twimbit

Uncover 2023

Is growth here to stay for APAC telcos?

twimbit

Executive Summary

1 Telcos maintain growth momentum, estimated at 6.5 percent for 2022 in comparison to 6.4 percent in 2021

2 Earnings fail to keep pace with revenue growth, 45 percent of telcos show decline in EBITDA

3 Telcos make steady progress in establishing enterprise business, enterprise now accounts for 20 percent of total revenues

4 Diversification into adjacencies such as media, gaming, e-commerce, financial services gain momentum. Non-connectivity is expected to reach 30 percent of revenues by 2025

5 China leads the 5G surge, APAC, subscriber numbers to reach 2.1 billion by 2026; Enterprise the key revenue driver

Source: twimbit analysis, industry reporting

twimbit

Executive Summary

6 Industry consolidation to continue with growing need for network investments

7 Telcos accelerate transition to become digital telco; many get better at execution; CX gets sustained board room attention

8 Cloud became a key board room agenda as telcos forged strategic partnerships with hyperscalers

9 Telcos under cyberattack, cybersecurity grows as a business opportunity

10 ESG reporting gains traction, leaders look to define broader purpose such as digital inclusion, privacy and security.

Source: twimbit analysis, industry reporting

twimbit

#1 Industry revenue growth at 6.9 percent in 9M 2022 vs 9M 2021 (YoY)

1 40 Asia Pacific telcos added US$ 28.3 billion net new revenues in 9M 2022

2 87+ percent of telcos record a positive YoY change

3 The performance of the Indian telcos have been exemplary throughout 2022 primarily because of the tariff hike. The top 3 Indian telcos have set new growth benchmarks for other markets in the region of 17 percent in 9M 2022 YoY

4 China Mobile adds the highest YoY net new revenues in 9M 2022 of US$ 11.2 billion

Source: twimbit analysis, industry reporting

Percent revenue change in 9M 2022 YoY

twimbit
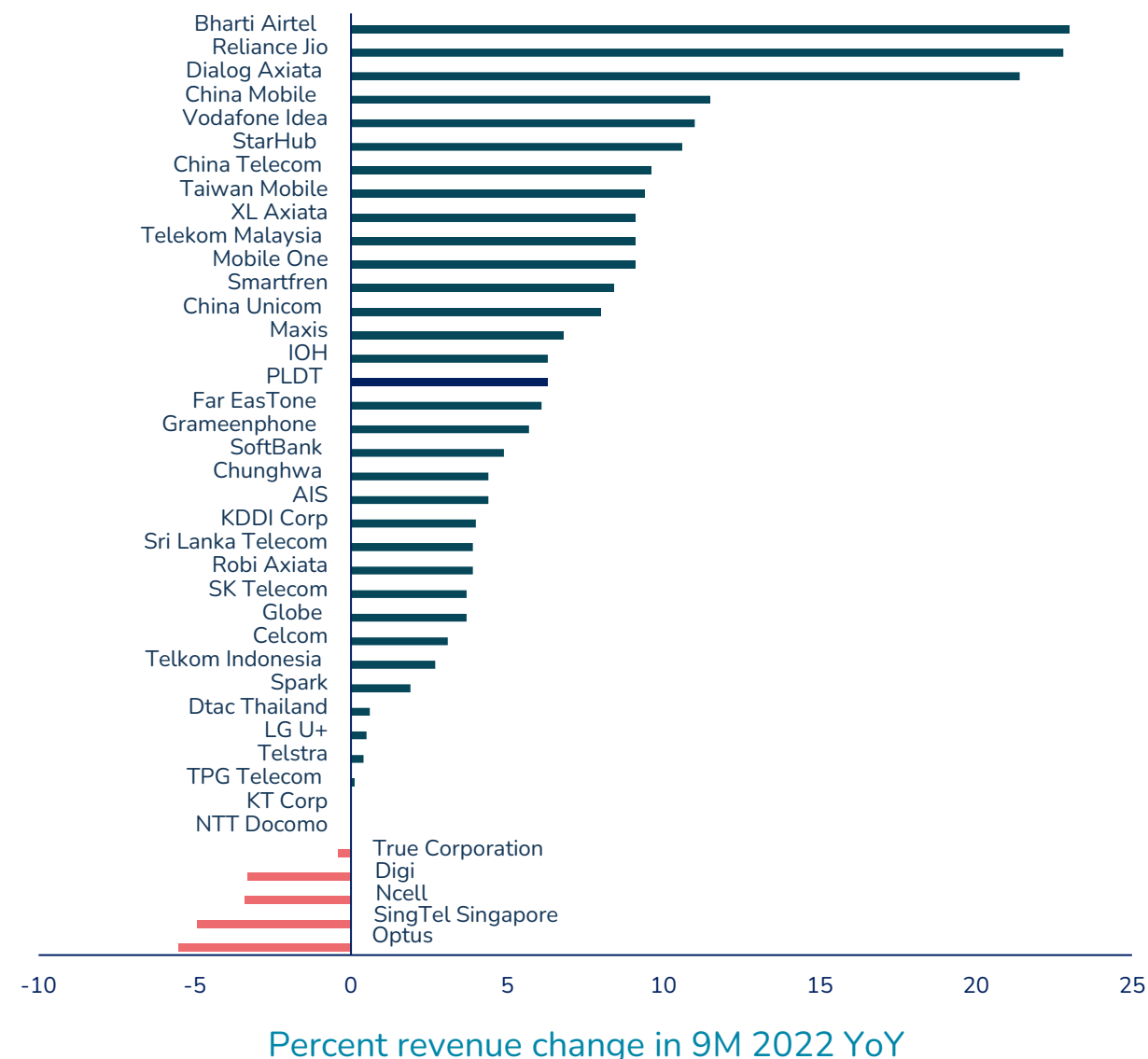
#1.1 Asia Pacific telcos expected to sustain growth levels in 2023

1 2021 saw the industry experience an all-time high growth of 6.4 percent in the previous 5 years.

2 The high YoY growth levels in 2021 were also accredited to a weak performance in 2020 due the Covid 19 pandemic

3 Asia Pacific telcos have sustained the levels of growth. Non-connectivity business and enterprise business have been key growth drivers.

4 We expect telcos to sustain these growth levels in 2023.

US$ billions

APAC telcos revenue (US$ billion) ——— Growth %

2023 expected revenue growth APAC telcos

Source: twimbit analysis, industry reporting

twimbit
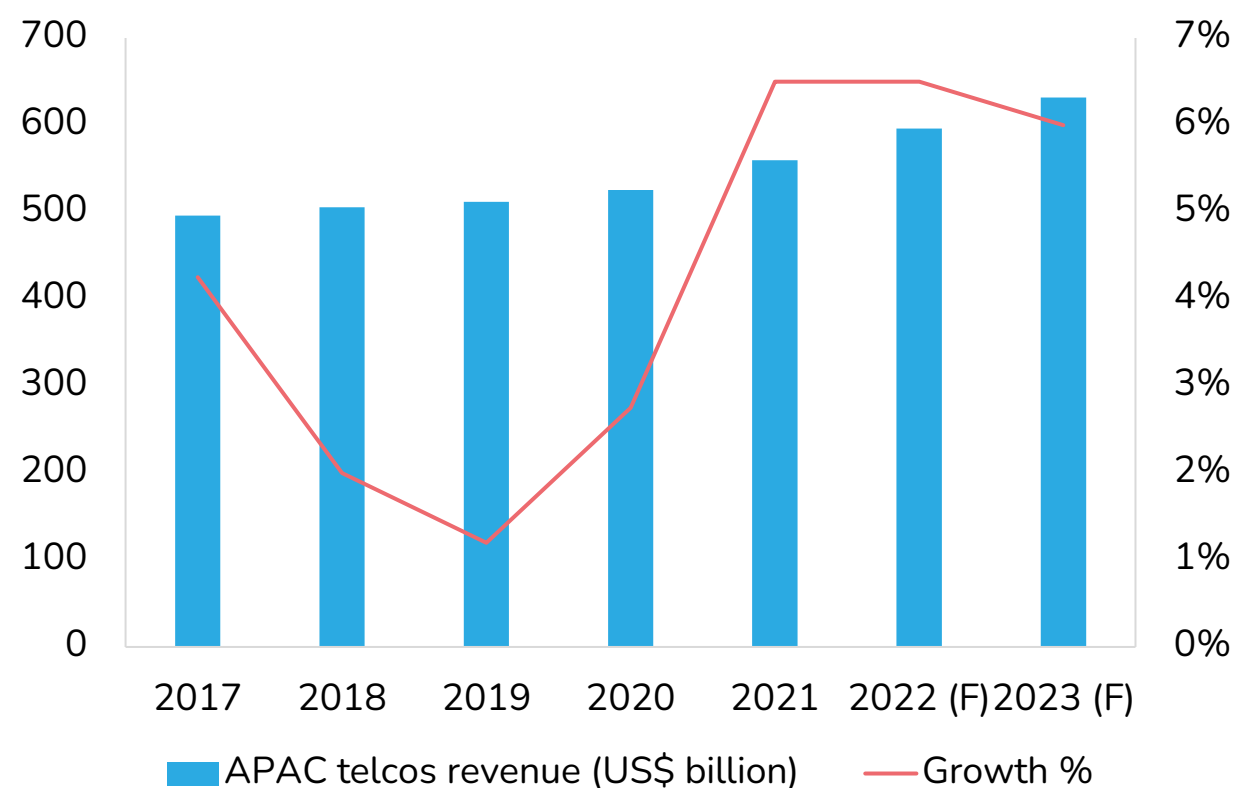
Tariff hikes help Indian operators drive growth of 17 percent YoY

"

My own sense is that we should start seeing some tariff increases during the course of this year. I do believe that the tariffs at that level are still very low. The first port of call is to get to Rs 200 which will require at least one round of tariff increase.

Quoted - May 2022 in
anticipation of another tariff hike
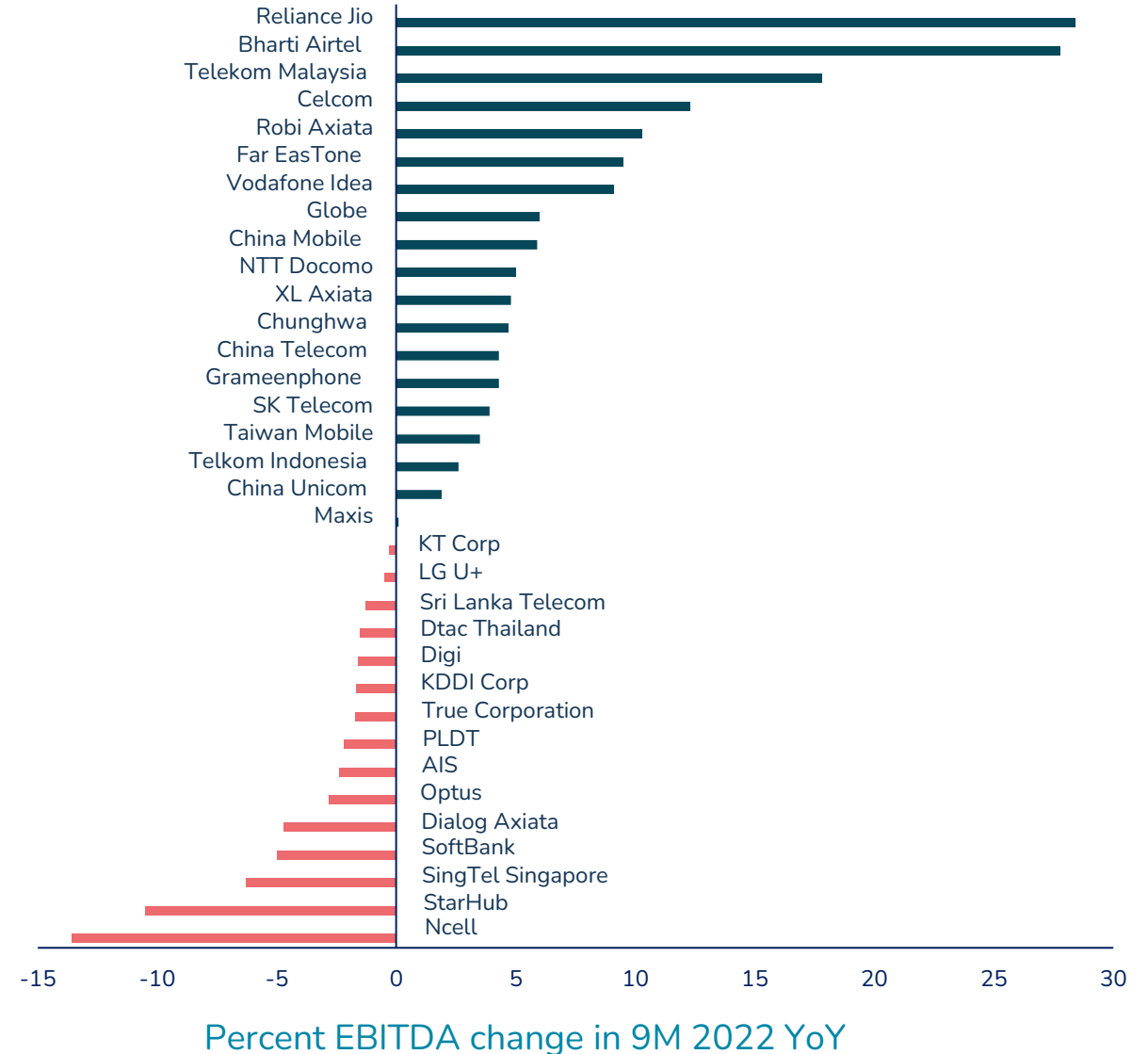
airtel

Gopal Vittal, CEO

Highest revenue growth
in APAC in 9M22

twimbit

#2 45 percent of the telcos register a decline in earnings (EBITDA), despite notable growth in revenues

1 APAC telcos witness a nominal average growth in EBITDA of 3.9 percent in 9M 2022 YoY

2 Indian telcos continue to show strong EBITDA growth. The tariff hikes have impacted both the revenue and profitability positively

Percent EBITDA change in 9M 2022 YoY

Reliance Jio, Bharti Airtel, Telekom Malaysia, Celcom, Robi Axiata, Far EasTone, Vodafone Idea, Globe, China Mobile, NTT Docomo, XL Axiata, Chunghwa, China Telecom, Grameenphone, SK Telecom, Taiwan Mobile, Telkom Indonesia, China Unicom, Maxis, KT Corp, LG U+, Sri Lanka Telecom, Dtac Thailand, Digi, KDDI Corp, True Corporation, PLDT, AIS, Optus, Dialog Axiata, SoftBank, SingTel Singapore, StarHub, Ncell

-15 -10 -5 0 5 10 15 20 25 30

Source: twimbit analysis, industry reporting

twimbit

#2.1 CAPEX spending continues to slowdown in 9M 2022

1 Close to 50 percent of the telcos charted a negative change in their CAPEX in 9M 2022.

2 The trend is consistent since the beginning of 2022 and is expected to continue in 2023.

3 There is growing momentum towards infrastructure sharing. The key markets of China, Japan, South Korea have passed the peak investment phase for 5G.

4 5G led CAPEX spending is expected to increase substantially in two of South Asia's largest markets, viz., Indonesia and India in 2023.
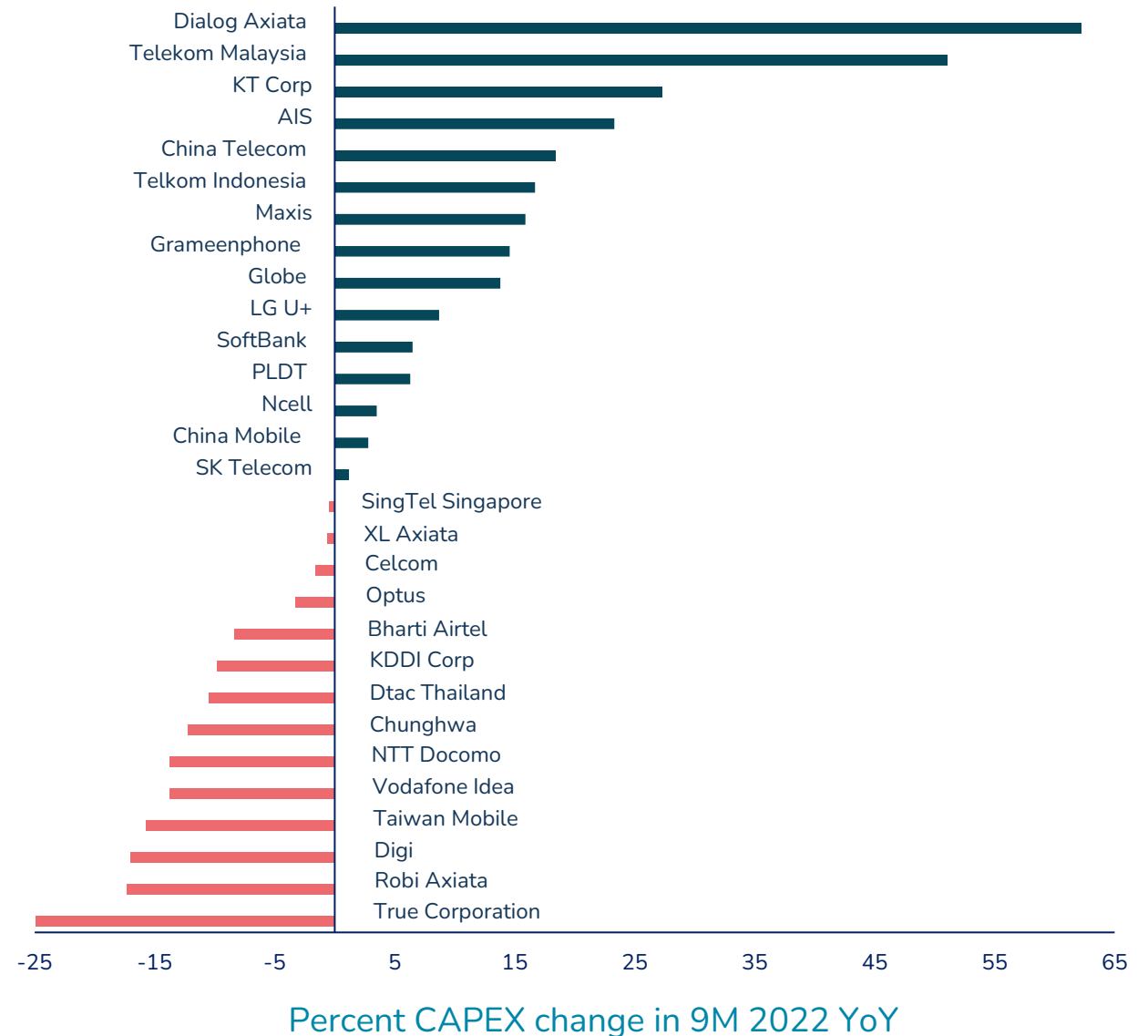
Percent CAPEX change in 9M 2022 YoY

Source: twimbit analysis, industry reporting

twimbit
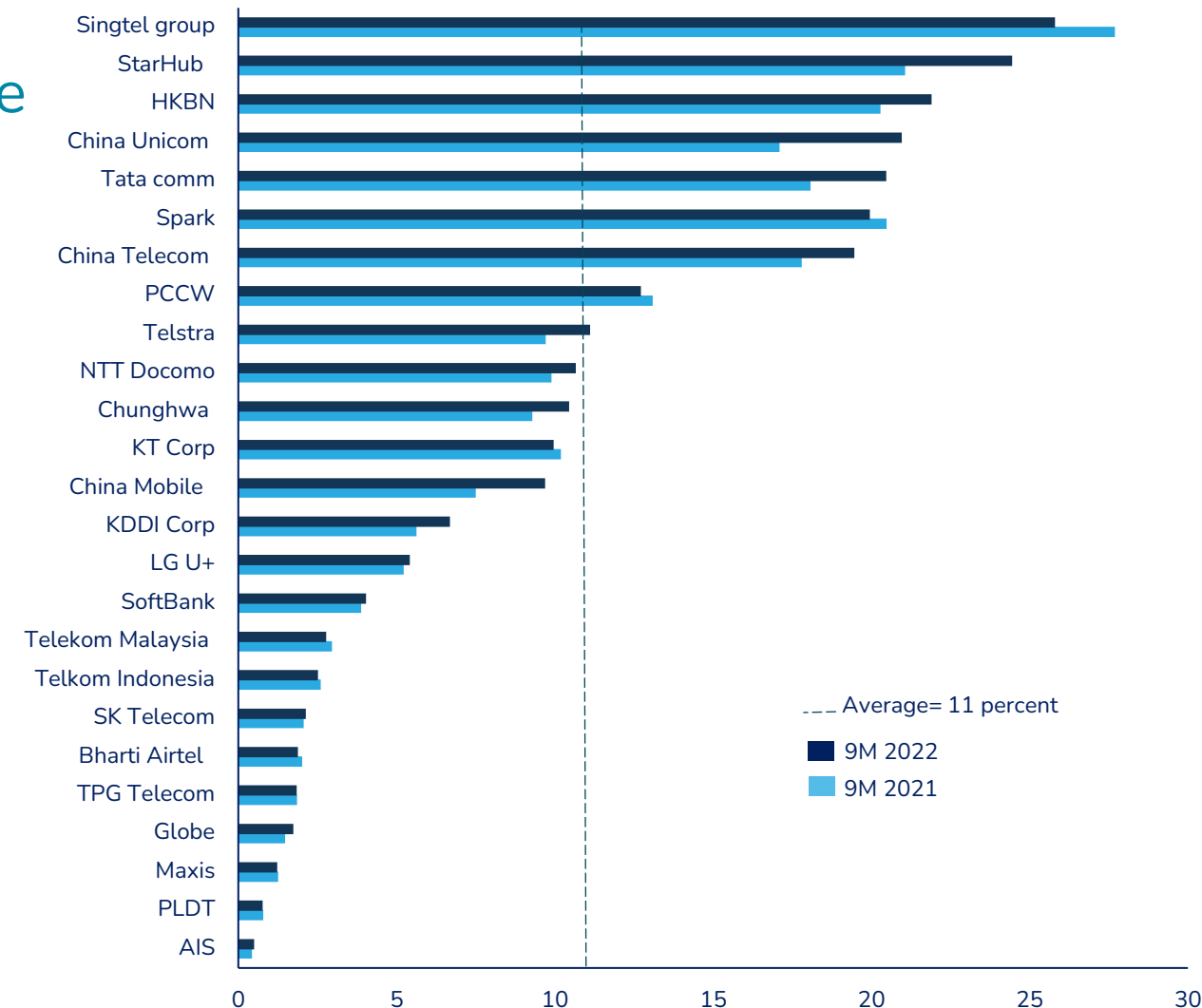
#3 Enterprise accounts for 20.2 percent of total revenue in 9M 2022

1 Enterprise revenue grew **12 percent in 9M 2022 (YoY)** compared to 7 percent overall revenue growth (Analysis of 25 telcos)

2 80 percent of the operators studied recorded a positive YoY change in this segment

3 The average revenue share for enterprise to total has increased from 19.3 percent in 9M 2021 to 20.2 percent in 9M 2022.

Source: twimbit analysis, industry reporting

Tata comm
Spark
HKBN
Singtel group
StarHub
Chunghwa
NTT Docomo
Telekom Malaysia
China Unicom
China Telecom
PLDT
KT Corp
Bharti Airtel
TPG Telecom
China Mobile
Telstra
Maxis
KDDI Corp
LG U+
PCCW
SoftBank
Telkom Indonesia
Globe
SK Telecom
AIS

- - - Average= 20.2%
■ 9M 2022
■ 9M 2021

0   5   10   15   20   25   30   35   40   45   50   55   60

Percent of enterprise revenues to total 9M 2022

twimbit

#3.1 Enterprise non-connectivity accounts for 11 percent of total revenue

1 Enterprise non-connectivity revenue grew 22 percent in 9M 2022 (YoY) compared to 7 percent overall revenue growth (Analysis of 25 telcos)

2 Non-connectivity services (cloud, IoT, cyber security, managed applications, etc) accounted for 54 percent of total enterprise revenue
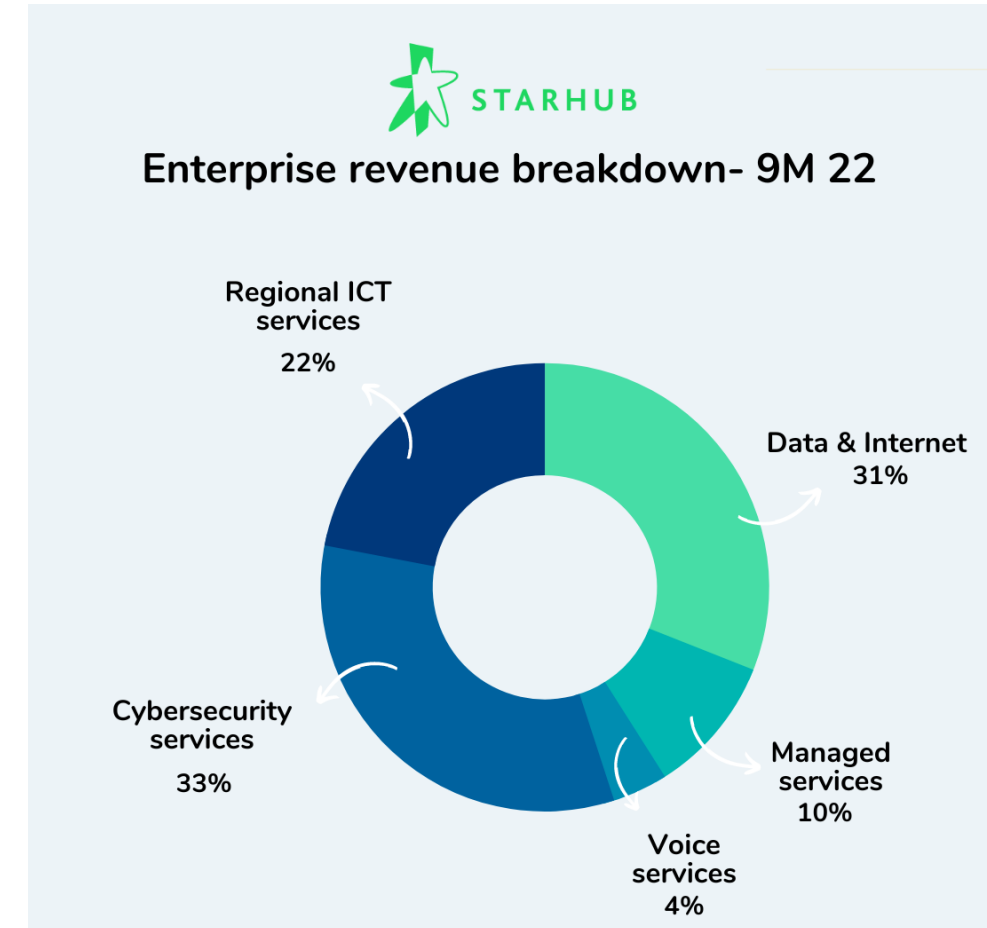
3 The average revenue share for enterprise non-connectivity to total revenues has increased from 9.6 percent in 9M 2021 to 11 percent in 9M 2022.

Legend:
- - - Average= 11 percent
■ 9M 2022
■ 9M 2021

Chart categories (top to bottom): Singtel group, StarHub, HKBN, China Unicom, Tata comm, Spark, China Telecom, PCCW, Telstra, NTT Docomo, Chunghwa, KT Corp, China Mobile, KDDI Corp, LG U+, SoftBank, Telekom Malaysia, Telkom Indonesia, SK Telecom, Bharti Airtel, TPG Telecom, Globe, Maxis, PLDT, AIS

X-axis: 0, 5, 10, 15, 20, 25, 30

Percent of enterprise non-connectivity revenues to total 9M 2022

Source: twimbit analysis, industry reporting

twimbit

#3.2 StarHub's focus on 3C's- Cybersecurity, Cloud and Connectivity pays off

1 StarHub has articulated its focus on converged platforms to bring together the 3C's

2 It intends to invest heavily in this domain, positioning itself well through collaboration with key partners.

3 It has noted a huge growth in its regional ICT services business after the acquisition of JOS SG & MY in Jan 2022

StarHub is prioritising:
1. 5G next-gen network products,
2. A managed Secure Access Service Edge (SASE)
3. Digital/cloud transformation services.

STARHUB

Enterprise revenue breakdown- 9M 22

Regional ICT services 22%

Data & Internet 31%

Managed services 10%

Voice services 4%

Cybersecurity services 33%

Source: twimbit analysis, industry reporting

twimbit

Cloud and security: the growth engines for enterprise leaders

" It's about business outcomes and not telco outcomes. We are focusing on some exciting outcomes such as Infinity Play, Super App, Cloud Infinity, Green Tech, Cloud + Cloud Connectivity + Cyber. These are war cries for us.

STARHUB

Nikhil Eapen, CEO

Non-connectivity the key driver for enterprise business growth

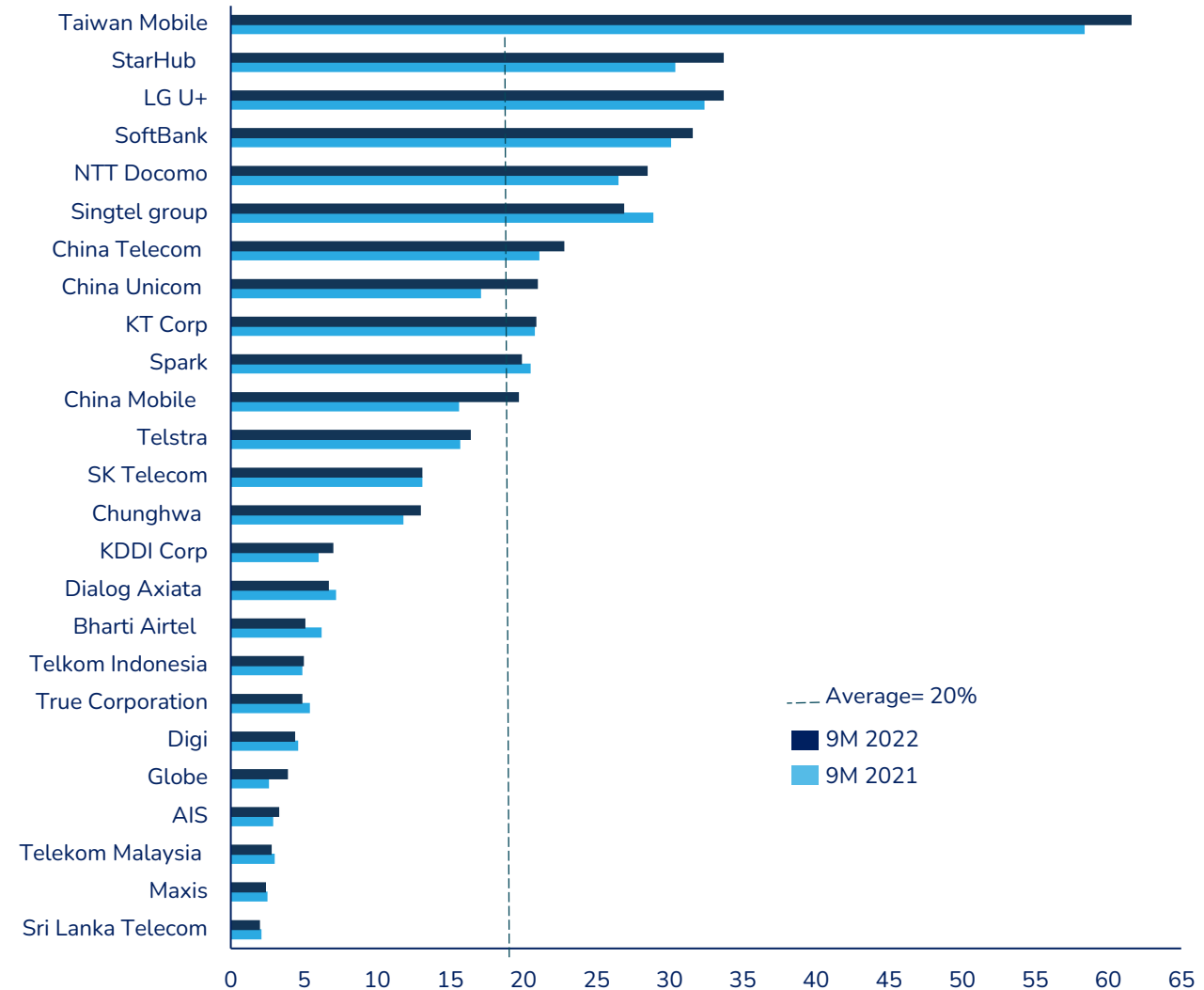# #4 Non-connectivity accounts for 20 percent of total revenue in 9M 2022

1 Non-connectivity expected to account for **30 percent of total revenue** for telcos in Asia Pacific by 2025

2 Non-connectivity revenue **grew 19.5 percent in 9M 2022** (YoY) compared to 7 percent overall revenue growth (Analysis of 25 telcos)
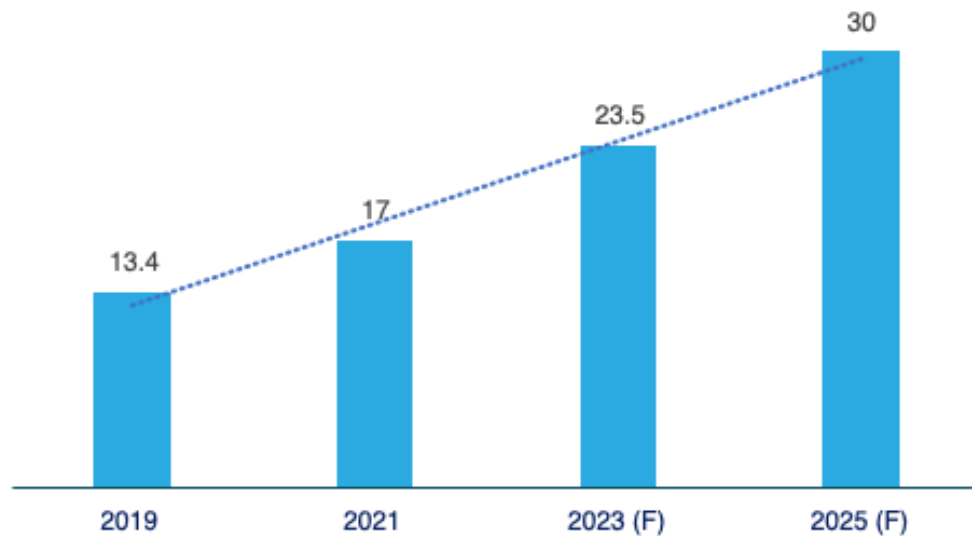
Source: twimbit analysis, industry reporting

Percent of non-connectivity revenues to total 9M 2022

twimbit

#4.1 59 percent of business comes from e-commerce services for a telecom company

1 Taiwan Mobile stands out as an exceptional telco to diversify business beyond traditional services

2 momo by Taiwan Mobile is the second largest e-commerce platform in the country

3 E-commerce constitutes close to 59 percent of business (US$ 2.6 billion) in 9M 22

4 Such digital services are easily scalable beyond domestic markets and enjoy a global reach

5 Post its initial success in the domestic market, momo expanded to markets like Malaysia, Philippines and Vietnam

Taiwan Mobile

% of non-connectiviy revenue to total business

Year	Value
2018	40.1
2019	45.6
2020	53.8
2021	59.5
2022 (F)	62

Growth in adjacencies propel growth

"

We believe momo's (e-commerce platform) secular growth story is very much intact, given the relatively low e-commerce penetration in Taiwan. Our continuous investments in logistics should ensure that our leadership position will be further solidified and the popularity of momo card and momobile bundles will only lend to momo's moat.
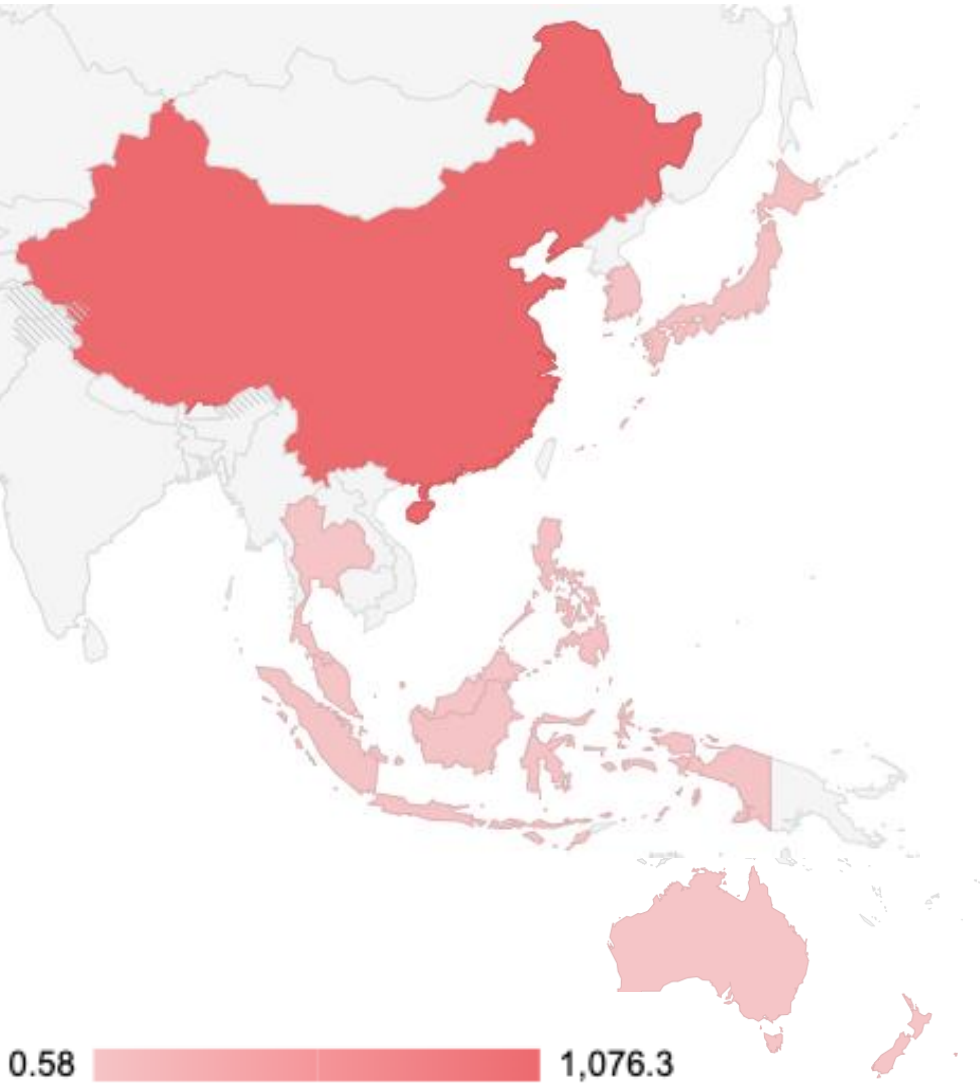
Taiwan Mobile

Jamie Lin, CEO

Highest non-connectivity revenue to total business in APAC of 61.6 percent

#5 Total 5G subscribers touched 1.2 billion in 2022

Country	5G subscribers in 2022 (millions)
South Korea	24.6
Japan	40.6
Australia	3.1
Singapore	2.1
China	1076.3
Thailand	5.1
Indonesia	15.4
Malaysia	0.58
New Zealand	2.0
Philippines	27.1
Total	**1196.9**

0.58 ▬▬▬▬▬ 1,076.3

Source: twimbit analysis, industry reporting

twimbit

#5.1 5G mobile subscriptions in APAC to reach 2.1 billion in 2026

1 5G mobile subscribers is expected to grow with a CAGR of 15.8 percent from (2021 to 2026)

2 Mobile subscribers is expected to grow with a CAGR of 0.8 percent from (2021 to 2026)

3 Developed 5G markets like China, Japan, South Korea, Australia and Singapore will have 68.3 percent of its total subscribers as 5G subscribers

Note:
1.   5G package subscribers' data is considered for China
2.   Rest of APAC includes Malaysia, New Zealand and the Phillipines

Source: twimbit analysis, industry reporting

twimbit
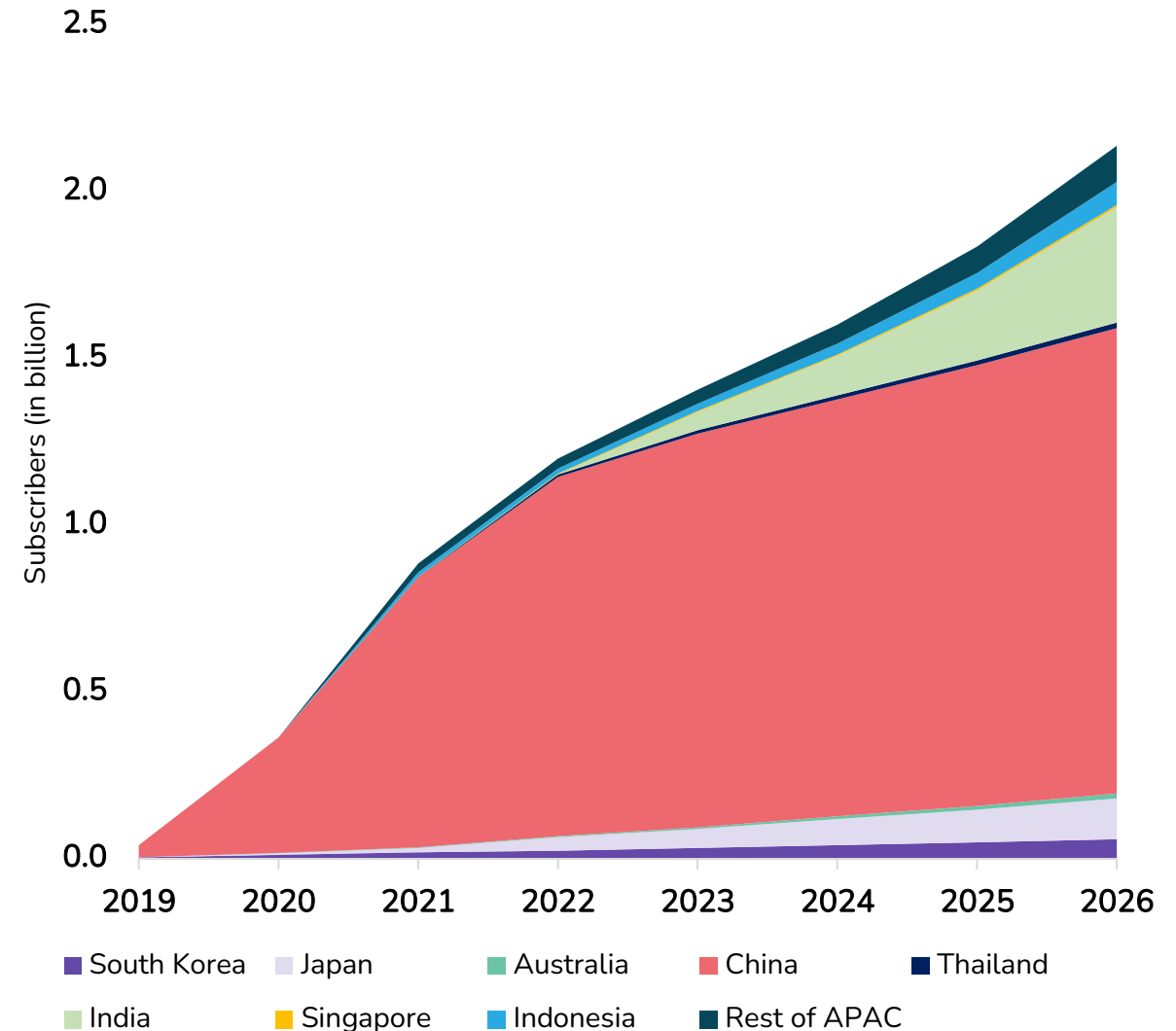
#5.2 Ushering Industry 4.0 with 5G

Smart manufacturing

Factory production has been completely transformed by smart manufacturing. **This has improved safety by 10 percent, product quality by 30 percent, asset efficiency by 20 percent, and reduced costs by 30 percent.**

A case of ZTE Nanjing (China)

In 2021, ZTE introduced smart manufacturing at ZTE's Binjiang site with 5G-enabled processes in place at almost every level of operation, via integration of information technology and operational technology supported by 5G network.

ZTE's smart manufacturing practices have yielded significant benefits: **80 percent decrease in the rate of missed inspections of assembly quality**, a **46 percent reduction in the defectiveness rate of key processes**, a **28 percent cut in the need for production line personnel**, and a **20 percent shorter adjustment cycle on the production line**.

Smart mining

Smart mining is now a reality in China. In 2021, the China Coal Group ended its coal production of 247 million tons, exceeding the annual financial budget of 14.77 million tons - a record high. A YoY increase of 2.59 million tons was recorded from January to May 2022. There was an increase in production, while mine workers' fatality and injury rates declined by 10 percent and 20 percent, respectively.

A case of Daisy Coal Mine (China)

Coal mining equipment is remotely controlled in Daisy Coal Mine (630 meters underground). It takes only 50 people to complete a knife mining in under 5 minutes. At the mine train loading station, the distant innovative railroad stacking structure helps complete the train's loading activity in under 50 minutes, with the ergonomics per person being increased by 25 percent.

Source: twimbit analysis, industry reporting

twimbit

#5.3 Ushering Industry 4.0 with 5G

Smart energy

A smart power grid enables the power grid to run efficiently, stop blackouts, and detect faults immediately.

A case of China Southern PowerGrid

Using 5G technology, the average latency reduced by 75 percent and the fatality rate on high tension wire reduced by 13 percent using intelligent robots at workstations to identify faults.

Smart harbour

Smart ports are equipped with sensors, cameras, and devices that are fully connected to a network infrastructure. This creates a completely integrated communications system.
Automated container weighing systems will reduce weighing times, while remote controlled quay cranes will lower vessel completion time, **increasing productivity by up to 25 percent**.

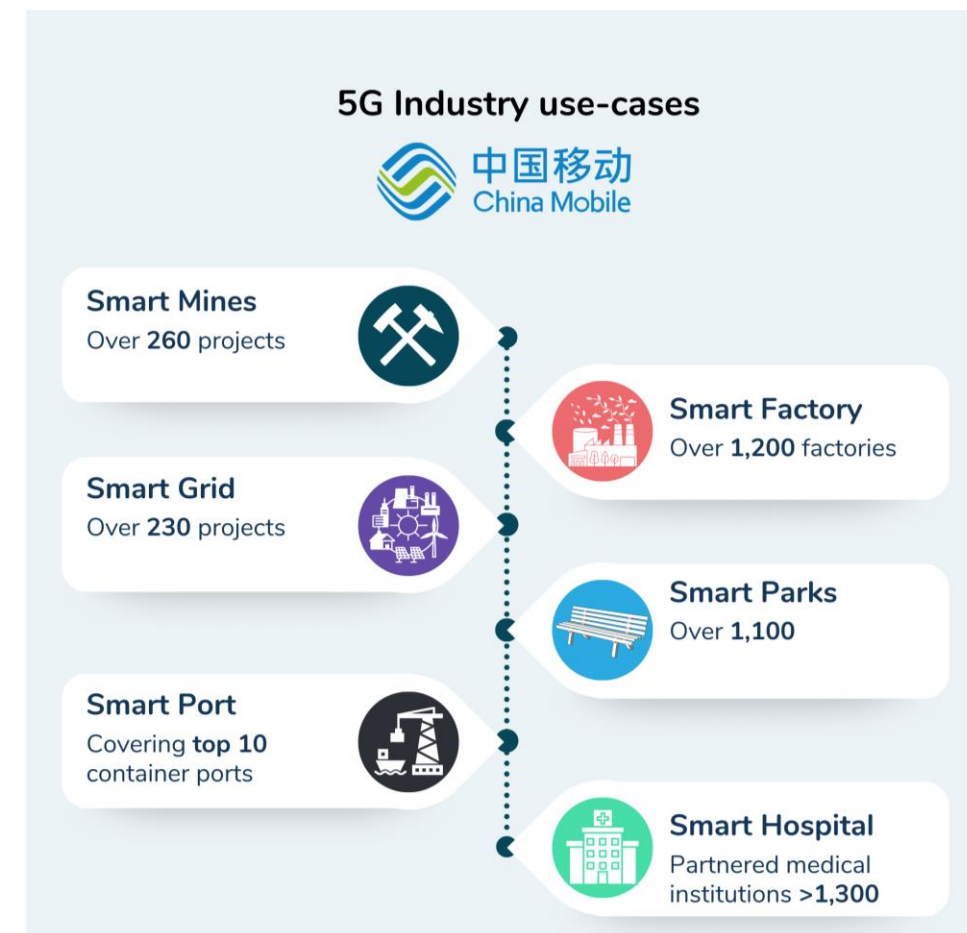**A case of Smart Harbour at Qingdao Port (China)**

The use of 5G technology and a latency of less than 1ms has helped applications like AGV (automatic guided vehicle) increase transport system efficiency.

The throughput increased to 23.71 million TEU in 2021 from 19.30 million TEU in 2018 (TEU: Twenty-foot equivalent unit).

Source: twimbit analysis, industry reporting

#5.4 5G industry use cases drive strong growth for China Mobile; now the benchmark for other service providers

- It has the largest enterprise business in the region with revenues of US$ 13.6 billion (18.3 percent of total) in H1 2022

- The non-connectivity business achieved US$ 14.7 billion in revenues, growing at an exceptional rate of 41.4 percent in H1 2022

Component	Measurement (H1 2022)	Growth (YoY)
Enterprise revenue	US$ 13.6 B	24.6 percent
Corporate customers	21.12 million	2.29 million (net addition as of 2021)
Industry cloud revenue	US$ 2.8 B	93.9 percent
IDC revenue	US$ 2.2 B	24.5 percent
ICT revenue	US$ 1.6 B	35.5 percent

5G Industry use-cases

中国移动
China Mobile

Smart Mines
Over **260** projects

Smart Factory
Over **1,200** factories

Smart Grid
Over **230** projects

Smart Parks
Over **1,100**

Smart Port
Covering **top 10** container ports

Smart Hospital
Partnered medical institutions >**1,300**

Source: twimbit analysis, industry reporting

China leads the 5G surge and the deployment of industry applications

> "We focused on key areas such as smart city, smart transportation and Industrial Internet and further promoted the integrated development of network, cloud and DICT

中国移动
China Mobile

Dong Xin, CEO

Largest 5G enterprise business in APAC

twimbit

#6 In-country mergers gain momentum

1 Most mergers in 2021 and 2022 were motivated by the desire to cut costs, build economies of scale and reducing competitive pressures

2 Three major telecom markets in the Asia Pacific region, viz., Indonesia, Malaysia & Thailand are seeing a merger of 2 leading players to drive scale and capex efficiency.

Major mergers in the region

Source: twimbit analysis, industry reporting

twimbit

Trend for mergers between telecom companies

> We have gone through 365 days (referring to the merger), and many initiatives have been carried out in IOH's efforts to meet our larger purpose. This is a great start to IOH's journey ahead, and we will continue to focus on delivering marvelous customer experiences.

indosat
OOREDOO HUTCHISON

Vikram Sinha, CEO

Achieved subscriber growth in Year 1 of merger

twimbit

#7 Digital Telco – "a growing mantra"

Measures of digital success

3 key priorities

- Transition from selling connectivity to orchestrating experiences

- Build a SuperApp

- Enhancing experiences for all stakeholders, viz, employees, partners, customers & society
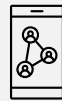
Efficiency Score
(Ease of buying, product utilization & getting support)

Engagement Score
(Frequency of interaction & engagement with the brand)

Ecosystem Value
(Total value of non-connectivity revenues)

Brand Experience

(Customers' brand perception influence by the brand story captured at all touchpoints)

Employee Experience

(Adoption of industry-leading practices for managing employees and learn how to drive cultural initiatives in a digital-first environment)

Source: twimbit analysis, industry reporting

twimbit

#7.1 twimbit benchmarks the top 10 telcos to ace CX in Asia Pacific

- Shortlisted 80 network service operators across the Asia-Pacific region

- Developed informed perspectives on CX through company reports, published anecdotes, contemporary CX literature and press releases

- Shortlisted top 10 telcos by screening on 4 pillars of twimbit CX framework

Digital Experience

Service Experience

Employee Experience

Brand Experience

Top 10 Asia Pacific telcos to ace CX

SK Telecom # 8.4	Airtel # 6.9
NTT Docomo # 8.0	Optus # 6.7
KDDI # 7.5	China Mobile # 6.6
Rakuten # 7.2	Telstra # 6.4
Spark NZ # 7.0	SoftBank # 6.0

twimbit CX score

> Case studies

twimbit

#7.2 Use tech to go from zero to one

SoftBank

au

Using public and private data to launch tech-based solutions

SoftBank is using such data to understand societal problems and design solutions around them.

For example, Monet, addresses key issues like traffic jams, accidents of the elderly people, decrease in public transportation users, driver shortage and availability of public transportation in remote areas. It provides on demand mobility services and help users search, pay, and make reservation for all type of public transportation.

Integrate communications and life design services

au is strengthening its point of contact with customers by using big data to find entry points into users lifestyle needs.

'au PAY' is being positioned as a super app that will become the launchpad for customers daily life activities by integrating services such as hailing taxis and making restaurant reservations.

Source: twimbit analysis, industry reporting

Digital experience

twimbit

#7.3 A shift from selling to experiencing

NTT docomo

SK telecom

Retail stores as brand experience centers

'**d garden**' stores are proof-of-concept shops that focus on how subscribers can use smartphones more comfortably instead of acquiring new subscribers.

The 7 prototype stores are designed on themes such as a cafe, kids, mobility among others to meet diverse customers needs.

Flagship store to showcase tech capability

'**T Factory**' store has been designed to show SKTs transformation from a telco to an ICT player by seamlessly connecting customers offline and online experiences.

The store displays latest technologies and products developed by SKT and its tech partnerships.

Source: twimbit analysis, industry reporting

Service experience

twimbit

#7.4 Happy employees, the secret sauce of great CX

Spark nz

Keeping diversity as a backbone for growth

Spark has 50 percent of board and leadership positions represented by women. .

It also became the first telecom company in New Zealand to achieve the Rainbow Tick certification in 2017.

Under its Blue Heart pledge, Spark encourages employees to make a personal commitment to supporting diversity and inclusion by being inclusive in everything they do.

SK telecom

Employees designing their own happiness

SKT actively measures employee happiness using digital tools and its annual 'Employees Happiness Survey' to identify employees perception of work life happiness.

They launched the Happiness Management initiative in 2020. The company diagnoses the happiness levels of its employees in a bottom-up approach and uses the results to develop and improve its plan to achieve its purpose.

Source: twimbit analysis, industry reporting

Employee experience

twimbit

#7.5 Impact customers' life beyond being a telco

airtel

OPTUS

'Zero Questions' is a utopian idea

Airtel launched 'Open to Questions' campaign aiming for getting closer to 'Zero Questions' from customers. In this campaign, they invited questions from each of its segment and used these as insights to improve product functionalities and add new features.

The objective was simple, Airtel wanted to address every single query.

'Donate Your Data' program to help the underprivileged

This program enables customers to donate unused data to young people, their families and other Australians in need.

As of end of 2021, 25,000+ youngsters were a part of this program. Consumers donated 28,371,456 GB of data, and Optus has made donations of 3,100,000 GB of data.

Source: twimbit analysis, industry reporting

Brand experience

Prioritizes selling an experience vs selling connectivity

> " As we open a new chapter in our corporate history, we will strengthen our market leadership by offering customer-centred technologies and services, and make redoubled efforts to become a socially responsible company
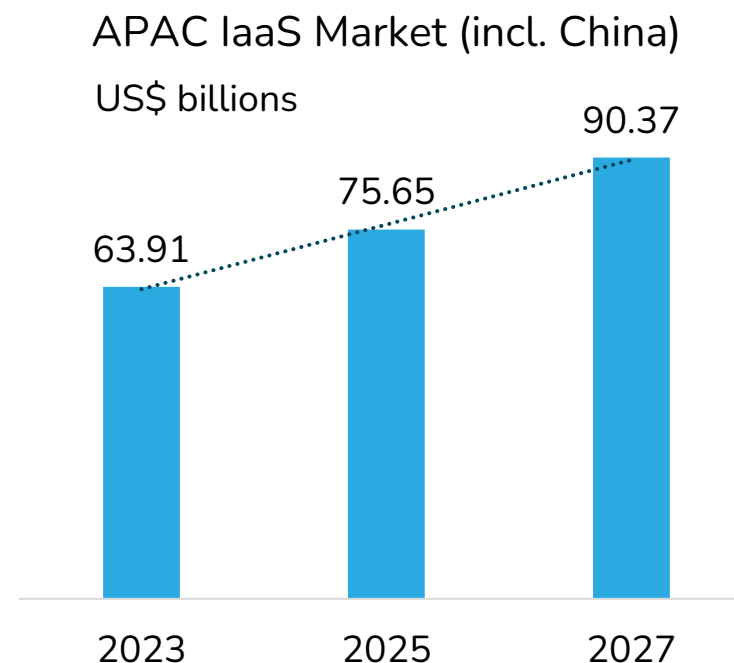
SK telecom

Ryu Young-sang, CEO

Leader in acing consumer experience

twimbit

#8 Telco's warm up to cloud

There are three distinct areas for telcos to adopt cloud:

- **Sell-with:** A cloud practice to help support enterprise customer cloud adoption and digital transformation. Telcos see this as a priority and opportunity area. Many are acquiring boutique cloud partners to build their capabilities. This has been the easiest to operationalize of the three.

- **Migrating network workloads to cloud:** We are in very early stages. Pioneers like Rakuten have shown the way in building an end-to-end cloud native mobile network. Many telcos have initiated small projects to test out cloud-based architectures.

- **Migrating back-office and IT applications to the cloud:** Billing, service management, mobile app and other back-office operations are being incrementally moved to the cloud in the app refresh and upgrade cycles.

APAC IaaS Market (incl. China)

US$ billions

Year	Value
2023	63.91
2025	75.65
2027	90.37

Source: twimbit analysis, industry reporting

twimbit

#9 Cybersecurity is one of the fastest growing opportunities. It is also one of the biggest challenges for the telcos

- Security services market is growing at a CAGR of 16 percent between 2022 and 2027 in Asia Pacific.

- Telcos are in powerful position to address opportunities particularly around small and medium businesses.

- Many telcos have been on an acquisition spree to build their capabilities.

US$ 14B

US$ 29B
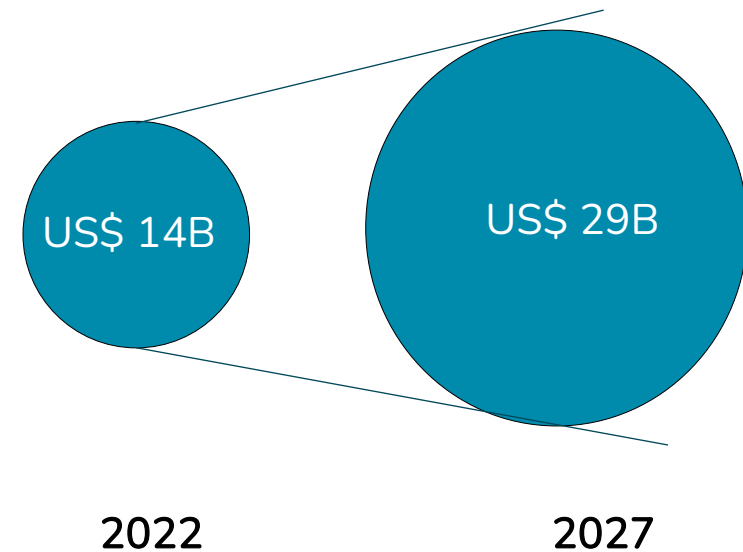
2022

2027

Growth of APAC cyber security market from 2022 to 2027

Source: twimbit analysis, industry reporting

twimbit

#9.1 Devastating data breaches rock the industry in 2022

OPTUS

- Personal details of 11 million customers were accessed. The information included names, dates of birth, phone numbers, email and home addresses, driver's license and/or passport numbers, etc.

tpg TELECOM

- Experienced a hack of its Hosted Exchange service, which compromised the email accounts of 15,000 customers. The attackers targeting financial and cryptocurrency data of TPG Telecom's iiNet and Westnet clients.

TM

- Breech affected 250,248 Unifi Mobile customers. It involved customer names, phone numbers and emails.

Telstra

- The personal information of more than 130,000 Telstra customers has been exposed in a privacy breach.
- The company attributed the breach to a "misalignment of databases" rather than hacking

Singtel

- Subsidiary of SingTel, IT services consulting company, Dialog, had its servers hacked in September 2022, and a small sample of its data, including some employee personal information, was published on the dark web on October 7th.

Telkom Indonesia

- Data leak involving Indihome, a subsidiary of Telkom Indonesia in which personal data of 26,730 Indihome customers, including their names, addresses, surfing history on the internet, such as dates, passwords, domains, platforms, browsers and URL links was accessed

Source: twimbit analysis, industry reporting

twimbit

Security is now a board room priority

> " Throughout we have used the 'what's best for customers' approach to guide our response through this attack and that is why we wanted to put out a call out for all our customers to be on alert in the best way we can

OPTUS

Kelly Bayer Rosmarin, CEO

Responded well following a massive data breach

twimbit

#10 twimbit key takeaways on ESG

Are telcos fulfilling their role towards the society?

Sustainability has become one of the key challenges of our generation.

Telcos have made progress in reporting ESG, but they have an opportunity to redefine what ESG means to them.

Digital Inclusion

Addressing the issue of digital inclusion across the country (that could include network penetration, affordability of services etc.)

Cyber security

Addressing the issue of cybersecurity across the nation (not only as an offering, but rather towards protecting the citizens)

Data privacy/protection

Pushing the conversations forward and addressing the challenges of data privacy/protection and digital well-being.

Impact on other industries

Not only focusing on emissions from your operations but helping enterprise customers achieve their sustainability goals.

Source: twimbit analysis, industry reporting

twimbit

#10 Top 10 telcos to ace ESG in Asia Pacific's

- The telcos have been ranked using an ESG ratings framework developed based on discussions with leading industry experts, review of existing ESG literature, reports on major industry participants, industry sources, and twimbit analysis.

- The ESG framework encompasses 15 parameters & 45 sub-parameters across the 3 pillars of E, S and G.

Environment

Social

Governance

SK Telecom	# 7.59	Taiwan Mobile	# 6.93
Optus	# 7.56	Singtel	# 6.79
Chunghwa Telecom	# 7.24	au	# 6.76
Docomo	# 7.23	KT Corp	# 6.66
Telstra	# 7.12	Softbank	# 6.61

twimbit ESG rating

> Case studies

twimbit

Key takeaways:
#10.2 Start with CHG emission

50 percent
Leaders show a YoY decline in both scope 1 & scope 2 emissions

30 percent
Leaders who still do not declare scope 3 emissions

#10.3 Managing energy consumption

60 percent
Leaders with a YoY increase in use of renewable energy

80 percent
Leaders with a YoY increase in total energy consumption

Key strategies of our leaders!

OPTUS   **Telstra**   SoftBank

Singtel

NTT **docomo**   Taiwan Mobile

❖ Proactively record and declare ESG data such as 'GHG emissions intensity' and 'Scope 3 emissions'

❖ Move beyond local ESG regulations and match global standards such as GRI, TCFD and SASB

❖ Telcos with high renewable energy use invest in production of renewable energy alongside sourcing externally

❖ Build or source an AI based electricity tracking system for real time management of electricity consumption

Key takeaways:

#10.4 Effective use of resources

60 percent
Leaders with a YoY decrease in waste generation

60 percent
Leaders with a YoY increase in water consumption

#10.5 ESG assessment of supply-chain

60 percent
Leaders with a YoY increase in use of renewable energy

10 percent
Leaders with a YoY increase in total energy consumption

Key strategies of our leaders!

❖ Waste management champions target – cell phone and network waste recycling, sustainable packaging, and use of plastics

❖ Develop efficient water harvesting capabilities to reduce dependence on potable municipality water for operational uses

❖ Aim for 100 percent ESG screening rate of new suppliers (across tiers)

❖ Complement ESG education of suppliers with on-site visits to oversee ESG implementation and provide corrective support

Key takeaways:

#10.6 Led by the BOD

80 percent
Leaders have BOD as the top body overseeing ESG initiatives

70 percent
Leaders with 75 percent or less independent directors in the board

#10.7 Run transport operation

50 percent
Leaders who do not provide political contributions in any form

30 percent
Leaders have not provided details of their anti-trust or fair-trade practices

Key strategies of our leaders!

❖ Have the BOD nomination committee comprise only of independent non-executive directors

❖ Remove performance incentives for non-executive directors to maintain independence and impartiality

❖ Publicly disclose any direct or indirect (lobbying) political contributions

❖ Ensure easy discovery and wide circulation across organization of – fair trade practices, code of conduct, whistle blower policies and conflict of interest statements

Source: twimbit analysis, industry reporting