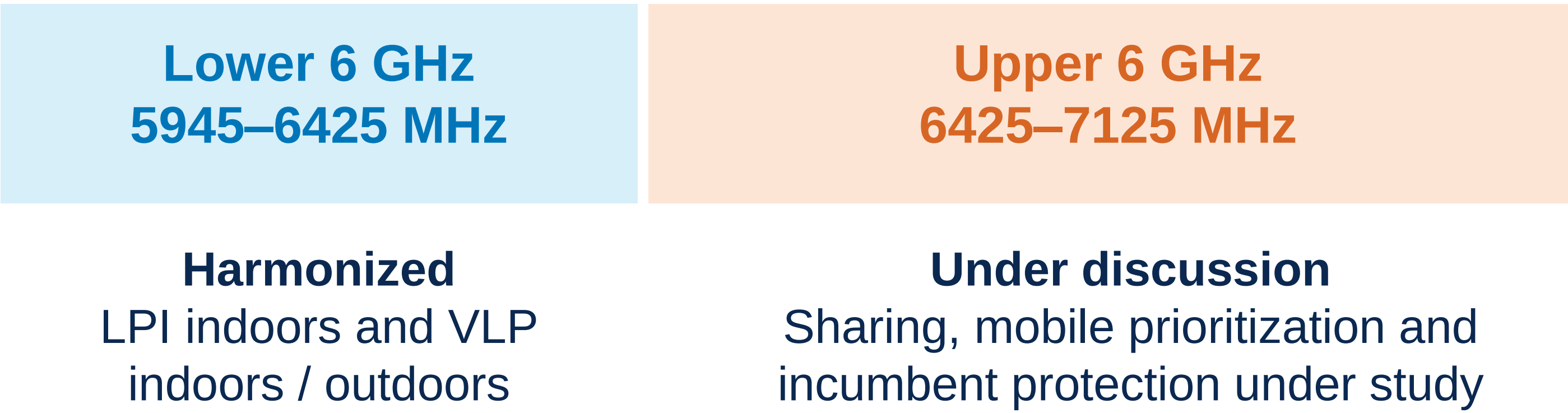
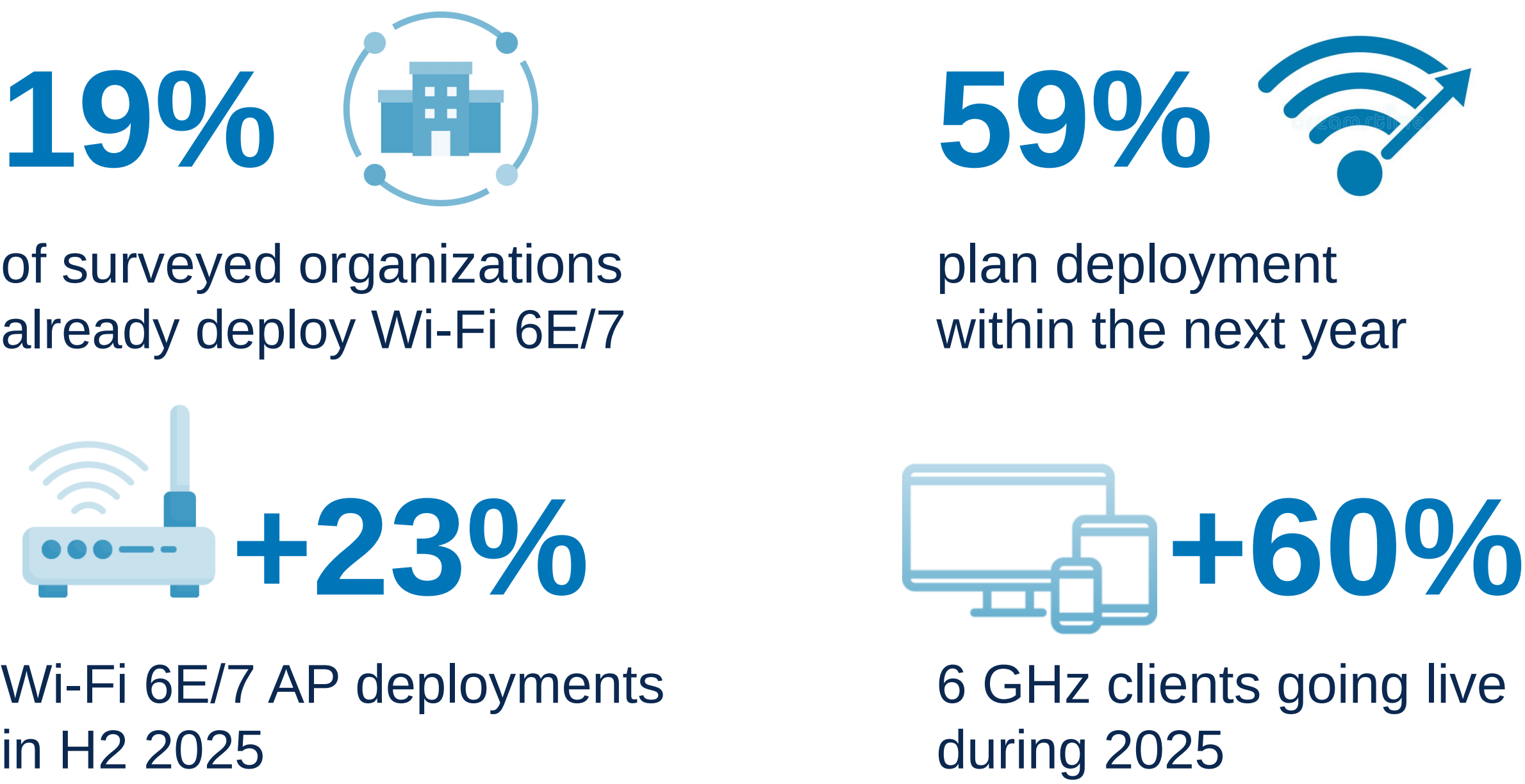


1 Europe: spectrum and adoption

The EU baseline opens 480 MHz for Wi-Fi.
A further 700 MHz remains at the centre of the spectrum-policy debate.



Growing adoption of 6 GHz Wi-Fi



* Global industry survey and telemetry

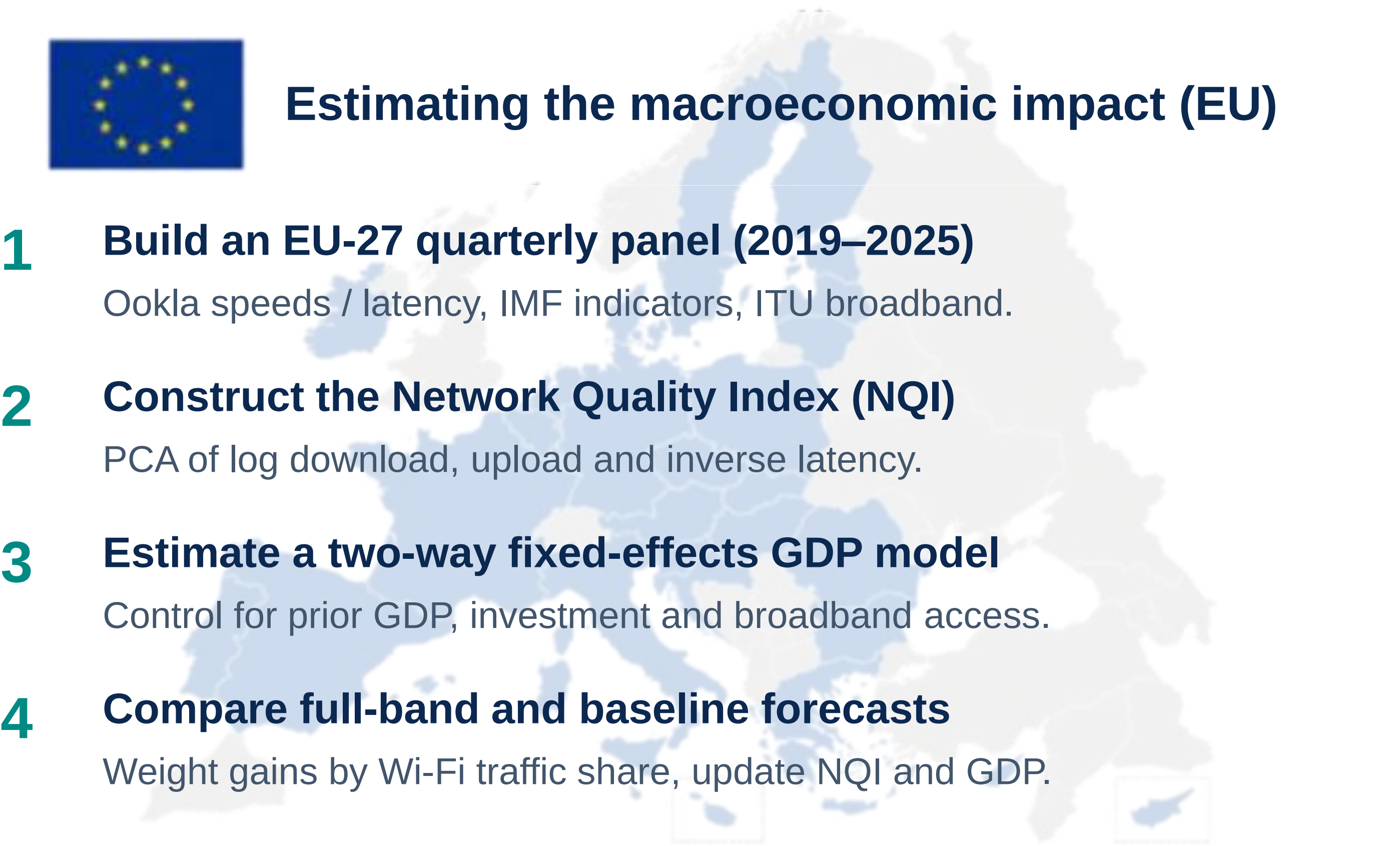
3 Technical gains and GDP methodology

Full 6 GHz versus lower 6 GHz access



Contention model based on 50 APs per location, with 5–50 STAs per AP. OFDMA and MLO are not explicitly modeled.

GDP model inputs: +7.5% throughput and –8.75% end-to-end latency for Wi-Fi traffic. The latter assumes Wi-Fi accounts for 25% of total delay.

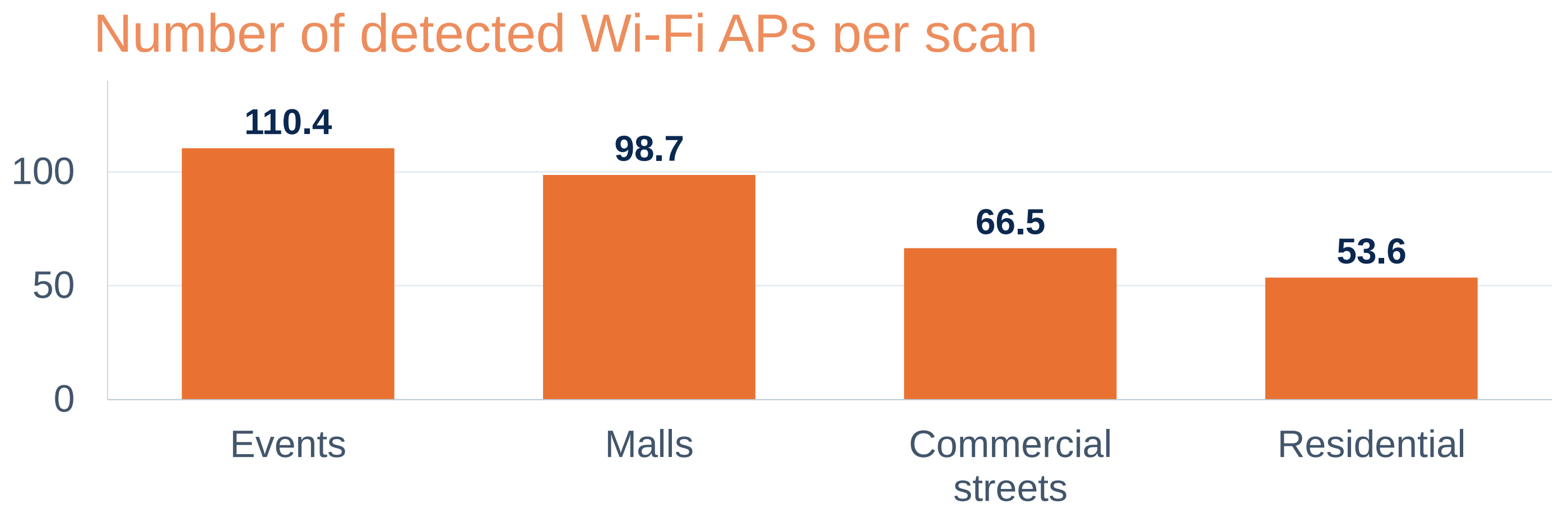


5 Conclusions and future work

Policy implication: weigh economic value alongside coexistence. Delayed access carries a modelled opportunity cost, while clear, harmonized rules can reduce investment uncertainty.

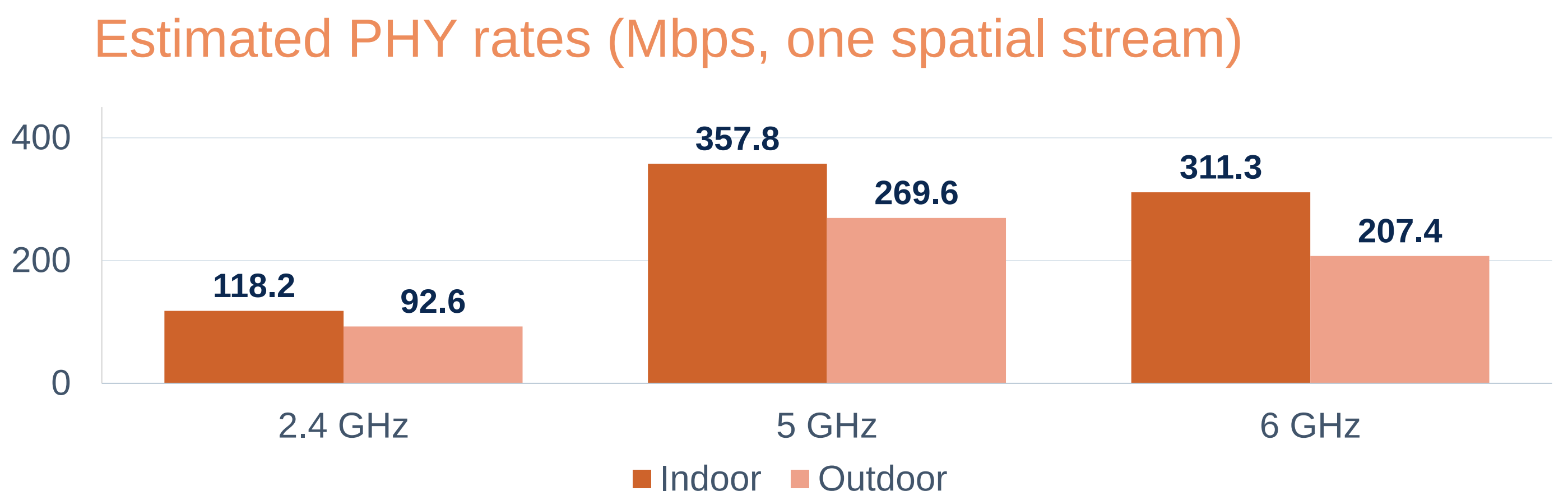
Next step: assess licensed mobile use on comparable terms, accounting for rollout timing and ecosystem maturity. Compare unlicensed, licensed and shared options without presuming a winner.

2 Barcelona: evidence from the field



63.6 physical APs per scan (on average)
40.5% are Wi-Fi 6/6E

95.4% of active STAs on 5 GHz
At 6 GHz: 1.5% of APs and 0.9% of active STAs.



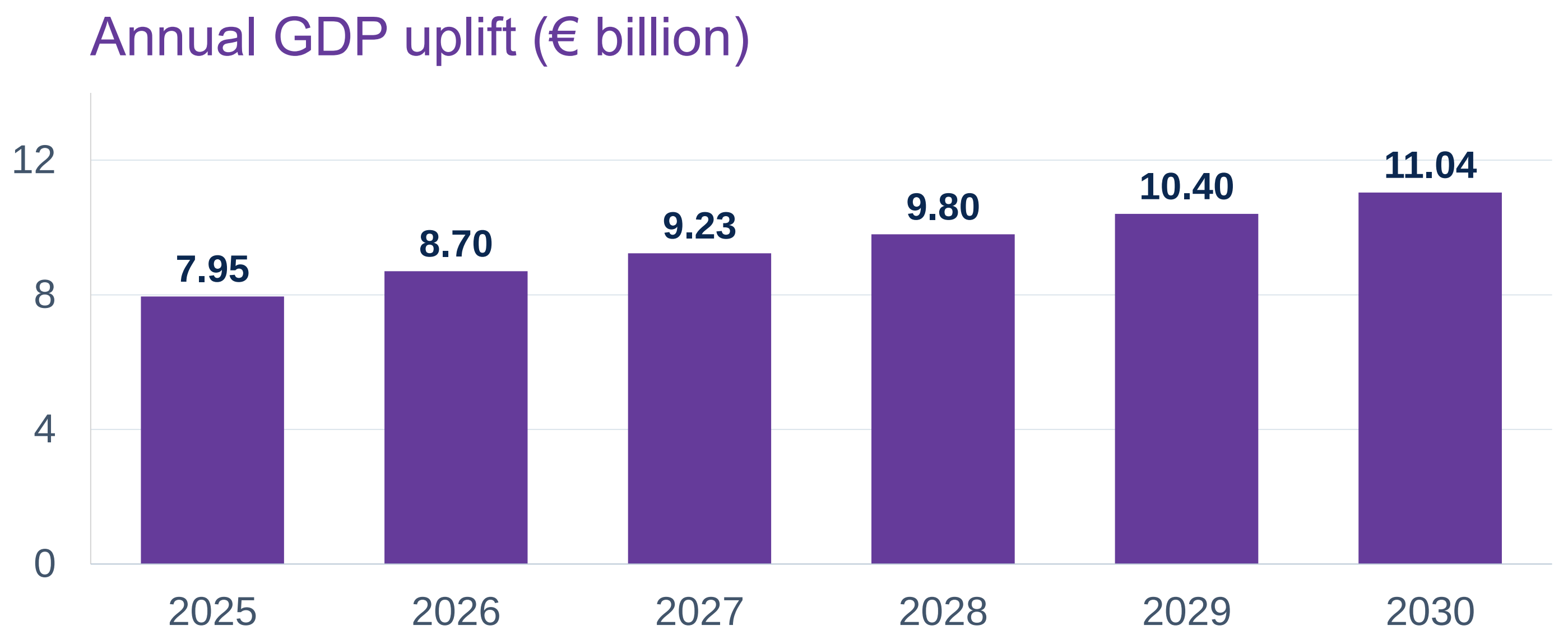
6 GHz has the lowest spectral efficiency: path loss, power limits and indoor-to-outdoor penetration reduce RSSI. These are PHY estimates, not measured throughput.

4 GDP impact and broader benefits

€57.118 billion

Cumulative EU-27 GDP uplift, 2025–2030

Modelled full-band scenario relative to continued lower-band-only access.



Broader societal benefits

Affordable connectivity and traffic offload
More productive businesses and remote work
Support for AI, XR, digital twins and industrial IoT

Qualitative benefits, not separately monetized or added to the GDP estimate.



Read the paper

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