

# Global trends in 5G and beyond: snapshots from recent Cullen International research

30<sup>th</sup> OSIPTEL anniversary

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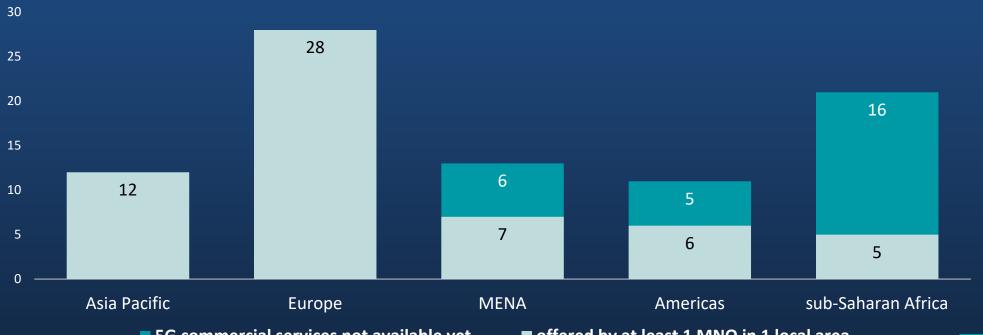
#### Global Trends research on "5G and beyond"

- 1. <u>Status of deployments</u>, if any, by individual MNOs across all regions in the World. What type of deployments? What is available in the market? Trends on supply and demand, incl. take-up statistics where available.
- Policies put in place by governments capable of generating concrete impacts on 5G availability and affordability (spectrum availability, access to key infrastructure, incentives on supply and demand, policies on technology providers, or on the use of the networks).
- Spectrum assignments, by type and including terms and conditions on the use of radio spectrum (fees, coverage & quality obligations, flexibility in the use of radio spectrum).
- 4. Towards 6G





## Commercial availability of 5G services in 85 countries surveyed



**■** 5G commercial services not available yet

■ offered by at least 1 MNO in 1 local area

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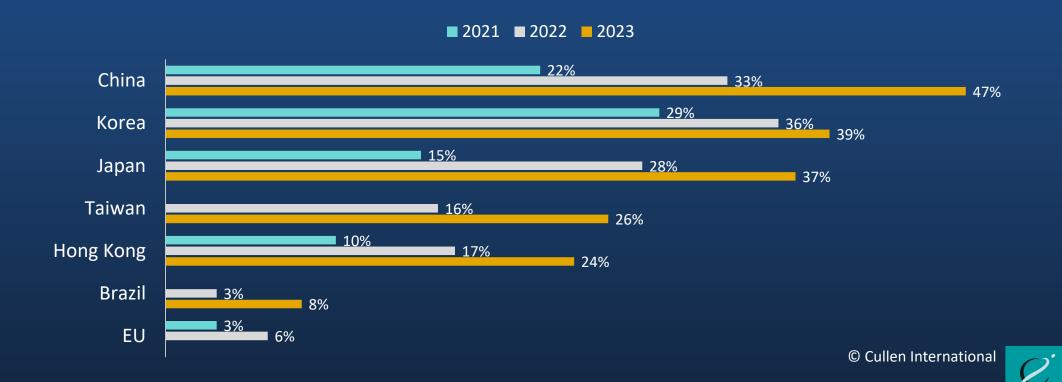
## High diversity in 5G population coverage across countries







#### 5G take-up





#### Deployment-friendly policies for 5G: selected examples

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OPERATIONAL	AU	BR	CN	EU	НК	IN	JP	SK	NZ	SG	TW	US
Planning of sites, small antennas	✓	✓	<b>✓</b>	✓				✓				✓
Facilitating rural deployments					✓		✓		✓			✓
RoW access to public and private infra			<b>✓</b>	✓	✓	✓		✓		<b>√</b>	✓	✓
Sharing and co-deployments			✓				✓				✓	
FINANCIAL												
5G use cases, innovation, R&D	✓	✓		✓	✓	$\checkmark$	✓	✓		✓		
Tax exemptions infra stimulus		<b>√</b>	<b>✓</b>	✓	✓		✓	✓				
Capacity upgrades			✓	✓			✓		✓		✓	✓





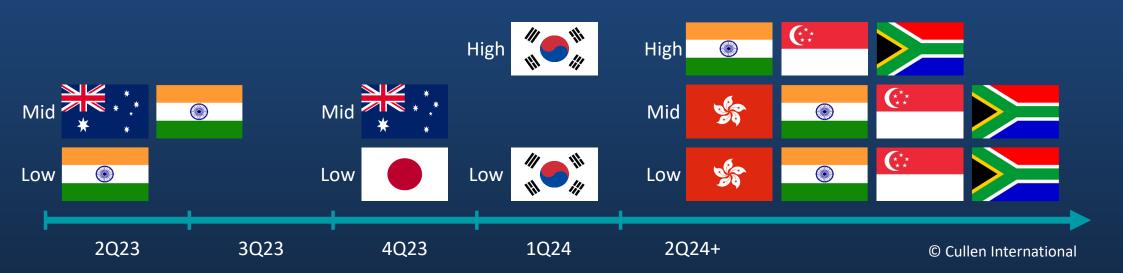
#### Spectrum for 5G

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ASSIGNMENT METHODS	AU	BR	CN	НК	IN	JP	SK	NZ	SG	ZA	TW	US
Auction	✓	✓		<b>✓</b>	<b>✓</b>		✓			<b>√</b>	✓	✓
Beauty contest						✓			✓			
Direct assignment			✓					<b>√</b>				
USE CONDITIONS												
Coverage obligations		✓	✓	<b>√</b>	<b>✓</b>	✓	✓	✓	✓	✓	✓	
Access/sharing obligations			✓			✓	✓					
Use or lose provisions				✓	<b>✓</b>		✓	✓				✓
Specific quality requirements for 5G		✓							✓			✓





#### A few relevant spectrum awards







#### First steps towards 6G

Activities	Government focus							
Government strategy								
Radio spectrum (6 GHz)	**							
R&D								





### Thank you!

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