

Building Sustainability

Telecom & Digital Tomorrow



“5G Services to Begin in Kathmandu Valley and Major Cities”

As part of its digital infrastructure goals in the Nepal Budget 2082/83 (2025/26), the government has announced its intention to initiate 5G services in the Kathmandu Valley and other major urban areas.

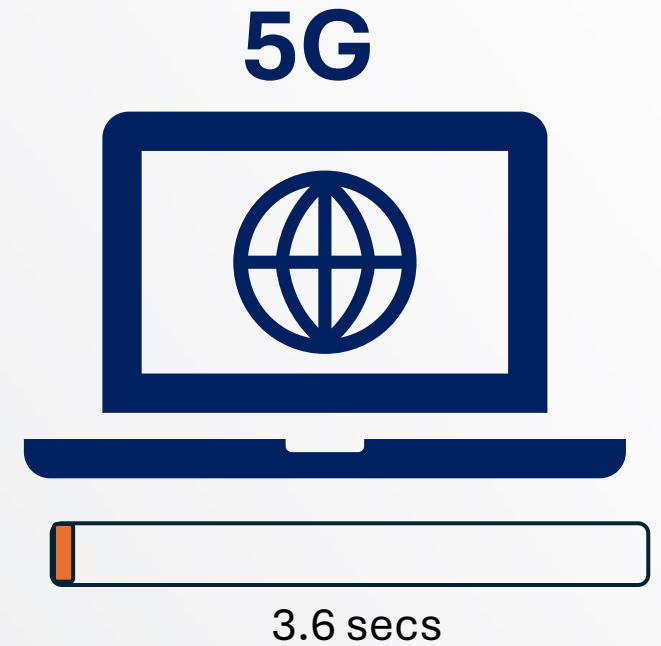
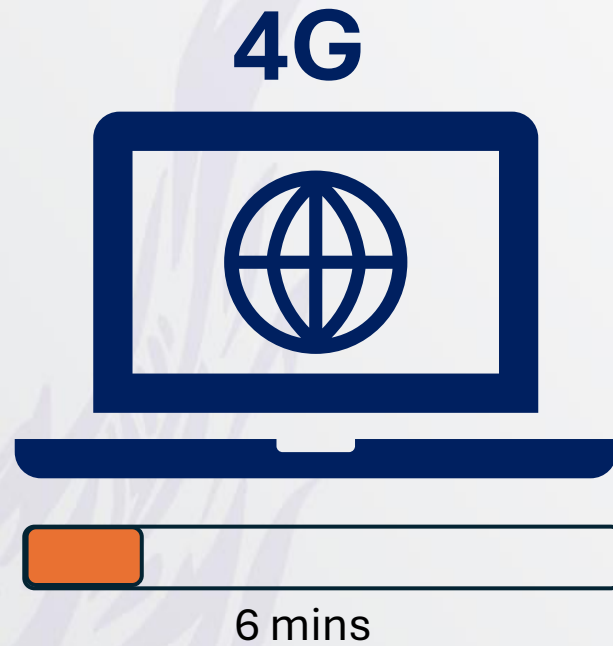
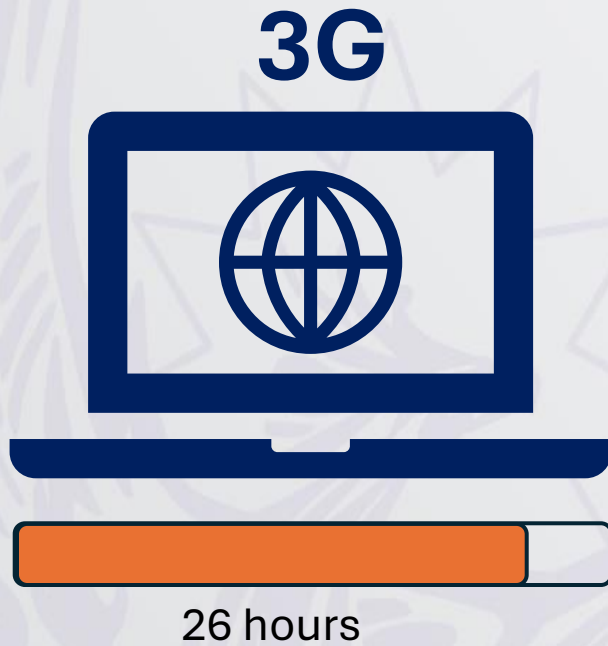
The Finance Minister emphasized that launching 5G technology is crucial to supporting **future-ready connectivity** and enabling **next-generation applications** in sectors like health, education, and smart cities.



What is 5G?

100X more capacity than 4G

Time to download a 2-hour movie –



Source: Consumer Technology Association

10X faster than 4G

Response time -

4G



30-50 millisecond

5G

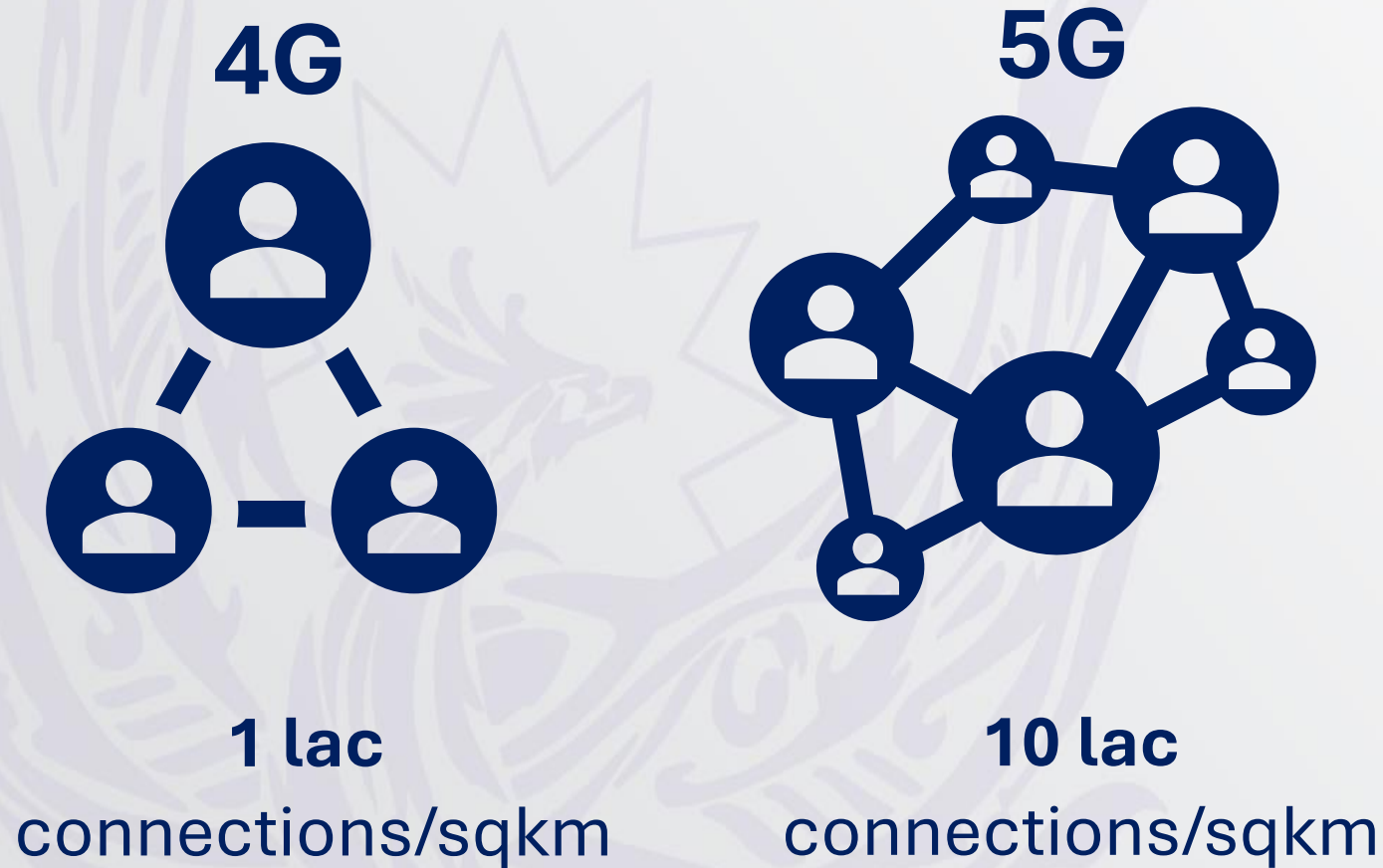


1-10 millisecond

Faster than blink of
an eye!



10X more connection capacity than 4G



**Internet
of Things
(IoT)**

5G enabled Agro Smart App leading to Smart Farming in India!



A Chinese surgeon performed a remote transcontinental telesurgery from Rome on a prostate cancer patient in Beijing, over 8,000 kilometers away.



China Southern Power Grid has begun the 5G Smart Demo Project to help build Shenzhen into a 5G Smart City.



5G inspection robot












5G Camera

Self-driving vehicles no longer distant dream with 5G.



5G enables ICT development like we could never imagine before...



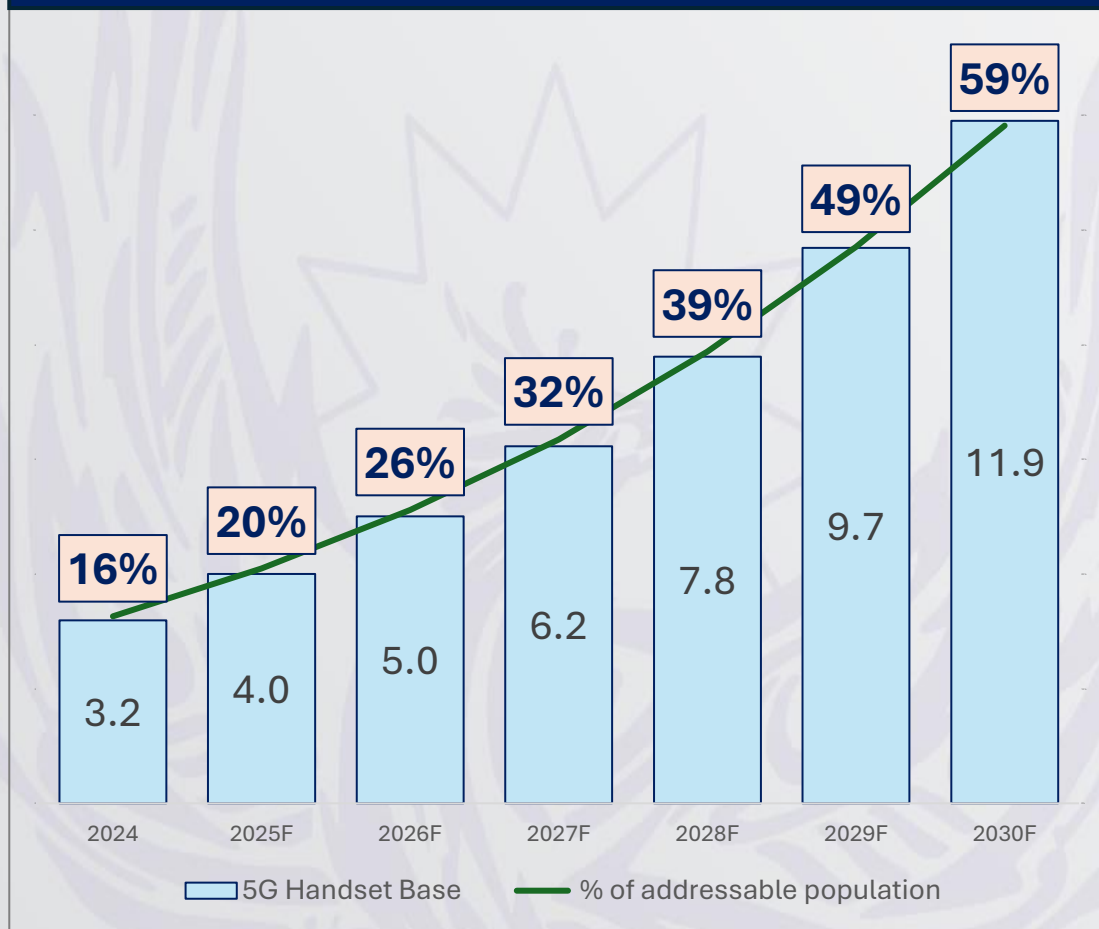
Download Speed	Max 100 MBPS	Max 10 GBPS	100 X	 Fast internet (mobility)	 Fixed Wireless Access	 Enterprise services
Response time (Latency)	30-50 ms	1-10 ms	10 X	 Industrial automation	 Remote surgeries	 Smart vehicles
No of Connections	1 lac devices/km ²	10 lac devices/km ²	10 X	 Smart Agriculture	 Smart Home	 Smart City

Adopting 5G is not just an upgrade — it's essential to stay **relevant, connected, and future-ready.**

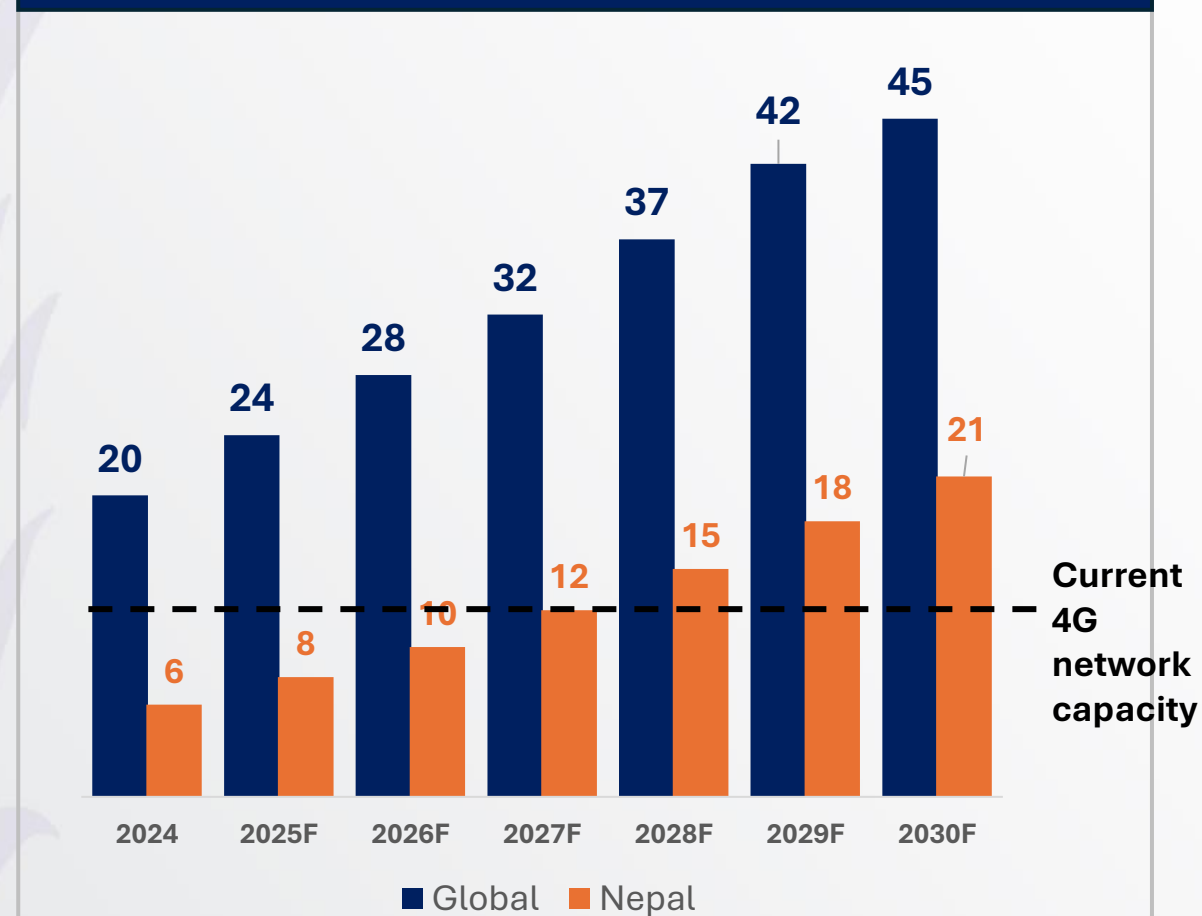
1

Nepal is demand-ready for 5G, with rising smartphone imports, growing adoption of 5G-capable devices, and increasing data usage which is expected to increase further.

5G Handset base in Nepal

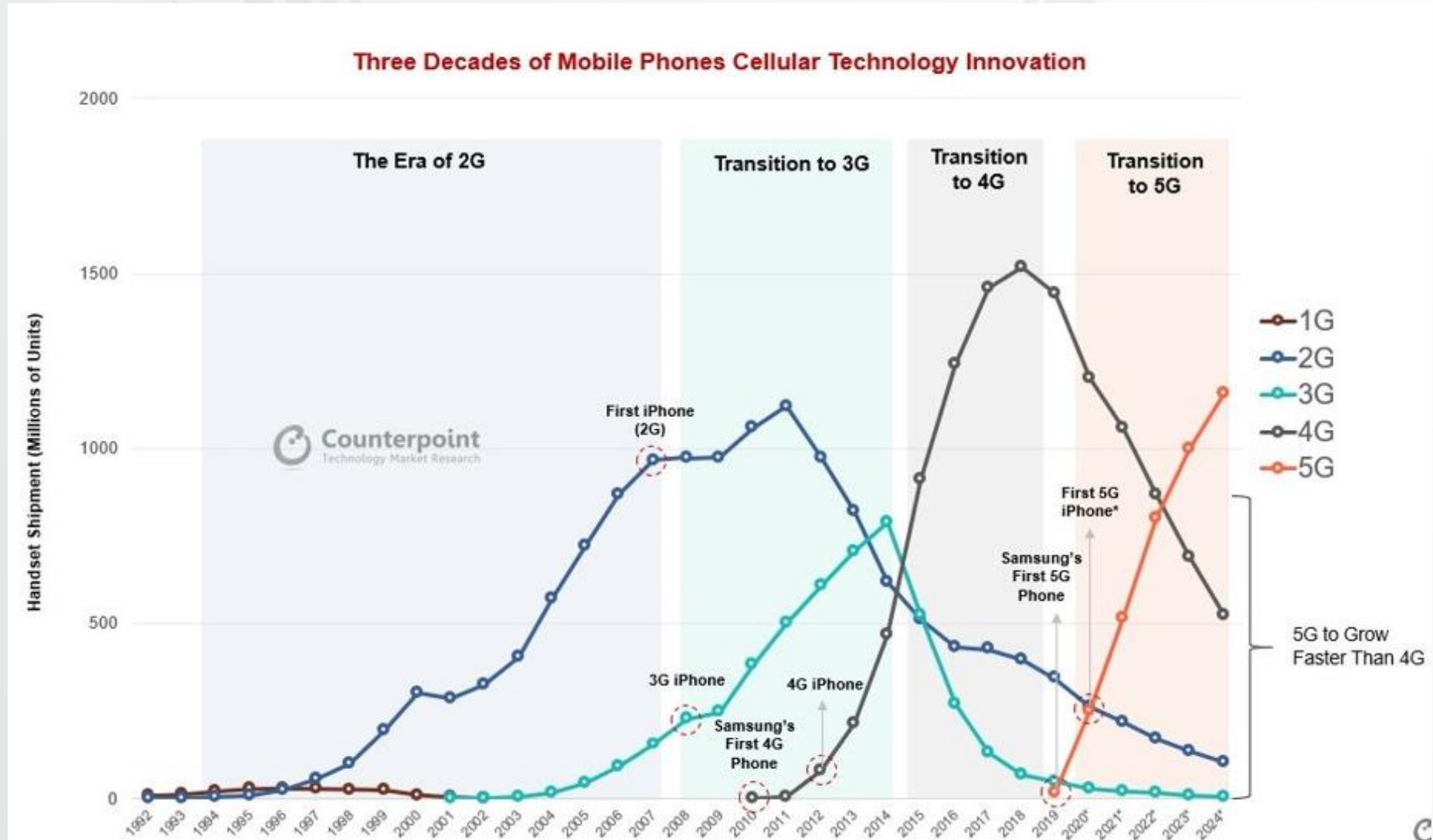


Data Usage (GB/month)



2

Legacy technologies are fading - Devices for 2G/3G/4G will become increasingly irrelevant and unsupported; equipment will be harder to source and maintain.





12% of sites have 3G shutdown and spectrum refarmed on Ncell network.

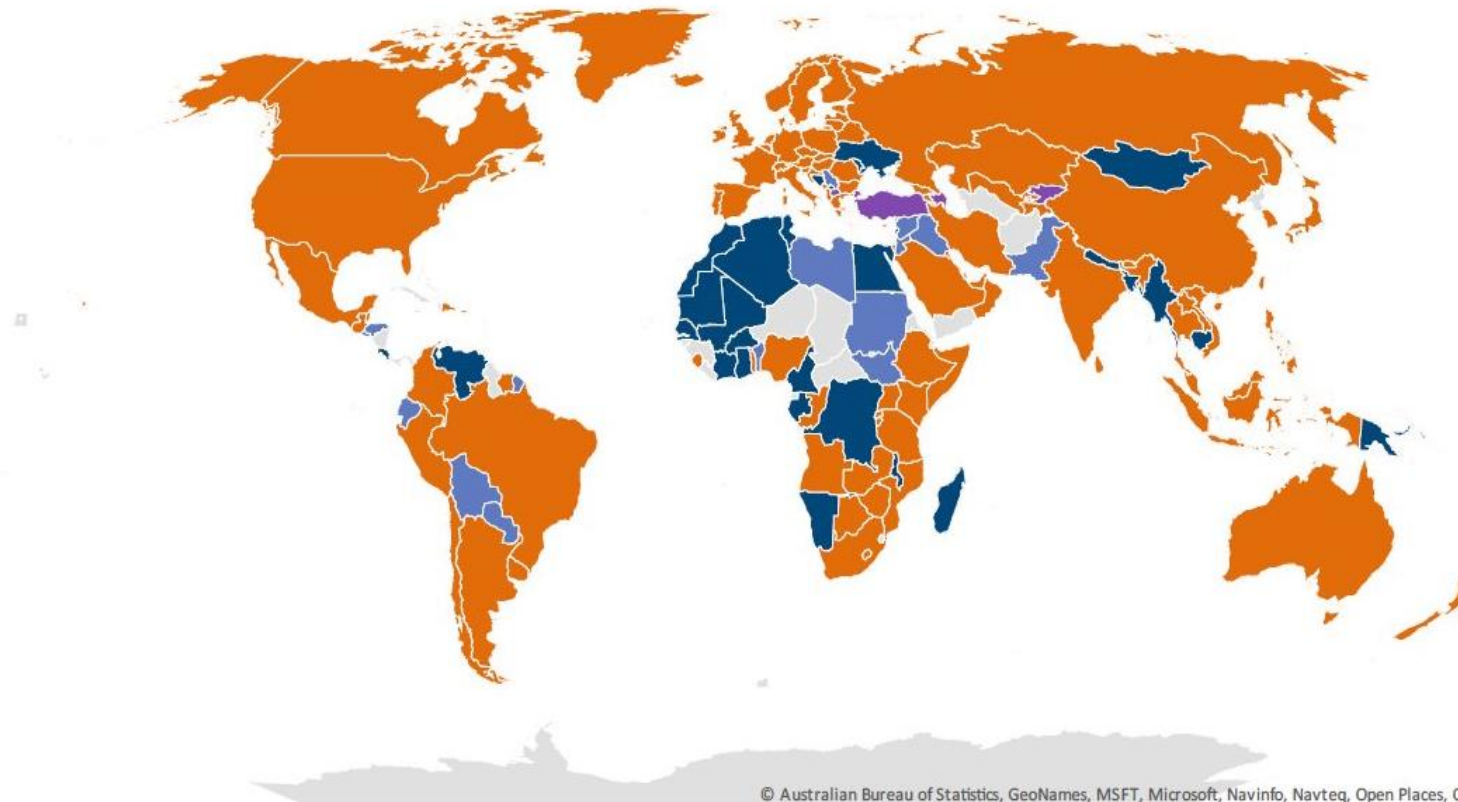
Ncell plans to shut-down 3G in Nepal by 2025 and 2G in next 2 years.

3

Further delays in 5G rollout **risk leaving Nepal behind** in terms of technological advancement and overall socio-economic development.

Map of operator investments in 5G (end October 2024)

■ Planning/evaluating/testing/trialling ■ 5G deployed in network, services launched ■ Deploying/deployed, precommercial ■ 5G deployed in network, soft launch



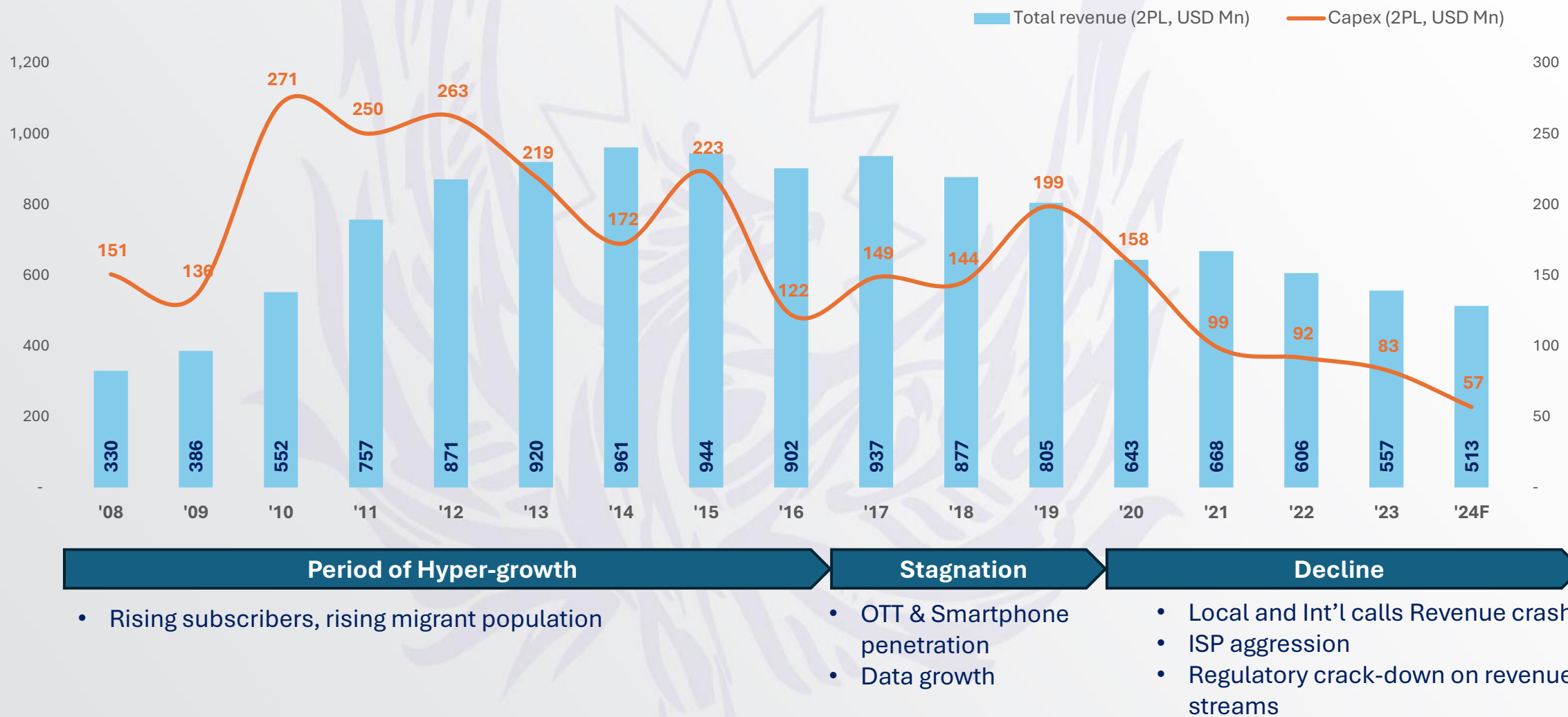
343 operators in 126 countries have launched commercial public 5G services

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Our Reality...

Story of Mobile Telecom in Nepal – Hyper-Growth, Slowdown, Grim Outlook



* Net Revenue w/o TSC, VAT & OT
Source: Internal Estimates

If this decline continues without any counter-measures, **telecom industry in Nepal will FAIL**

	Past	Trending	Future
Market 2PL	2016/17	2022/23	2028/29
Revenue	97,307	73,147	56,372
EBITDA	59,678	35,620	19,082
Profit After Tax	29,646	5,587	(-1,025)
PAT %	30%	8%	(-2%)
CAPEX	18,988	11,584	6,201 (?)
CAPEX Intensity	20%	16%	11%
Taxes and Fees	43,821	34,100	21,812



6Bn NPR is the minimum CAPEX required by Industry every year to keep lights On.

* Net Revenue w/o TSC, VAT & OT

Source: NT Annual Reports (ntc.net.np) and internal estimates

EBITDA: Earnings Before Interest, Tax, Depreciation & Amortization

Warning Signs:

नेपाल टेलिकमको वित्तीय अवस्था निरन्तर ओरालो



निरन्तर घट्दो नाफाले संकटमा टेलिकम सेवाप्रदायक, फाइभजी सेवा प्रभावित हुने खतरा

दूरसञ्चार प्राधिकरणका अनुसार आव २०७९/८० मा आइपुग्दा टेलिकम सेवाप्रदायकको आम्दानी करिब २६ प्रतिशतले ओरालो लागेर रु ७३ अर्ब १४ करोडमा सीमित भएको छ ।

- नेपाल टेलिकमले चालु आर्थिक वर्षको तेस्रो त्रैमासमा खुद नाफा ४८.६७ प्रतिशतले घटाएको छ।
- टेलिकमले ओटिटी प्लेटफर्म र करसमेतको कारण आम्दानीमा गिरावट भएको बताएको छ।
- आम्दानी घट्दै जाँदा सेवा विस्तार र नयाँ प्रविधि लगानीमा चुनौती थपिएको छ।



The Economics of 5G...

5G Cost Estimation

Total cost of deployment per operator will be ~46Bn and cash flow of ~64.5 Bn is required to be generated from business per operator to make this feasible.



Kathmandu & Lalitpur
Metropolitan
Micromarkets

Cost of equipment & infrastructure	Spectrum & Maintenance cost for 5 yrs	Cash required per operator
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~8 Bn

~7.5 Bn

~15.5 Bn



Nation-wide

~46 Bn

~18.5 Bn

~64.5 Bn

1

As Is Business will never be able to generate cash flow required for 5G.

2

Subscription model will take ~7-8 years to generate the cash flow (not investment friendly, high uncertainty)

3

Options to speed up 5G Rollout:

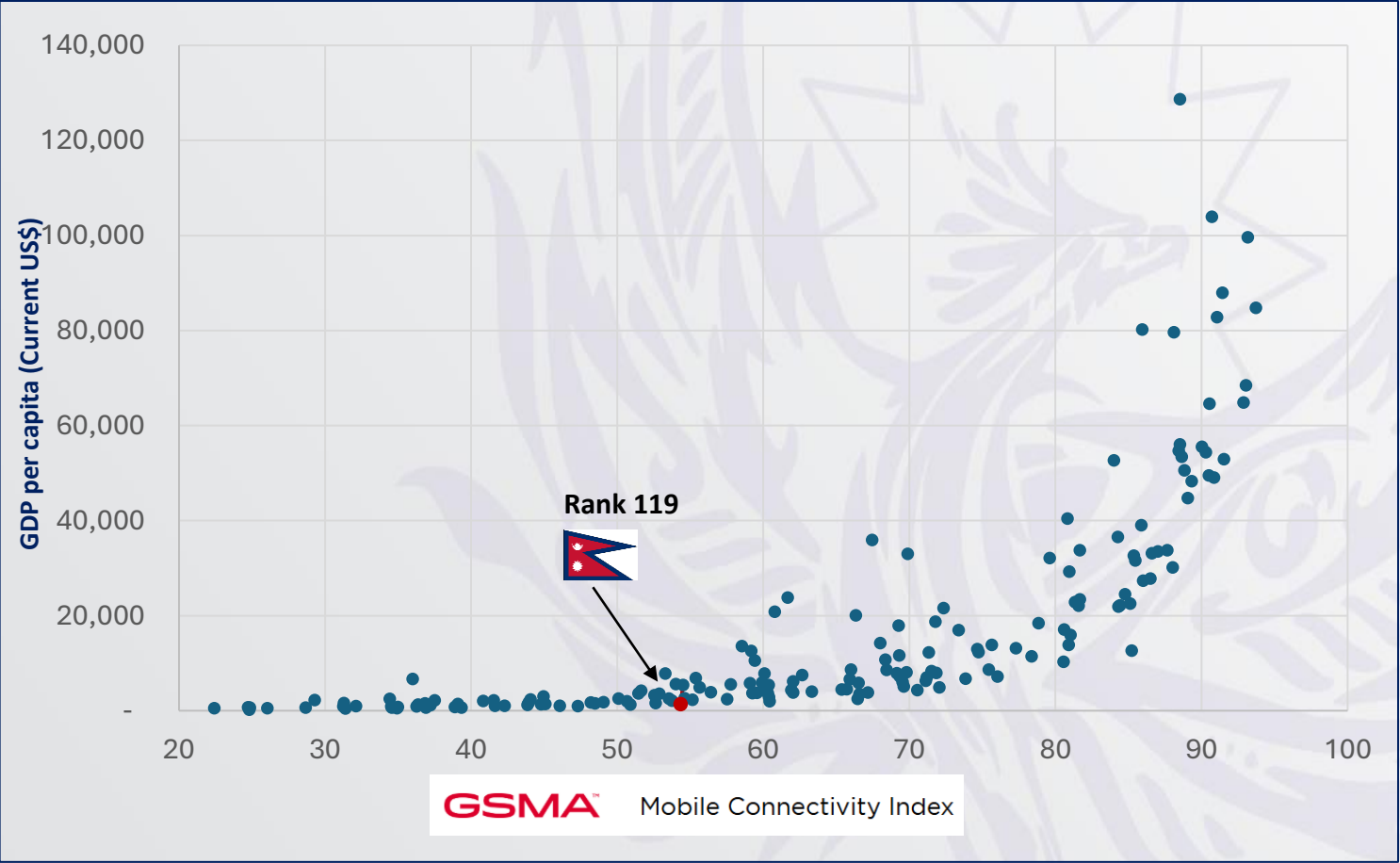
Free spectrum & Custom duty waiver
Reduce tax burden on telecom sector

Business Case for Industry Restructuring

	Past	Trending	Future As Is	Future with Subscription based model
Market 2PL	2016/17	2022/23	2028/29	2028/29
Revenue	97,307	73,147	56,372	96,816
EBITDA	59,678	35,620	19,082	58,028
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PAT %	30%	8%	(-2%)	19%
CAPEX	18,988	11,584	6,201 (?)	18,395
CAPEX Intensity	20%	16%	11%	19%
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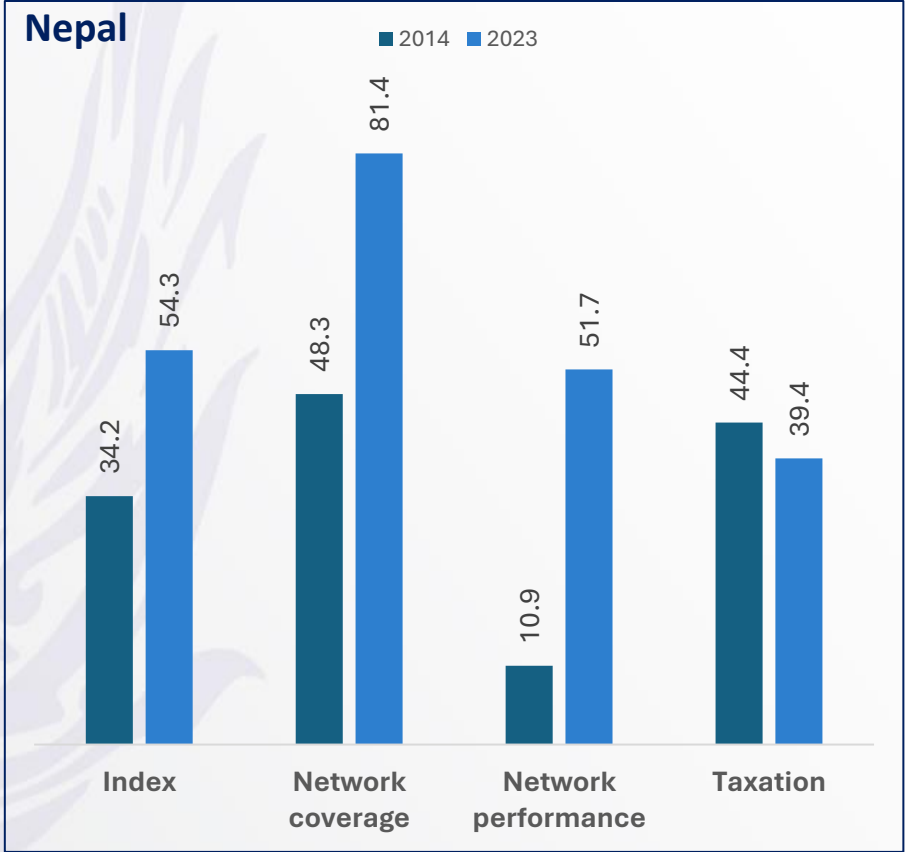
The GSMA Mobile Connectivity Index (MCI) 2023 places Nepal at **119th rank**. Nepal falls behind in favorable regulatory policy scores, esp. **taxation**.

MCI correlation with GDP per Capita



Source:
Mobile Connectivity Index (GSMA)
GDP per capita 2023 (World bank)

MCI Enabler Dimensions Scores (2023 vs 2014) -



In Nepal, Telecom is taxed like a luxury, not lifeline.



Tax contribution from Telecom is almost **3X** revenue contribution - **in line with tobacco and alcohol industries in Nepal.**

All numbers from 80-81

Ncell has paid **NPR 342Bn** in taxes and fees in Nepal since its inception and is constantly one of the **highest taxpayers** in Nepal.

What does NPR 342 Bn mean?



Full 5G rollout
6 times over



7000km of quality
roads in hilly region



14000 new
schools



3 years of free
basic healthcare
for everyone in
Nepal



To Conclude...

5G is possible and sustainable with only...



Industry-wide Subscription based model implementation

- Only weekly and monthly (high validity packs) remain
- PAYG closure
- Validity linked with pack purchase

Tax and fees Rationalization

- Remove sector specific taxes to boost growth in telecom
- Waiver on Spectrum Fees & Custom fees for 5G



Clarity on License to operate post 2029 (for Ncell)

- Since 5G is a long-term investment with longer timeline for monetization, investment is not feasible with unclear license period

Road to 5G



Recharge Validity Rationalization

- Recharge service validity reduction to mimic subscription behavior
- **BALANCE REMAINS UNTOUCHED**



Pay As You Go

Block Remove expensive Pay As You Go and offer economical packs



Low Sachet Packs Removal (1 & 3 Days)

Weekly & Monthly packs to remain

Subscription Based Model

Model Similar to ISPs of Nepal



Clarity on License post 2029



Tax & Fees Rationalization



5G

Without **industry level interventions and key policy changes**, 5G rollout is not possible for Ncell & not sustainable for industry.

The background is a solid purple color with a faint, repeating pattern of stylized flowers or leaves. The pattern is centered and covers the entire background.

THANK YOU