

# Predicting mobile data growth

Richard Haas – Analyst

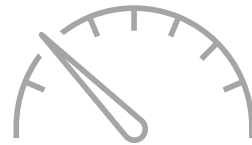
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# Mobile data consumption so far...



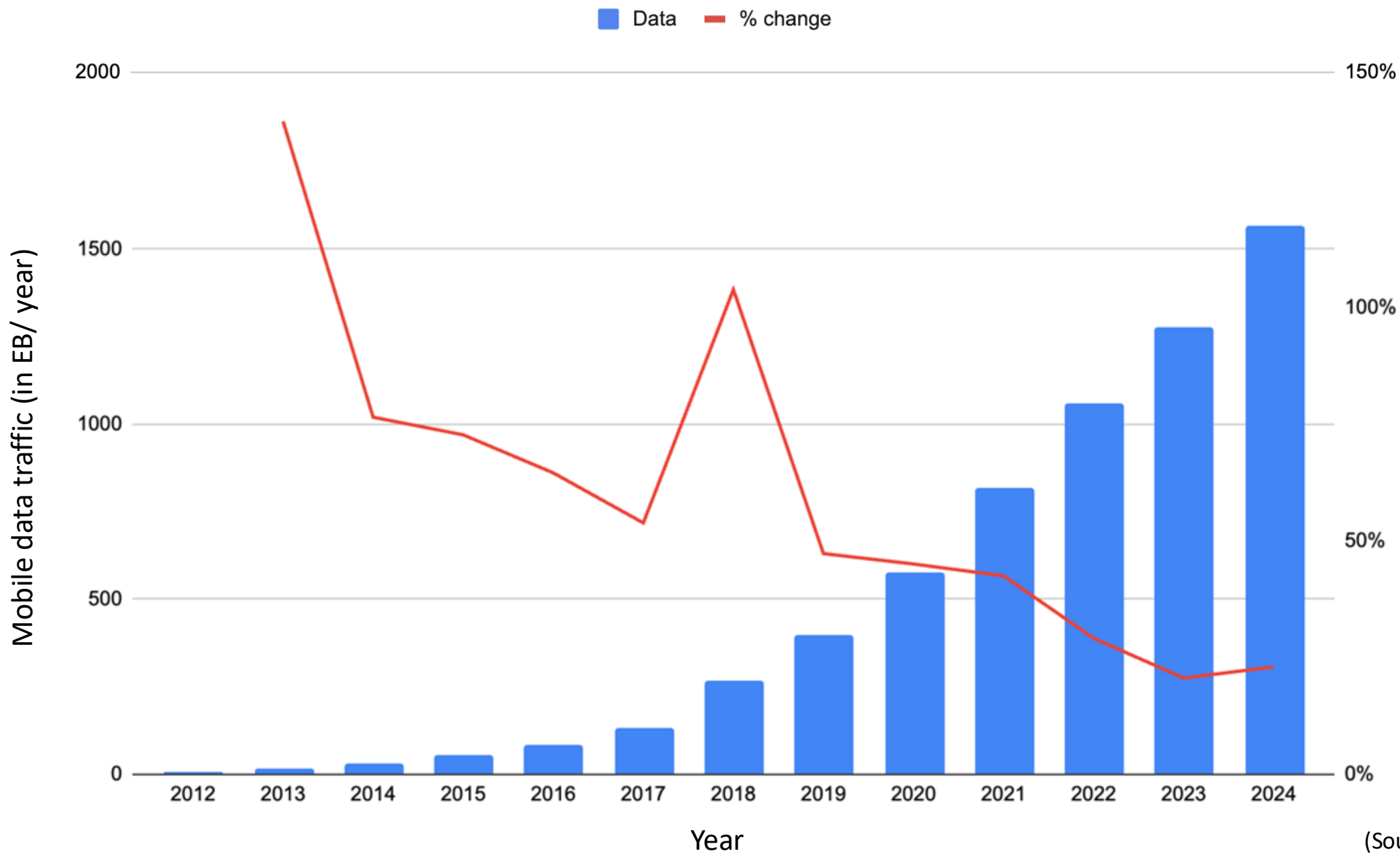
2007-2018: Rapid data consumption growth



From 2018: Slowing of year-on-year growth



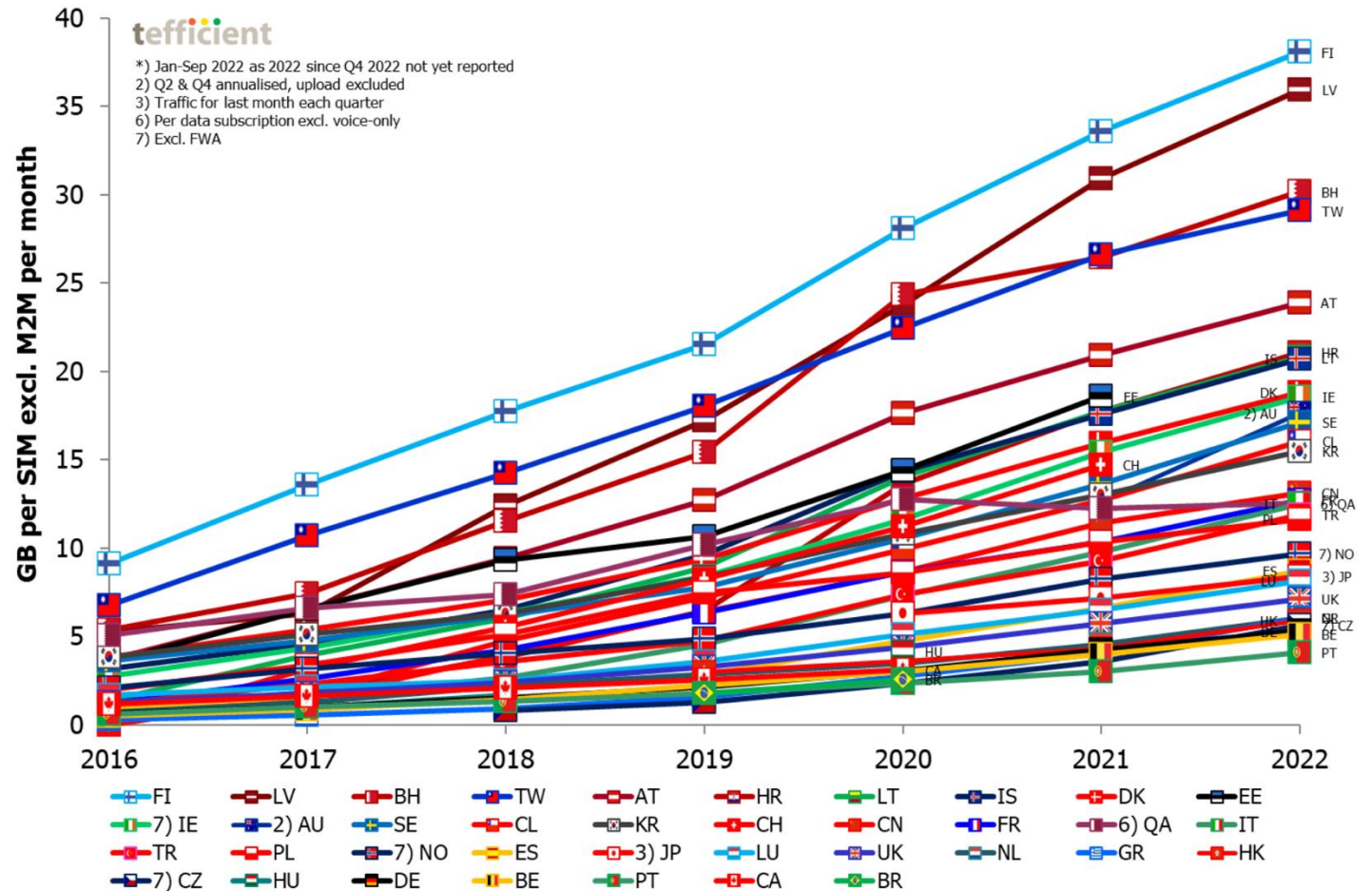
Total GB growth still significant



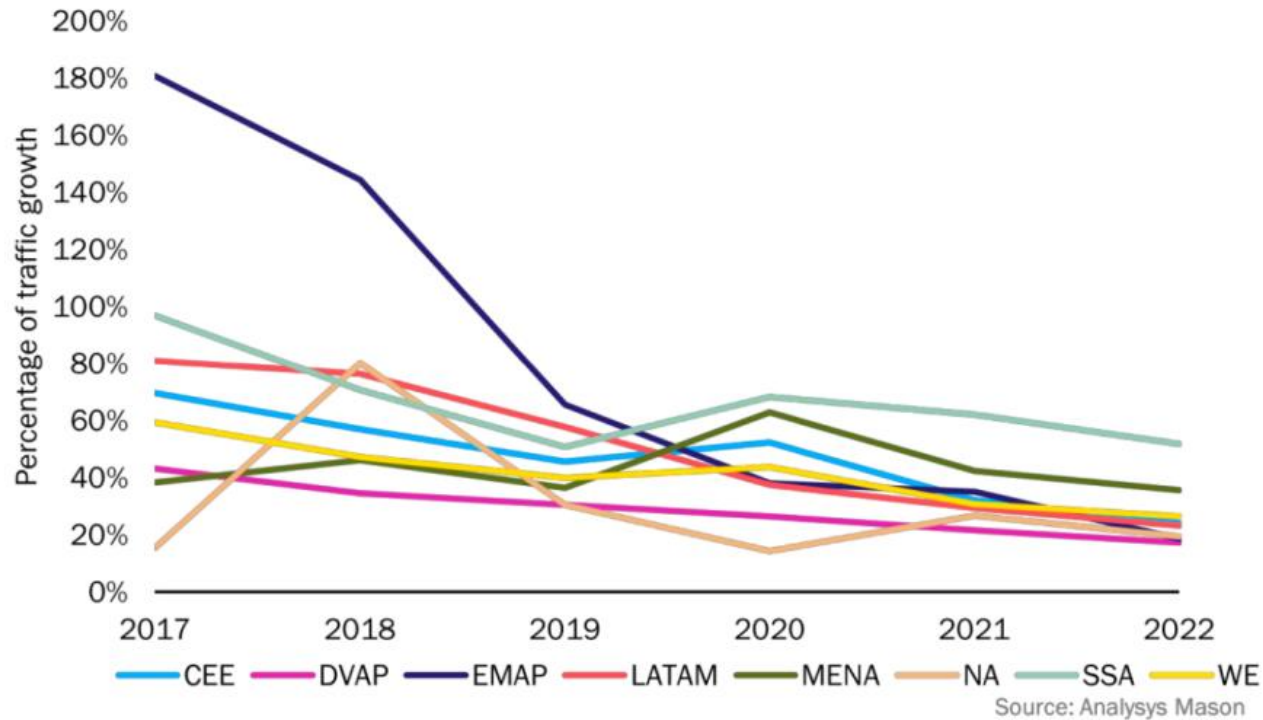
(Source: [Ericsson](https://www.ericsson.com/en/mobility))

# Local trends

- Finland is number one in data usage (nearly 40 GB per month)
- FWA is a driver for growth
- In Finland, 25% of sim cards are data-only, and they carry 2.6x more traffic than regular sims
- In Austria, 16% are data-only
- Not true in Taiwan; data only share is 2%



# Regional breakdown



- Mobile data traffic differs vastly by region, and even by country.
- However, year-on-year growth is trending downwards in all regions

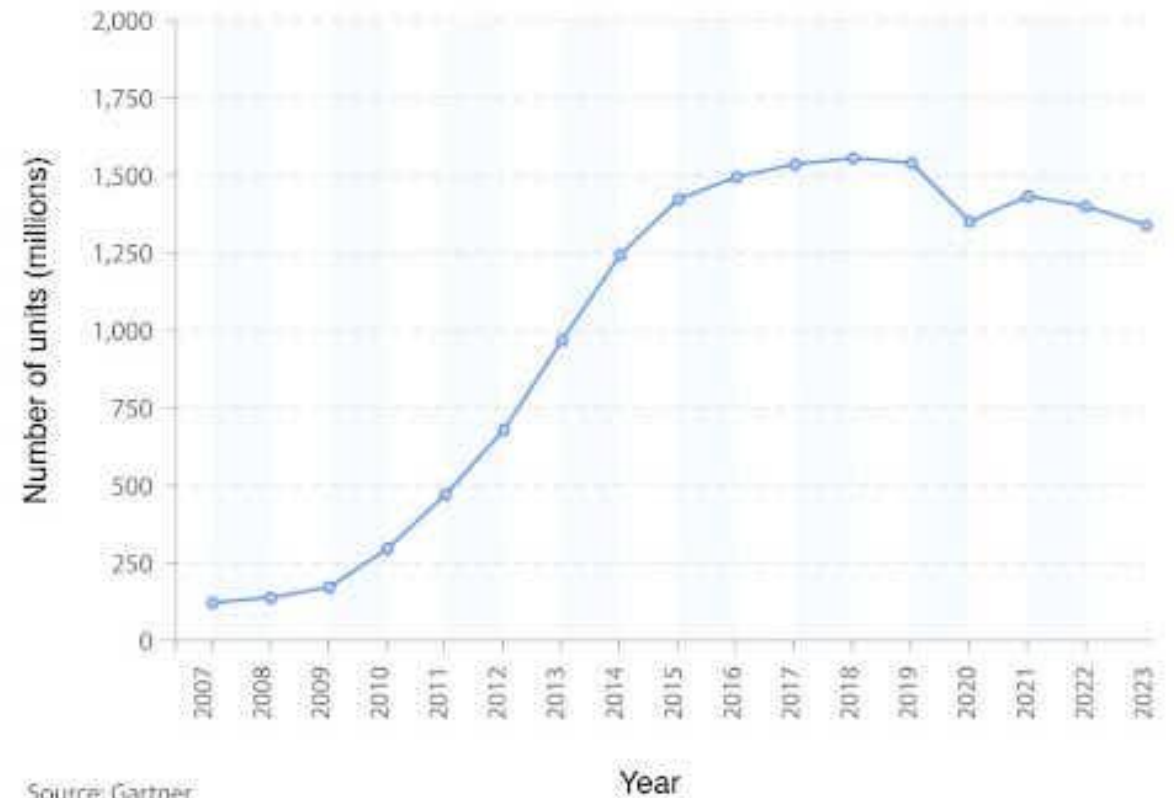
**CEE** = Central and Eastern Europe, **DVAP** = Developed Asia–Pacific, **EMAP** = Emerging Asia–Pacific, **LATAM** = Latin America, **MENA** = Middle East and North Africa, **NA** = North America, **SSA** = Sub-Saharan Africa, **WE** = Western Europe

# Why has data consumption slowed?

(Source: [Gartner](#))

- "Peak smartphone"
- Can we consume more video?
- Increasing resolution no longer has an impact, as difference is hard to tell on small smartphone screens
- Developers optimise for "worst case scenario"

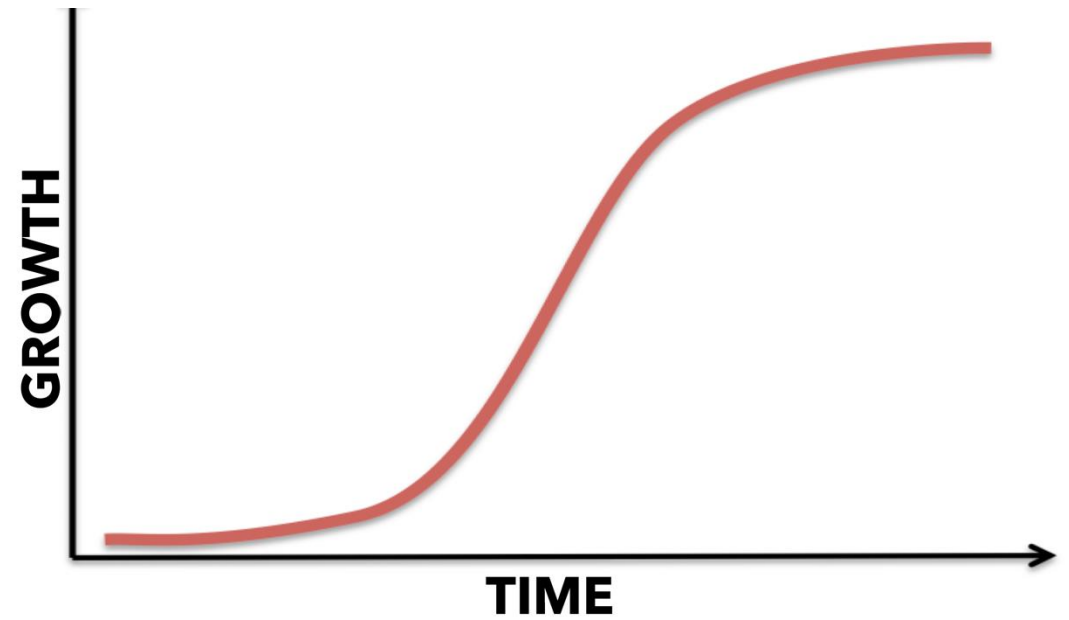
Global mobile phone unit sales over time



Source: Gartner

# Predicting future growth

- If year-on-year growth continues to slow, data usage will eventually flatline
- There are disagreements on whether (or when) this will happen
- Predictions are important, as they are used to make policy decisions





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Global (2027)

~3300 EB per year

~3.1x growth



UK only

Low: 3x growth

Medium: 5.4x growth

High: 9x growth



Global

2700 EB per year

~2.3x growth



ERICSSON

Global

~~4000 EB per year~~

~2.7x growth

3200 EB per year

~2.5x growth

Prediction:  
Total data  
growth by  
2028



# Ericsson's changing prediction

PolicyTracker



SPECTRUM RESEARCH SERVICE:

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## Ericsson mobility report downgrades mobile data growth forecast

The predicted mobile data traffic for 2029 in the latest report is 312 exabytes (EB) per month—a drop of 23 per cent from the November 2023 report, which predicted 406 EB per month.

Jul 09, 2024 | [Mirva Villa](#)

Ericsson said the adjustment was due to its data sources, including regulators and mobile network operators, reporting lower figures in the second half of 2023.

Although the vendor admits that it is now assuming a “lower starting point” for data consumption, it says its future prediction remains similar to previous reports in terms of year-on-year percentage growth.

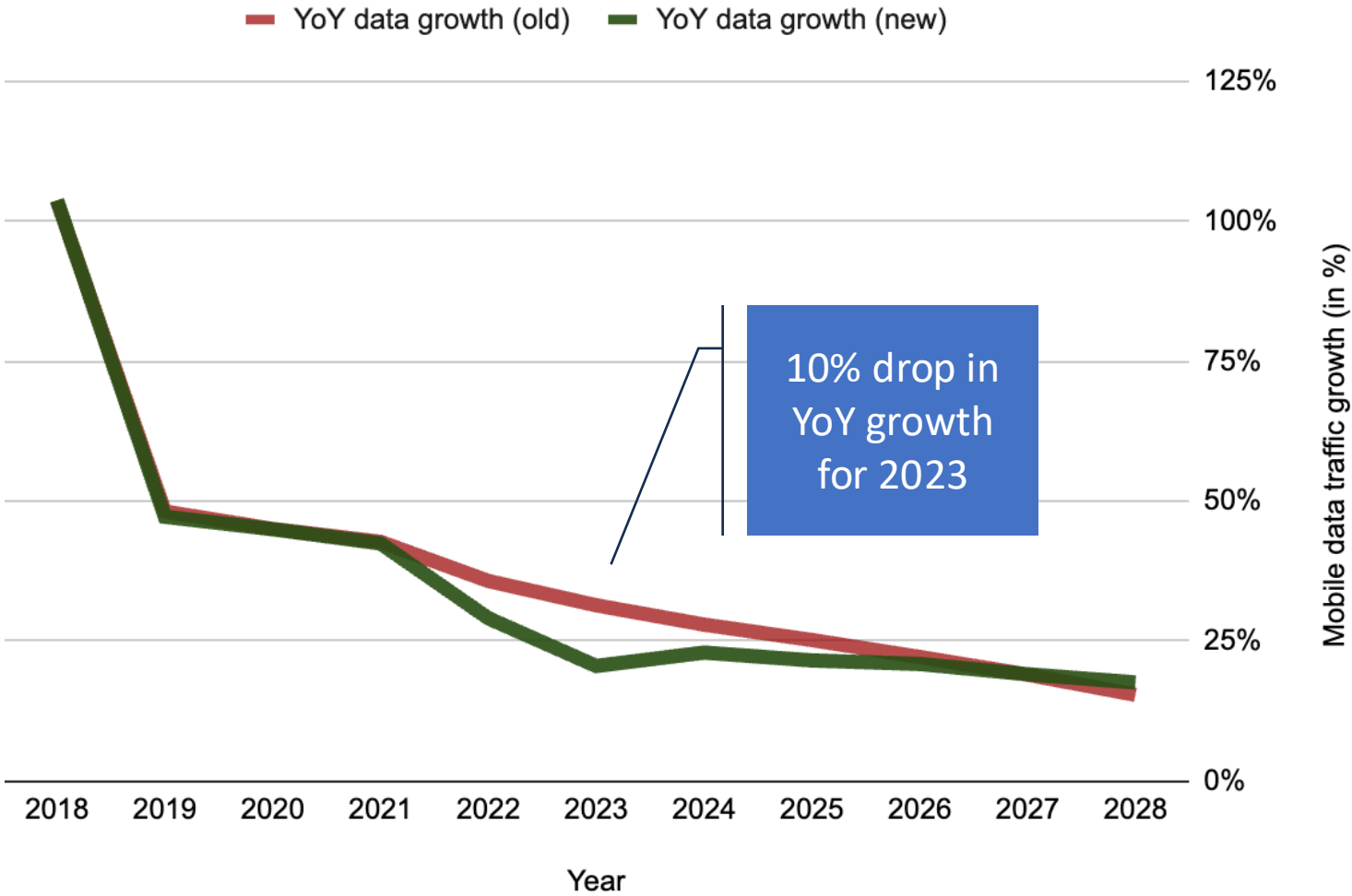
...

Independent telecoms consultant William Webb has [asked](#) why the “dramatic change” in previous figures had not impacted Ericsson’s forecast for mobile growth in the coming years.

“The 2023 reported data sits much higher than the 2024 reported data,” he said, comparing Western Europe’s figures as an example. “But then, bizarrely, the new forecast just jumps back to the old with a 10 per cent increase in growth forecast in 2024 and then a near-precise track of the prior forecast. They have not adjusted their forecast at all.”

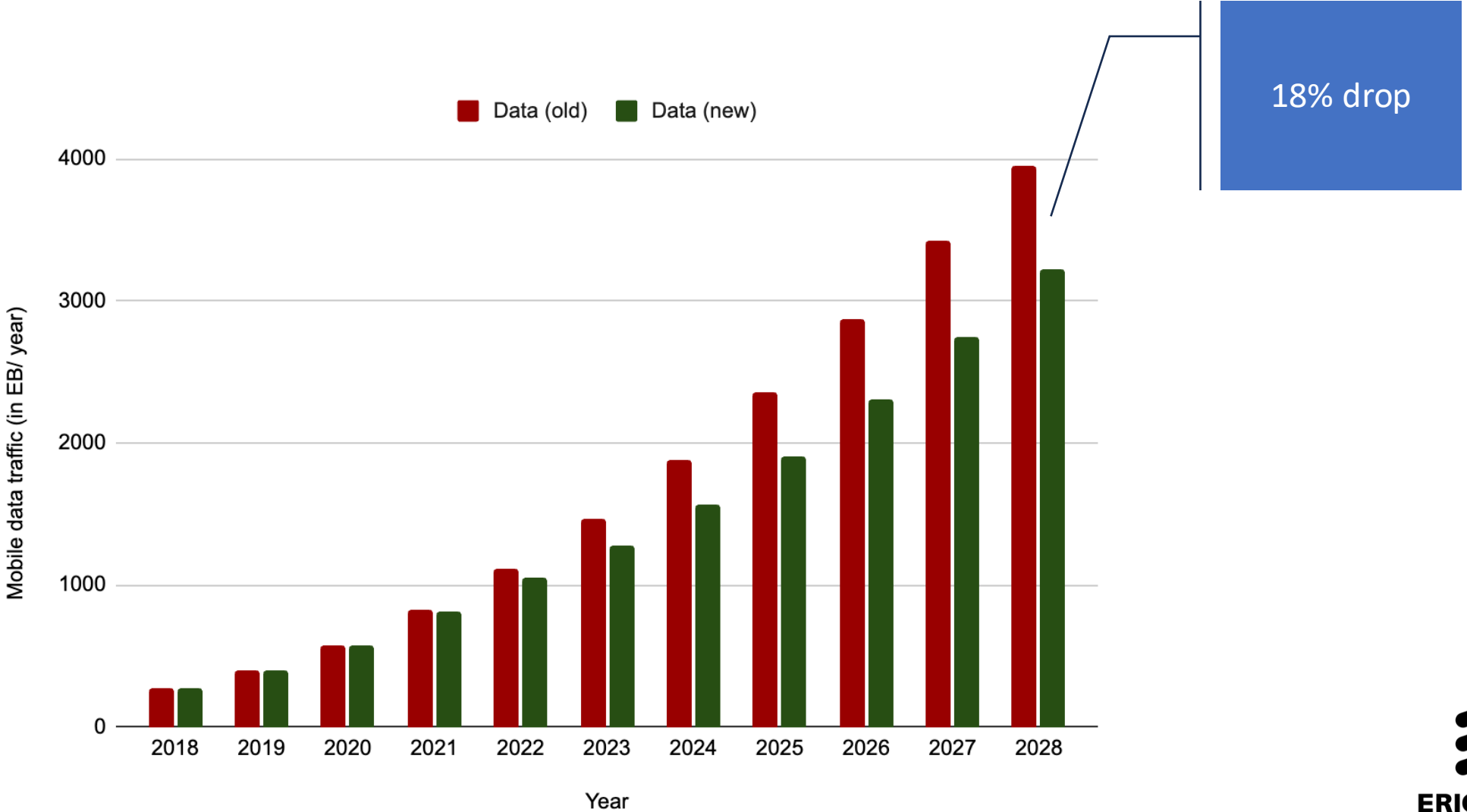
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# Ericsson downgrade in year-on-year growth



(Source: [Ericsson](https://www.ericsson.com))

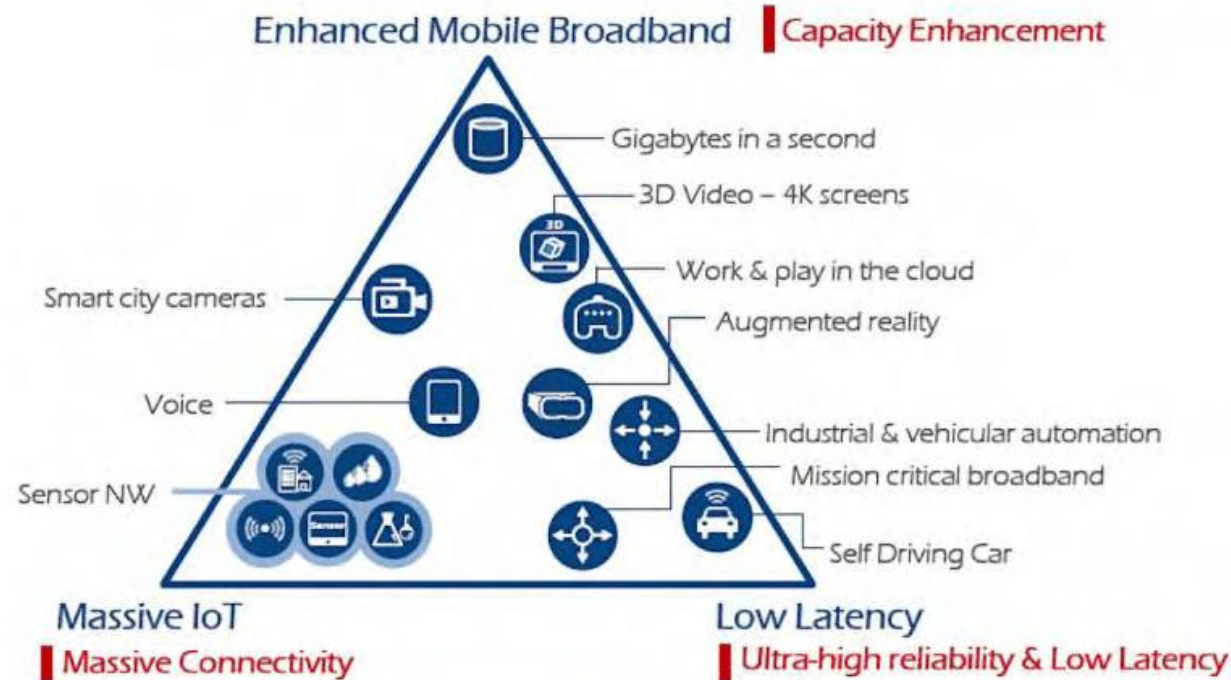
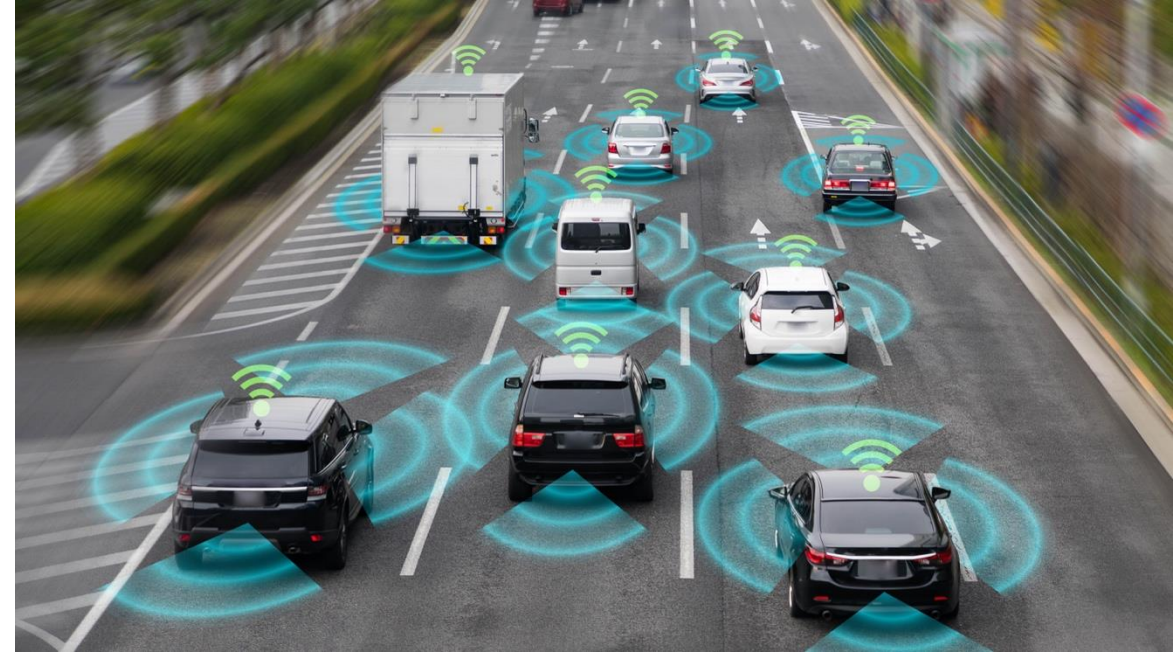
# Ericsson downgrade in exabytes



(Source: [Ericsson](https://www.ericsson.com))

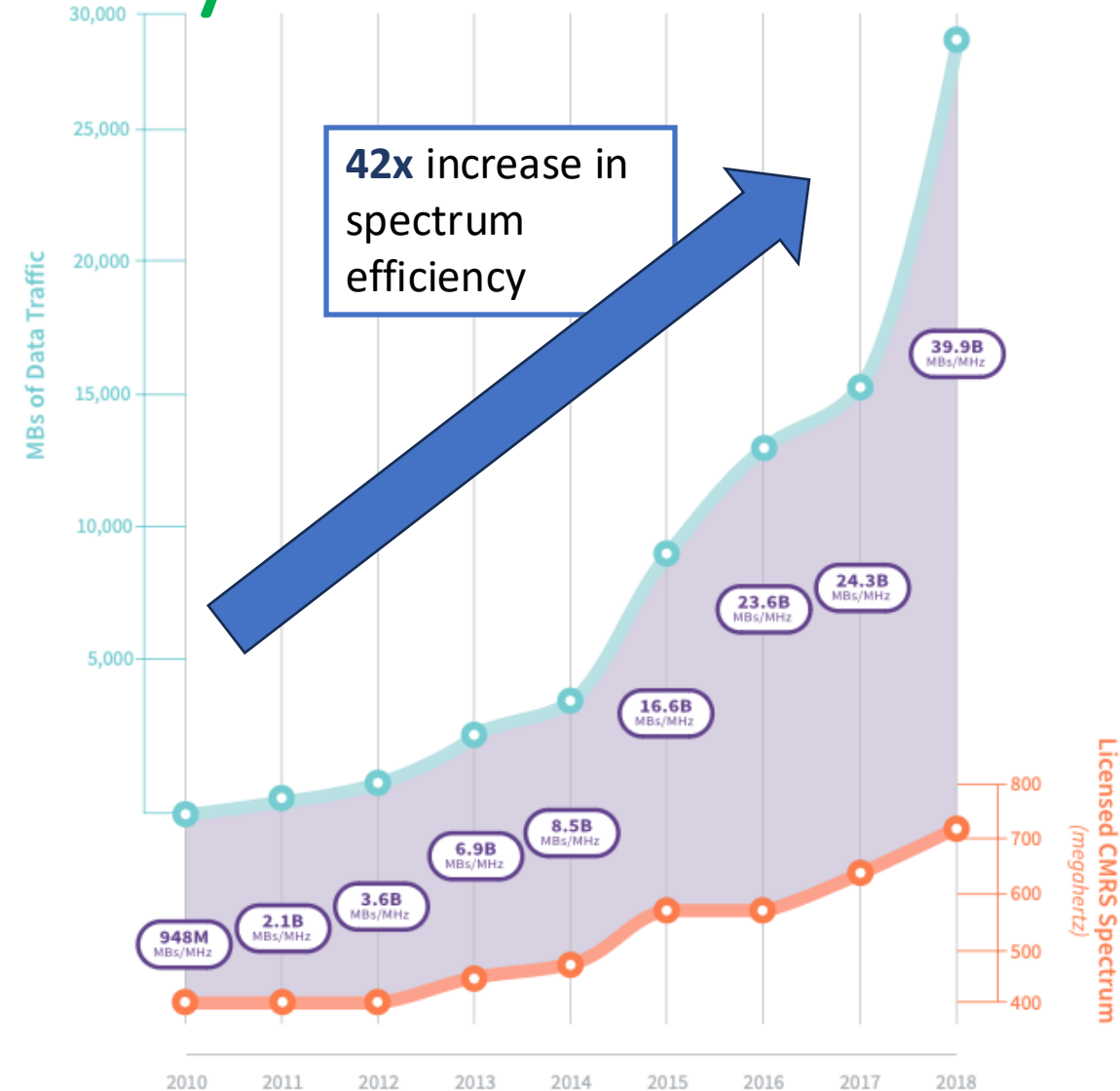
# Some doubt the 6G data explosion

- A lot of the 5G use cases did not come into fruition
  - Autonomous driving
  - Smart cities
  - IoT
- Currently 62% of user time is spent connected to WiFi



# More spectrum = More capacity?

- Having sufficient spectrum holdings is important for managing capacity
- However, technological development is constantly improving efficiency
- Cost to providing 1 GB of data is falling drastically
- There is also an incentive for big tech to reduce data use through improved compression (lower data costs, lower environmental impact)
- Some argue significant new swaths of additional spectrum won't be necessary
- Other ways to improve capacity: network densification, more deployment in mid-bands



(Source: [CTIA](#))

# Conclusions for spectrum policymakers

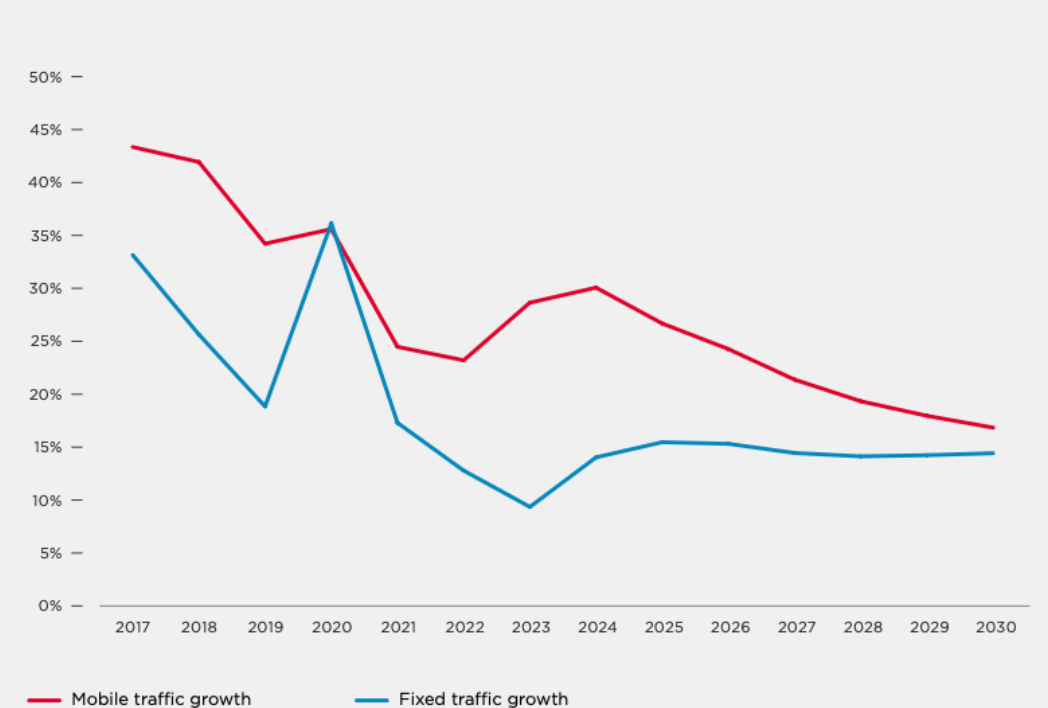
- In the past, a goal in spectrum policy was to ensure mobile operators can cope with exponential demand growth
- If this stops, spectrum policymakers will need to adapt
- The end of big, expensive auctions?
- Opportunity: More investment in innovative spectrum use, such as dynamic spectrum sharing systems
- But... concluding mobile operators will not need any spectrum going forward is short-sighted

# 6 GHz case study

- Both industries want the band for similar reasons
- Reasons are mostly based on future predictions on capacity & use cases
- Still: A decision has to be made, otherwise spectrum lies fallow
- In the future regulators will likely be faced with more difficult decisions like this one

Wi-Fi	Mobile
Improve capacity	Improve capacity
Support future use cases like VR, XR, 8K video	Support future use cases like VR, XR, 8K video, sensing
Faster speeds	Faster speeds

Mobile and fixed traffic: percentage growth in Europe



# Conclusion

- Mobile data traffic growth is trending downwards year-on-year
- Data usage measured in GB still growing significantly
- Era of exponential growth is over (for now)
- Predictions on future data growth in the “6G era” differ widely
- Unclear if 6G will need new swaths of spectrum
- If there is no demand boom, this will have significant consequences on industry and regulators
- Regulators should take these trends into account when allocating spectrum