



Mobile^{UK}

NILGA – Mobile Connectivity

14 November 2024

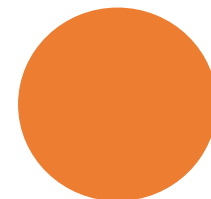
Mobile Coverage

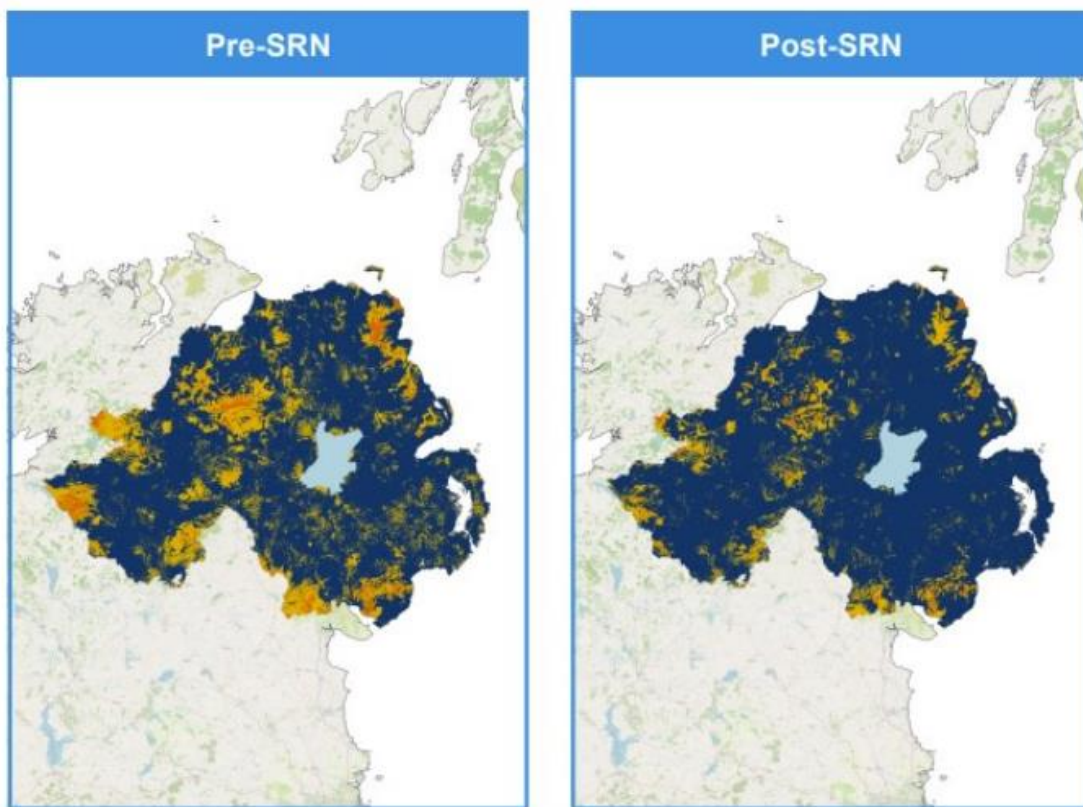
97% of the UK's landmass is covered by a 4G mobile signal from at least one mobile operator (82% by all four)

Shared Rural Network - £1 billion investment - to cover 95% of the UK's landmass. (All four MNOs – 85% (from 75%) / At least one MNO – 98% (from 97%))

5G outdoor coverage stands at 79% from at least one MNO and 17% by all four. (UK is 92% and 28%)

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Region (Local Authority)	4G Coverage from all MNOs		4G Coverage from at least one MNO	
	Pre-SRN	Forecast post-SRN	Pre-SRN	Forecast post-SRN
Antrim and Newtownabbey	86%	94%	99%	99%
Ards and North Down	85%	99%	99%	99%
Armagh City, Banbridge and Craigavon	82%	93%	99%	99%
Causeway Coast and Glens	77%	87%	96%	99%
Derry City and Strabane	61%	76%	92%	97%
Fermanagh and Omagh	71%	79%	96%	98%
Lisburn and Castlereagh	88%	96%	99%	99%
Mid Ulster	73%	87%	99%	99%
Mid and East Antrim	81%	88%	98%	98%
Newry, Mourne and Down	67%	80%	94%	98%

Is 5G and Mobile Connectivity a 'Nice to Have?'

- Essential to economic growth and levelling up
- Data requirements have increased 40% every year for the last decade.
- 5G is the only way mobile networks will be able to keep up with this demand
 - Extra capacity
 - Utilises new spectrum
 - More efficient
- Cumulative benefits of 5G for economic output in Northern Ireland stand at £2.7 billion between 2026 and 2030.



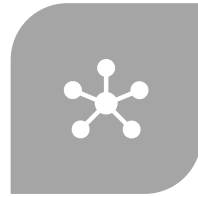
Economic Boost

- 4G
 - A range of social and economic benefits worth between £249,000 and £6.9 million to different types of rural communities over 15 years.
 - A reliable mobile signal is helping transform local industries, with small businesses, freelancers and tourist populations all deriving economic benefits from 4G coverage
 - Recent research by EE found that in the coastal hamlet of Dunseverick in Northern Ireland, EE's 4G generates benefits worth between £353,000 and £518,000 to the local population.
- 5G
 - Examples already benefiting NI economy
 - Belfast Harbour is harnessing 5G-led innovations to accelerate the digitisation of port operations including automatic bulk freight handling and safety improvements
 - Queen's University is harnessing 5G via Building Information Modelling (BIM), Digital Twin technology and AR (Augmented Reality) to support the design and construction of a £100 million, state-of-the-art Advanced Manufacturing Innovation Centre.

Connectivity opportunities



VIRTUAL REALITY



LOCAL AUTHORITY
DIGITAL
TRANSFORMATION
STRATEGIES



REMOTE AND FLEXIBLE
WORKING



ONLINE ACCESS TO
SERVICES



SOCIAL CARE



CLIMATE CHANGE



21ST CENTURY HIGH
STREET



MOBILE BROADBAND
(FWA)



DIGITAL INCLUSION



INWARD INVESTMENT

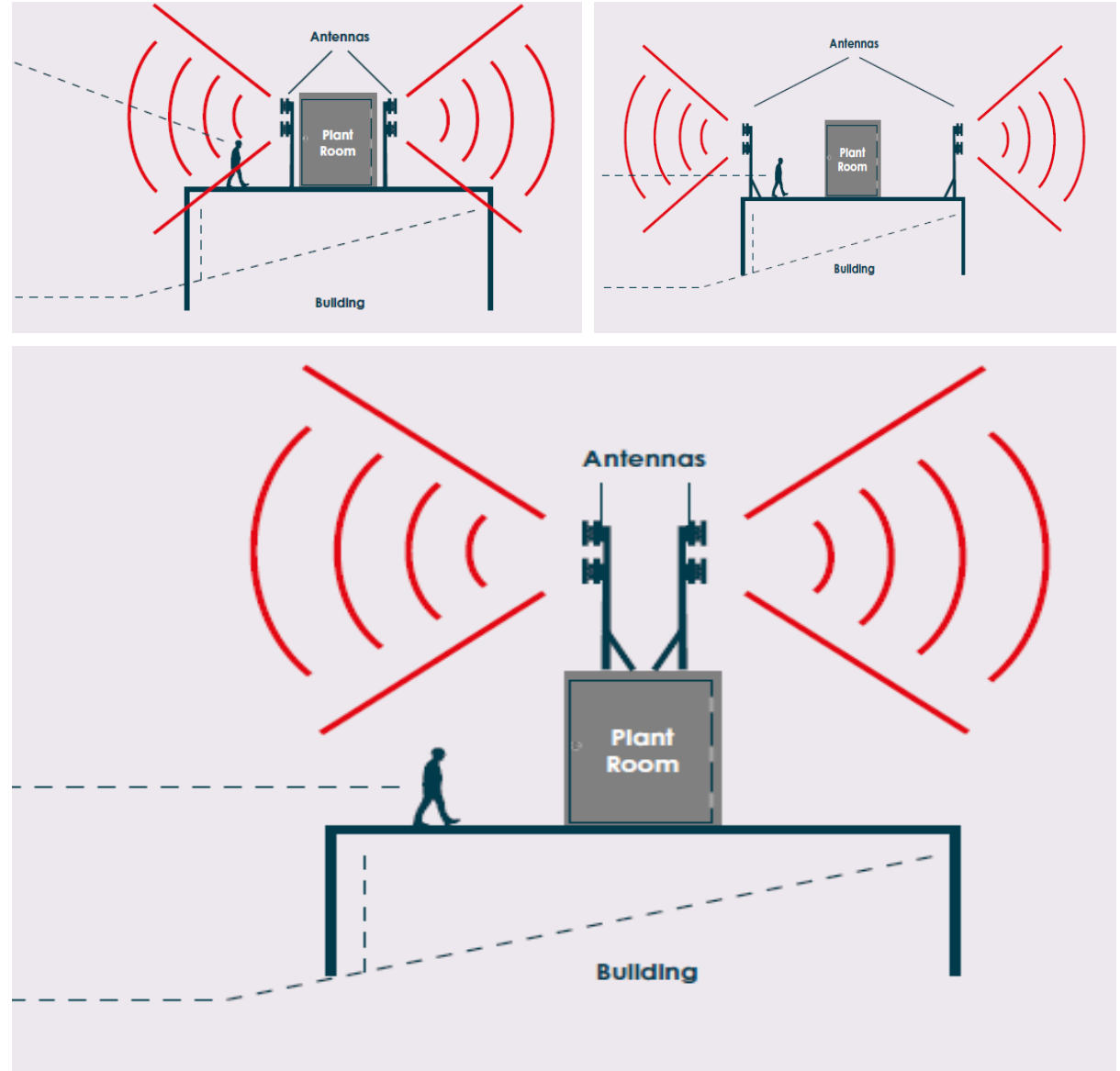


Invisible Signal – Physical Infrastructure



Applications targeted to the environment
Capacity and Coverage

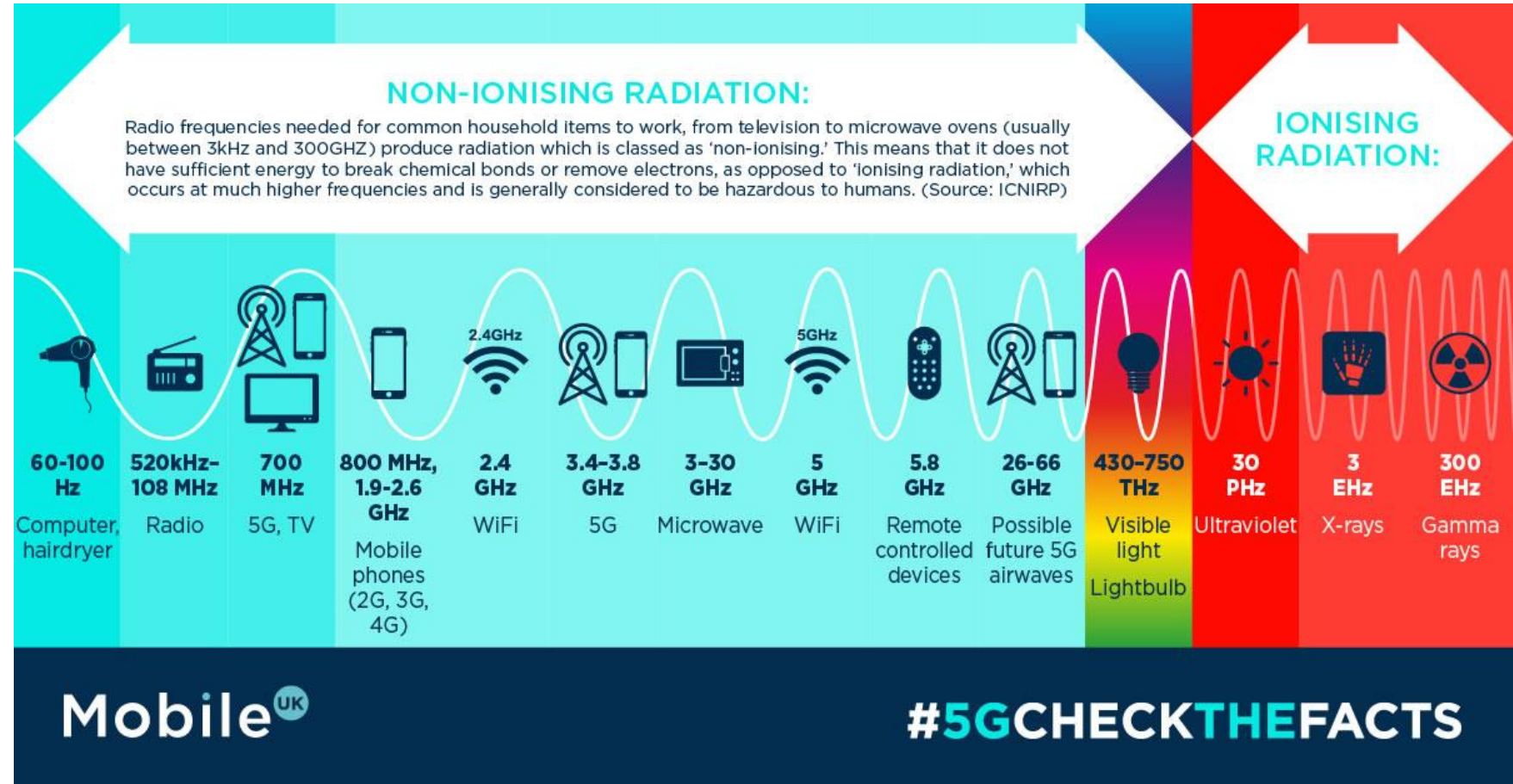
Why there?
Why so high?
Why cabinets?



Tree, Mast or
Toilet Brush?



Public Health





Macro vs Small Cells

- Both macro cells and small cells provide 5G connectivity
- Complementary roles
 - Macro cells broadcast over a wide area (i.e. whole town / kilometres)
 - Small cells broadcast localised coverage (metres)
 - Small cells provide additional coverage and capacity in areas of high-density demand (i.e. stadiums, transport hubs etc.).
- Different capabilities
 - Macrocells are less affected by obstructions, whereas small cells have line of site limitations
 - Macrocells can connect thousands of users, while microcells connect hundreds
 - Small cells use low power and can be less costly and quicker to deploy utilising street furniture
- **Both are required to create the networks of the future**



Barriers to Deployment



Perceptions, Misinformation and Misunderstanding



Leadership deficit on promotion of mobile



Planning regulations out of step with other nations



Planning delays

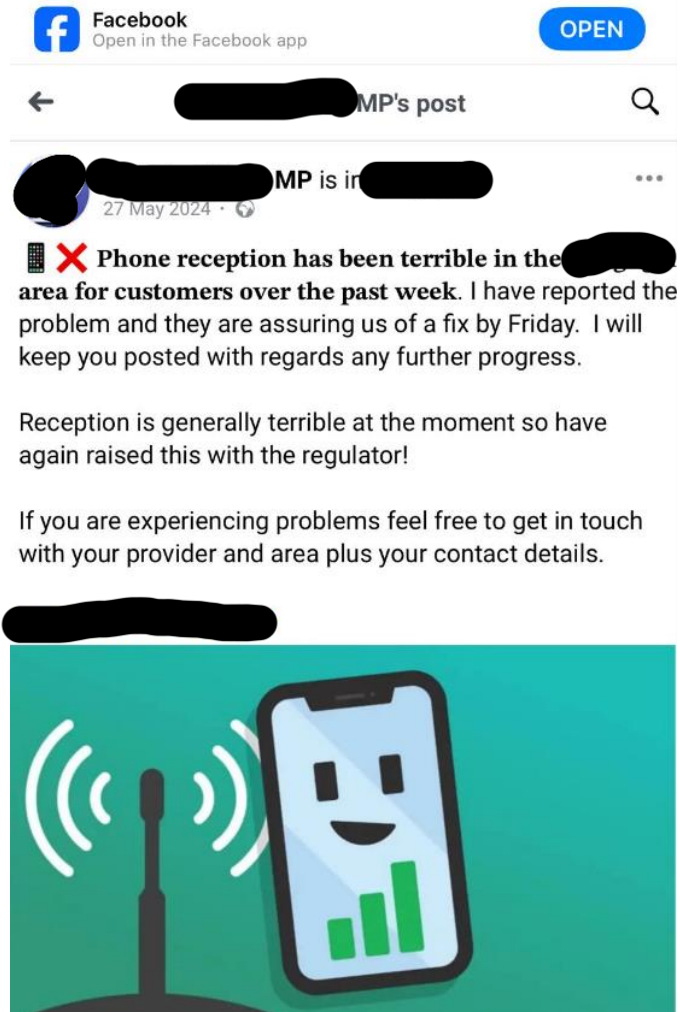


Stretched Resources



Localised Objections

Local Leadership



Anti 5G Sentiment / Myths / Limited Awareness

Belfast Telegraph Mon 24 Jun 2024

LATEST | 'Extensive damage' caused to 5G mast after overnight arson in west Belfast



Belfast Telegraph Wed 31 Jul 2024

Four Belfast 5G masts set alight in 48-hour arson rampage



Mobile Action Plan

THE ACTION PLAN

in Ireland

- Digital Champions (FFNI)
- Planning Reform
- Education and Awareness Raising
- Best practice sharing
- Barrier Busting Taskforce
- Local Development Plans
- Digital Champions

2022



What Digital Champions can achieve



Standardised documentation (including wayleaves)



Sharing of best practices (pan authority (counties and districts))



Dispute resolution (planning)



Asset collation and sharing (accessible databases)



Awareness campaigns (Be 5G Smart)



Industry relationship building



Better coverage and connectivity

“If we overcome the challenges in roll-out, it would be a game changer for the Northern Ireland economy”





BUILDING
MOBILE
BRITAIN

Mobile^{UK}

**LIVE BETTER
CONNECTED**





2G/3G Switch Over

- Frequencies used by 2G/3G will be repurposed for faster 4G and 5G services
- Switch off to be completed by 2033
- 3G first. 2G retained for longer for calls.
- MNOs are engaging with customers to assist in the transition.