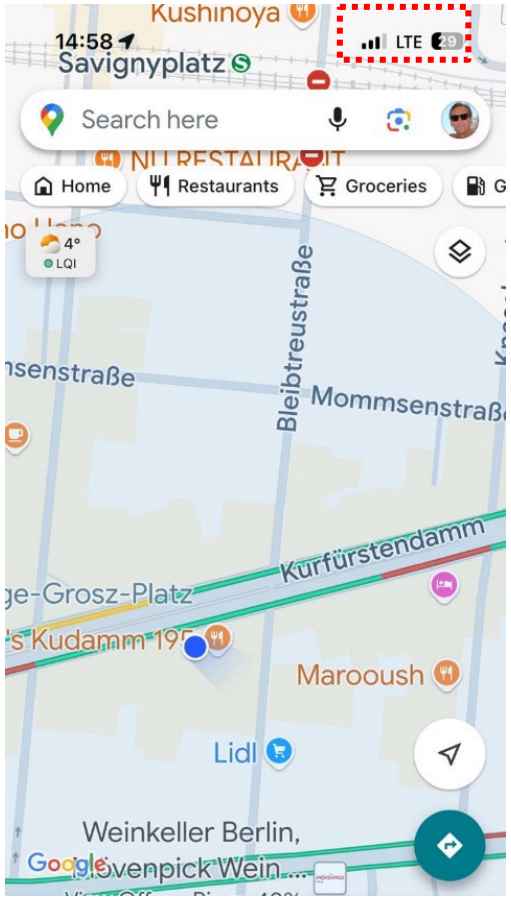
- Unlimited mobile data in Germany is 2.7 times more expensive compared to Finland.
- Mobile data usage in Finland is five times higher than Germany.
- With unlimited data the marginal cost of using data is zero, i.e. the same as for WiFi.



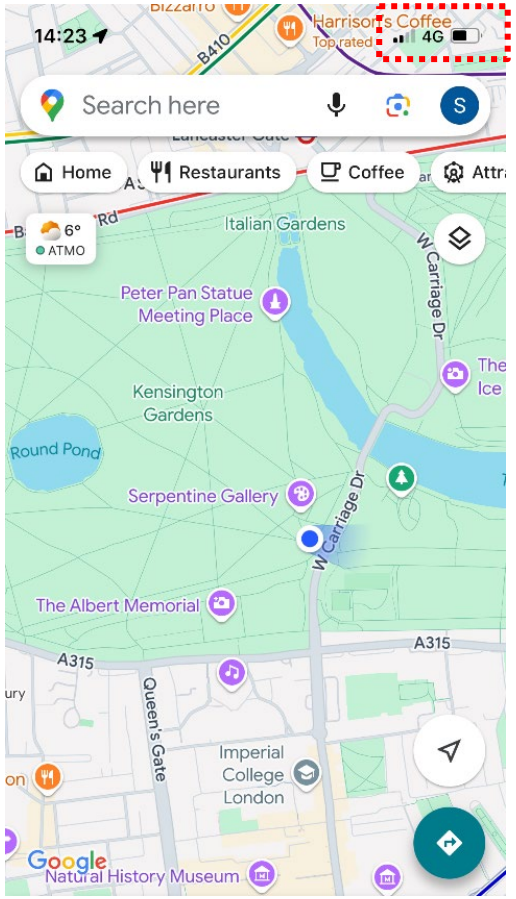
European policy makers congratulate themselves on reaching 89% 5G population coverage but the lack of true 5G in most European cities supresses usage

- The are 5G coverage holes outdoors in cities and in most indoor public places.
- There is lack of speed coverage in many places.
- Current network are mostly 5G Non Stand-Alone (hybrid 4G/5G) which cannot offer 5G services such as slicing or QoS based services.

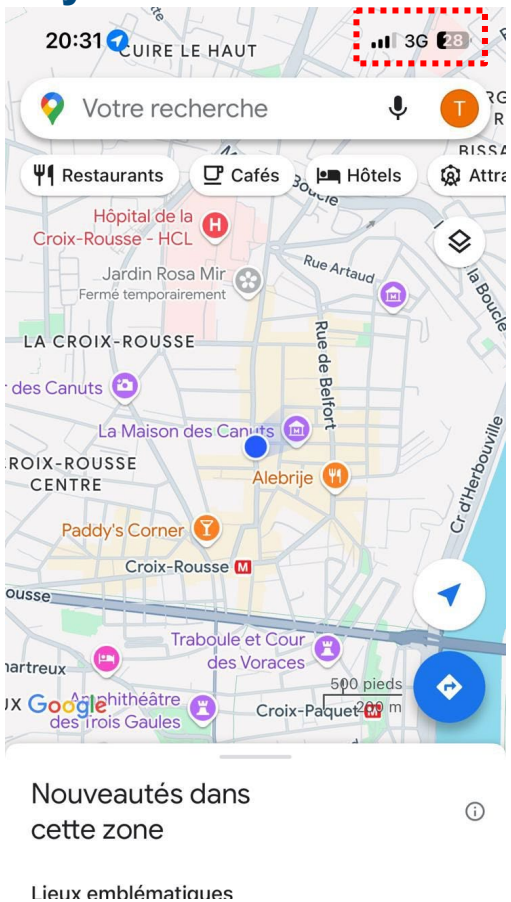
Berlin



London



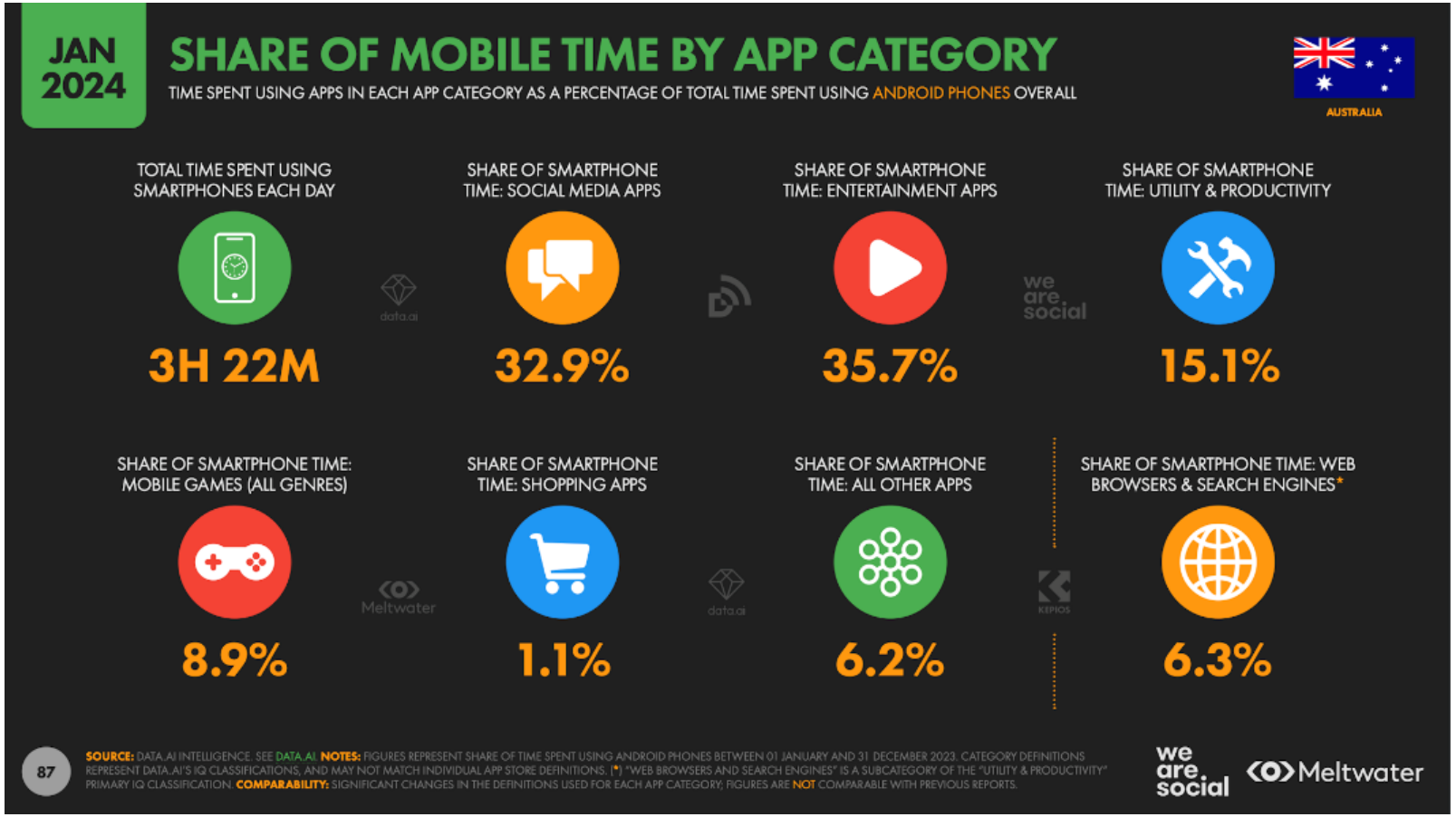
Lyon



Source: Screenshots from 5G enabled smartphones, January 2025

Most smartphone users already use more that 100 Gbytes of data, but much of it is on WiFi

- Due to the lack of 5G speed coverage coupled with volume-based pricing, smartphone users often spend more time connected to Wi-Fi in public places rather than 5G mobile.
- Once smartphone users are no longer constrained, 5G mobile traffic would increase substantially.
- If 50% of today's daily usage i.e. 34.5 minutes would be via 5G mobile at 20 Mbit/s (HD YouTube video) this would generate a monthly data volume of 158 GB just on mobile video.



Source: 2024 Social Media Statistics for Australia, Jemma Healy, Meltwater, Apr 29, 2024

European policy makers should take action to ensure that the vision of 5G can be delivered in an economically feasible manner

5G requirements focus on area traffic capacity, near guaranteed data rates, low latency and reliability

"*IMT-2020 is expected to provide a user experience matching, as far as possible, that of fixed networks*"
(Report ITU-R M.2441-0 (11/2018), "Emerging usage of the terrestrial component of International Mobile Telecommunication (IMT)

Rethink rural coverage obligations

- A Euro spent on urban 5G coverage benefits more people and businesses more of the time compared to a Euro spend on rural coverage.

Measure 5G-SA coverage

- Non-stand-alone 5G is hybrid 4G/5G and cannot deliver network slicing, service class differentiation, or uRLLC.

Focus on consistent 5G-SA outdoor and indoor speed coverage in urban areas

- Make 6415-7125 MHz available for 5G mobile.
- Facilitate small cell deployment on lampposts, street furniture, etc. with low site rental fees. The London borough of Lewisham charges £50 per year per lamppost.
- Encourage or mandate shops, restaurants, transport hubs, etc. to grant operators permission to install indoor neutral host small cells free of charge.