

Challenging the consensus

Common claims in spectrum policy, and what the data can tell us

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Outline

- About PolicyTracker & SignalTracker
- Assessing common claims
 - Mobile spectrum costs are rising
 - US mobile industry lacks mid-band spectrum
 - 5G Standalone is a game-changer
 - Wi-Fi / Mobile needs 6 GHz
- Questions

About

PolicyTracker

- At *PolicyTracker* our mission is to explore the latest debates in spectrum management and policy
- Our newsletter started in 2004
- Our key value is impartiality. Many groups have a legitimate interest in the use of spectrum
- We are an independent company, not affiliated to any of these interests

SignalTracker

- New app developed by PolicyTracker to measure mobile connectivity (Wi-Fi and 4G, 5G, etc.)
- Collects data on upload and download speeds, signal strength, interference, mobile generation and bands used
- Data integrates into PolicyTracker research, and our Data Explorer



Download our app
using the QR code



There is a lot of noise in spectrum policy



Spectrum is too expensive!

6G needs more spectrum

Wi-Fi needs 6 GHz

5G Standalone is a transformational upgrade

Wi-Fi has a stronger case for the 6 GHz band

Data traffic will soon outpace capacity

Spectrum costs are rising

Changes to UHF band will cause the death of the cultural industry

NATO needs more spectrum

Sharing is impossible

THz spectrum has no use cases

Spectrum sharing is the future

6G can't exist without 6 GHz

The US is lagging behind in mid-band spectrum availability

6G should be the last mobile generation

Remote surgery is just around the corner

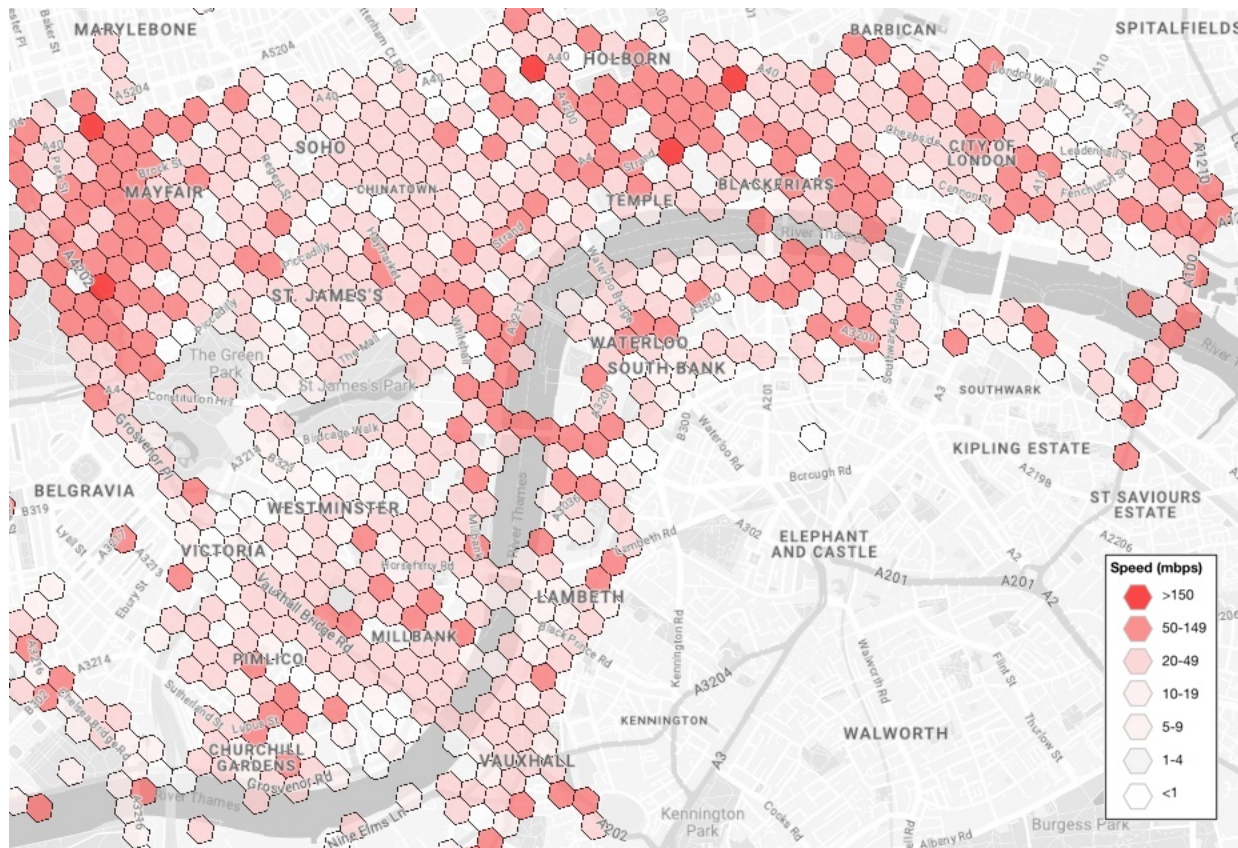
Wi-Fi capacity is already stretched

6G needs more spectrum

The ITU should be abolished

What can the data tell us?

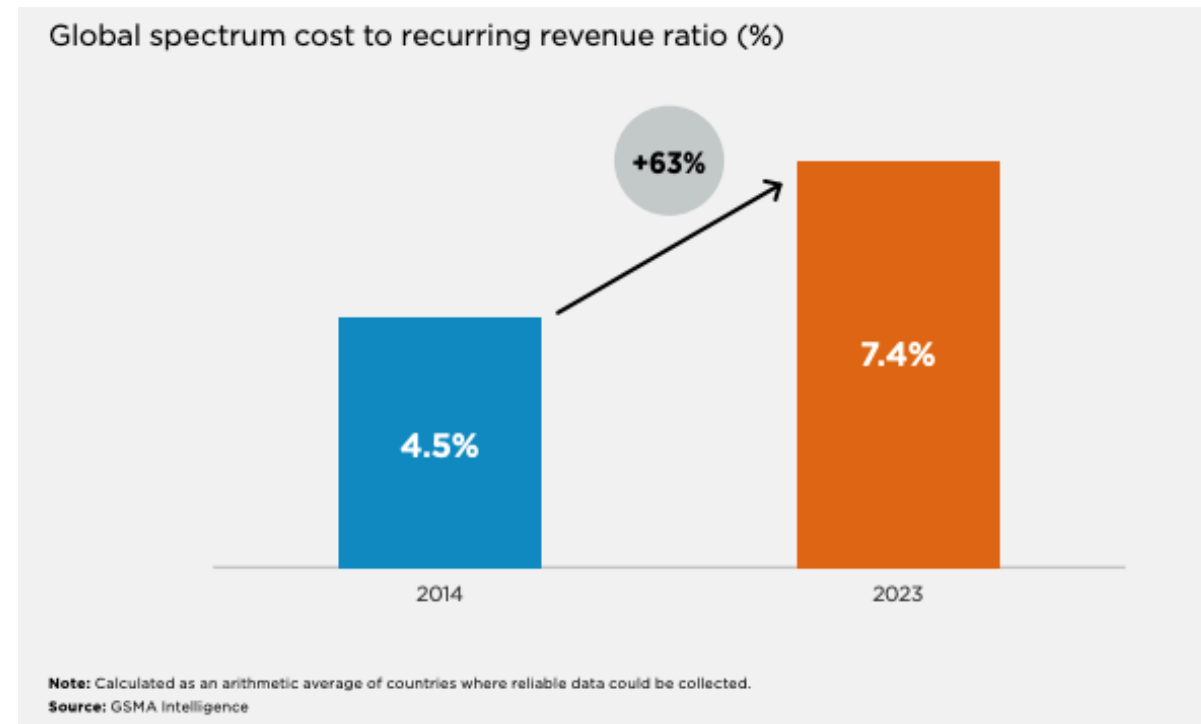
- Very rare that one argument is entirely correct or wrong
- Spectrum decisions are a matter of priorities for a regulator
- But, in some cases we have data that can guide is closer to the truth



SignalTracker central London survey ([April 2025](#))

Claim: Mobile spectrum costs are rising

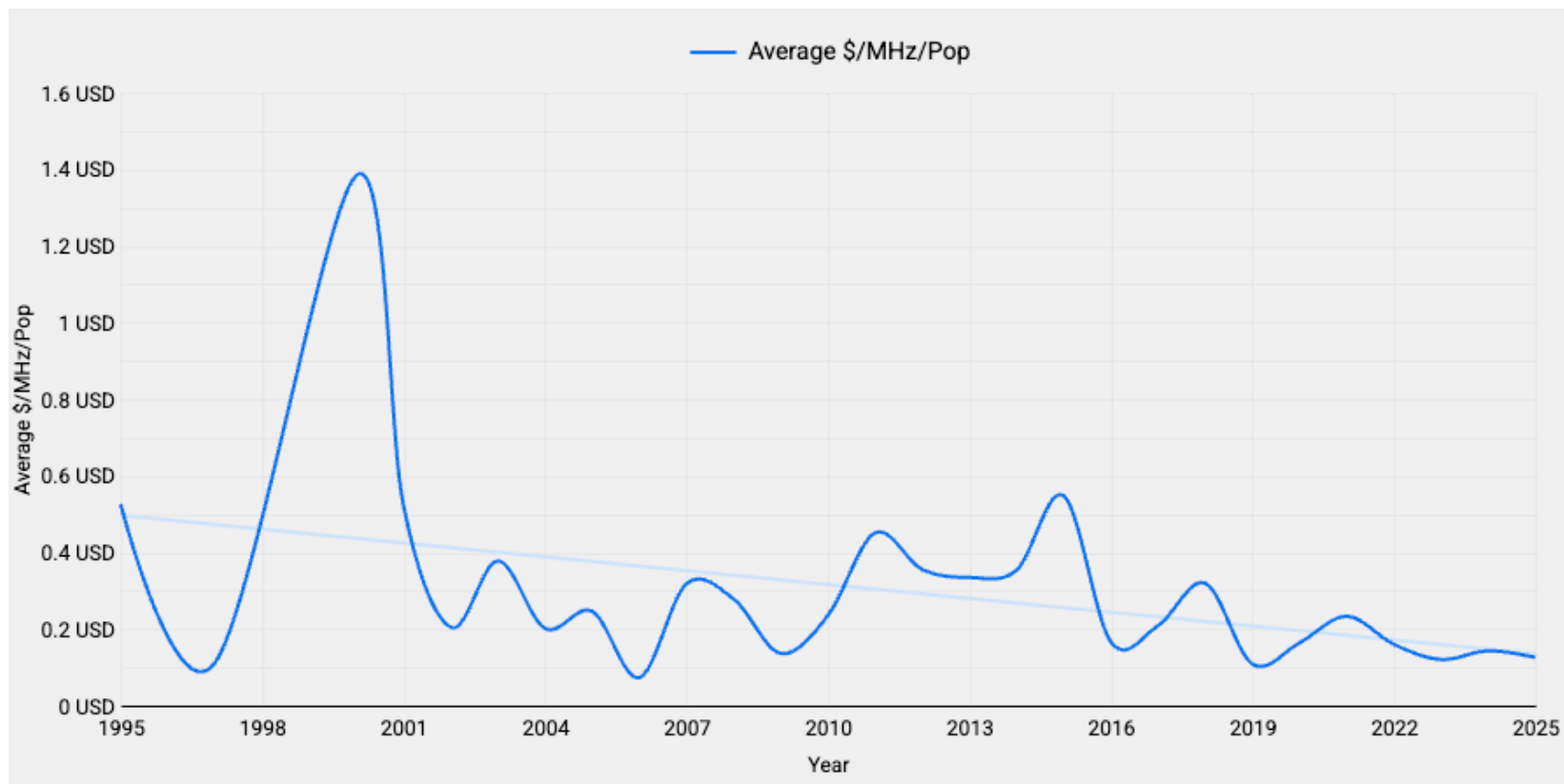
- Spectrum costs often described as a burden by the mobile industry
- The argument: High spectrum costs hurt investments, and countries with lower spectrum costs tend to have better outcomes
- Recent GSMA report: *Spectrum costs now account for 7% of operator revenues, representing a 63% increase over the past decade.*



GSMA Global Spectrum Pricing Report ([May 2025](#))

Data: Spectrum costs are falling

- There are cases where this is definitely true. Spectrum costs can be a burden!
- But overall, the data tells us: Mobile spectrum costs are falling
- One snappy never applies to all markets: local situation important



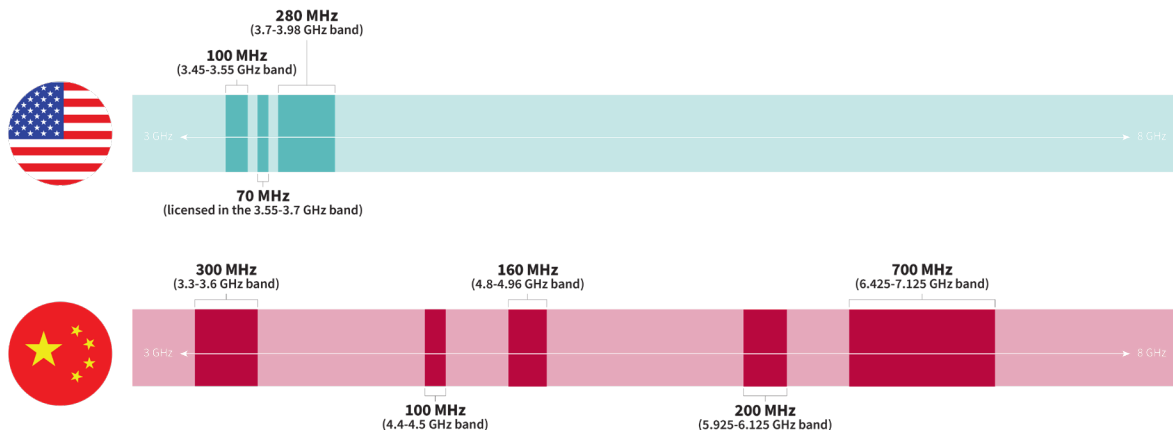
PolicyTracker Spectrum
Database (PSD),
October 2025

Claim: US mobile industry lacks mid-band spectrum

- Claim that US is falling behind China on mid-band spectrum was widespread ahead of “Big Beautiful Bill”
- CTIA: China has allocated 3.2x more mid-band spectrum than the US

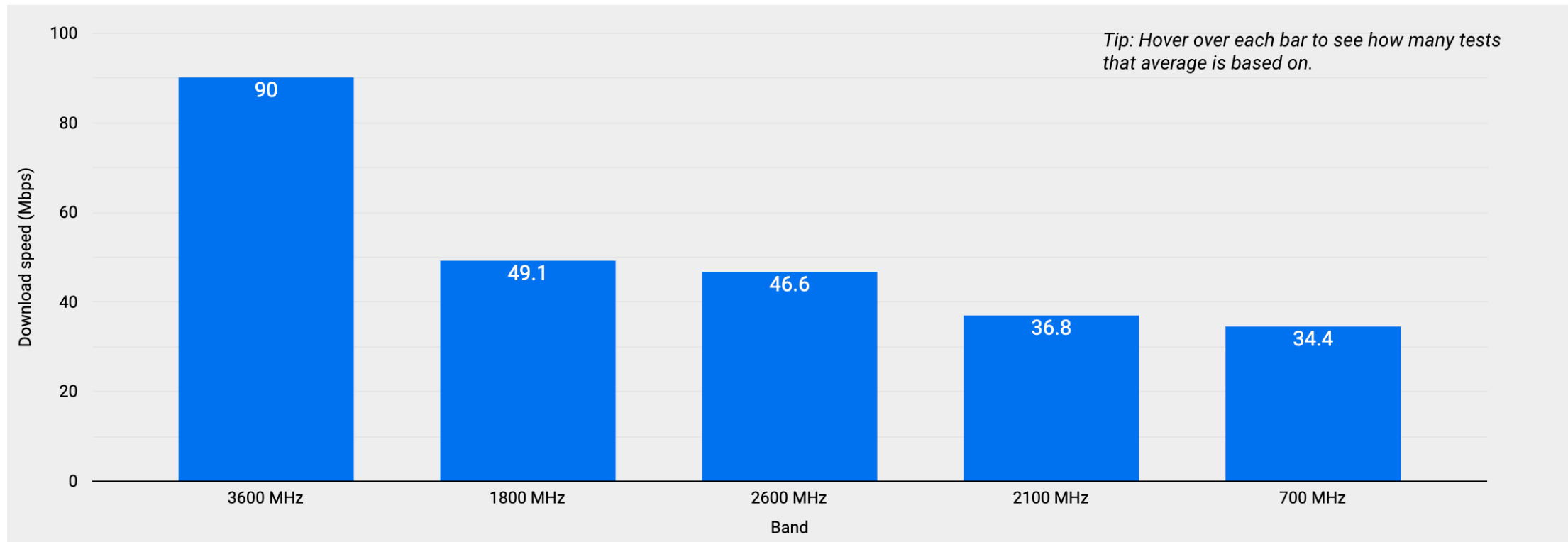
Unfortunately, the FCC has been unable to conduct spectrum auctions since our authority to do so lapsed three years ago. Since then, America has been falling behind China and many 2 other nations when it comes to the amount of prime, mid-band spectrum necessary to power new innovations. This puts America at a significant disadvantage to China and harms U.S. consumers.

America Needs to Allocate More Licensed Mid-Band for 5G



Data: Mid band provides a better user experience (1/2)

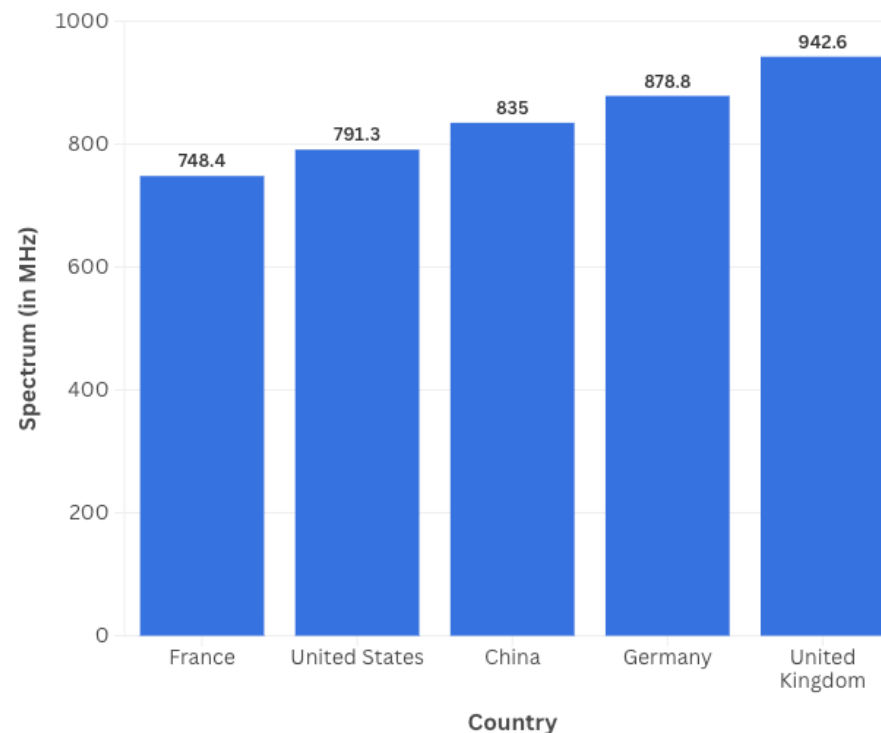
- Mid-band spectrum availability is important
- 5G results show it is around 2x faster download speeds



Data: US mid-band availability similar to China (2/2)

- Our data: China has only assigned approx. 40 MHz more mid-band spectrum
- Why the difference?
 - CTIA used an unusual definition of mid-band which excludes large holdings in the 2.6 GHz band (only 3 GHz and above)
 - CTIA included non-comparable spectrum: e.g. shared indoor-only licences in 3.5 GHz and lower 6 GHz band
- Mid-band availability could change in future, especially as China looks to assign upper 6 GHz
- But it's difficult to predict when and how China will assign more mid-band spectrum

Assigned mid band spectrum by country



Source: [PolicyTracker](#), [FCC](#)

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Claim: 5G Standalone is a game-changer

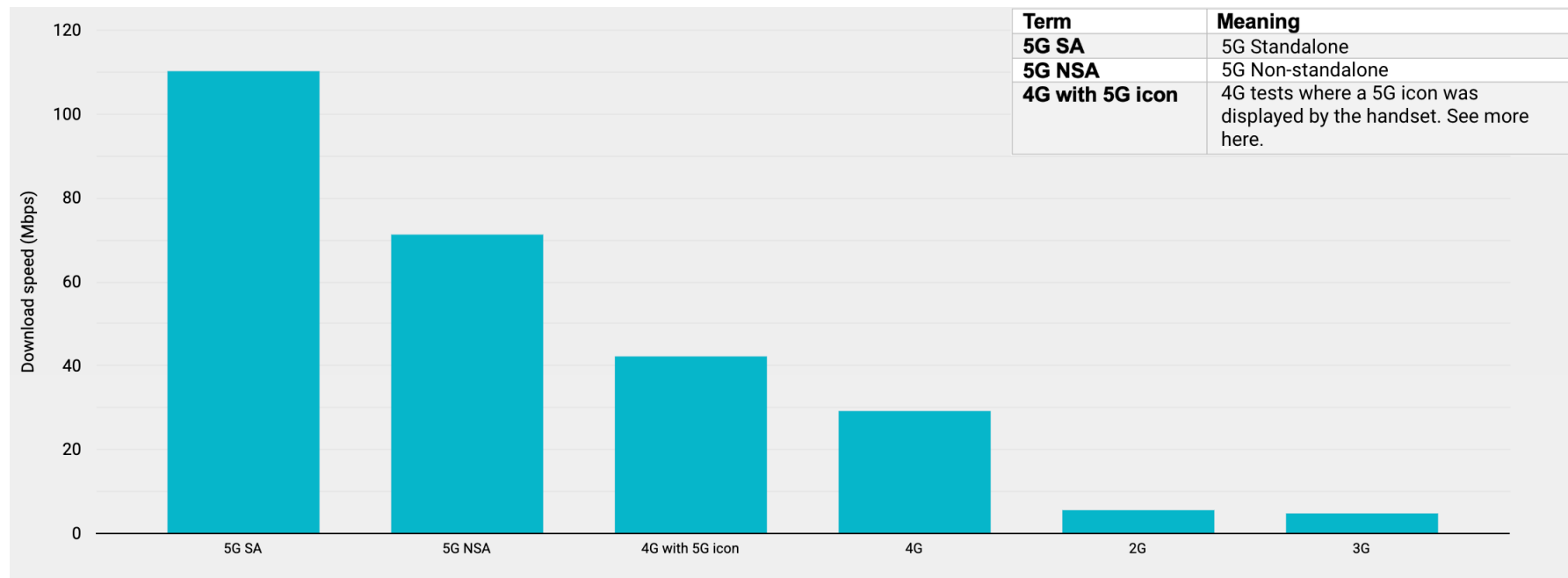
- 5G Standalone is being promoted as a transformative technology
- 5G SA being promoted as an enabler for enterprise use cases because it supports new features such as network slicing, and RedCap
- Verizon: promising peak speeds of 3.3 Gbps on 5G SA



Source: [GSMA](https://www.gsma.com)

Data: For most consumers, 5G Standalone is a minor improvement

- Crowdsourced data suggests users experience avg. speed of 110 Mbps (43% faster)
- But: Many agree anything faster than 20 Mbps makes no real difference to user experience
- Coverage is lacking: Only 3.21% of our tests are recorded on 5G SA
- Revenue opportunities are unclear, and depend on the success of private and industrial 5G applications



Claim: Mobile / Wi-Fi needs upper 6 GHz

- Both industries want the band for similar reasons
- Both claim an immediate need
- "We can't have 6G without 6 GHz"

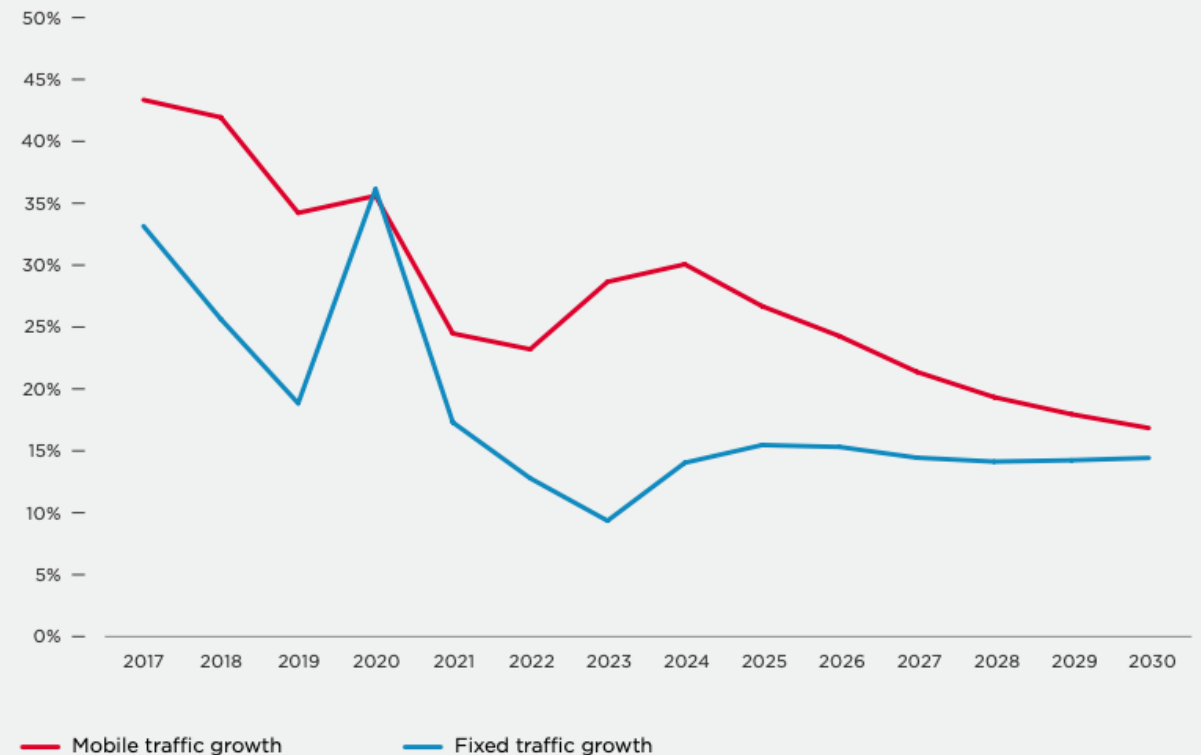
Wi-Fi	Mobile
Improve capacity	Improve capacity
Support future use cases like VR, XR, 8K video	Support future use cases like VR, XR, 8K video, sensing
Faster speeds	Faster speeds

Data: Data traffic growth is trending down for both technologies

(Source: [GSMA](#))

- Arguments from mobile and Wi-Fi are mostly based on future predictions on capacity & use cases
- Yet: Insight from mobile data traffic provides no answers because growth is shrinking for both technologies

Mobile and fixed traffic: percentage growth in Europe



Thanks!

SignalTracker



Download our app
using the QR code

