



Supporting the European Gigabit Society

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30 September 2019**

THE GSMA
WAS FOUNDED IN

1987

15 OFFICES
WORLDWIDE



SHANGHAI



SAN FRANCISCO



BEIJING



SAO PAULO



NAIROBI



NEW DELHI



LONDON



DUBAI



ATLANTA



BRUSSELS



BARCELONA



HONG KONG



BRASILIA



BUENOS AIRES

Connecting everyone and
everything to a #betterfuture



The mobile industry is the
first to formally commit
to the UN Sustainable
Development Goals



The GSMA
represents the interests
of mobile operators
worldwide



UNITING
NEARLY
800
MOBILE
OPERATORS



WITH ALMOST
300
COMPANIES
in the broader mobile ecosystem



The world's leading mobile industry events,
Mobile World Congress and Mobile World
Congress Shanghai, together attract

160,000+

people from across the globe each year

The GSMA works to deliver a regulatory environment
that creates value for consumers by engaging
regularly with:



MINISTRIES
OF TELECOMS



TELECOMS
REGULATORY
AUTHORITIES



INTERNATIONAL &
NON-GOVERNMENTAL
ORGANISATIONS



CONNECTING
23,000+
Industry Experts

Exclusively for GSMA Members,
InfoCentre² is your place to
connect with a global
community of industry experts

GSMA Working Groups
provide frameworks and
standards in commercial,
operational and
technical matters that help
maintain and advance
mobile industry ecosystems



8.1
BILLION+

MOBILE CONNECTIONS
WORLDWIDE



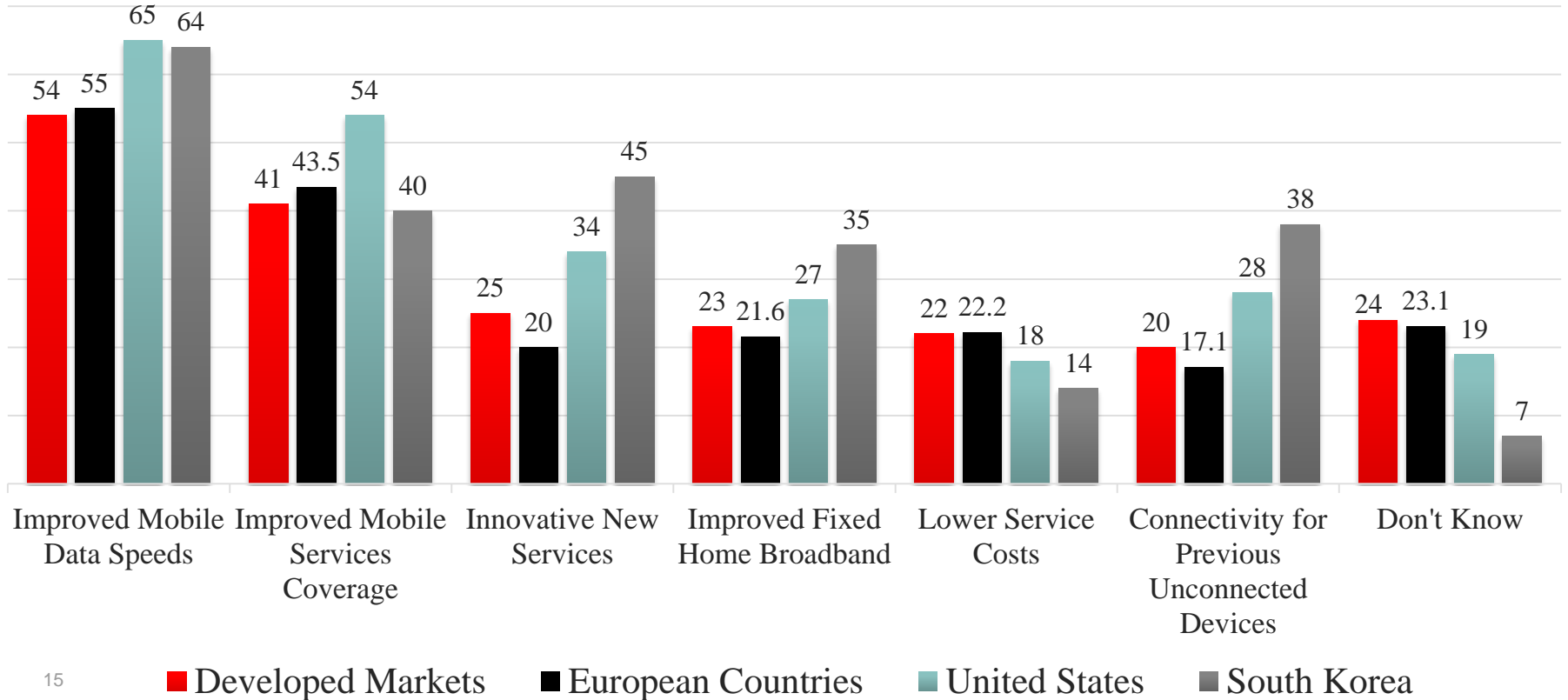
Consumers: what do they expect from 5G?

- Study in September/October 2018
- 15 000 respondents
- 16 developed countries

Non EU Countries	EU Countries
Australia	France
Canada	Germany
Israel	UK
Japan	Italy
Russian Federation	Netherlands
Saudi Arabia	Poland
South Korea	Spain
USA	Sweden



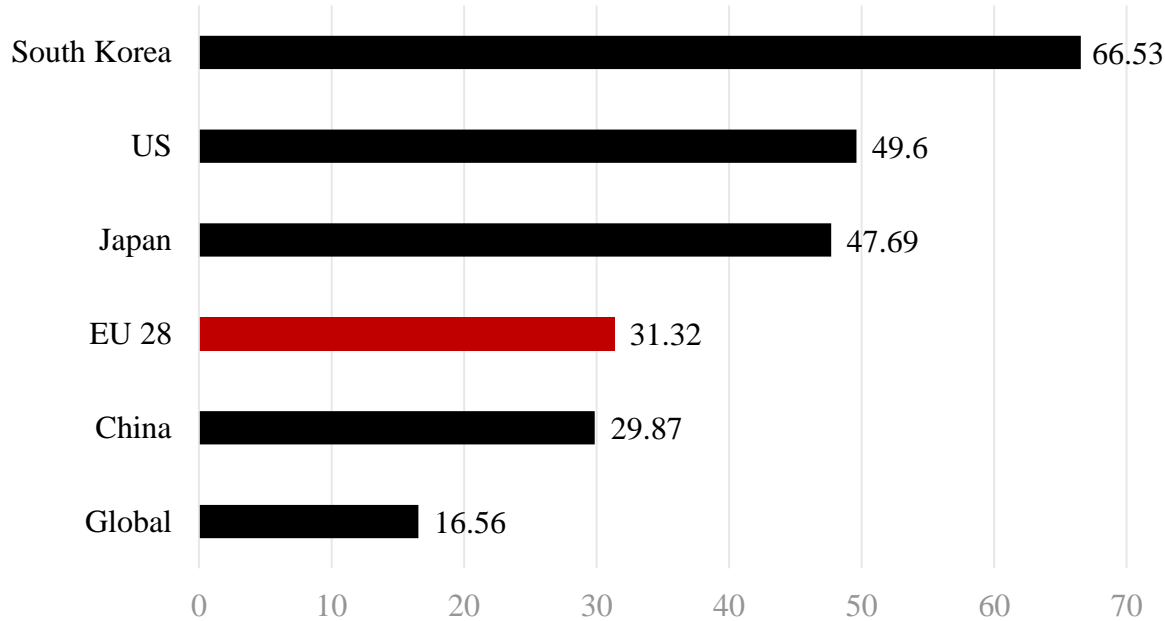
From what you know of 5G, which of the following would you expect 5G networks to deliver?



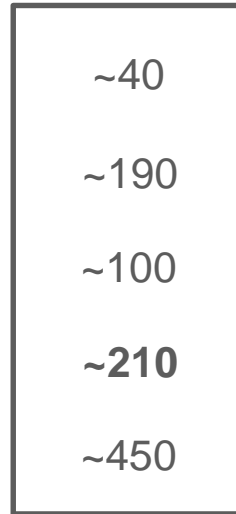


2025 view – 5G customer adoption

5G as % of total mobile connections*



5G connections (mln)*

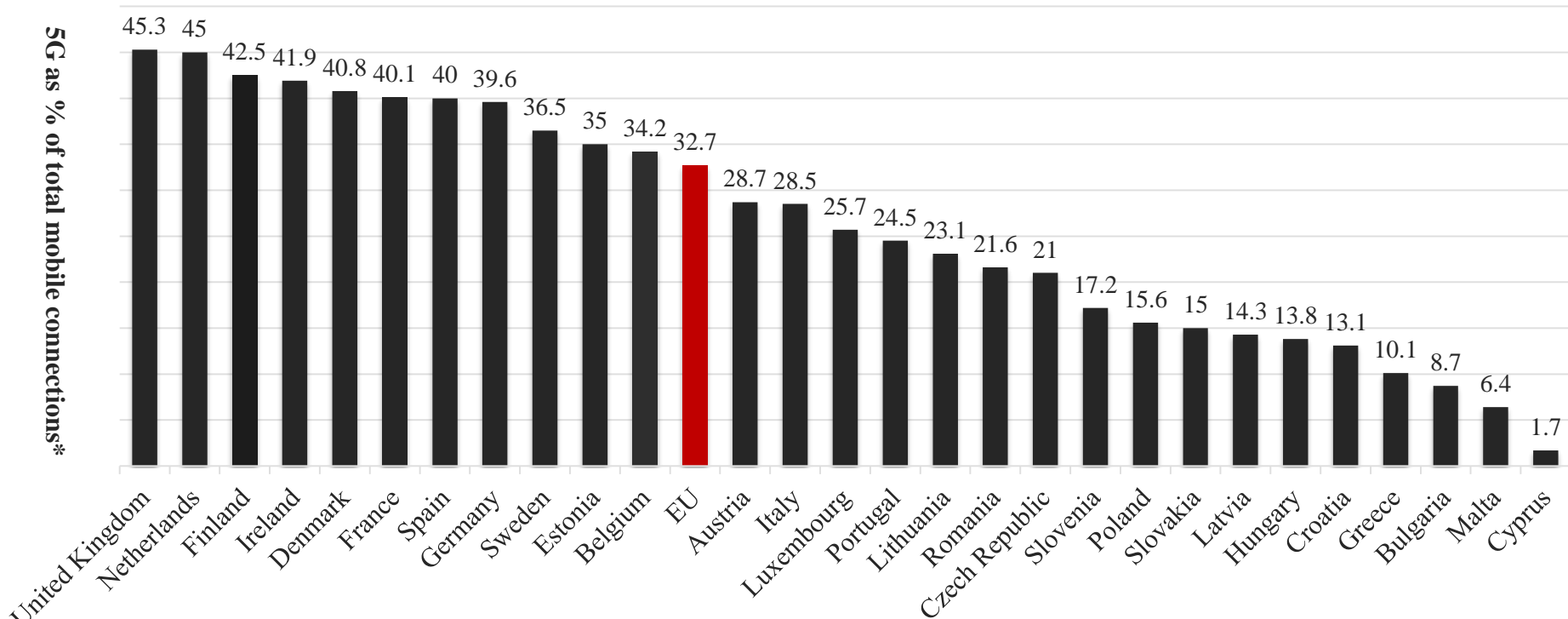


~1.5 billion

These five economies will account for ~70% of the 1.5 billion 5G mobile connections expected globally by 2025

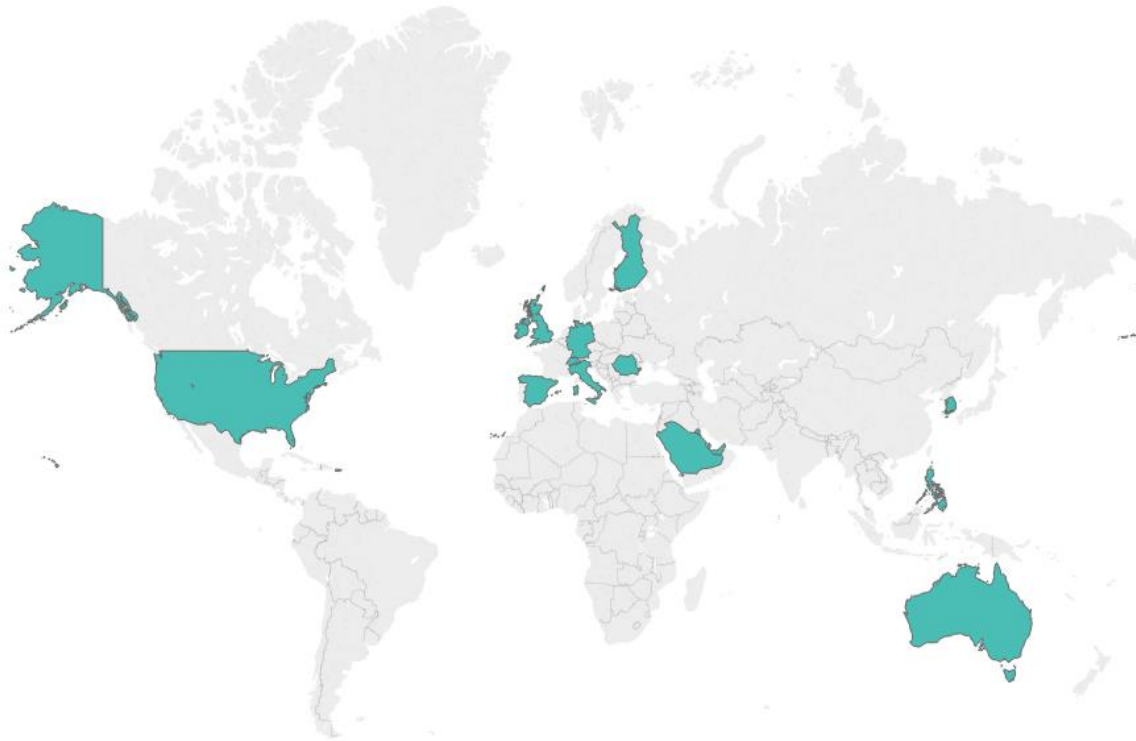


2025 5G customer adoption – EU





5G commercialisation



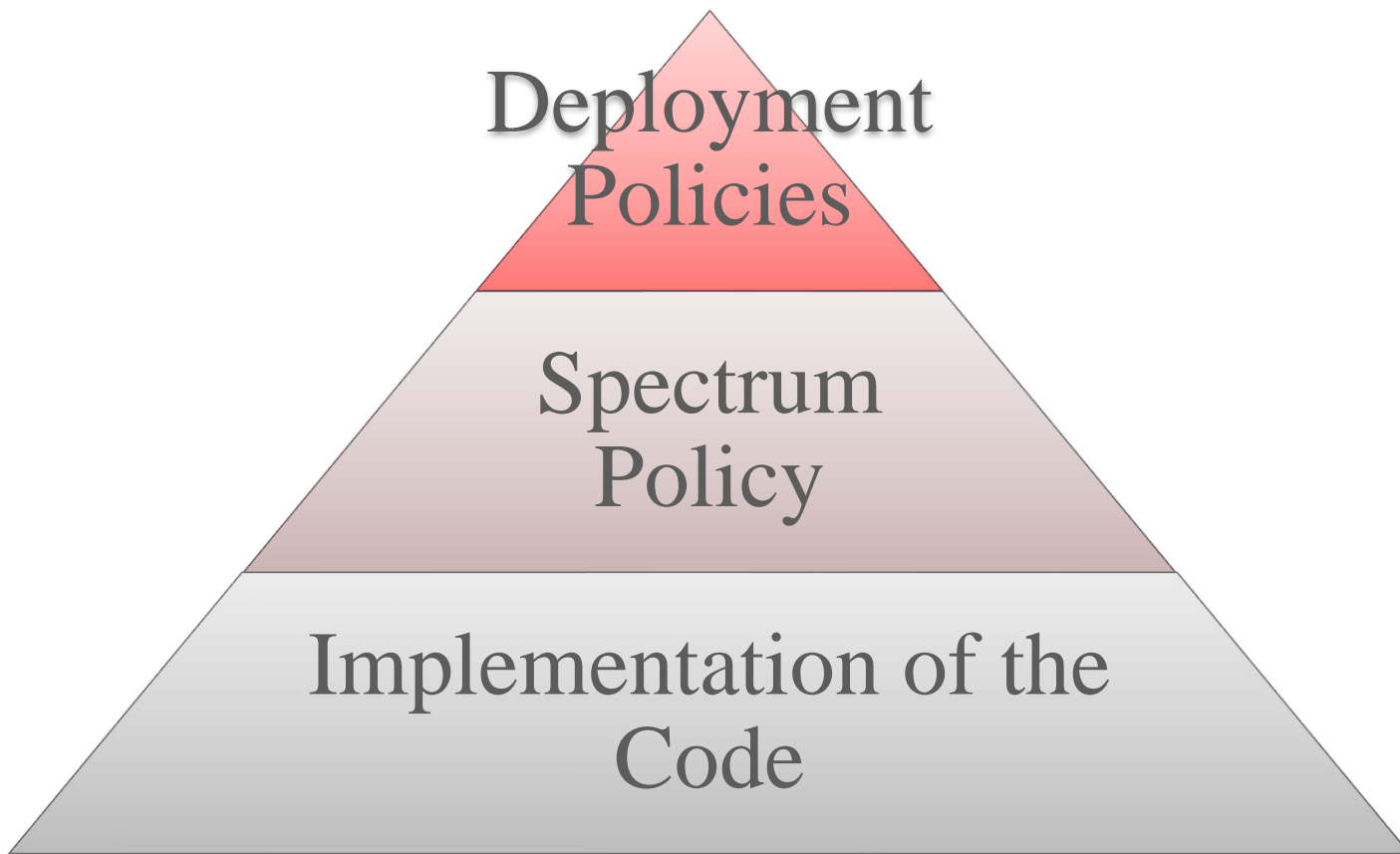
Country	Operator	Country	Operator
Australia	Optus	Philippines	Globe Telecom
	Telstra	Qatar	Vodafone
Bahrain	Batelco	Romania	Digi Mobil
	Viva		Vodafone
Finland	Elisa	Saudi Arabia	STC
Germany	Vodafone	Spain	Vodafone
Ireland	Vodafone	Switzerland	Sunrise
Italy	TIM		Swisscom
	Vodafone	UAE	du
South Korea	KT	UK	Etisalat
	LG Uplus		Three
	SK Telecom		EE
Kuwait	Ooredoo	USA	Vodafone
	Viva		AT&T
	Zain		Sprint
Maldives	Dhiraagu		T-Mobile
Monaco	Monaco Telecom		Verizon Wireless

 Commercial 5G network

*Data correct to 30 August 2019
For updates, see gsmaintelligence.com*



The policy challenges for 5G





The Code – Implementation



Ambition



How strongly a Member State believes in the benefits 5G will bring to its citizens and economy

Leadership



Willingness to sacrifice the small short-term gains for the bigger, long-term, benefits



Spectrum: Policy Challenges



Supply



5G needs 80 to 100 MHz in the C-Band and around 1 GHz in the 26 GHz per operator

Conditions



Achievable and encouraging network investment

Award



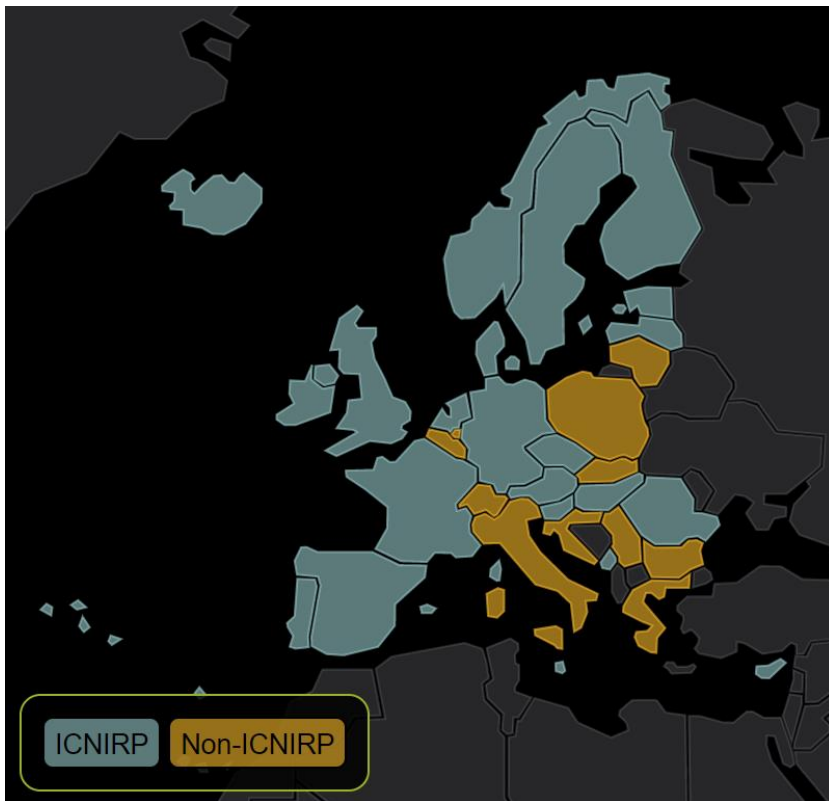
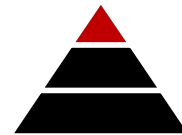
Only used when needed and following fundamental principles of best practice

Pricing



Greater connectivity and investment instead of short term state revenue

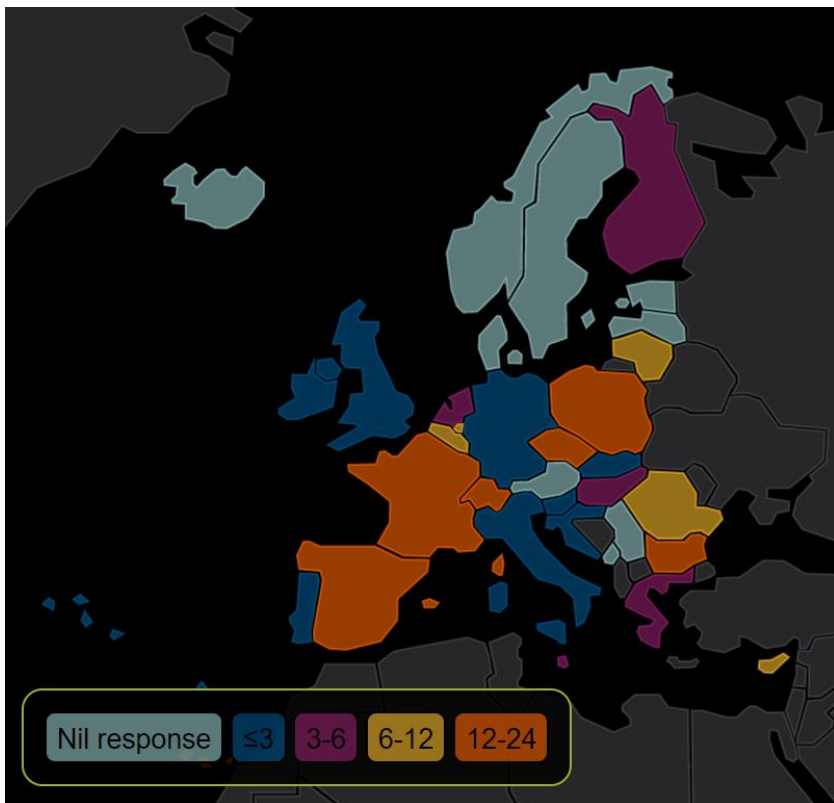
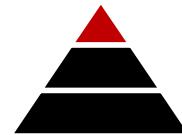
Deployment: EMF Policy



Several Member States do not apply the international (ICNIRP) guidelines as recommended in 1999/519/EC

As a result 140 million (27%) European citizens are affected by less efficient mobile network deployment

Deployment: Siting Policy



Multi-layered (National, Regional, Local) and very bureaucratic with a heavy administrative burden

5G deployment will need a significantly higher number of sites (2-3x times) than previous generations

Streamlining and simplifying the process will significantly help 4G and 5G deployment

Small cell implementing act will help but it is not a silver bullet



Concluding remarks

- Europe risks falling behind on 5G in the long term
- The success of the Gigabit Society depends on choices made at National level
- Europe could use more collaboration and cooperation between countries