



**Four Brands, One Common Purpose:
Better Connectivity for All**

 **SPEEDTEST**®

Crowdsourced network performance,
quality, and availability

Downdetector®

Service monitoring, customer engagement,
and disruption management

ekahau®

Wi-Fi network design, optimization,
troubleshooting, and security

RootMetrics®

Controlled drive and walk mobile
network testing and benchmarking

SPEEDTEST®

600M+
app installs

11M+
daily tests



60B+
tests to date

15K+
global test
servers

Downdetector®

150M+
unique users

25M+
mo. problem
reports

34K+
services
monitored

70+
countries

Billions

of daily crowdsourced network
performance samples

Tens of Millions

of data points on NPS, subscriber
ratings, and consumer sentiment

Millions

of miles of controlled drive and
walk network surveys

Defining the Future of Connectivity

Ookla data is used by governments, regulators, standards bodies, NGOs, academic institutions, trade groups, and analysts to solve the biggest connectivity challenges



Ofcom



GSA
Global Mobile Suppliers Association

GSMA™



The Global Media's Trusted Source

170K+ articles published annually
referencing Ookla brands

270B+ unique monthly impressions on
publications citing Ookla data

73.2% share of voice for Ookla and
Speedtest combined in
network intelligence

Global Reach and Impact

90% of the Fortune 500 trust
Ekahau networking insights

5K+ Enterprise clients for Ookla
in over 120 countries

Quantifying the In-Building Connectivity Gap

Lifting the lid on **empirical indoor cellular evidence** for the first time in European cities

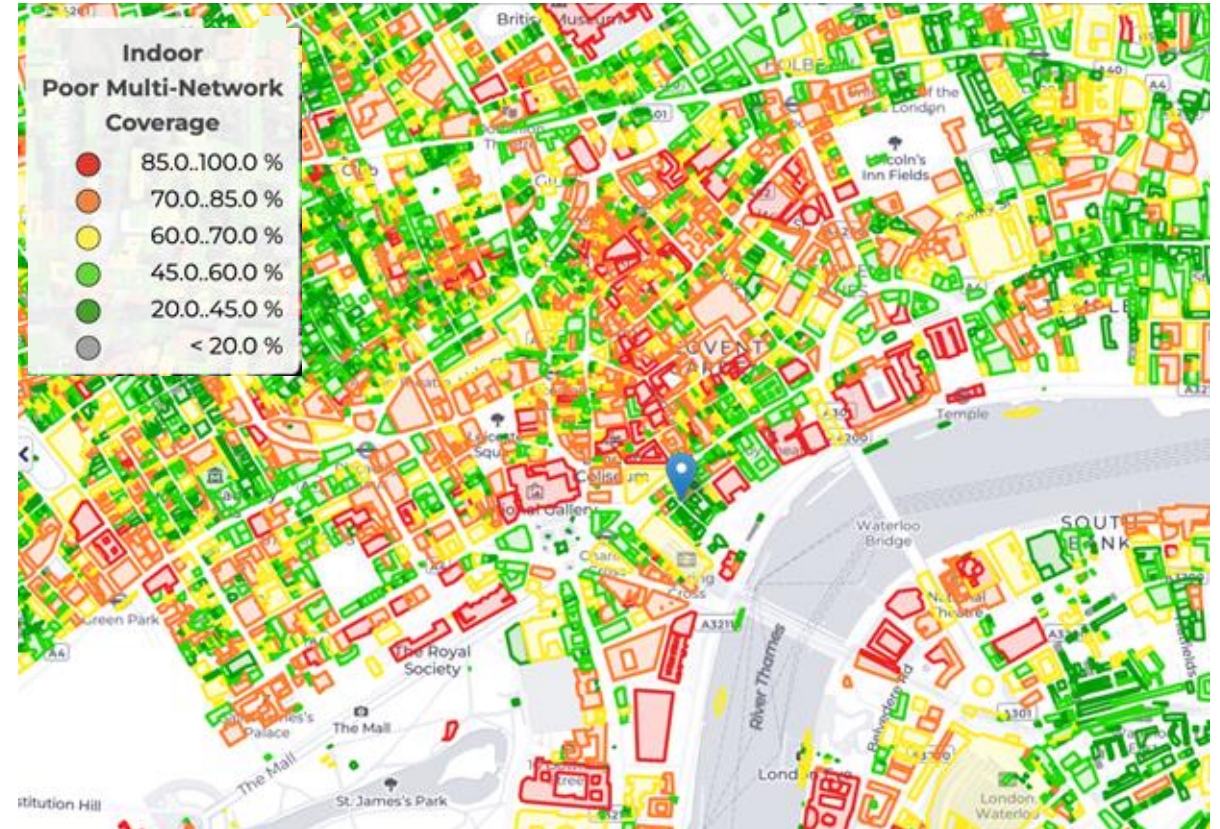
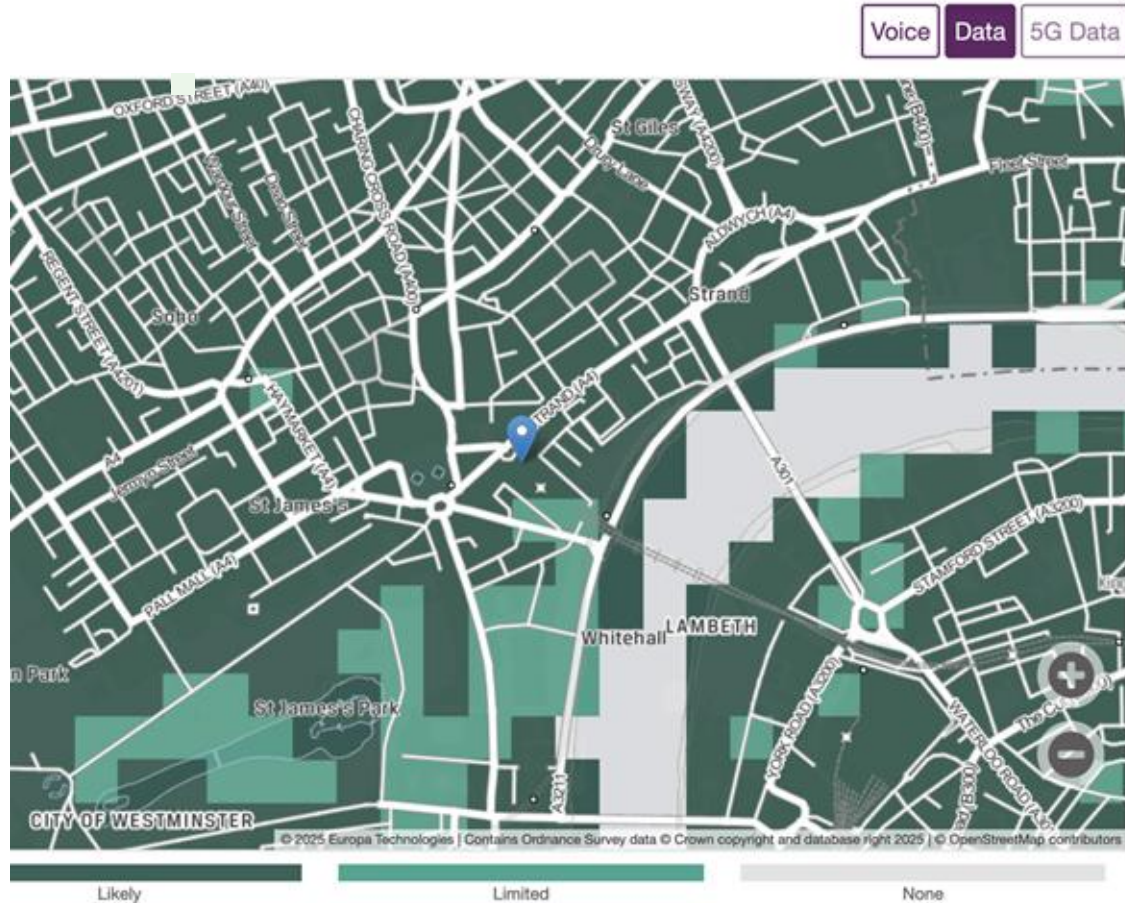


Luke Kehoe
Lead Analyst



Instagram vs. Reality for Indoor Cellular

Outdoor-centric coverage projections miss vast indoor cellular gaps in cities like London, limiting the opportunity for evidence-based policy interventions.



Crowdsourced data from Ookla's Cell Analytics™ (right image) reveals clusters of buildings near Covent Garden with poor multi-network coverage, indicating limited access to mobile data and other telephony services deep indoors across multiple operators. Ofcom's outdoor-centric coverage checker (left image) misses the indoor not-spots, lacking the building-level precision required for a comprehensive understanding of coverage levels in London.

Indoor Not-Spots are evident across Europe

Relying on outside-in network design has let vast in-building coverage gaps infect the building stock and proliferate across major cities, posing risks to public safety and impacting the network experience.



Crowdsourced data from Ookla's Cell Analytics™ (left image) reveals clusters of buildings near Champs-Élysées (Paris) with poor multi-network coverage, indicating limited access to mobile data and other telephony services deep indoors across multiple operators. Operator-level data (right image) reveals a large proportion of the building stock exhibits poor indoor signal quality outcomes.

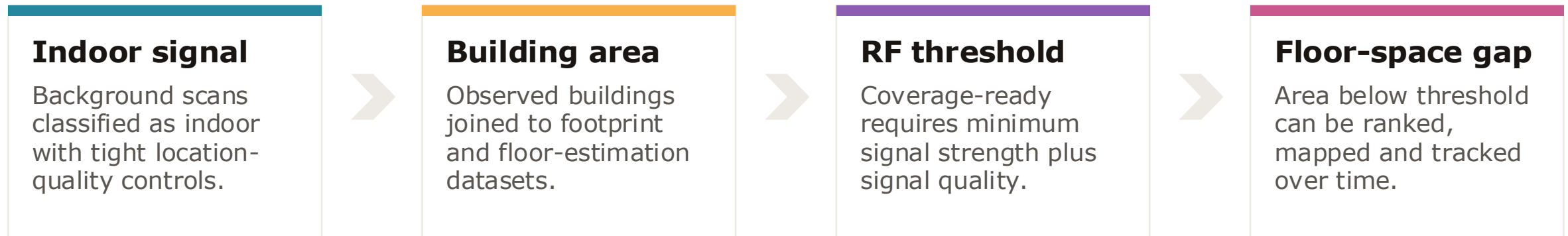
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**When you can measure what
you are speaking about, and
express it in numbers, you
know something about it.**

– Lord Kelvin

The indoor cellular gap finally has a unit: square metres

High-confidence indoor signal scans can be spatially joined to building footprints and floor-area estimates, turning indoor cellular from anecdote into a measurable infrastructure layer.



Why RF-quality floor space, not speed alone?

Speed measures performance where a connection is already usable. RF-quality floor area measures whether the building itself is coverage-ready.

What coverage-ready floor area means

A building contributes to the ready total only when indoor RF passes the quality gate. The city result is weighted by square metres, not by observation volume.



London Q1 2026



London's indoor floor-space gap is four times Berlin's in absolute terms

Q1 2026 shows a stark city-level contrast: London has a larger measured floor-space gap and a materially lower coverage-ready share.

Coverage-ready measured indoor floor area, Q1 2026

London



69.4 million m²

London measured indoor cellular floor-space gap

69.4m m² measured indoor floor area below threshold

Berlin



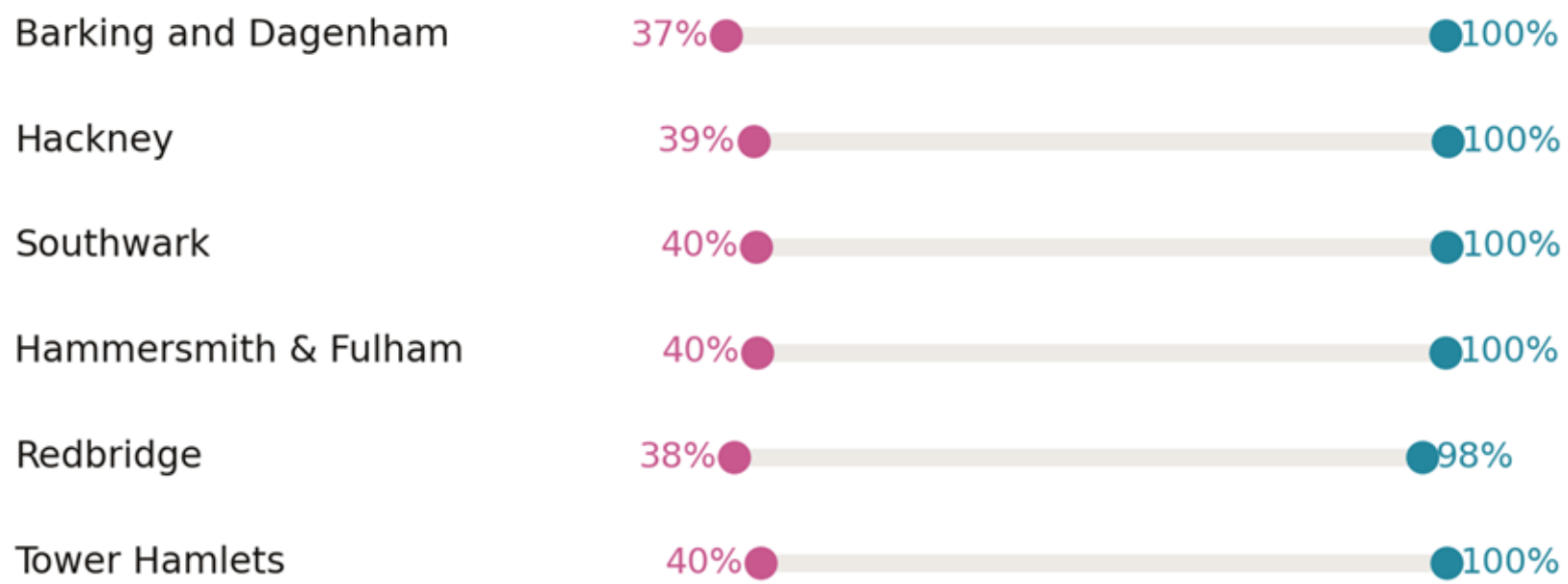
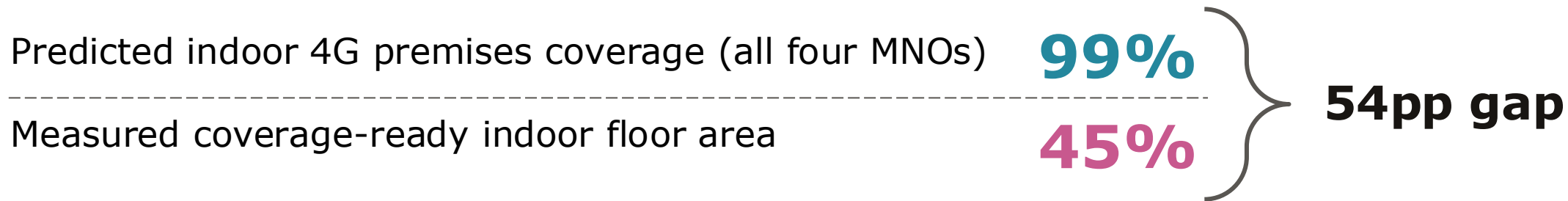
17.2 million m²

Berlin measured indoor cellular floor-space gap

17.2m m² measured indoor floor area below threshold

Prediction-based indoor cellular coverage can look complete

Ofcom’s statistic asks what share of premises are predicted to receive indoor 4G from all four MNOs. Our metric asks what share of indoor floor area is actually coverage-ready.



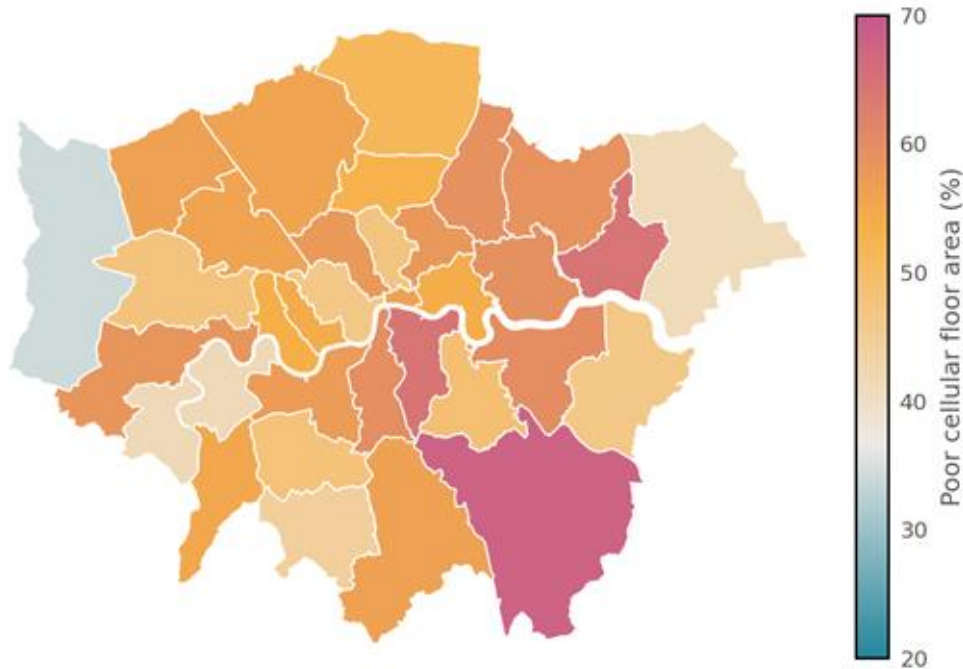
What this means

A premises can count as covered while large parts of the building still sit below the RF-quality threshold. The gap becomes visible when measured in square metres.

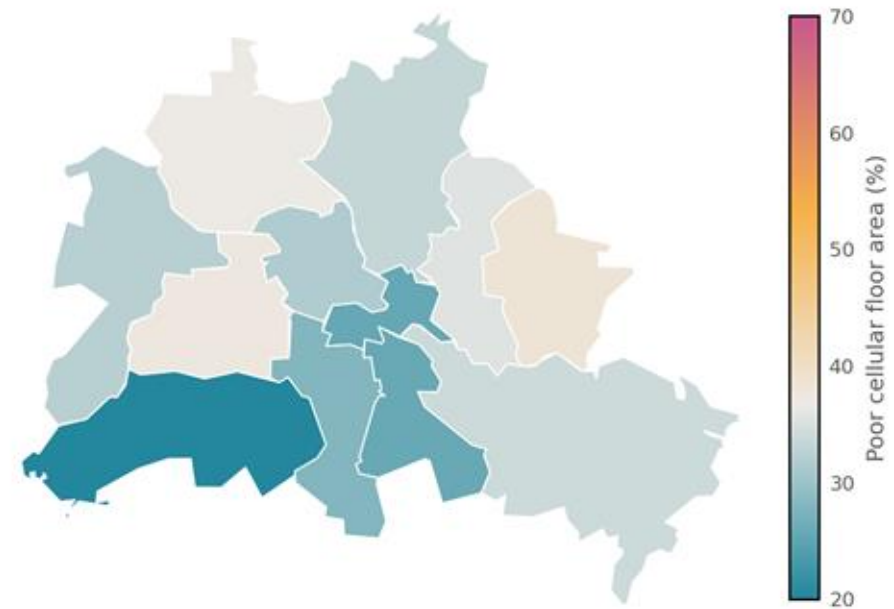
The indoor cellular gap now has a map, not just an average

London's indoor coverage not-spots are broader and deeper; Berlin's gaps are smaller but still locatable at borough-equivalent level.

London



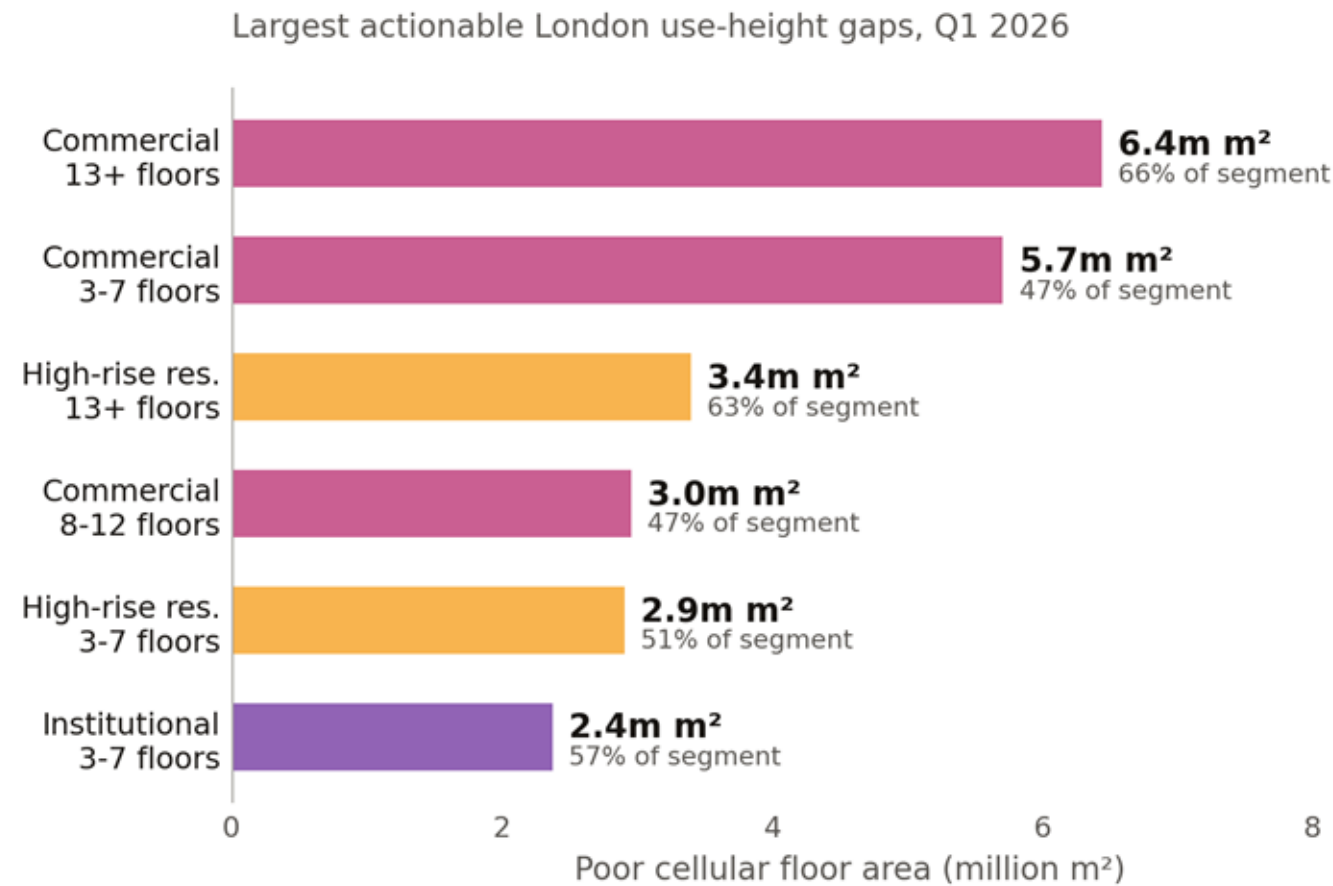
Berlin



Colour scale shows the share of measured indoor floor area below the RF-quality threshold.

And the gap has a striking building-use fingerprint

London’s measured gap can be decomposed by use case and height, turning indoor coverage from a city average into an intervention matrix for the first time.



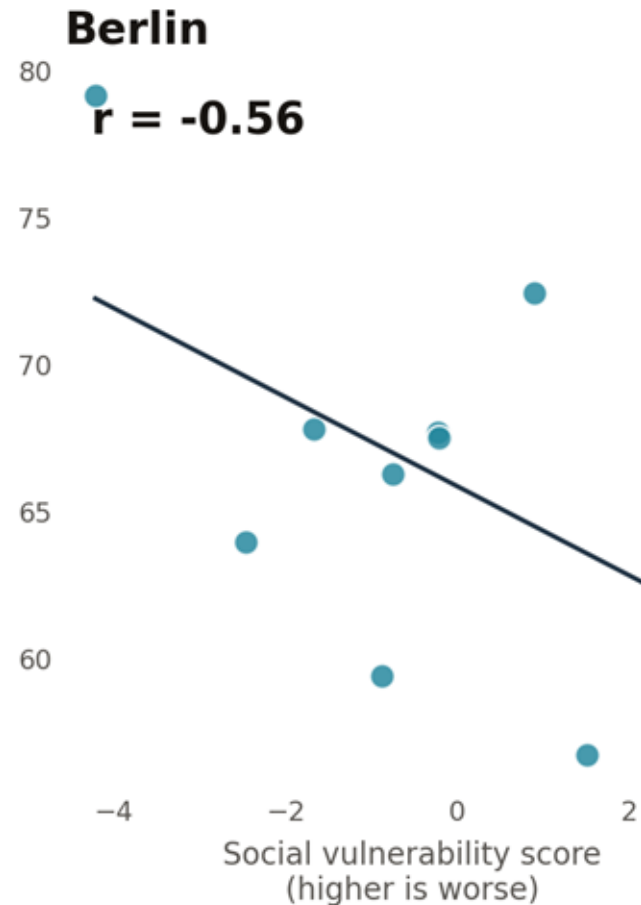
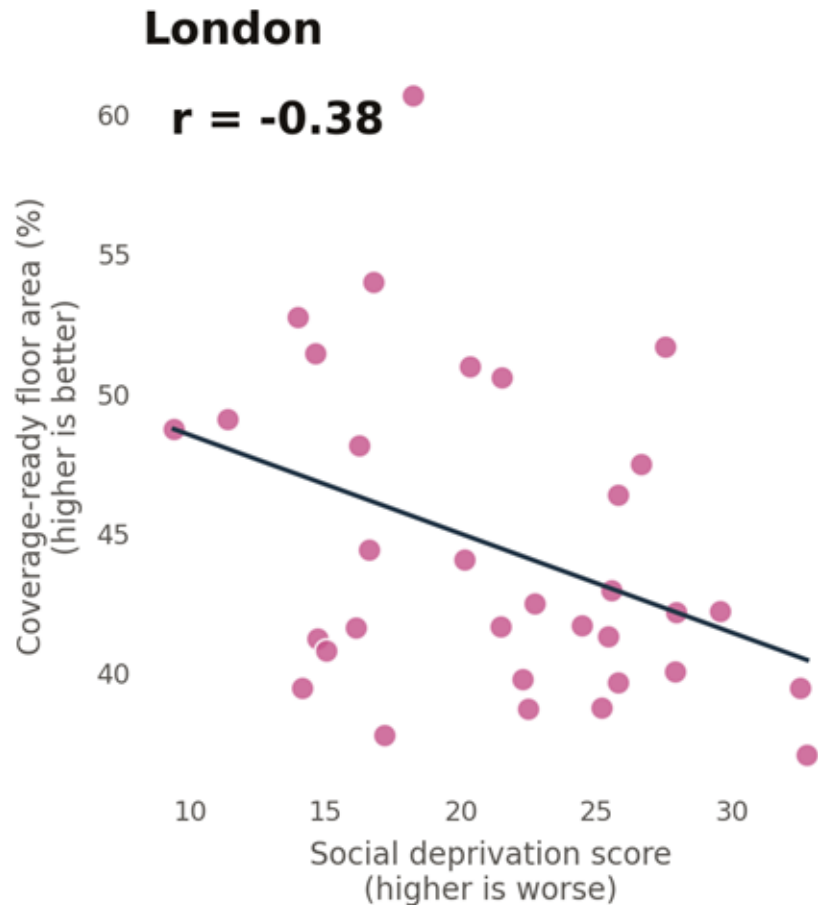
12.2 million m²

in the two largest commercial height segments

Actionable London use-height segments; mixed / other removed for targeting clarity. Labels show m² below threshold and the share of that segment not coverage-ready.

Indoor gaps intersect with urban disadvantage

London shows a statistically meaningful negative correlation with deprivation; Berlin points in the same direction but at lower statistical power. The likely mechanism is built environment.

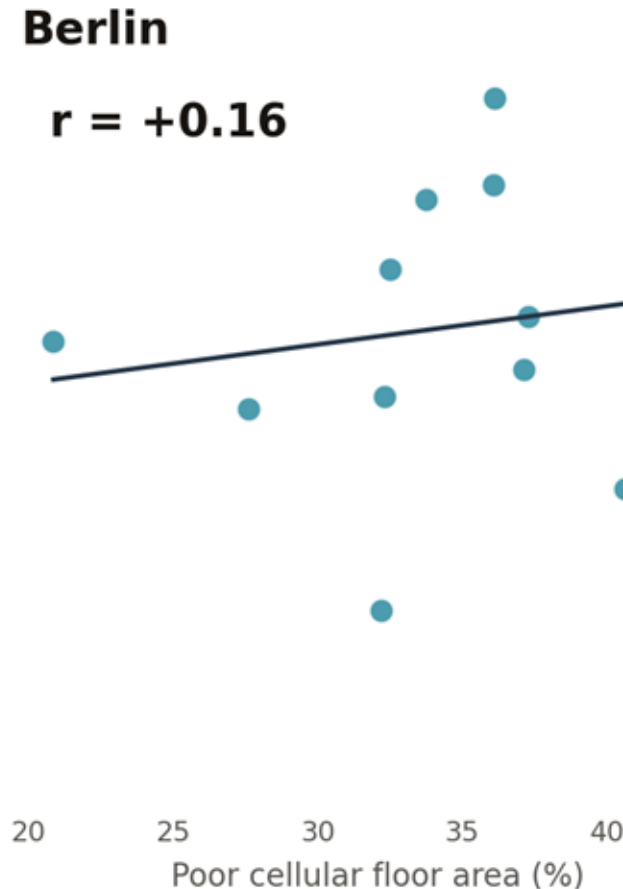
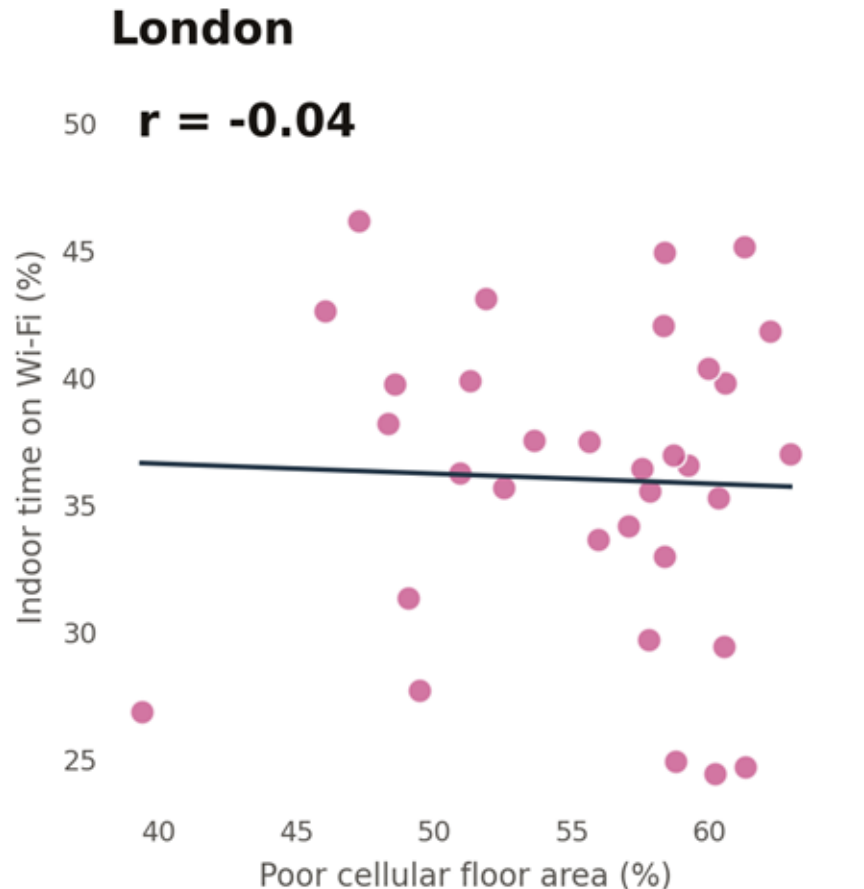


Careful interpretation

This is not a causal claim. It indicates where indoor connectivity, building conditions and social vulnerability overlap.

Wi-Fi time is context, not a cellular-gap proxy

Testing the correlation shows a weak relationship: Wi-Fi use reflects fixed broadband, building use, tariffs and user habits as well as cellular conditions.



-0.04

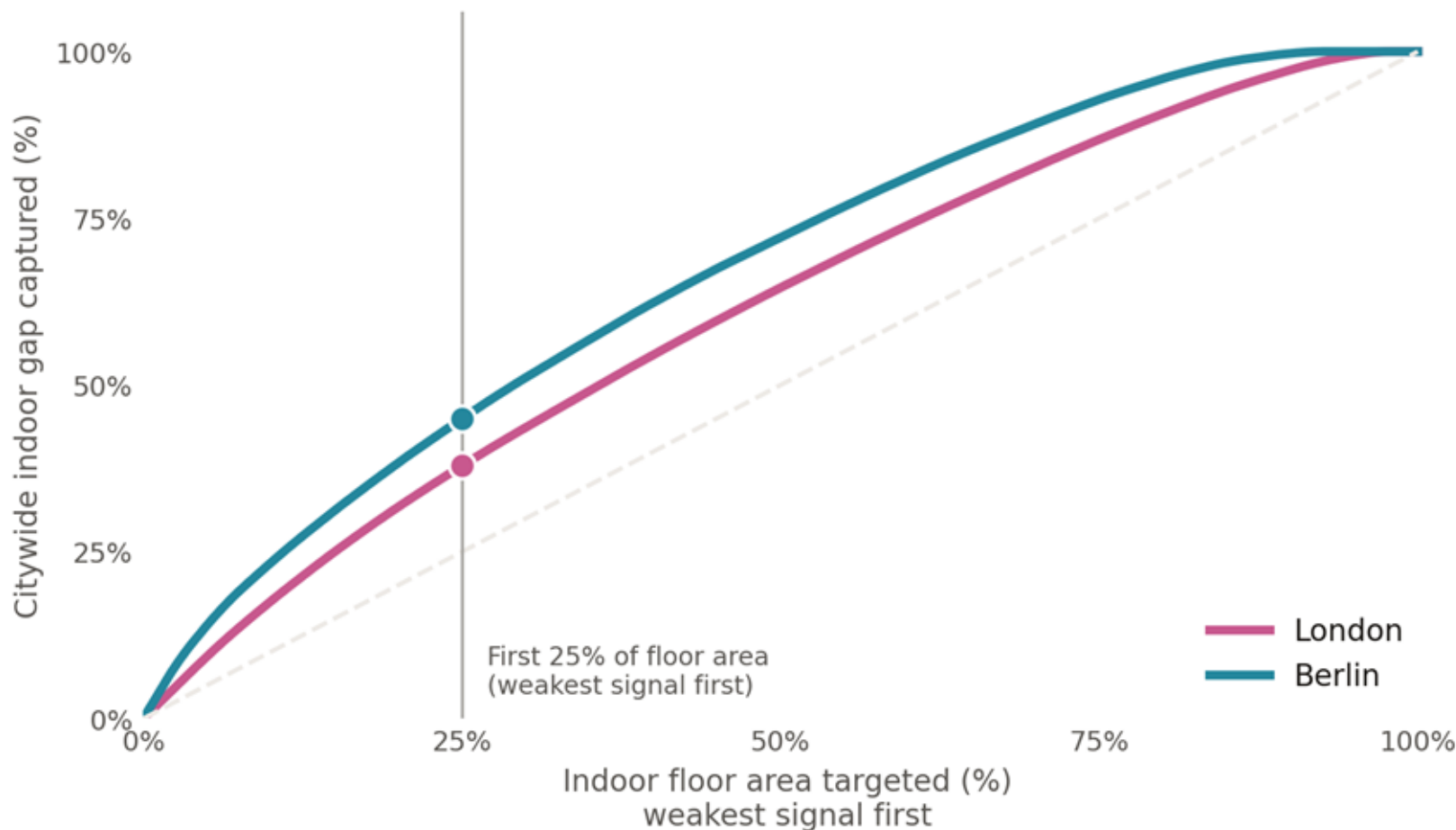
London correlation between Wi-Fi time and poor cellular floor area

+0.16

Berlin correlation between Wi-Fi time and poor cellular floor area

Targeting the weakest floor area first delivers outsized gains

Reading the x-axis as an intervention list: start with the weakest-signal floor area, then move outward. The steeper the line, the more concentrated the gap.



38%

London poor-signal floor area captured by the weakest 25%

45%

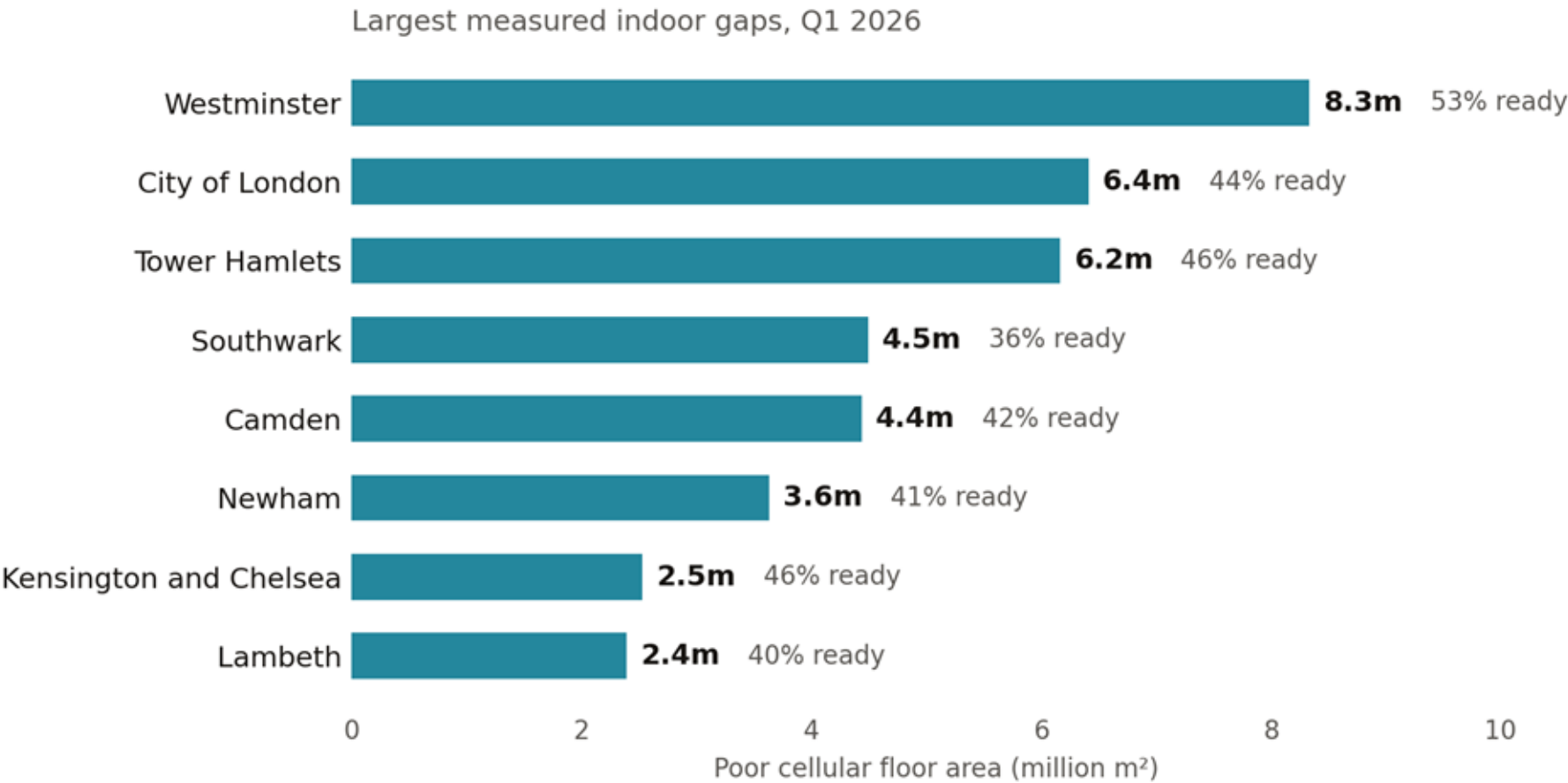
Berlin poor-signal floor area captured by the weakest 25%

How to read it

At 25%, the curve shows how much of the total indoor gap sits inside the weakest quarter of floor area.

London's biggest indoor gaps are concentrated in major commercial boroughs

The largest gaps by square metres include central commercial and mixed-use boroughs, not only the lowest-performing outer areas.

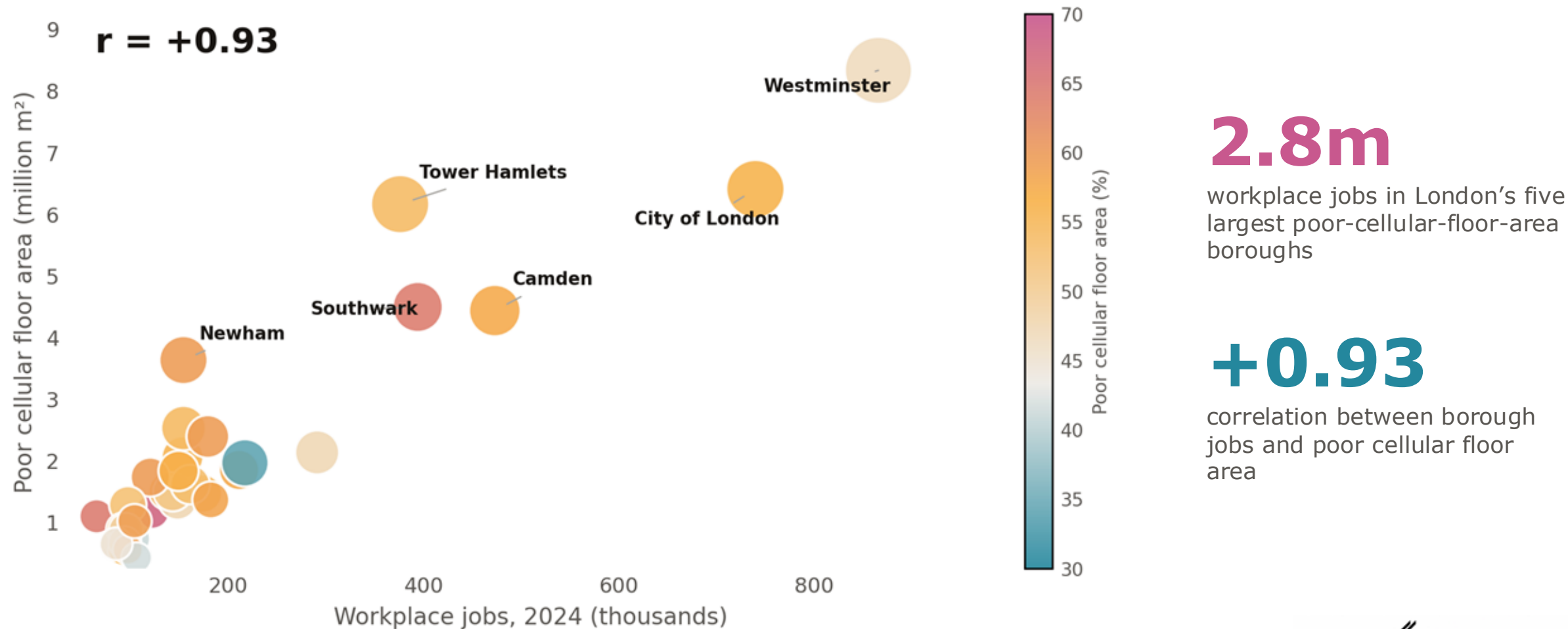


Square metres change the priority list

Westminster, the City, Tower Hamlets, Southwark and Camden become first-order intervention geographies when the gap is measured as floor area.

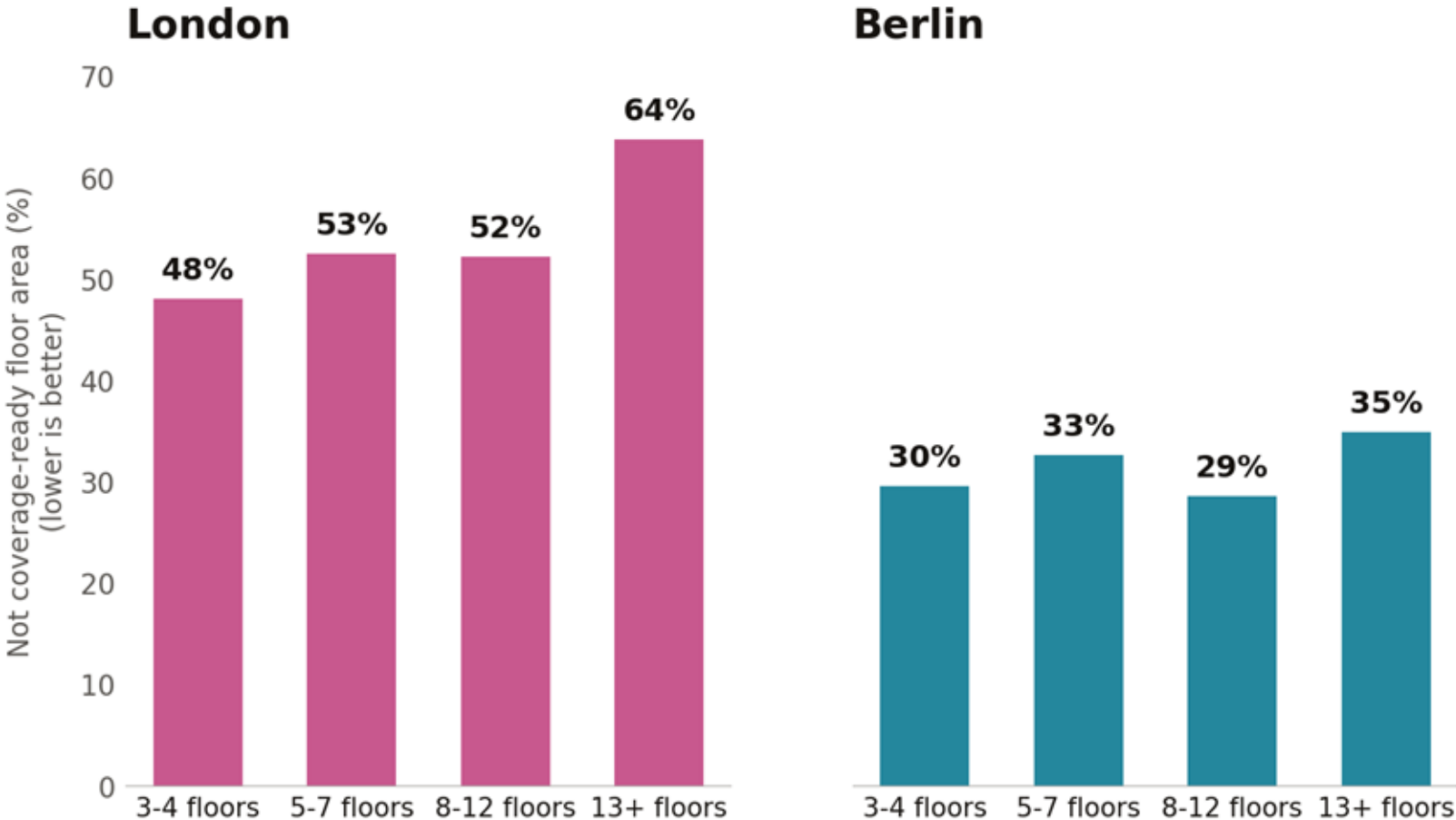
The largest gaps sit where London works

Overlaying GLA/ONS workplace jobs shows that poor cellular indoor floor area is concentrated in the city's highest-employment boroughs.



The high-rise penalty is visible in London

Tall buildings are where indoor RF weakness becomes a real-estate and resident-experience problem.



64%

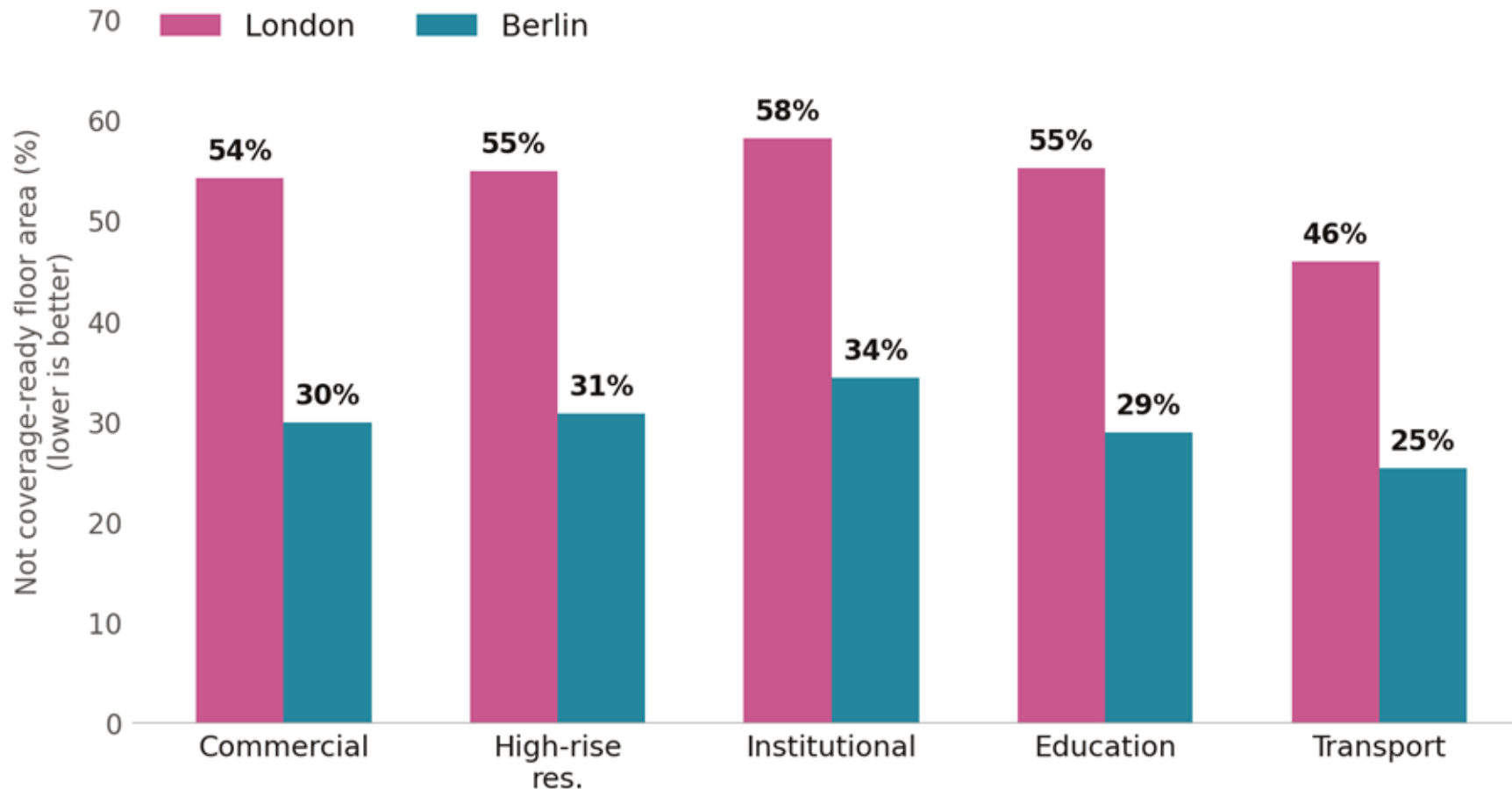
London 13+ floor
measured indoor area
not coverage-ready

35%

Berlin 13+ floor
measured indoor area
not coverage-ready

Commercial & institutional floor space make the gap material

The indoor gap touches offices, high-rise housing, education and institutional estate, where intervention cases are different but measurable.



17.2 million m²

London commercial poor cellular floor area in Q1 2026

Use-case lens

The same metric can support landlord, enterprise, public-sector and neutral-host decisions.

Moving from coverage claims to indoor readiness

The next policy frontier is not whether an outdoor cellular service reaches an address; it is whether the building is ready for consistent indoor cellular service.

Coverage model

Useful baseline, but weak at interior floor-space diagnosis.

Building rules

Passive infrastructure and access obligations make indoor readiness governable.

Measured baseline

City-by-city floor-space metrics let regulators and cities target gaps and track progress.

London and Berlin are exemplars. The same measurement layer can be applied wherever indoor coverage policy, real-estate economics and network densification need to meet.

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**You cannot intervene in what
you cannot observe, and you
cannot govern well what you
cannot measure.**

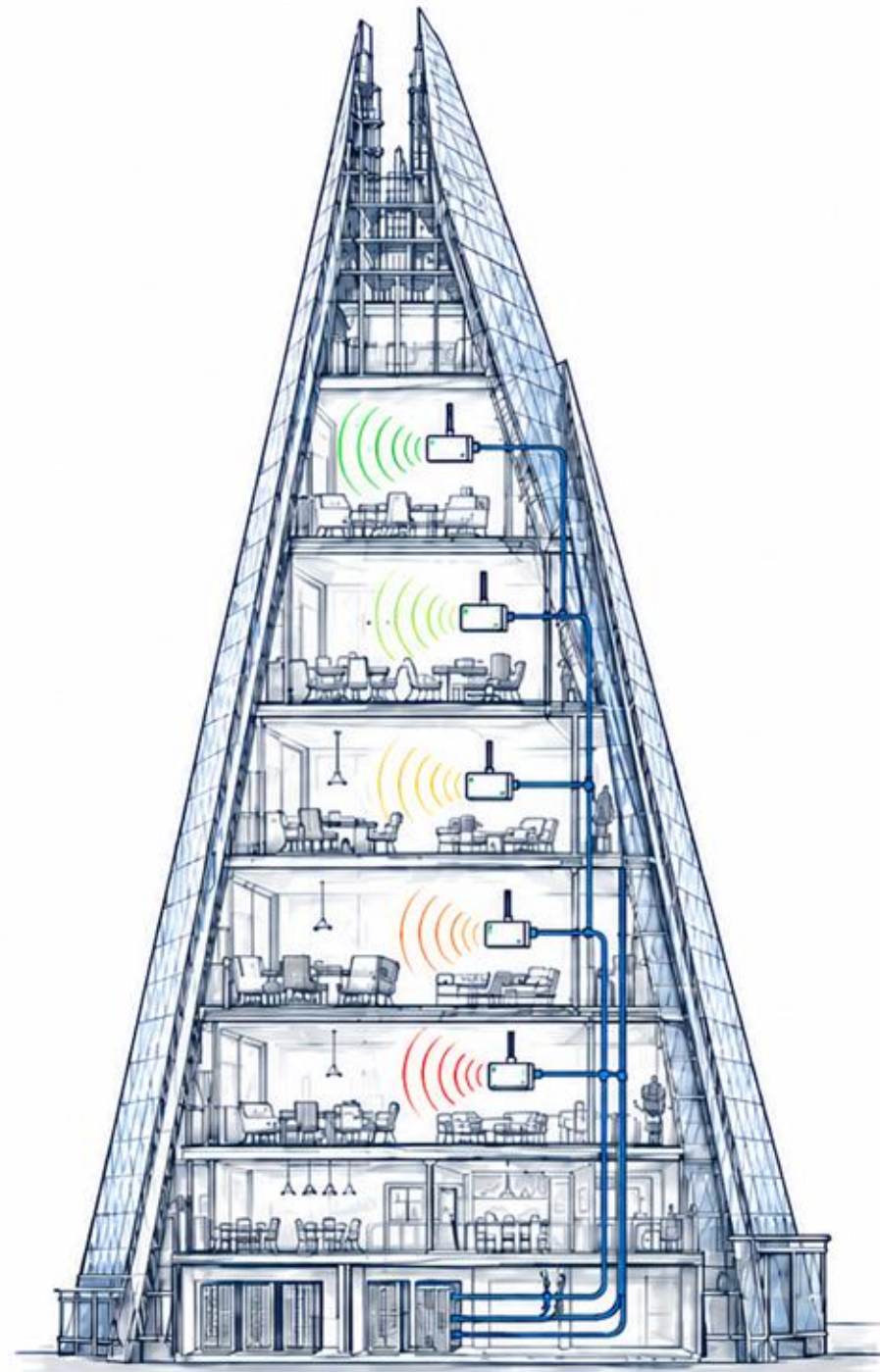
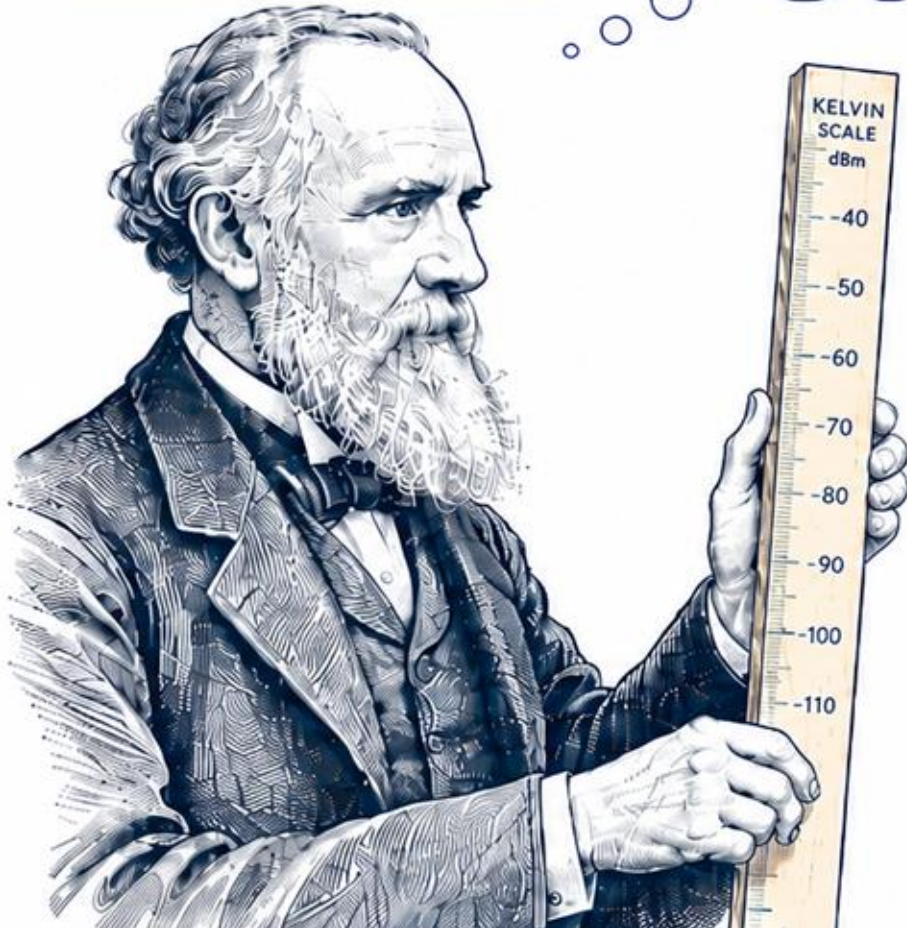
– Someone at SCWS 2026

LORD KELVIN

PIONEER OF MEASUREMENT
APPLIED TO MODERN
COMMUNICATIONS

"To measure is to know"
— Lord Kelvin

THE INVISIBLE
MADE MEASURABLE,
THE SIGNAL
MADE USEFUL.



INDOOR CELLULAR COVERAGE INDICATOR

 EXCELLENT

 GOOD

 FAIR

 POOR

 VERY POOR

Proven On-Site Network Excellence

Speedtest Certified™

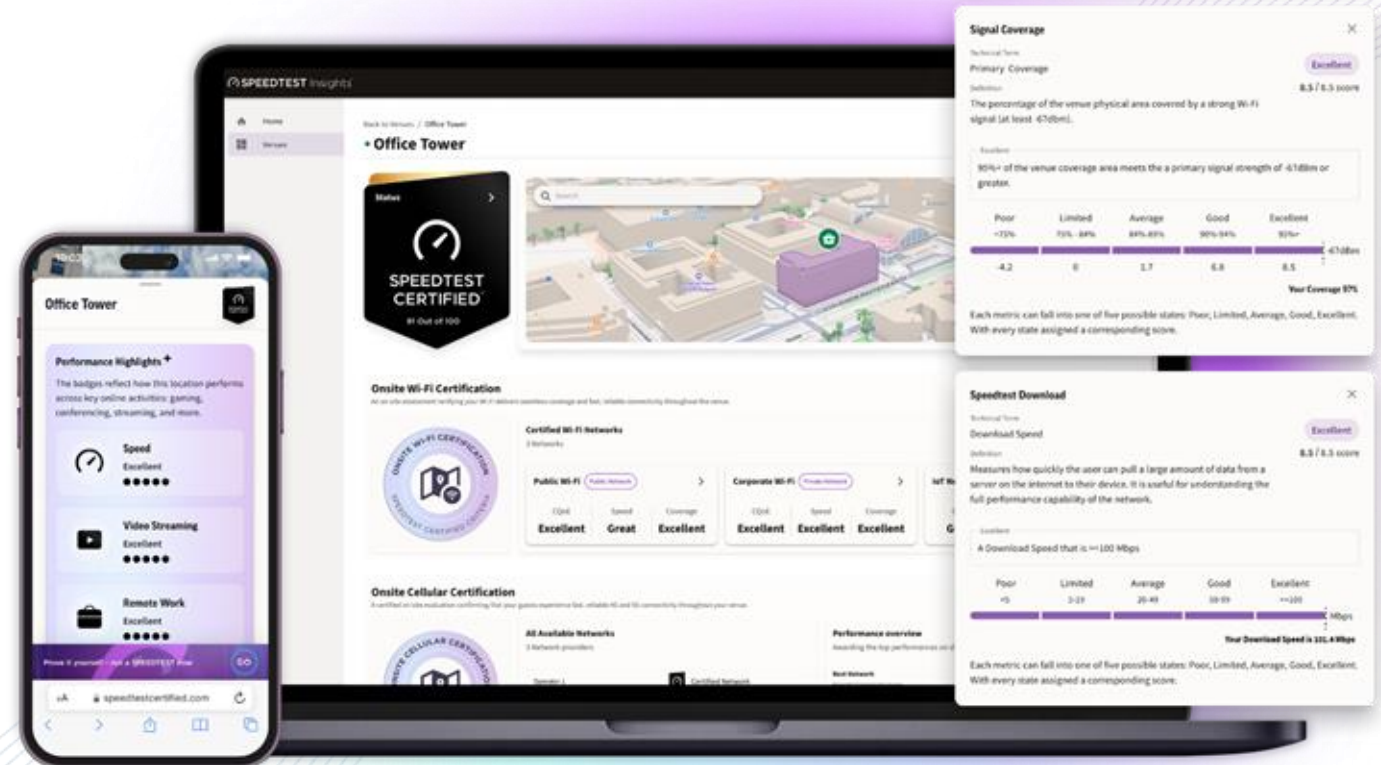
Speedtest Certified is the definitive property network verification program powered by trusted testing methodology and unrivaled brand recognition.



A comprehensive, data-driven network verification

We all know the negative consequences of poor connectivity at places like hotels, venues, hospitals, airports and more.

Speedtest Certified™ solves this problem by capturing a comprehensive view of network performance and offering a trusted badge of excellence from a globally recognized brand that distinguishes truly superior connectivity.



Thank You

Do you have any questions?

luke.kehoe@ookla.com

+353 87 445 3917

ookla.com