

















# Telecommunications Market Indicators in the Kingdom of Bahrain

Full year 2021 up to Q2 2022

Issued in **October 2022**

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# Introduction

- The collection, analysis and dissemination of accurate and timely market information significantly enhances the design of effective, proportionate and efficient market regulation.
- The publication of this report is in accordance with Article 54 of the Telecommunications Law of Bahrain.
- Unless specified, the analysis presented in this report is based on data collected from licensed operators by TRA. TRA would like to thank licensed operators for the information provided and looks forward to their continued collaboration in the future.
- When publishing such information, TRA must have regard to the need to exclude any information which relates to the private affairs of a Person and information which, if published, would or might in the opinion of TRA seriously and prejudicially affect the interests of any Person. TRA has taken the necessary steps to ensure that it complies with the requirements of Article 54, including not publishing information which may be considered confidential information.
- This is the **Seventeenth** Telecommunications Markets Indicators report and it covers a large range of telecoms services indicators for 2021 up to Q2 2022 such as the number of subscribers, penetration rates, calls usage and telecoms revenues.

# Disclaimer

- This report contains information collected by the Telecommunications Regulatory Authority in Bahrain in accordance with the provisions of the Telecommunications Law. This report fulfills the requirement to undertake research and publish information as set out in Article 54 of the Law. It also fulfills the requirements of Article 25 of the Law to provide information to the Regulator as set out in the Individual Licenses granted to the Operators mentioned in this report.
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# Services Offered by Active Operators

Operator Name	National Fixed	International Calls	Mobile	Internet	Leased line	Other data service	Others
Batelco	✓	✓	✓	✓	✓	✓	
Bahrain Internet Exchange (BIX)						✓	IP Transit –Peering – Colocation - Lawful Intercept - Number Portability- IPLC
BNET*	✓			✓	✓		
BT Solutions LTD					✓	✓	
Equant Global Network - EGN BV					✓		IPVPN
Etisalcom Bahrain	✓	✓		✓	✓		MPLS
Gulf Electronic Tawasul					✓		
IMC							International calls through wholesale
Infonas	✓	✓		✓	✓	✓	
Kalaam telecom	✓	✓		✓	✓		
Mobitel							Bulk SMS
Northstar Technology		✓		✓	✓		
Nuetel Communications	✓	✓		✓	✓	✓	IPTV - ICT
Rapid telecoms	✓	✓		✓	✓	✓	
STC Bahrain	✓	✓	✓	✓	✓		
Sita						✓	
Viacloud	✓	✓		✓	✓		
Vodafone Enterprise Bahrain						✓	IPVPN -Ethernet Wireline - Ethernet VPN
Zain Bahrain	✓	✓	✓	✓	✓	✓	
Zain Global Communications Services					✓		International transit voice services
Zajil					✓		

\*Services offered by BNET are on a wholesale level only.

# Main Telecom Indicators

Indicator	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Q2 2022	CAGR 2012-Q2 2022
Number of fixed line telephony (excluding ISDN)	259,723	251,643	246,136	242,350	234,378	238,969	228,717	226,390	228,422	221,045	221,577	(1.4%)
Fixed line telephony penetration (including ISDN)	21%	23%	22%	21%	20%	19%	18%	18%	18%	17%	17%	-
Total mobile subscribers	2,123,903	2,210,190	2,328,994	2,541,688	2,994,865	2,364,477	2,092,714	1,918,635	1,770,966	1,923,443	2,038,167	(0.4%)
Mobile penetration	176%	176%	177%	185%	210%	158%	139%	129%	118%	128%	130%	
Total broadband subscribers	1,148,264	1,507,971	1,679,681	1,977,402	2,407,837	2,372,742	2,160,052	2,152,496	2,012,253	2,145,773	2,251,123	6%
Broadband penetration	93%	118%	128%	145%	169%	164%	141%	145%	134%	144%	144%	-
Percentage of individuals using the Internet	88%	90%	91%	93%	98%	96%	99%	99%	99.7%	100%	N/A	-
Telecommunications revenues (BD in million)	409	423	430	453	435	424	431	446	460	486	N/A	-
Number of employees in the telecommunications sector	3,141	3,000	3,092	3,206	3,230	2,914	2,837	2,743	2,922	2,764	N/A	-

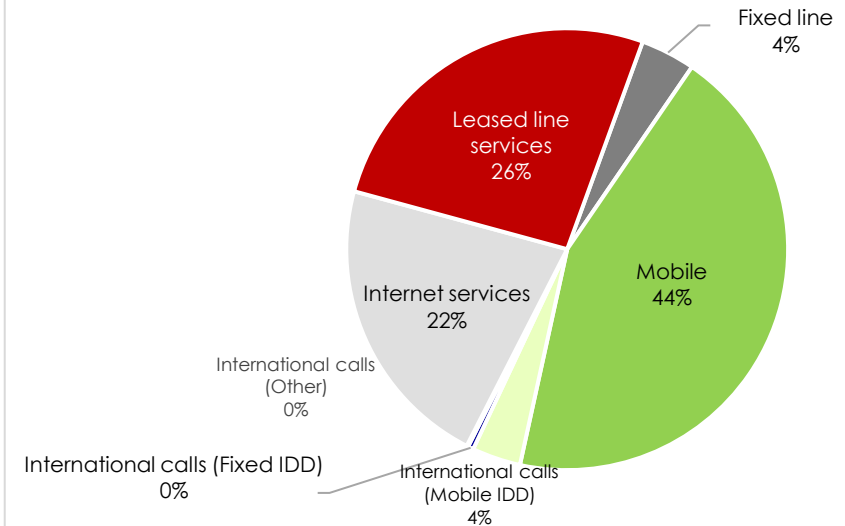
Notes:

- 1- The number of subscribers refers to the end of the period.
- 2- Number of broadband subscribers include fixed wired, wireless and mobile.
- 4- The source of Percentage of individuals using the Internet is the ITU and TRA residential survey.
- 5- Penetration is based on mid-year population estimated by CIO

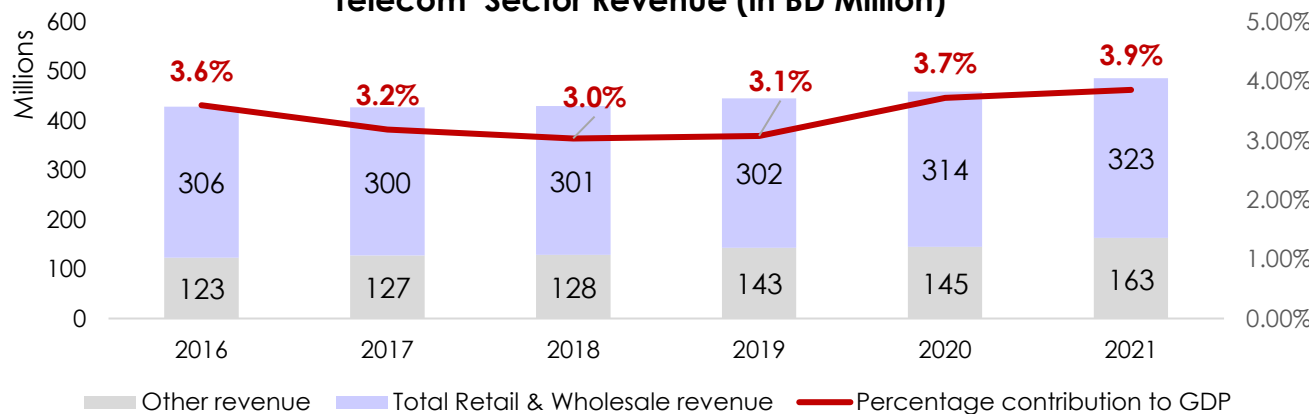
# Revenues in the Telecom Sector

- Telecommunications services generated **BD 486 million\*** in revenue in 2021 compared to BD 460 million in 2020, an increase of around 6%.
- Telecommunications sector revenues represent around **3.9%** of GDP as of 2021.
- The proportion of mobile revenue to total retail revenue decreased to **44%** in 2021, compared to 46% in 2020.
- Between 2020 and 2021 total retail revenue increased by **3%** while reported wholesale revenue increased by **2%**. Other revenue dropped by **4%** for the same period.
- Revenue from leased line services increased by **49%** while internet services revenue increased by **32%** between 2016-2021.
- Telecommunications sector revenue increased by **13%** between 2016-2021.

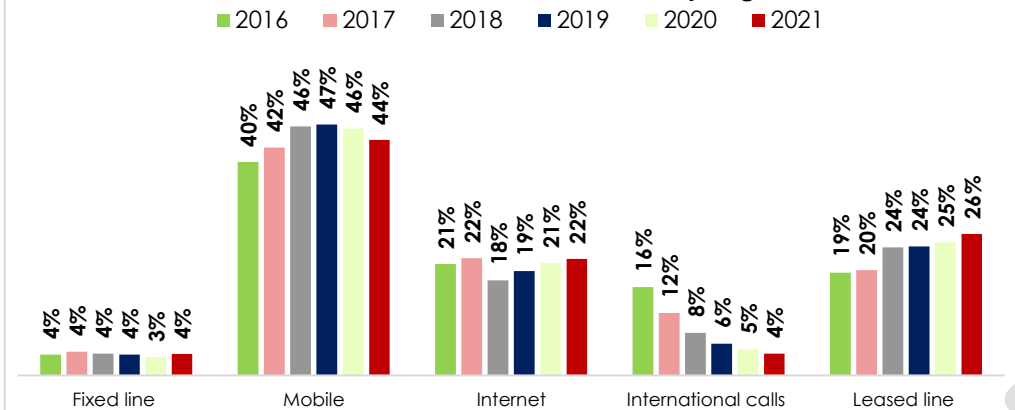
Break down of retail services revenue in 2021



Telecom Sector Revenue (in BD Million)\*\*



Evolution of retail services revenues by segment

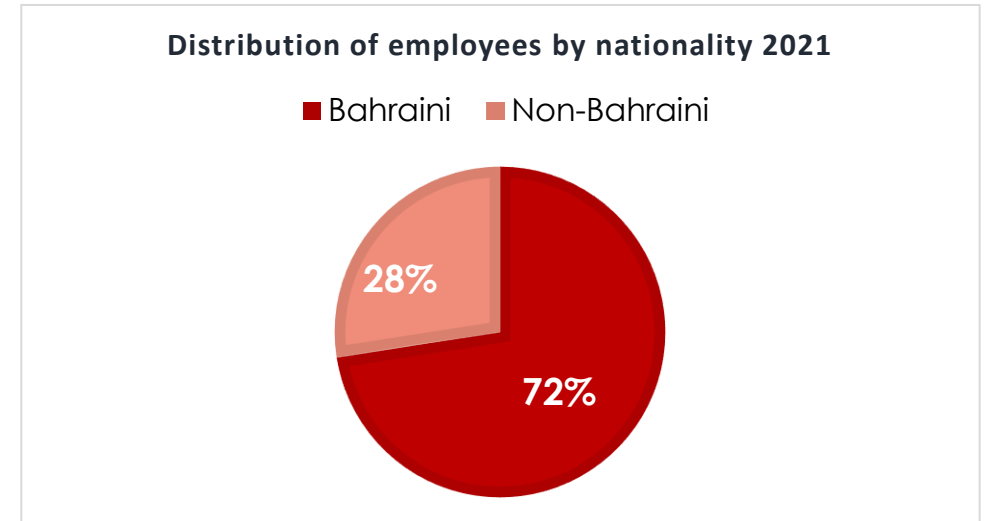
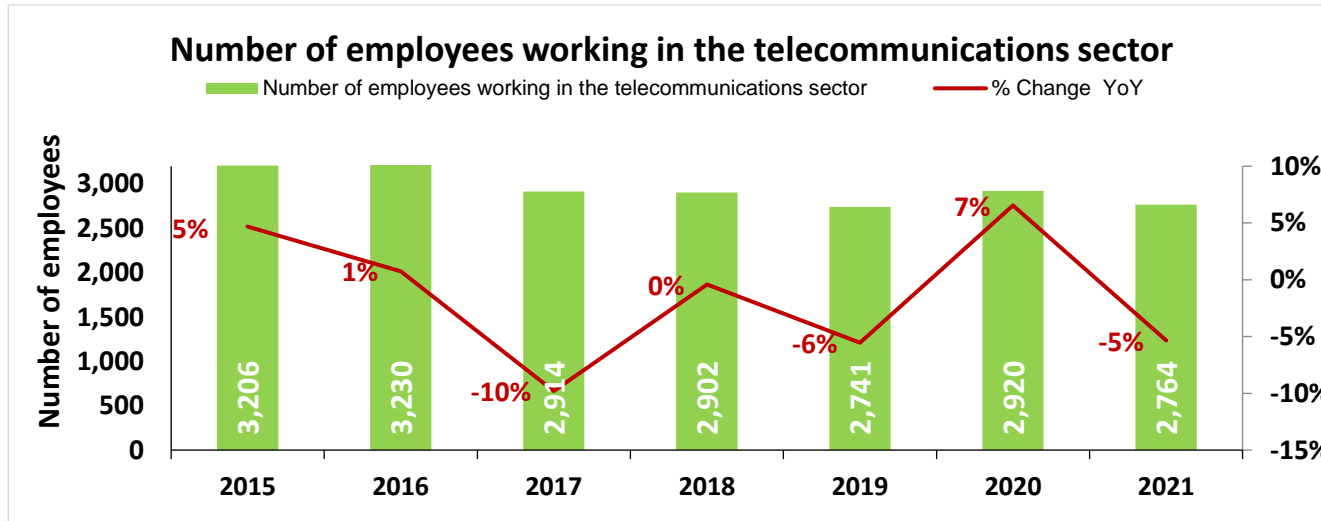
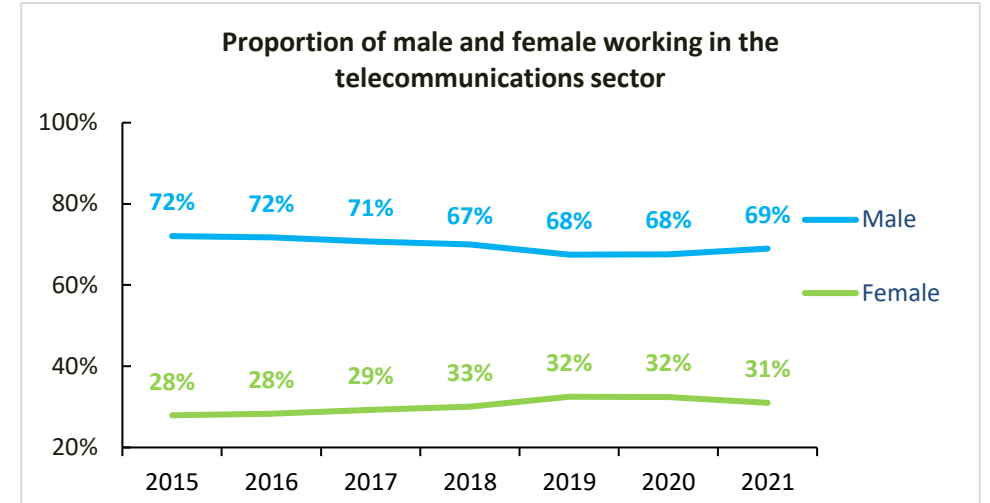


\* Other revenue includes but is not limited to (Hardware revenues, ICT, advanced services, etc..)

\*\* Revenue reported above includes BNET revenue.

# Employment in the Telecom Sector

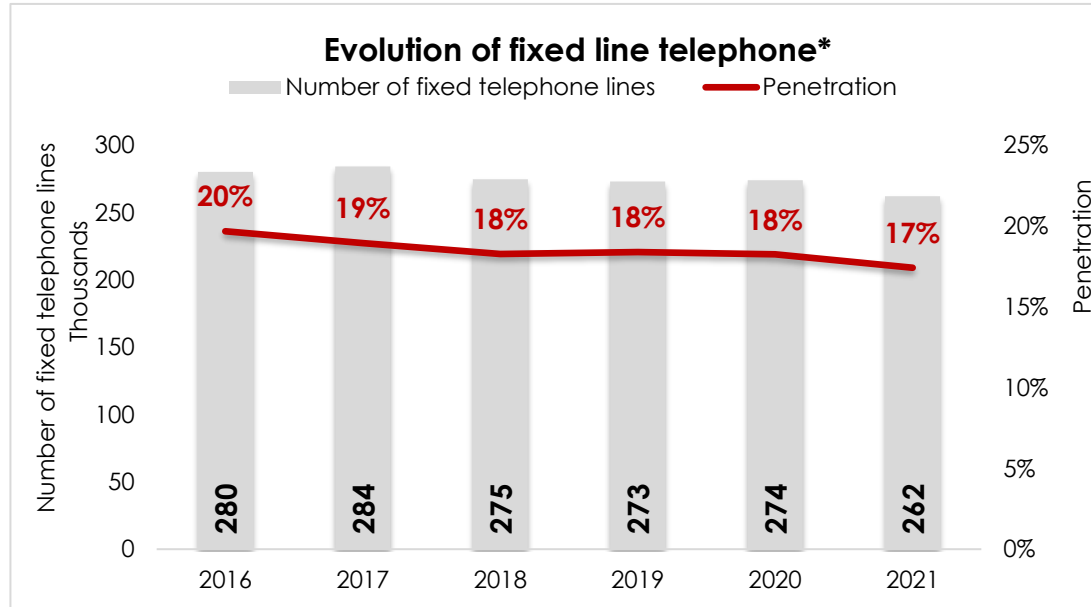
- 2,764 employees are working in the telecommunications sector as of 2021.
- The sector achieves high degree of Bahrainisation. As of 2021, 72% of the employees in the sector are Bahrainis.
- Females represent 31% of employees in the telecom sector.





# **FIXED LINE TELEPHONY SERVICES**

# Fixed Line Telephony Services



Number of	2016	2017	2018	2019	2020	2021
***ISDN	2,591	2,525	2,428	2,350	2,136	1,980
Basic-rate	1,139	1,086	958	867	657	653
Primary-rate	1,452	1,439	1,470	1,483	1,479	1,327

\* Including ISDN subscribers (Basic ISDN = 2 lines, Primary ISDN= 30 lines)

^ Revised numbers due to an operator resubmission

\*\* ISDN subscriptions refers to the number of subscriptions to the Integrated Services Digital Network. This can be separated into basic-rate and primary-rate interface service.

\*Mid-year population estimated by

CIO:

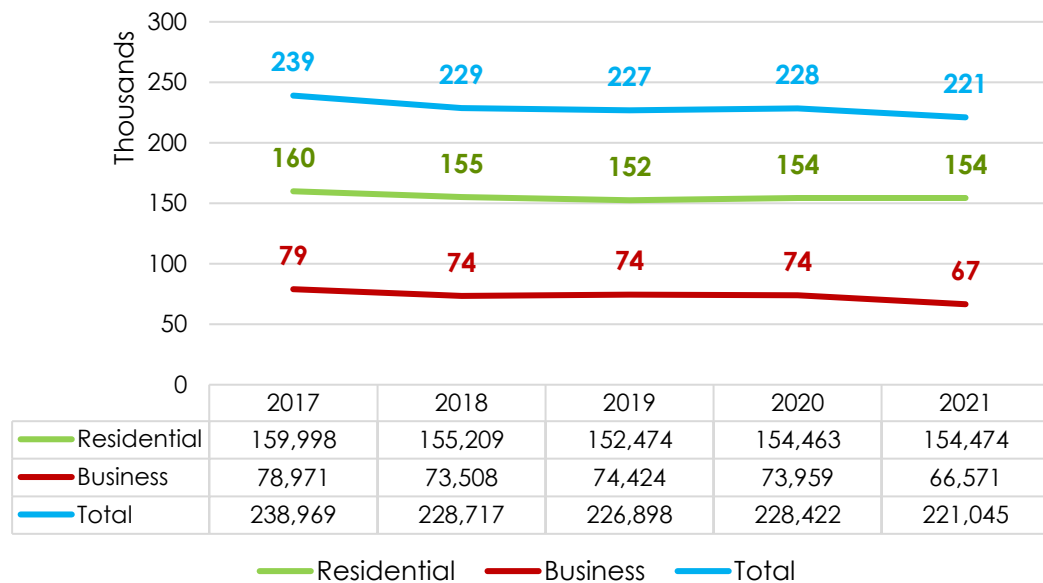
2020	1,501,635
2021	1,504,365

- There were **262,161** fixed-line telephony services (including ISDN) in operation at the end of 2021, compared to 274,106 fixed telephone lines in services at the end of 2020.
- Regarding ISDN service, Basic-rate ISDN has declined by **0.6%** between 2020 & 2021 while Primary-rate ISDN service dropped by **10%**.

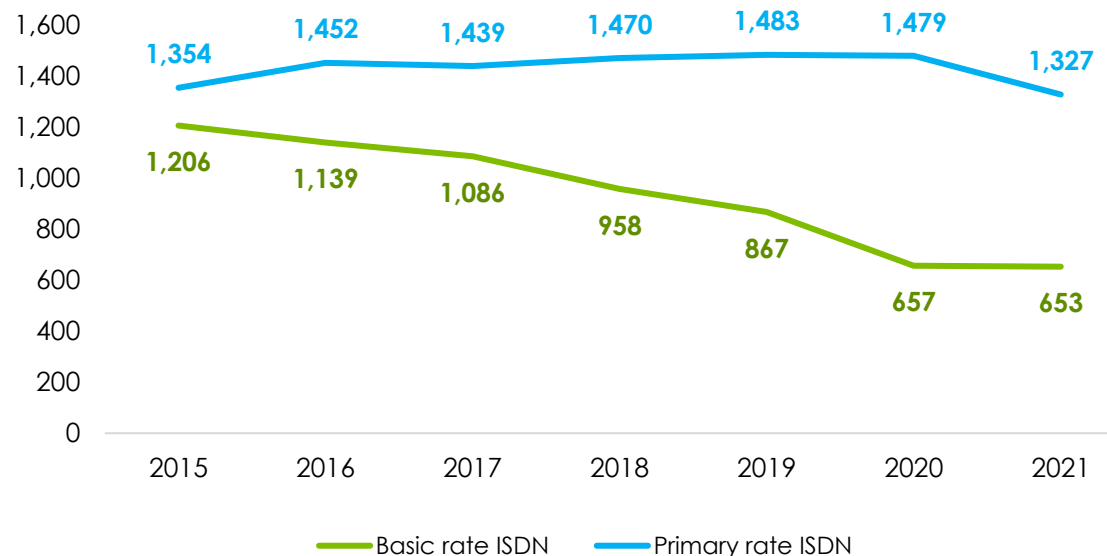
<b>2021</b>	<b>227,133</b>	Number of total fixed lines
	<b>15%</b>	Penetration rate
<b>2021</b>	<b>262,161</b>	Number of fixed lines, including total ISDN lines
	<b>17%</b>	Penetration rate

# Fixed Line Telephony Services By Customer Type

Number of fixed telephony lines by customer type (Excluding ISDN & CPS)



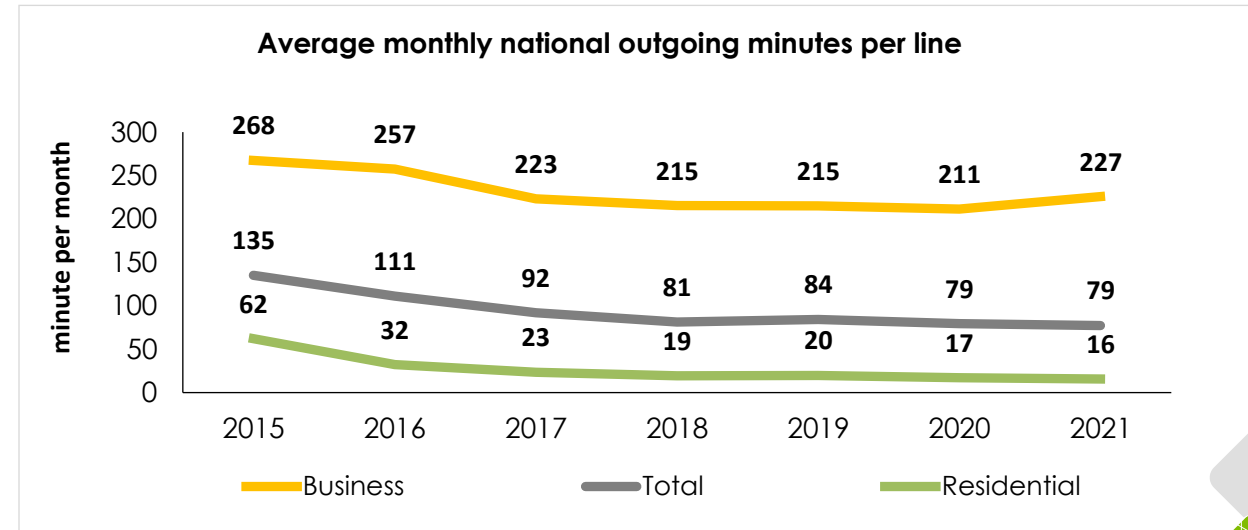
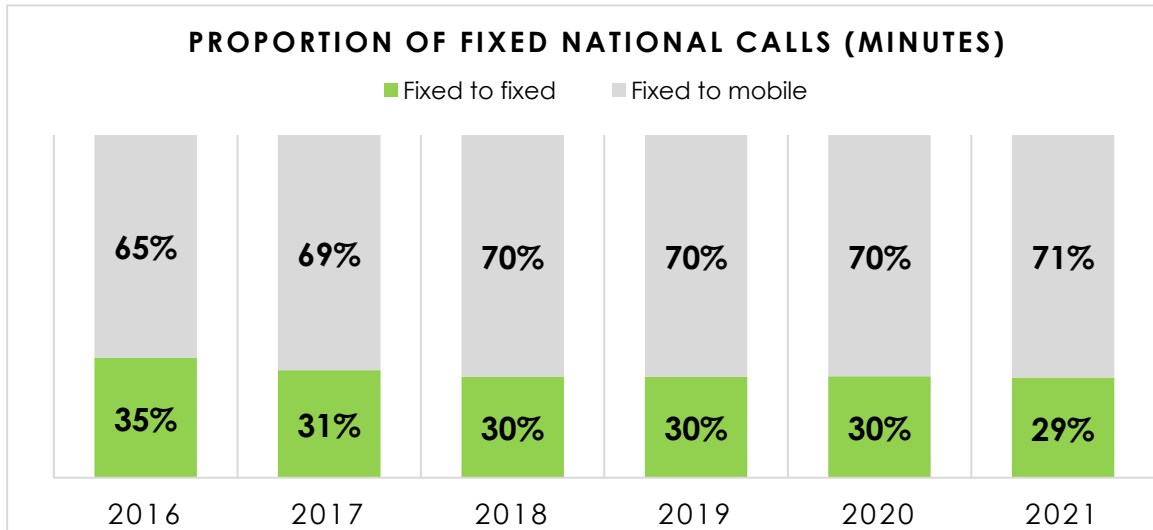
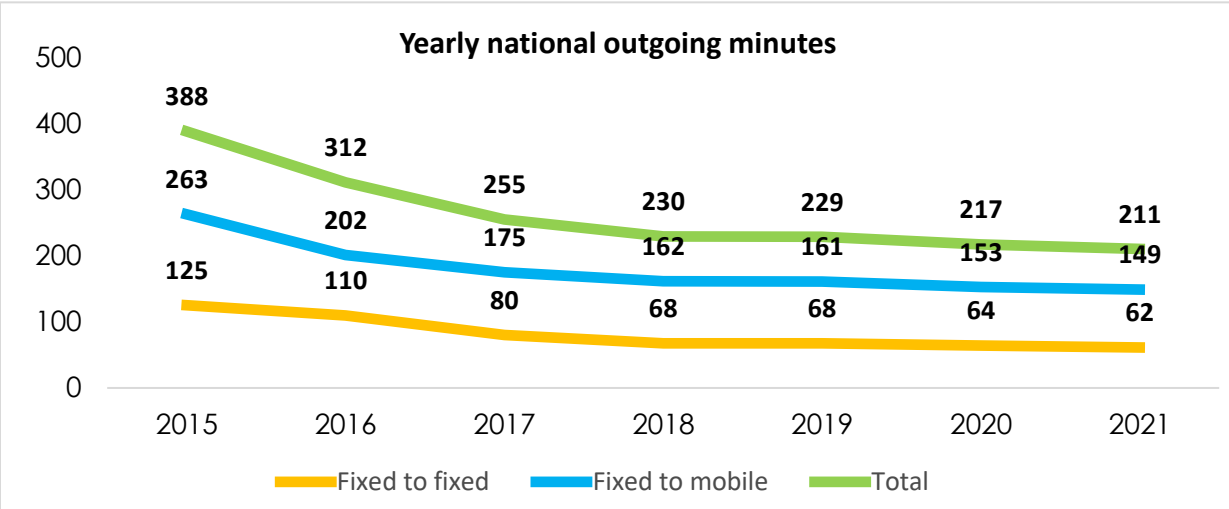
Number of ISDN subscriptions



- Total number of fixed telephony lines has decreased by **3%**. The total number of residential lines remained somewhat unchanged, and the total number of business lines dropped by **10%** relative to 2020.
- By end of 2021, Basic rate ISDN dropped by 0.6% while Primary rate ISDN dropped by 10%. Since 2016, Primary rate ISDN dropped by 0.1% while Basic rate ISDN dropped by 0.4%

# Fixed Line Telephony Outgoing Minutes

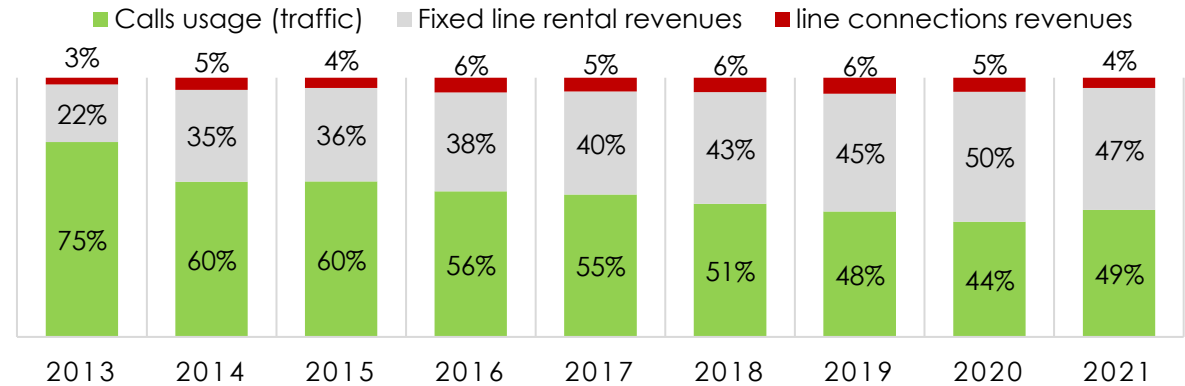
- The outgoing fixed call minutes fell by around 3% from 217 to 211 million minutes between 2020 and 2021 as consumers increasingly use mobile and internet-based voice and messaging services instead of fixed line telephony calls.
- Average monthly national outgoing minutes continued to decline as the average minutes for residential fixed lines declined by around 9%. However, average minutes for business fixed lines increased by around 7%.



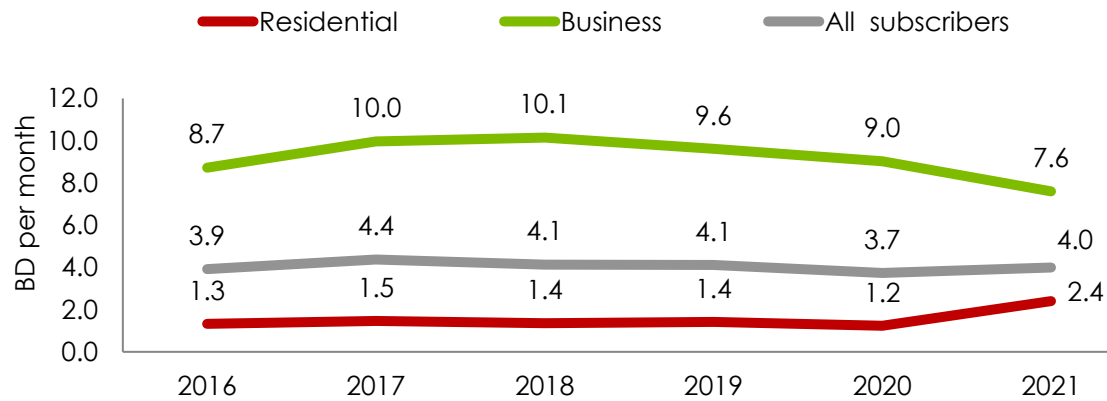
# Fixed Line Telephony Service Revenue

- Fixed line revenues increased by **76%** between 2020 and 2021. Although the number of subscriptions dropped, fixed line rental revenue and traffic increased.
- The average monthly revenue per user for national calls only increased to **4**. Similarly, the average revenue including international calls slightly increased to **4.4**.

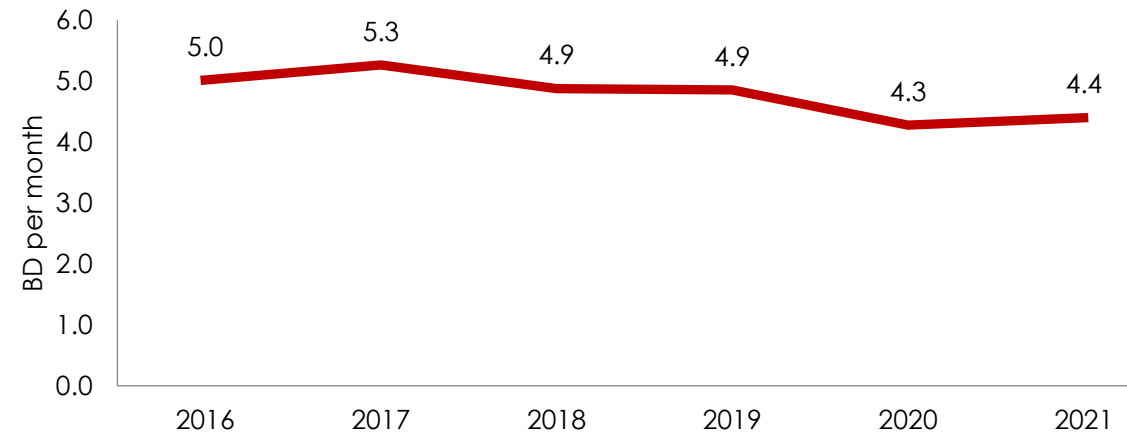
## DISTRIBUTION OF FIXED TELEPHONY REVENUE



## Average revenue per fixed line subscription (ARPU) – national calls only - Residential and Non-residential\*



## Average revenue per fixed line user (ARPU) - including international calls - For all customers



\* Increase in residential ARPU is due to enhanced reporting for 2021, which better captures the ARPU for each category.



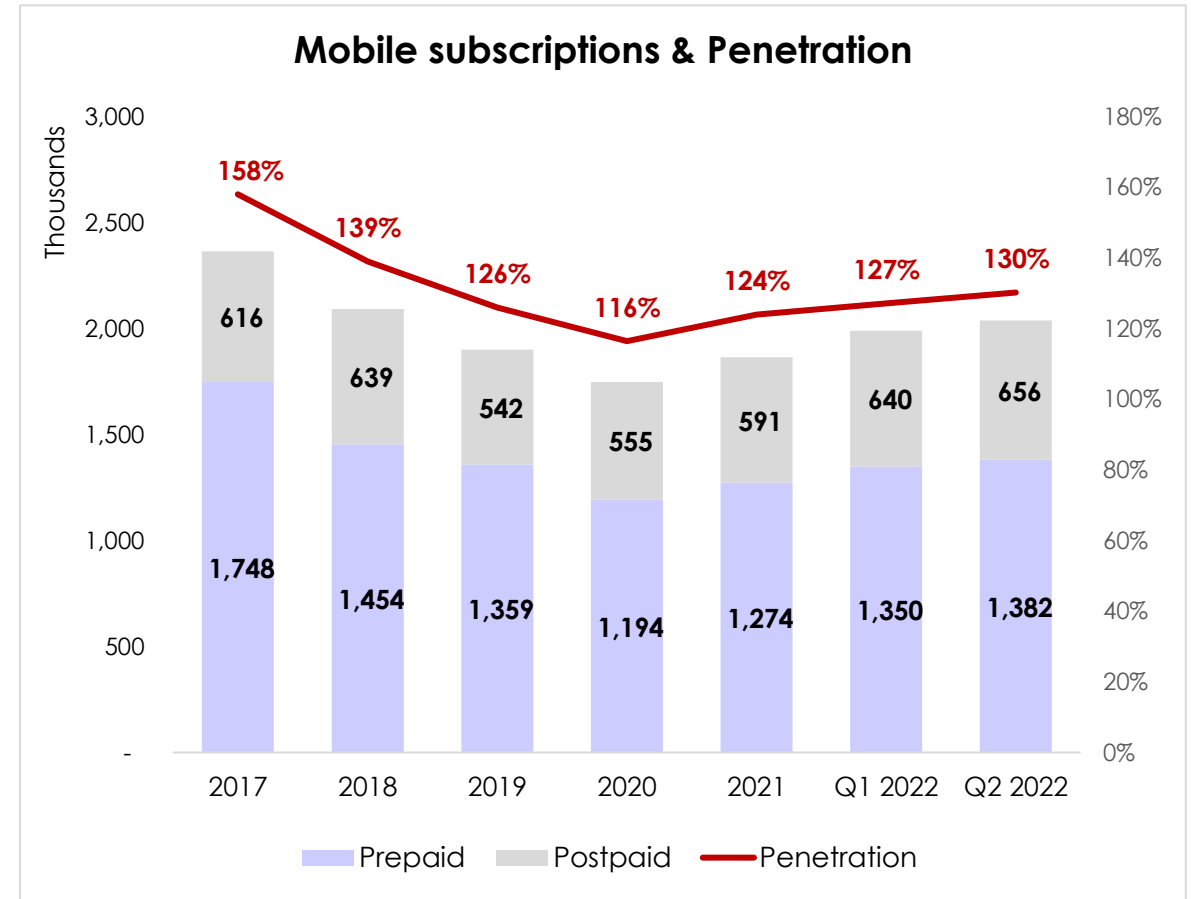
# MOBILE SERVICES

# Mobile Services

- By the end of 2021, the number of total mobile subscriptions increased by **9%** relative to 2020. By Q2 2022, the number of mobile subscriptions increased by **6%** relative to 2021.
- Postpaid subscribers increased by 7% between 2020-2021 and prepaid subscribers grow by 9.4% for the same period.
- By the end of 2021, postpaid subscriptions increased by **6.6%** compared to the end of 2020. Similarly, prepaid subscriptions increased by **6.7%** over the same period.

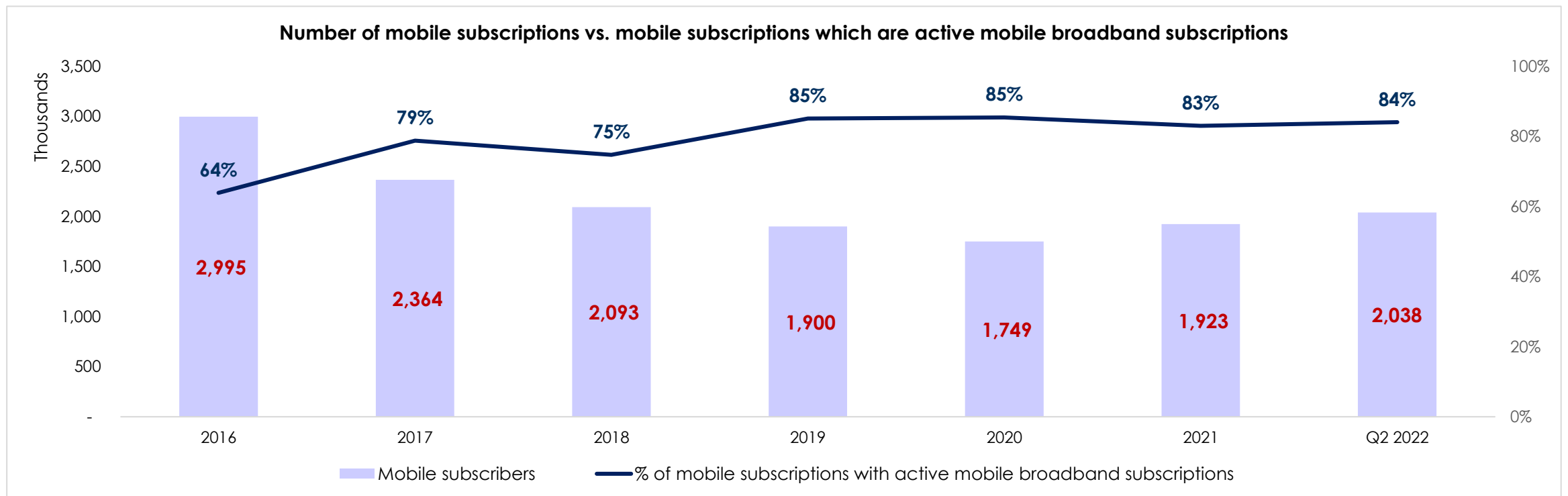
End of Q2 2022	<b>2,038,167</b>	Number of total mobile subscriptions
	<b>130%</b>	Penetration rate

	2017	2018	2019	2020	2021	Q2 2022
<b>Total</b>	<b>2,364,477</b>	<b>2,092,714</b>	<b>1,918,635</b>	<b>1,770,966</b>	<b>1,923,443</b>	<b>2,038,167</b>
% of Prepaid	74%	69%	71%	67%	68%	68%
% of Postpaid	26%	31%	29%	33%	32%	32%



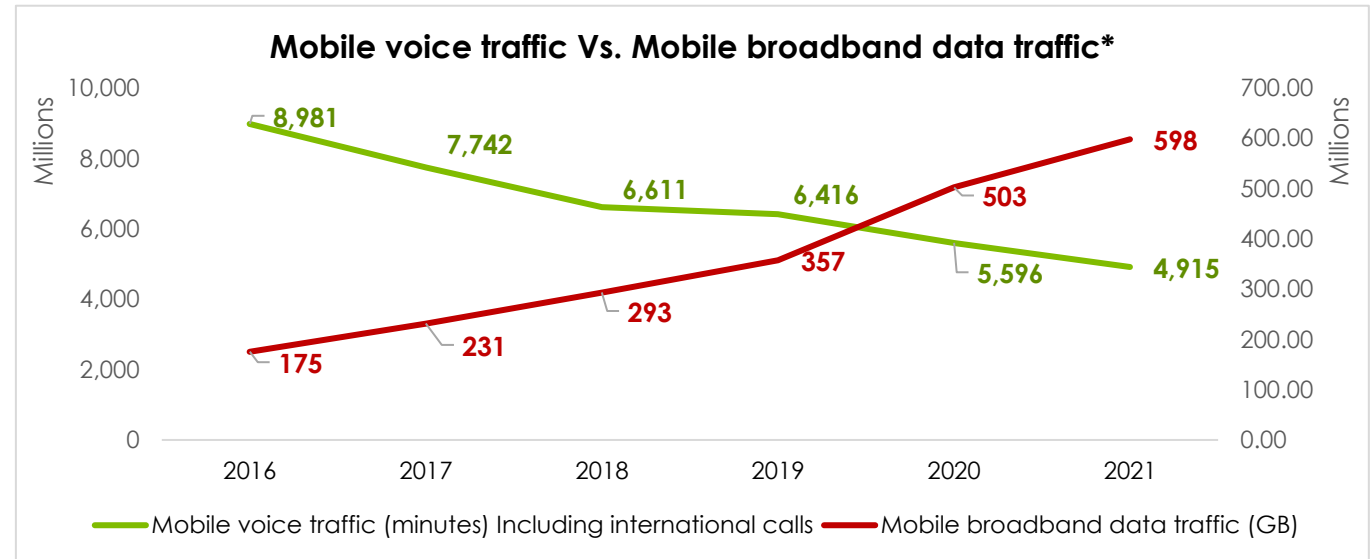
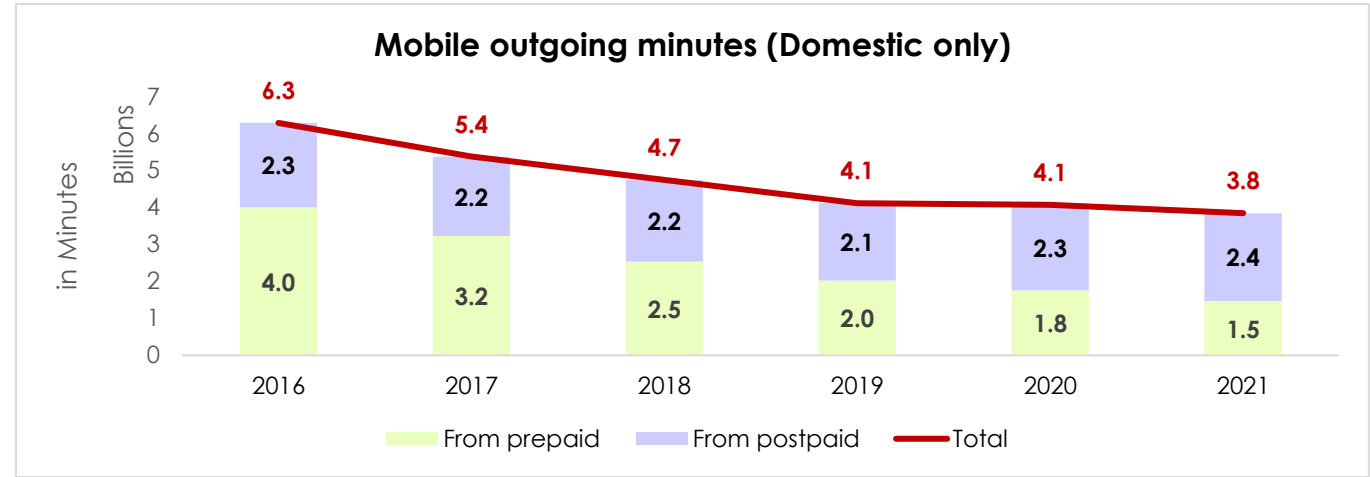
# Mobile Subscriptions with Active data subscriptions

- By Q2 2022, there were 1.7 million mobile subscribers with active mobile data subscriptions (pay per use, add-on and bundles) compared to 1.5 million subscribers in 2020 (Increase by 6%).
- Active mobile broadband subscriptions (pay per use, add-on and bundles) represent 84% of total mobile subscriptions by Q2 2022 compared to 64% of total mobile subscriptions at the end of 2016.



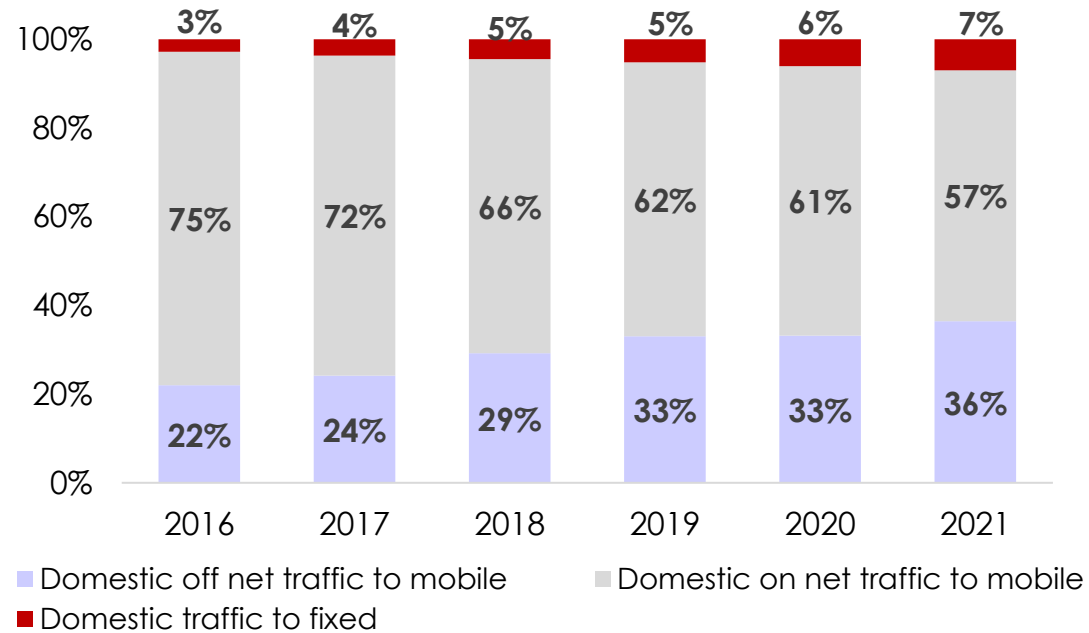
# Mobile Traffic

- At the end of Q4 2021, mobile generated 3.8 billion domestic minutes, representing a 6% drop compared to the previous year.
- The compound annual growth rate is -9% in domestic mobile originated traffic between 2016 and 2021.
- Comparing 2020 to 2021, the domestic postpaid mobile outgoing minutes increased by 3%, while the traffic originated from prepaid decreased by 16%.
- While total mobile voice traffic (including international calls) decreased by 12%, data traffic increased by 19% between 2020 and 2021.

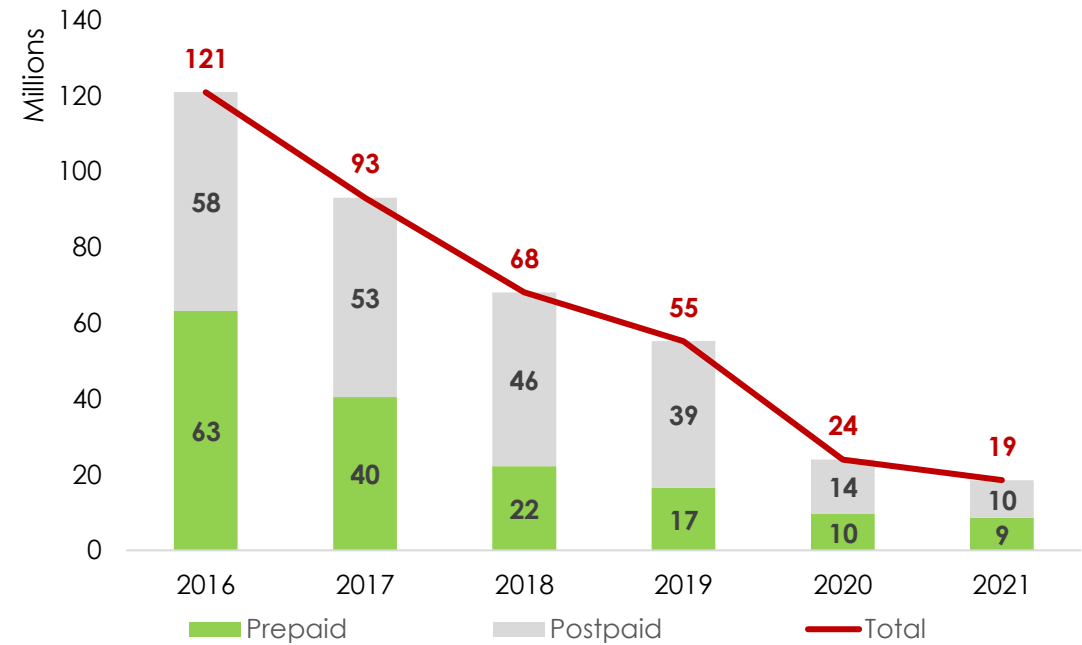


\*Data traffic is used for all Internet activities

### Distribution of domestic mobile outgoing minutes

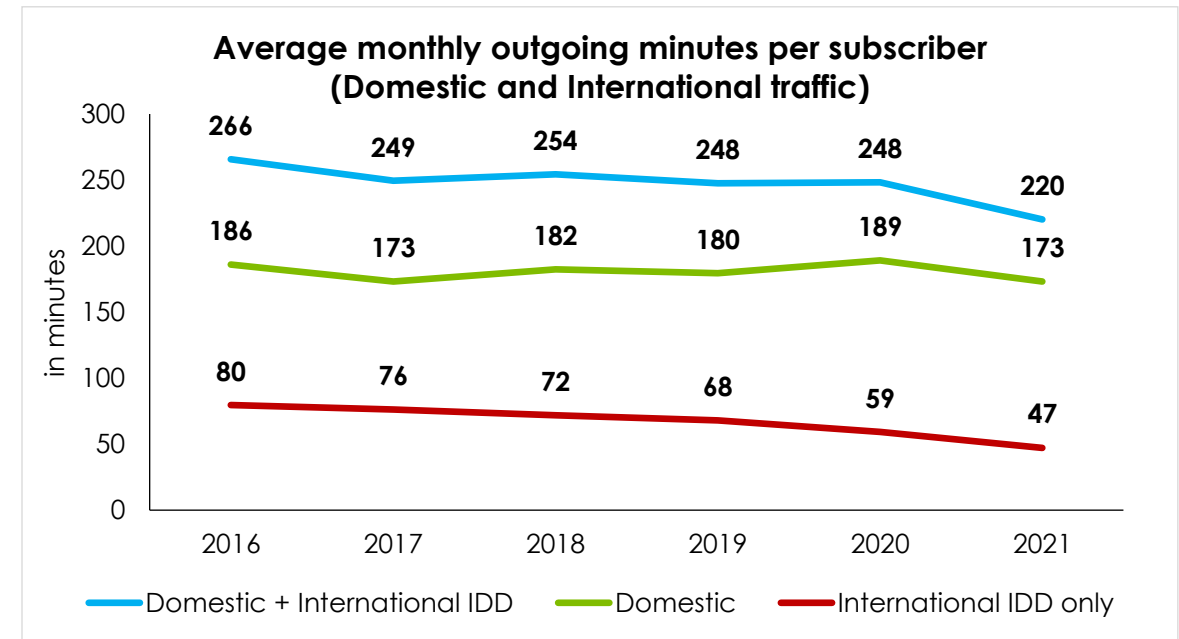
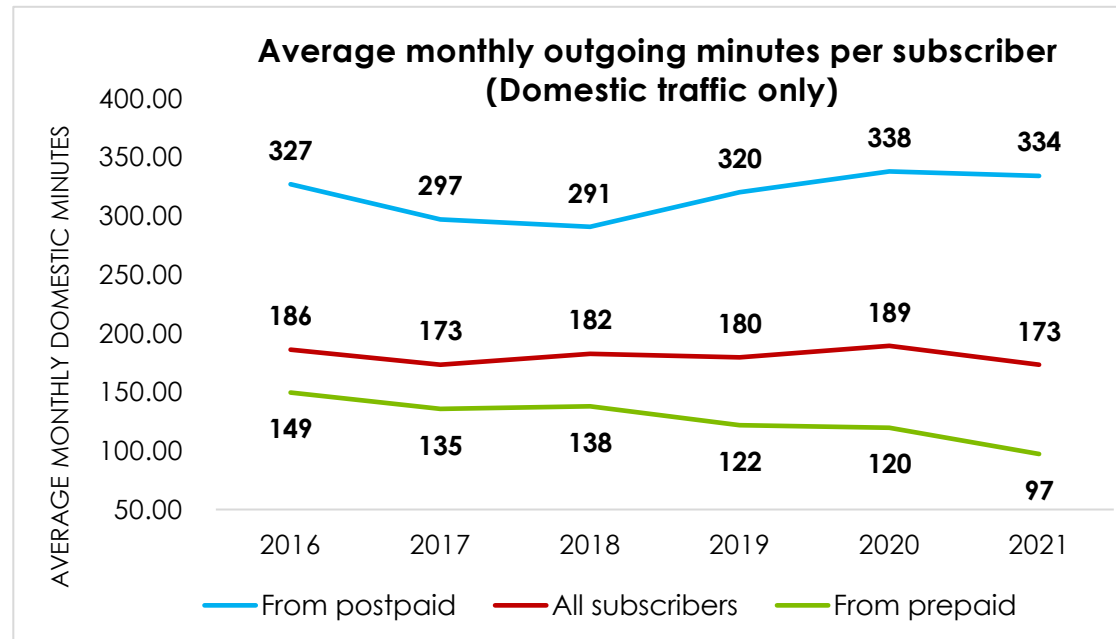


### Domestic outgoing SMS



- In 2021, domestic mobile originated on-net traffic dropped by 12% relative to the previous year.
- In 2021, domestic mobile originated off-net voice traffic increased by 3.6% relative to 2020.

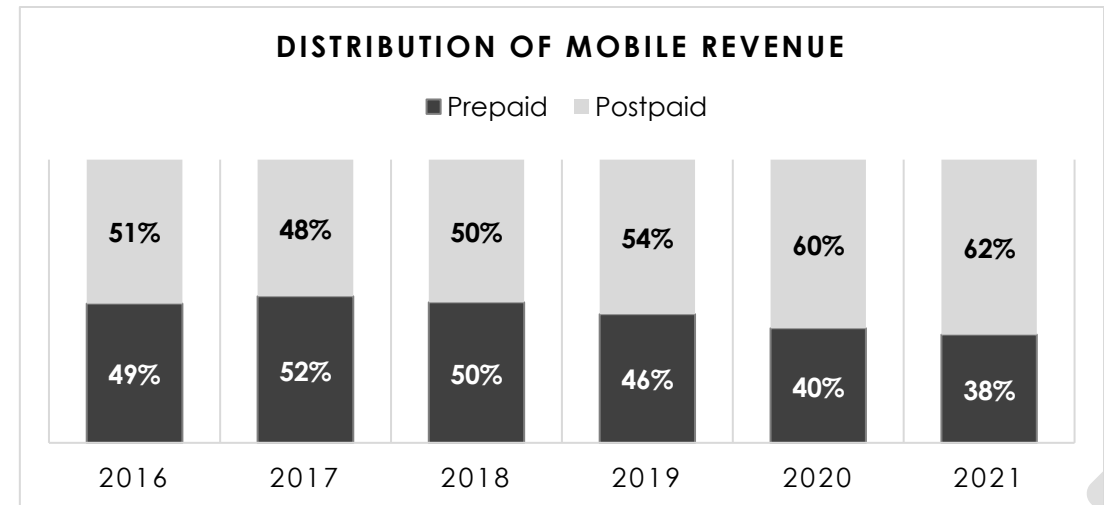
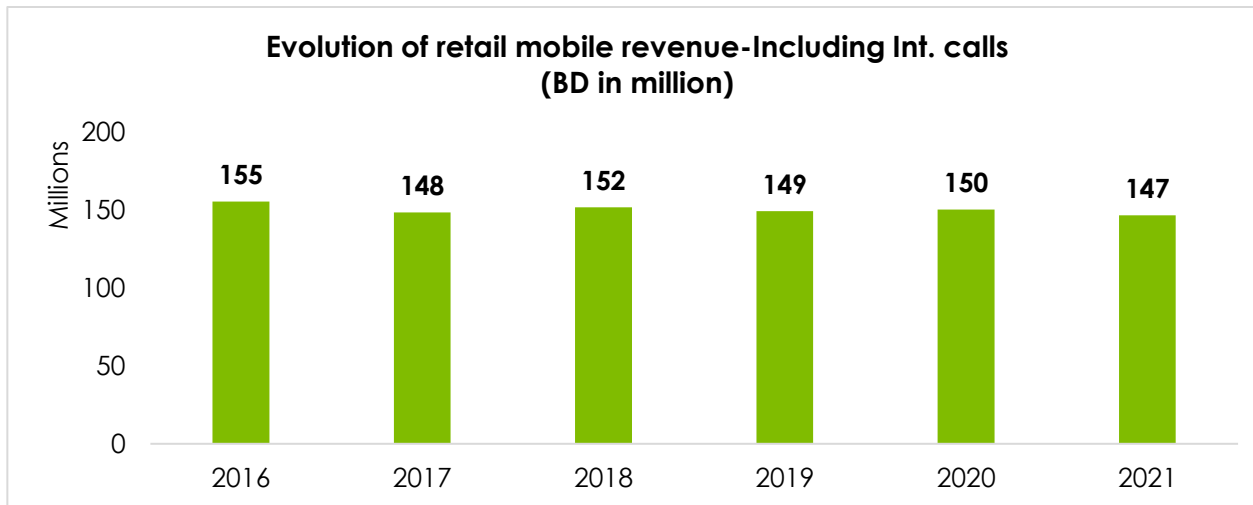
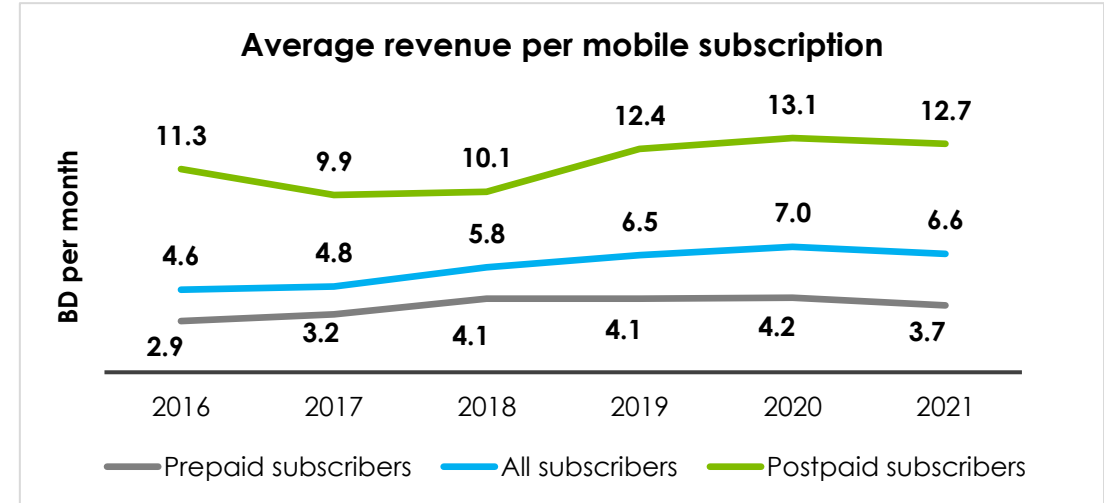
# Mobile Average Monthly Outgoing Minutes



- As shown in the figures above, the average monthly domestic traffic (in minutes) for postpaid subscribers dropped from 338 minutes in 2020 to **334** minutes in 2021, a 1% drop relative to the previous year.
- The average monthly domestic traffic (in minutes) for prepaid customers dropped from 120 minutes in 2020 to **97** in 2021, a (19%) drop relative to the previous year.
- The average monthly volume of international direct dial (IDD) calls dropped to **47** minutes in 2021.

# Mobile Revenue

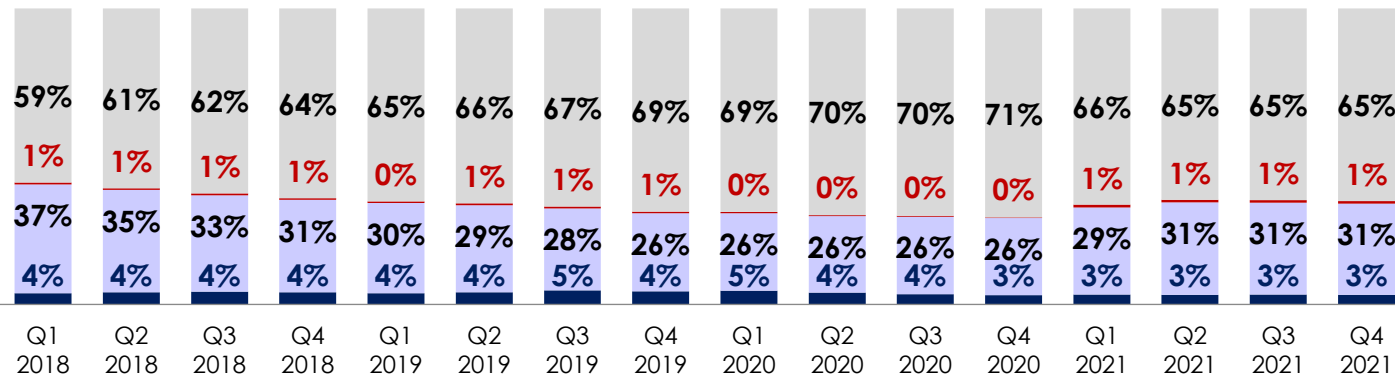
- Between 2020 and 2021, Mobile revenue slightly dropped by around 3% to reach BHD 147 Million.
- Revenue generated from postpaid mobile subscriptions represented 62% of the total retail mobile revenue in 2021.
- ARPU for postpaid subscribers has dropped by 3% relative to 2020. Similarly, prepaid ARPU dropped by 10% over the same period. Overall, Mobile ARPU dropped by around 6%.



# Distribution of Mobile Revenue

### Distribution of mobile revenue - Prepaid

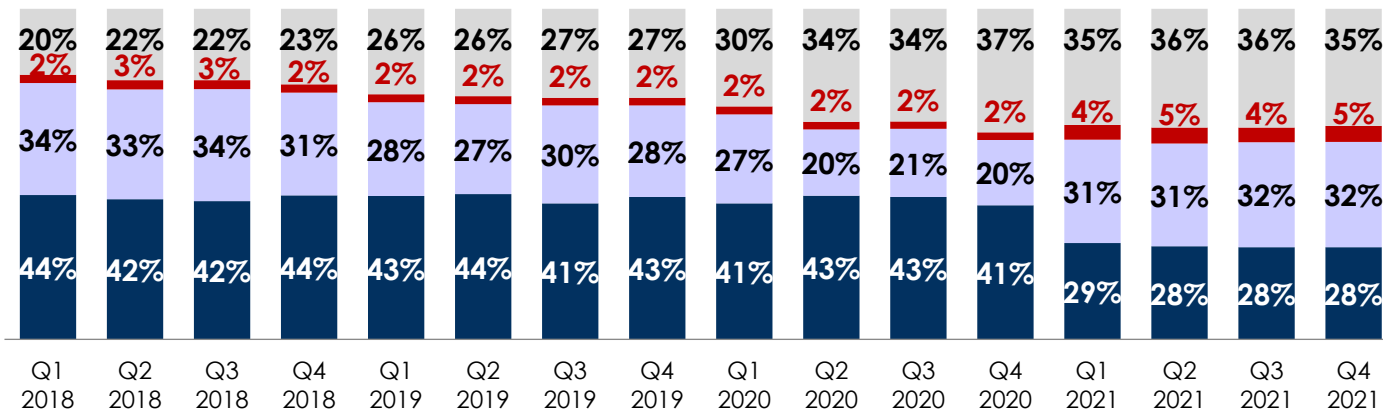
■ Data ■ SMS ■ Voice ■ subscription



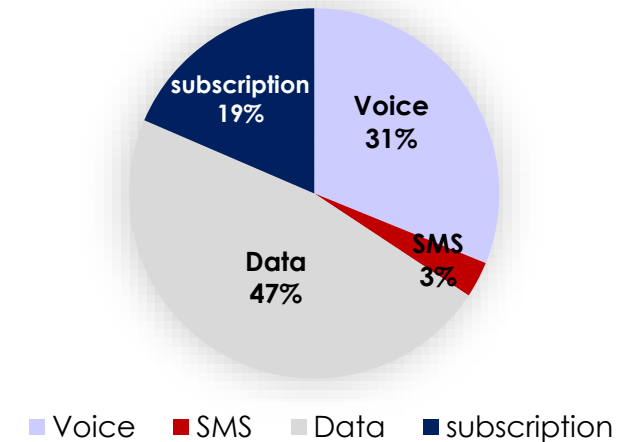
- By 2021, Data services were the main source of revenue for mobile operators, followed by Voice revenues, which slightly dropped relative to the previous year. Similarly, Subscription and SMS have slightly dropped.
- In 2021, for prepaid, data revenue remained the main source of revenue generating 65% in Q4 2021, relative to 71% in Q4 2020.
- As for postpaid, Data is also the main source of revenue contributing 35% in Q4 2021 to mobile revenue. Voice revenue increased to 32% compared to 20% in Q4 2020. However, subscription revenue has dropped to 28% compared to 41% in Q4 2020.

### Distribution of mobile revenue - Postpaid

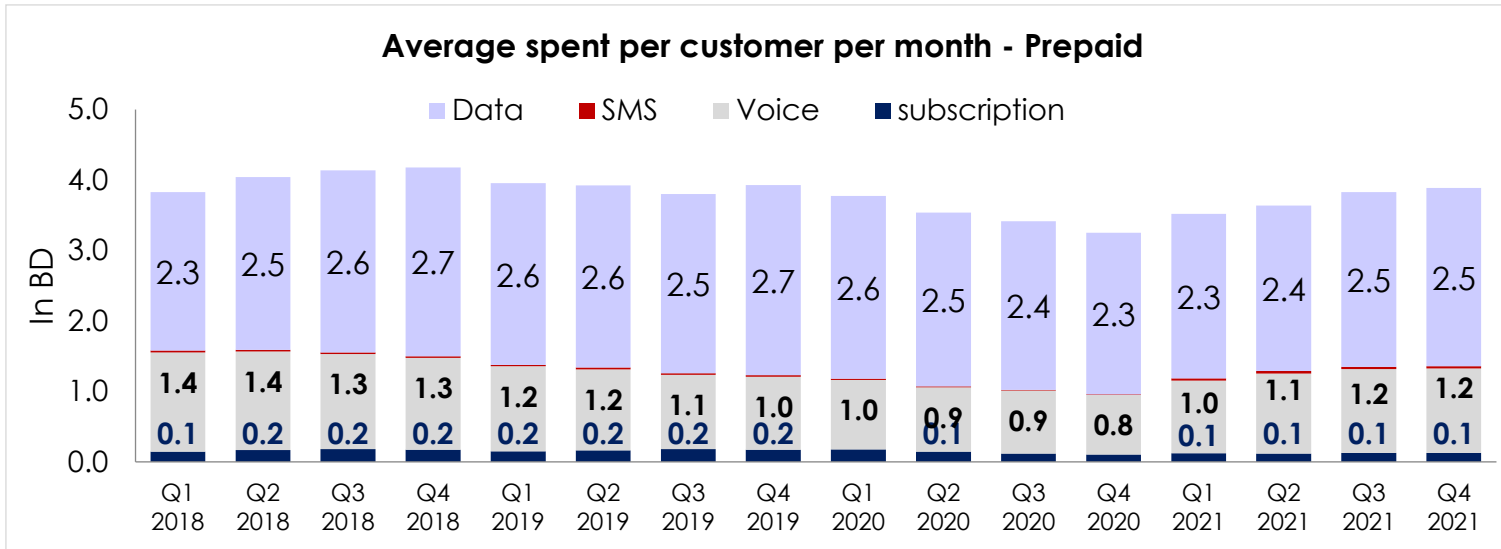
■ Data ■ SMS ■ Voice ■ subscription



### Distribution of mobile revenue (prepaid+postpaid) - 2021

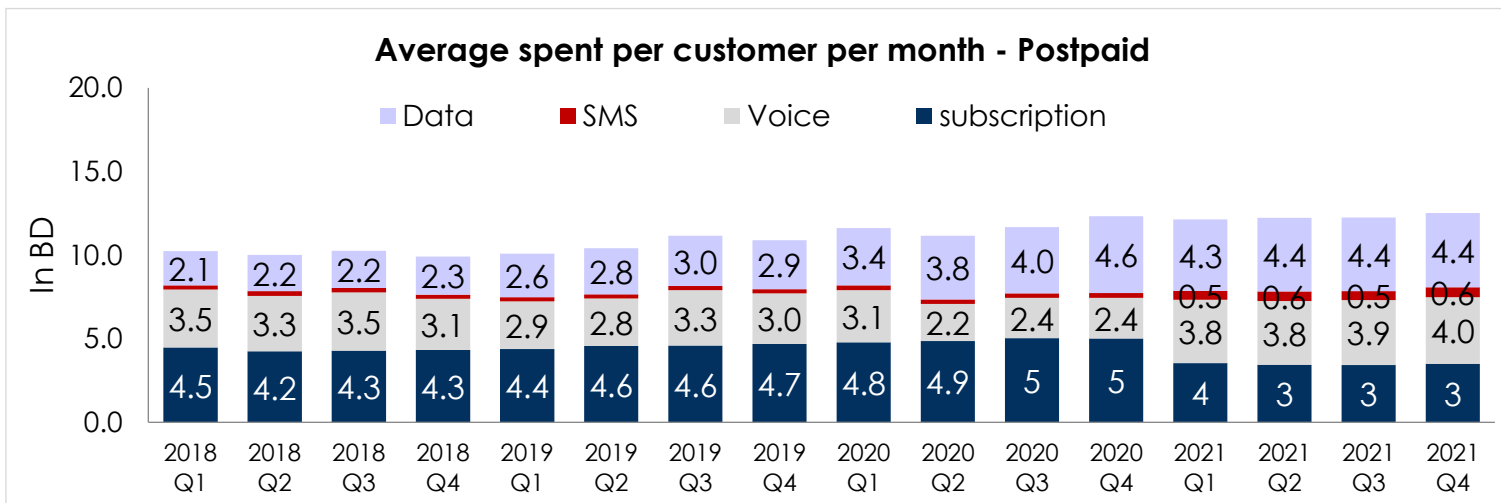


# Mobile Average Spend per Subscriber per Month



- In Q4 2021, prepaid subscribers spent BD 3.9 monthly for their subscription, phone calls, SMS and data, comparing to BD 3.3 spent on the same services during Q4 2020.

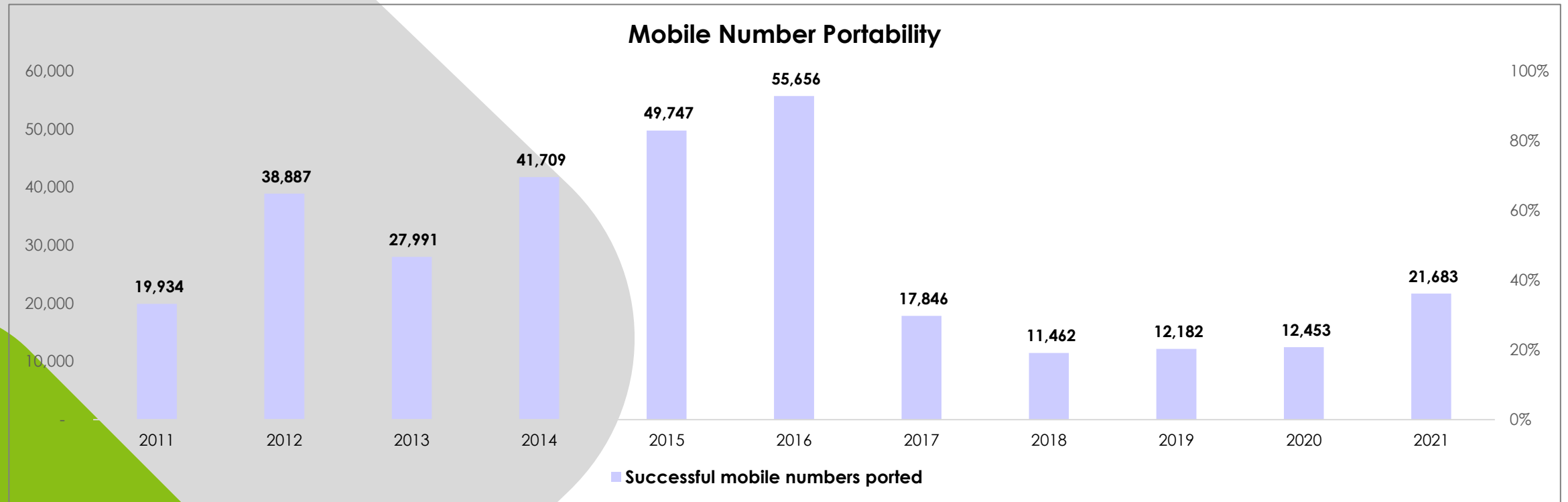
- In Q4 2021 postpaid subscribers spent BD 12.5 monthly for the same services compared to BD 12.3 during Q4 2020.



- For prepaid subscribers, the average monthly spend per subscriber for voice increased from BD 0.8 during Q4 2020 to BD 1.2 during Q4 2021. Similarly, data revenue increased to BD 2.5.

- During Q4 2021, the average monthly spend per postpaid subscriber for data dropped to BD 4.4 while voice revenue increased from BD 2.4 to BD 4.0.

# Mobile Number Portability



- The volume of mobile numbers successfully ported increased compared to 2020. By end of 2021, total successful mobile numbers ported were **21,683** a noticeable increase compared to 12,453 in 2020.
- A total of approximately **309,550** mobile numbers had been ported successfully since the introduction of number portability in 2011.

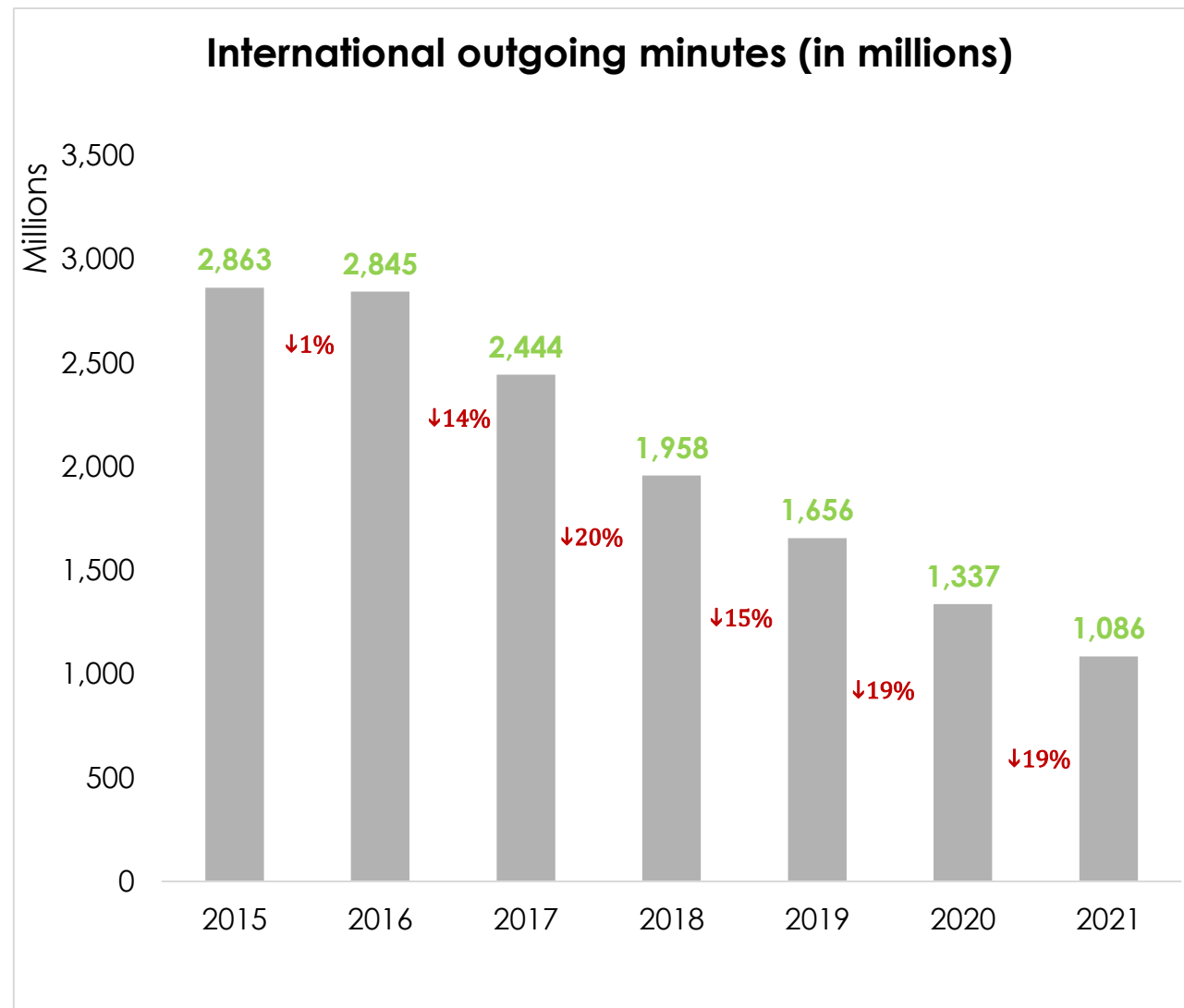


# INTERNATIONAL OUTGOING MINUTES

# International Outgoing Minutes

- During 2021 international outgoing minutes continued to drop, reaching **1,086** million minutes compared to 1,337 million minutes during 2020.
- OTT continues to place competitive pressure on traditional voice service providers as evident by the consecutive drops.

2021	<b>1,085,919,487</b>	International outgoing minutes
	<b>99%</b>	of calls originated from mobile
	<b>92%</b>	of outgoing traffic went to South Asian countries



# International Outgoing Minutes

- International outgoing minutes dropped by 19% between 2020-2021 and International calls revenue also decreased by 12% over the same period.
- This decline indicates ongoing competitive pressure on pricing, as well as change in the overall subscribers' behavior and usage.

## International outgoing minutes

Minutes (in millions)	2016	2017	2018	2019	2020	2021	% Change 2020-2021
GCC	70.8	65.3	58.7	53.1	40.2	37.2	-8%
Zone 2	2,606	2,259	1,805	1,529	1,236	993.9	-20%
Zone 3	48.7	35.6	32.9	28.7	26.3	26.1	-1%
Zone 4	120.3	84	58.6	43.8	34	28.7	-16%
<b>Total</b>	<b>2,845.5</b>	<b>2,443.9</b>	<b>1,995</b>	<b>1,655</b>	<b>1,337</b>	<b>1,086</b>	<b>-19%</b>

## International calls revenue

Revenues (BD in millions)	2016	2017	2018	2019	2020	2021	% Change 2020-2021
GCC	6.7	5.2	4.48	3.86	3.25	3.1	-4%
Zone 2	30.2	20.26	12.2	8.6	6.85	5.8	-16%
Zone 3	3.5	2.38	1.93	1.67	1.45	1.35	-7%
Zone 4	6.6	4.9	3.97	2.9	2.36	2	15%
<b>Total</b>	<b>47</b>	<b>32.7</b>	<b>22.6</b>	<b>17.06</b>	<b>13.9</b>	<b>12.26</b>	<b>-12%</b>

**GCC countries** (Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates).

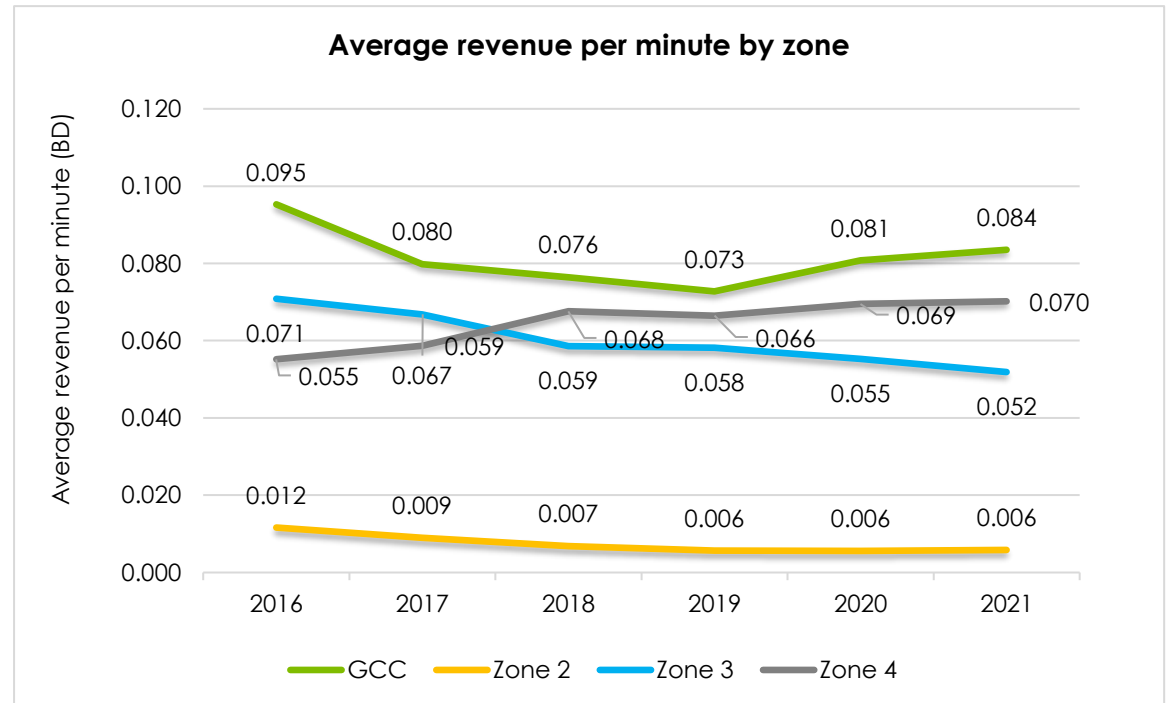
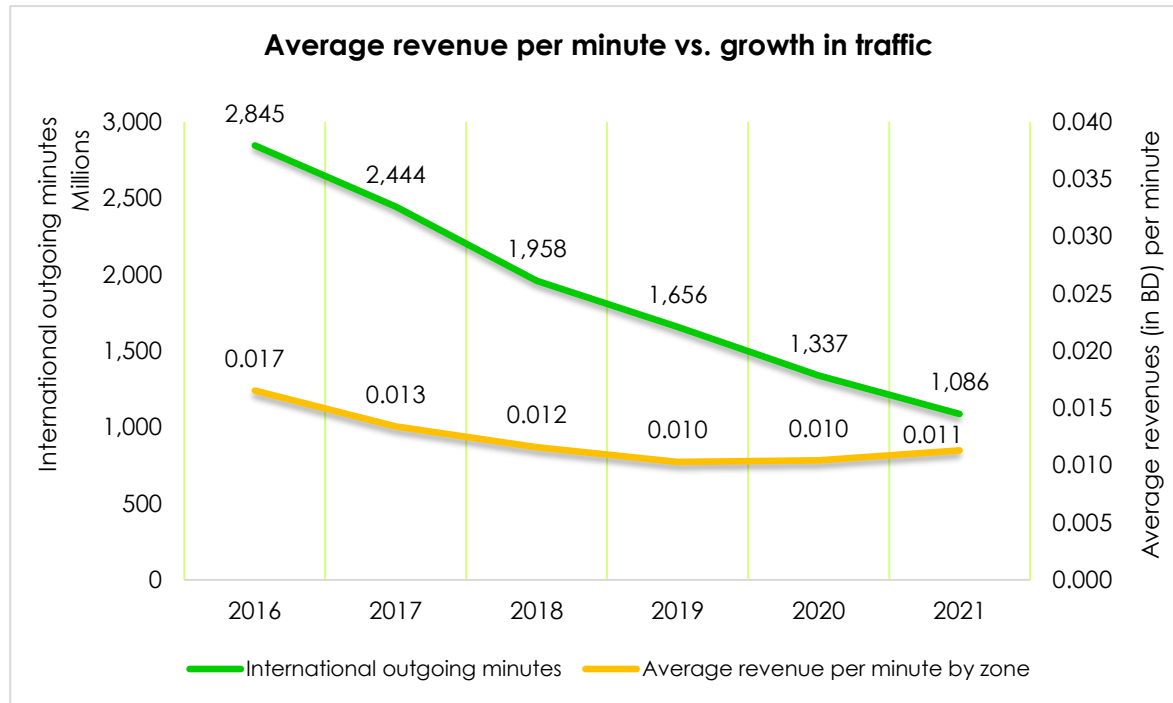
**Zone 2:** Calls to South Asian countries (Bangladesh, India, Pakistan, the Philippines and Sri Lanka).

**Zone 3:** Calls to other major destinations (Australia, Canada, France, Germany, Greece, Italy, Iran, New Zealand, Thailand, UK, USA and Yemen).

**Zone 4:** Calls to all other international destinations.

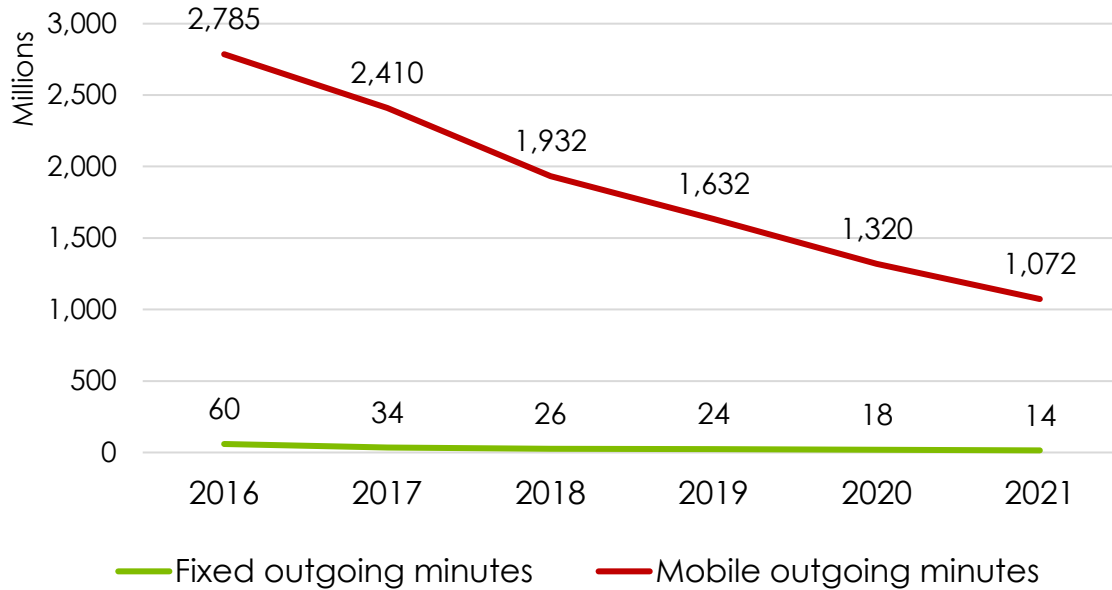
# Average Revenue per Minute for International Calls

- The average revenue per minute for international calls has fallen by almost **39%** from 2016 to 2021.
- Despite the substantial decrease in traffic, the overall average revenue per minute slightly dropped from 0.024 in 2020 to 0.023 in 2021.
- In comparison to 2020, the biggest increase in average revenue per minute in 2021 was mainly from Zone 2 countries (5% increase).
- By end of 2021, the total international voice traffic in minutes was 1,085,929,487 with revenue of BD 12,264,449.

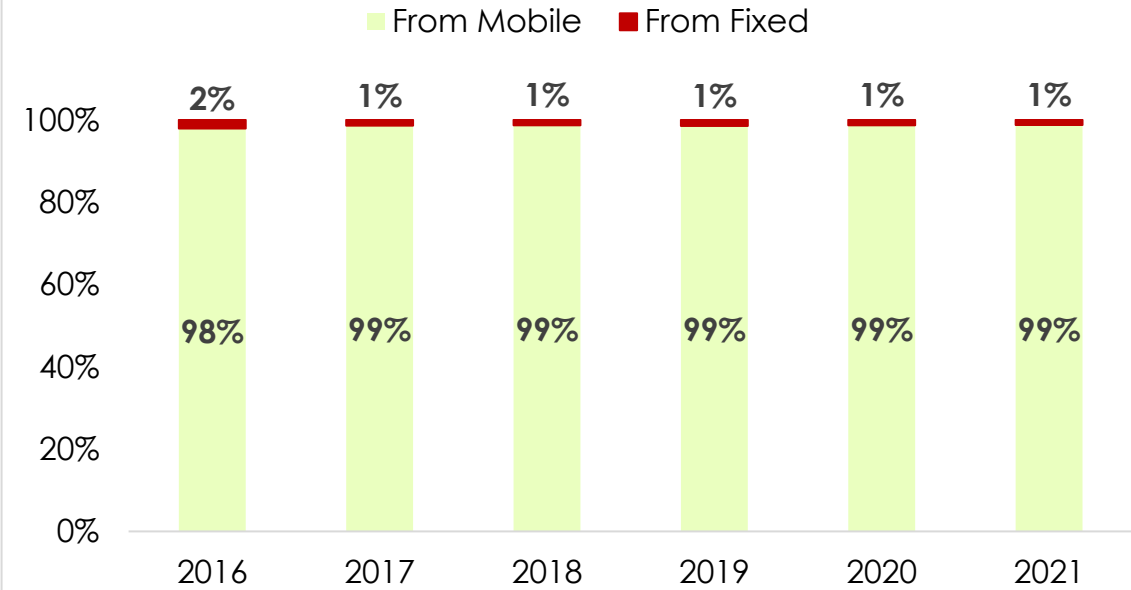


# International Outgoing Minutes\*

### International outgoing traffic (minutes)



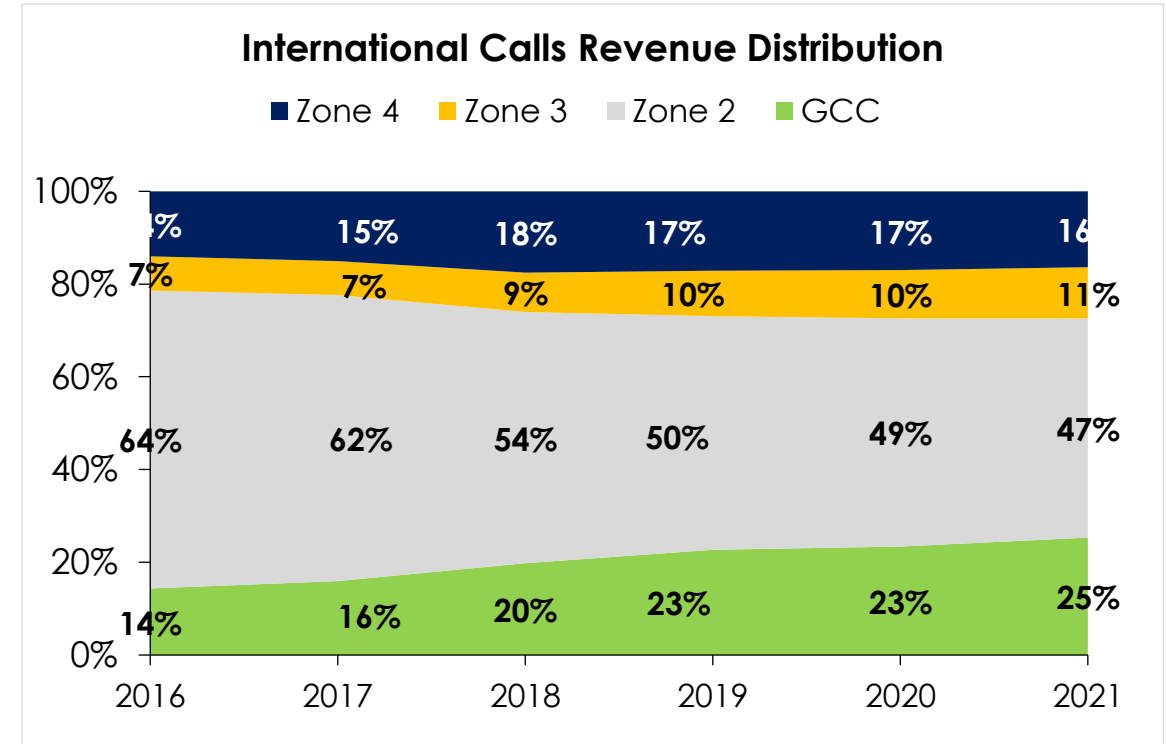
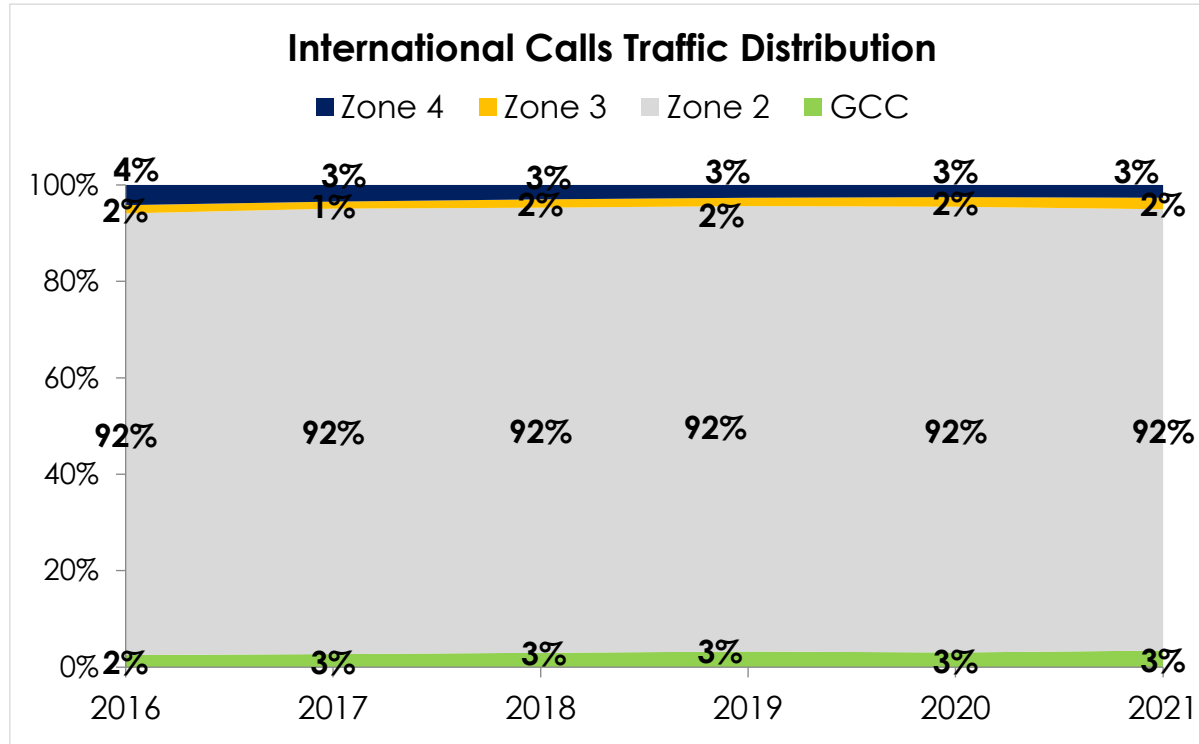
### Proportion of international outgoing minutes



- In 2021, International outgoing minutes originated from mobile decreased by (19%) compared to 2020, while minutes originated from fixed fell by (23%) over the same period.
- International outgoing minutes originated on mobile represented 99% of the total international outgoing minutes in 2021.

\*Minutes including prepaid calling card traffic.

# International Traffic vs. Revenues by Destination Called

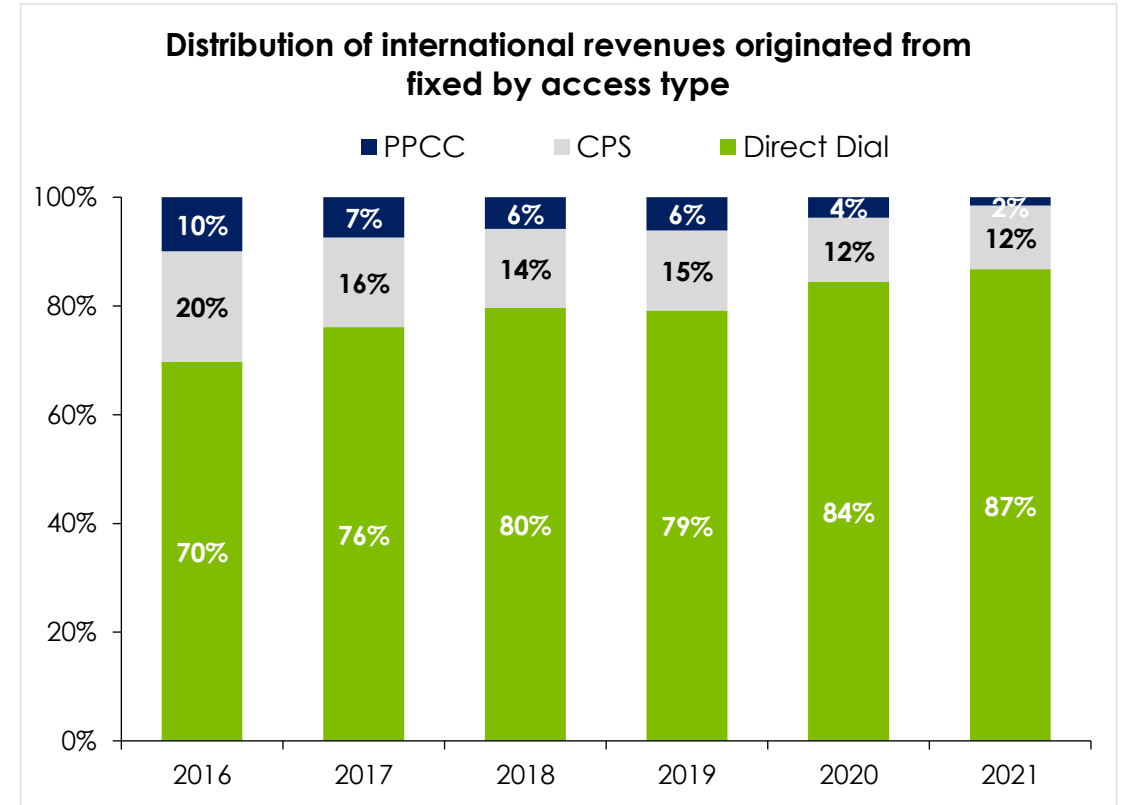
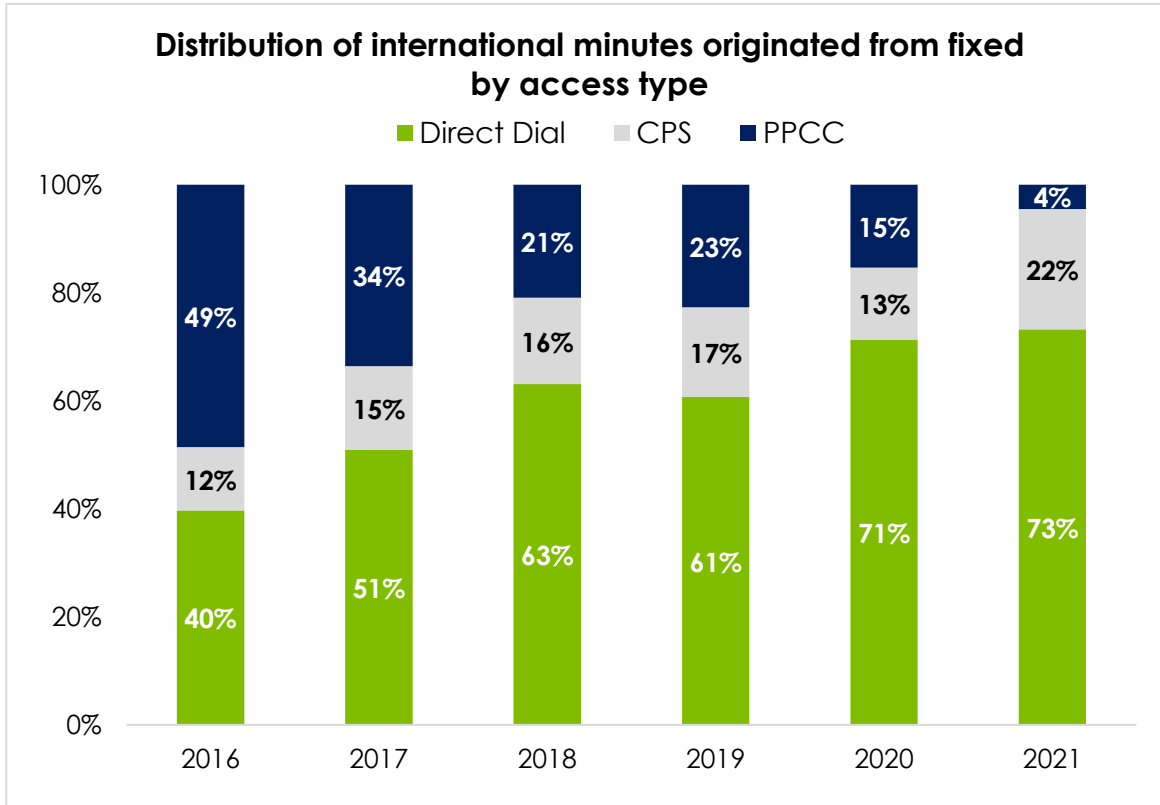


- 92% of total international calls minutes were made to Zone 2 (South Asian countries) in 2021.

- 47% of international revenues were generated from calls to Zone 2 (South Asian countries) in 2021.

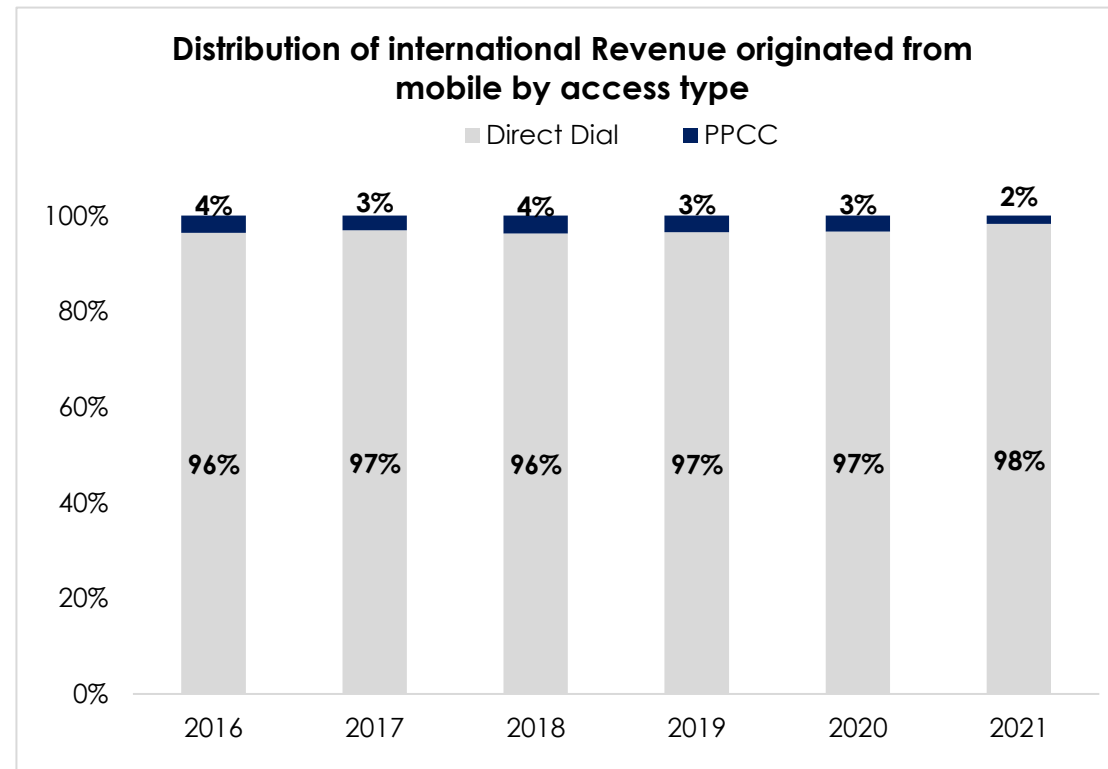
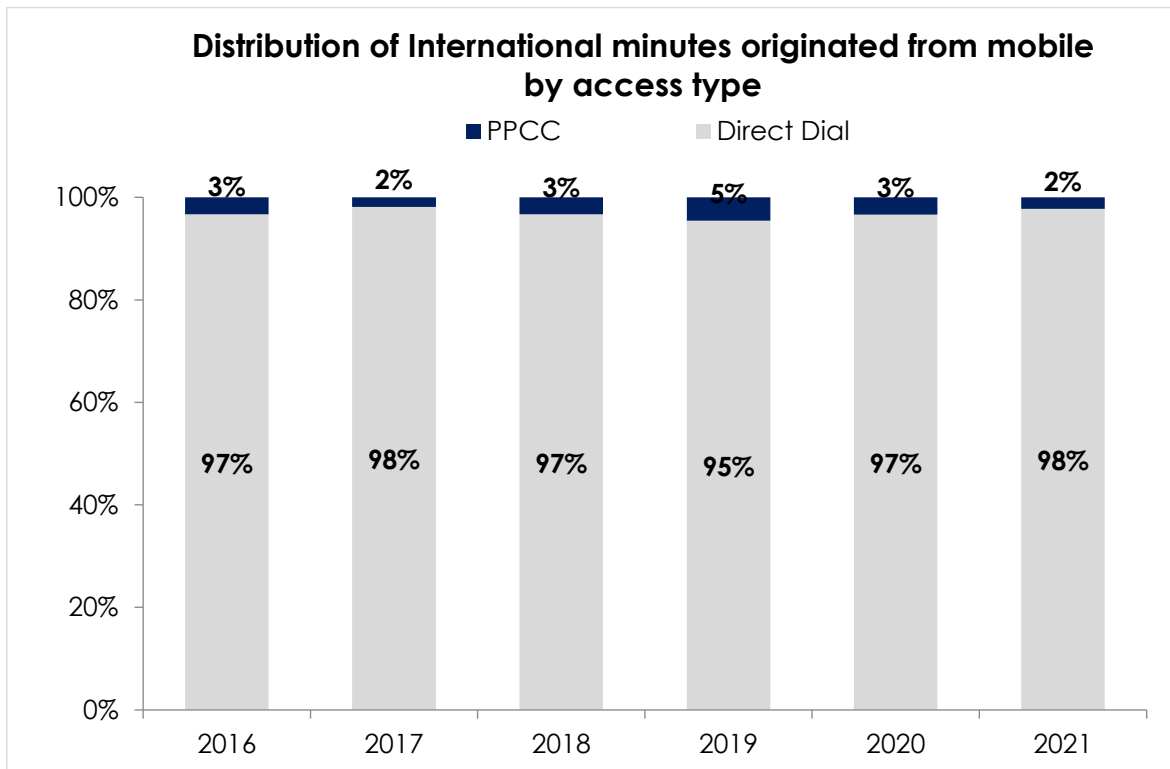
- The average revenue per minute earned from calls to South Asian countries (Zone 2) continues to be relatively low.

# Distribution of International Outgoing Minutes/Revenues by Access Type - Fixed Telephony



- PPCC represents 4% of total fixed originated minutes as of 2021. Its revenue represents 2% of total fixed telephony traffic revenue.
- Direct dial's fixed originated minutes represent 73% of total minutes and represents 87% of total revenue.

# Distribution of International Outgoing Minutes/Revenues by Access Type - Mobile



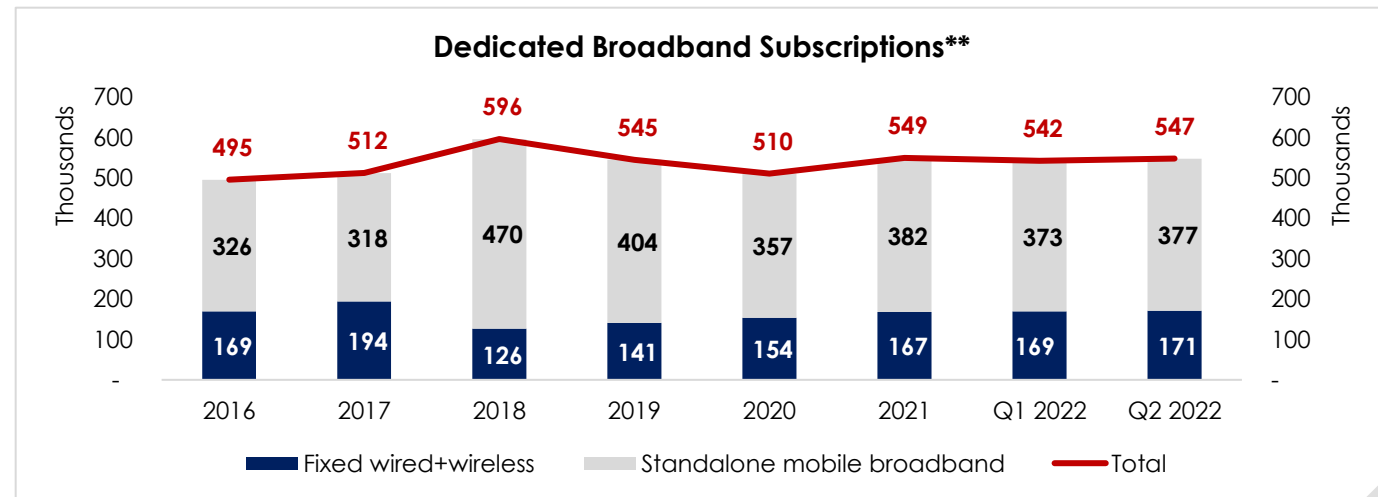
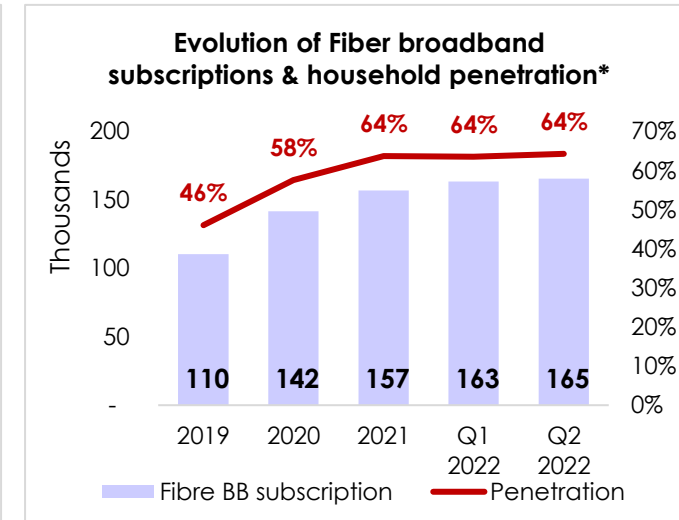
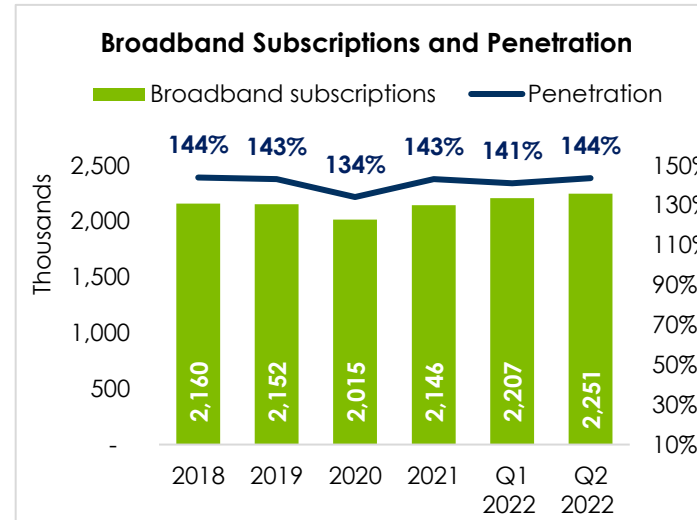
- In 2021, international direct dial traffic originated from mobile represented 98% of the total traffic. The pricing of mobile-originated international direct dial services has become even more competitive in recent years.
- Direct dial represented 98% of total revenues originated from mobile.

# BROADBAND SERVICES



# Broadband Services

- The total broadband market shows a positive increase in terms of both mobile and fixed broadband services, with the penetration rate being **144%** as of Q2 2022.
- Looking at the evolution of the fiber broadband market, it shows significant growth since 2019, with subscriptions growing year by year to reach **165,450** subscriptions as of Q2 2022. Penetration per household is also growing steadily and has reached **64%** as of Q2 2022.
- Broadband subscription growth is mainly driven by growth in the number of mobile broadband subscriptions as it represented around **92%** of total broadband subscriptions at the end of Q2 2022. Similarly, Fixed Broadband has also increased by **2%** by the end of Q2 2022 relative to the end of 2021.
- By Q2 2022, there were **547** thousand subscriptions for dedicated broadband services. This is also a positive indicator that the market is growing in terms of both Fixed broadband and Standalone mobile broadband.

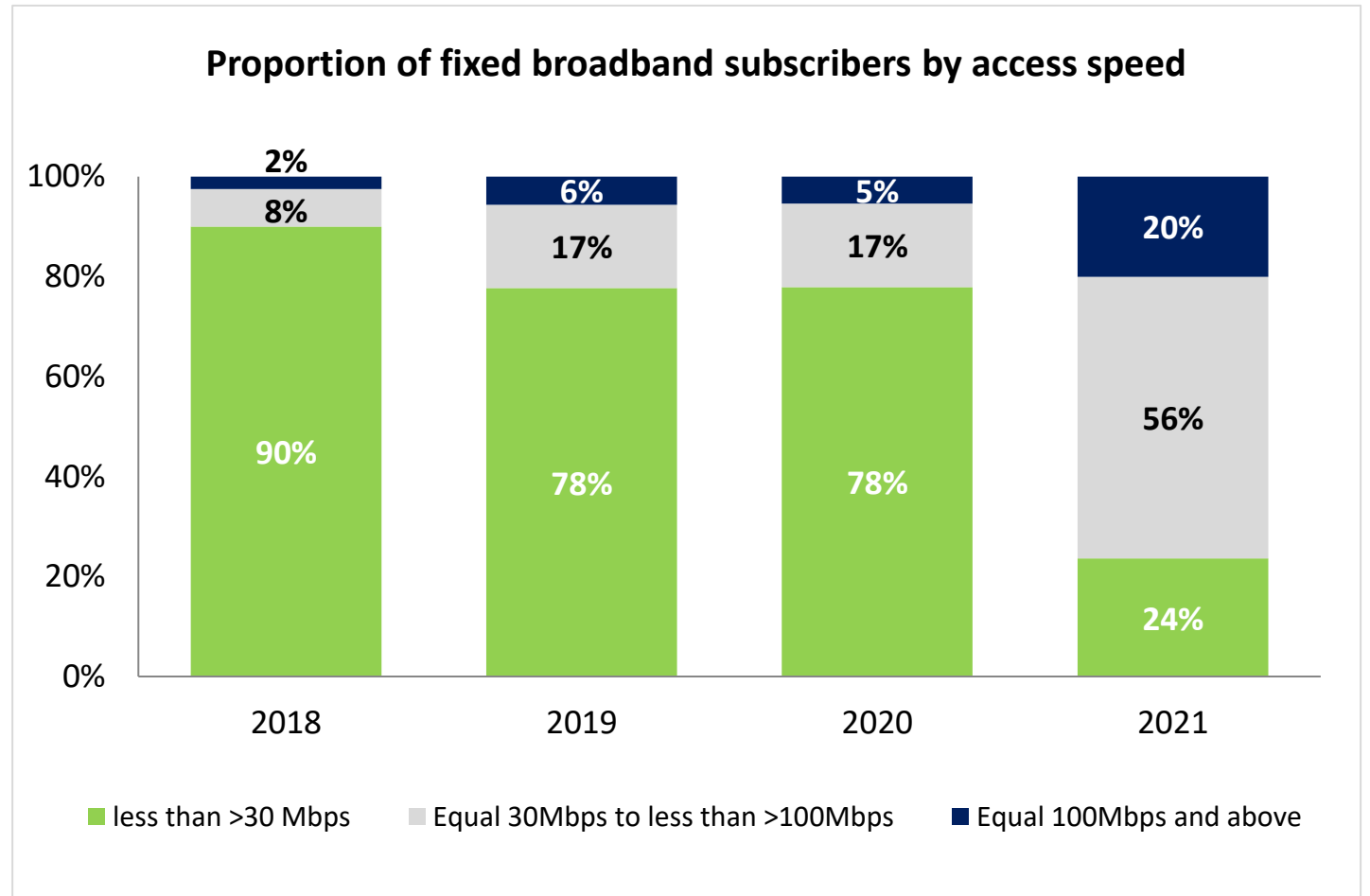


End of Q2 2022	2,251,123	Broadband subscription
	144%	Penetration rate
	92%	Mobile broadband subscriptions

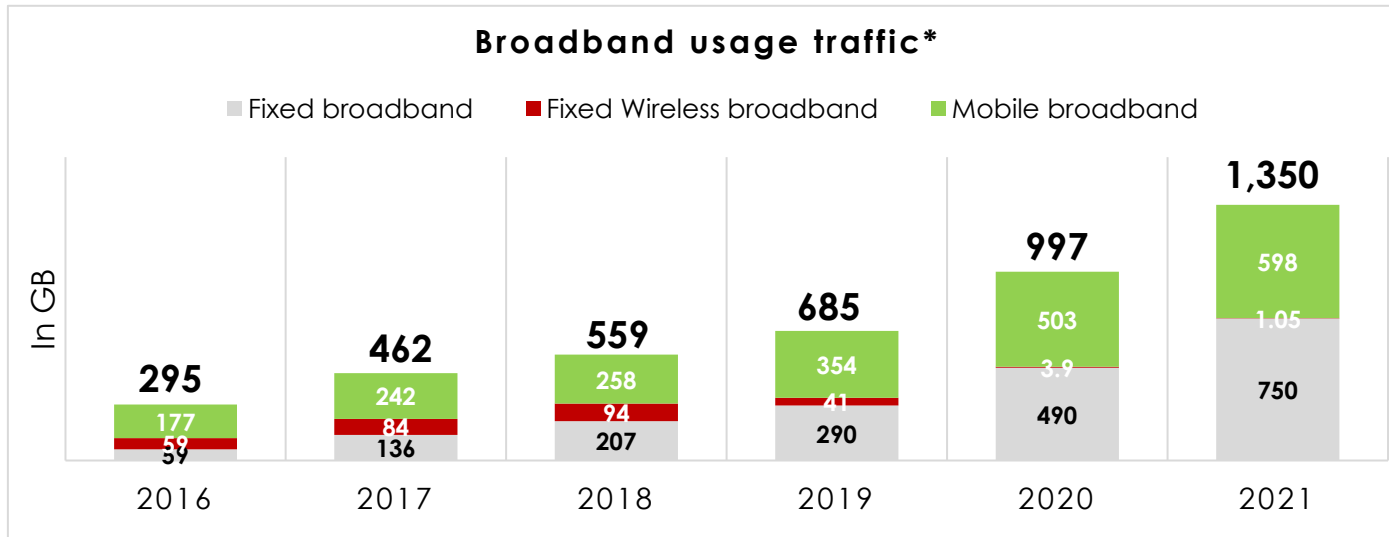
# of Households* By IGA	2018	2019	2020	2021
	189,534	239,750	245,983	257,268

# Proportion of Broadband Subscribers by Access Speed

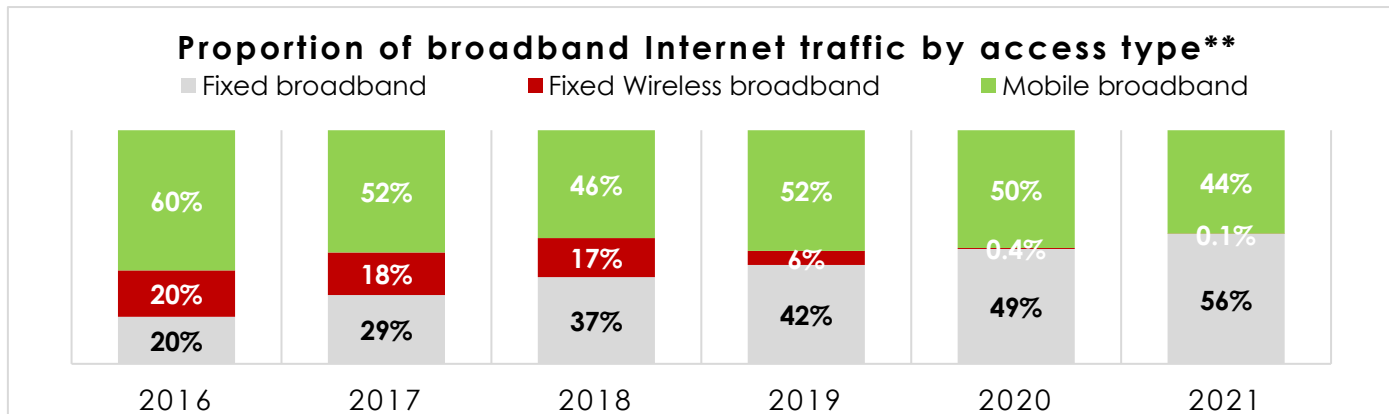
- In 2021, 76% of subscribers opted for fixed broadband packages with speed equal to 30Mbps or more.
- In 2020, there was around 8,000 subscribers to speeds equaling to 100Mbps or more. In 2021 this number reached 33,000 subscribers.
- This indicates subscribers' increased use of services that require a higher speed plus the affordability of the prices of higher speed packages.



# Broadband Usage



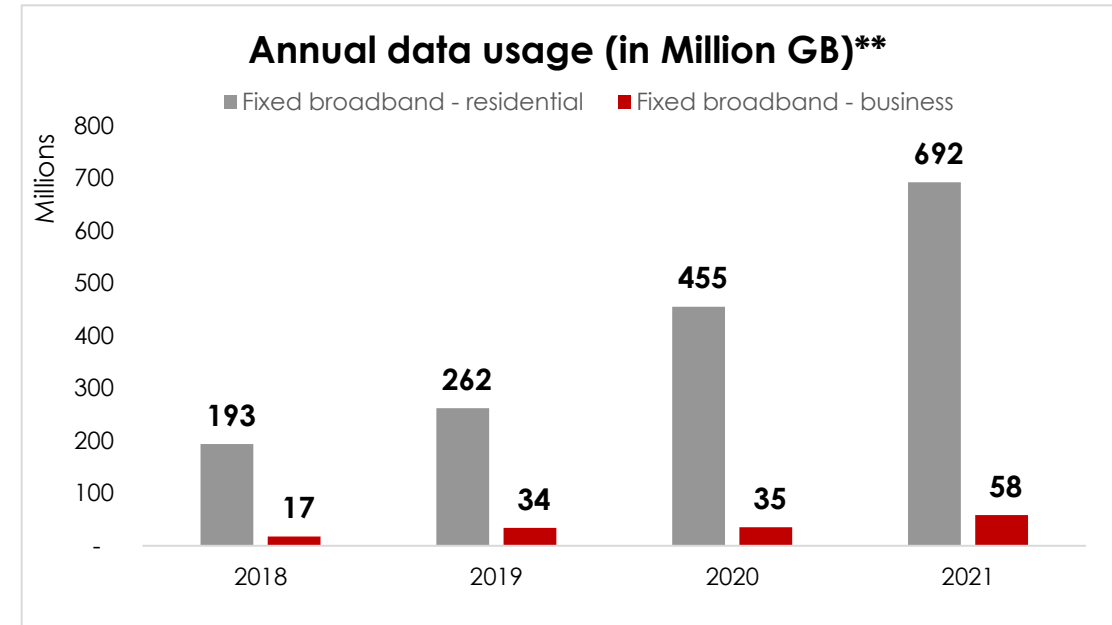
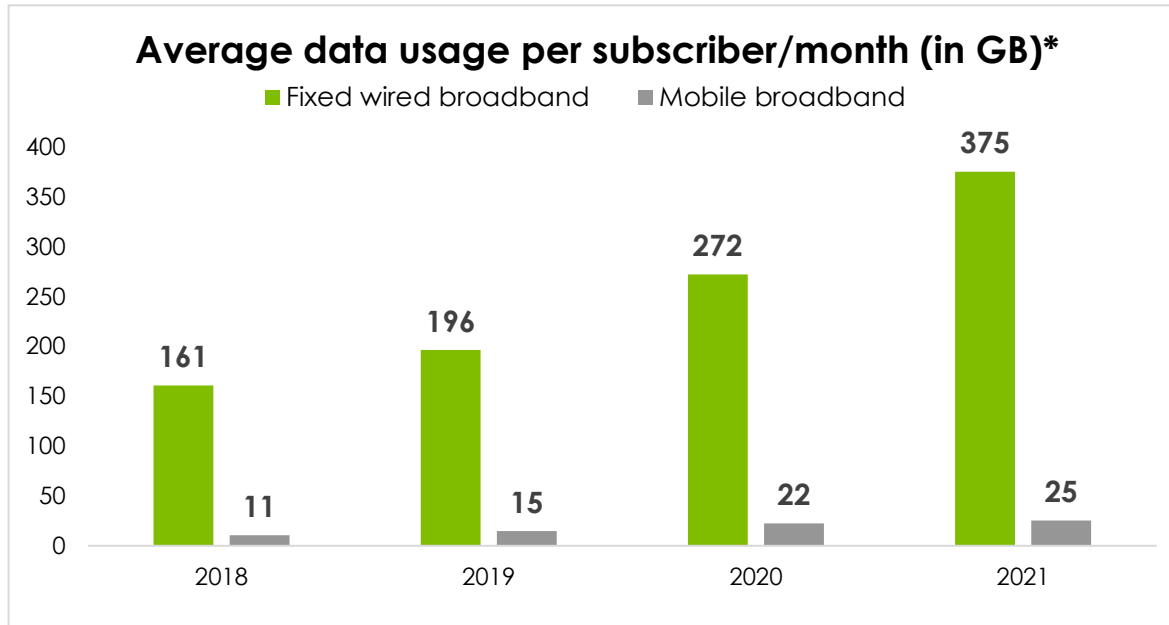
\* Includes data roaming



\*\*Drop in Fixed Wireless Broadband is due to an operator reporting fixed wireless under standalone mobile broadband

- In 2021 total broadband usage reached 1,350 million GB compared to 295 million GB in 2016 (around Fourfold increase between 2016 and 2021)
- Between 2016 and 2021, Mobile broadband usage increased Threefold.
- The traffic (in GB) generated from mobile broadband represented 44% of the total broadband usage in 2021, compared to 60% in 2016.
- Between 2020 and 2021, fixed wired broadband usage increased by 53% due to the increase in fibre uptake and monthly data allowance. Fixed wireless usage dropped by 73%, and mobile broadband usage increased by 19%. Also, due to the impact of COVID19, learning and working from home led to the increase in monthly data allowance, as well as the increase in online gaming and other internet applications usage.

# Average Usage per Broadband Subscription



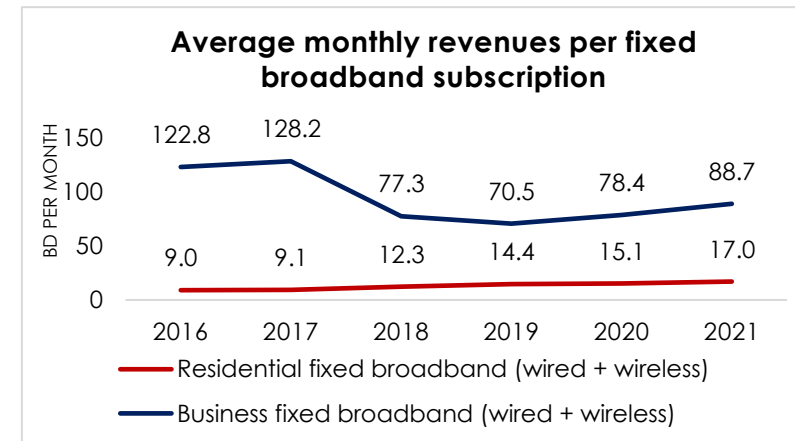
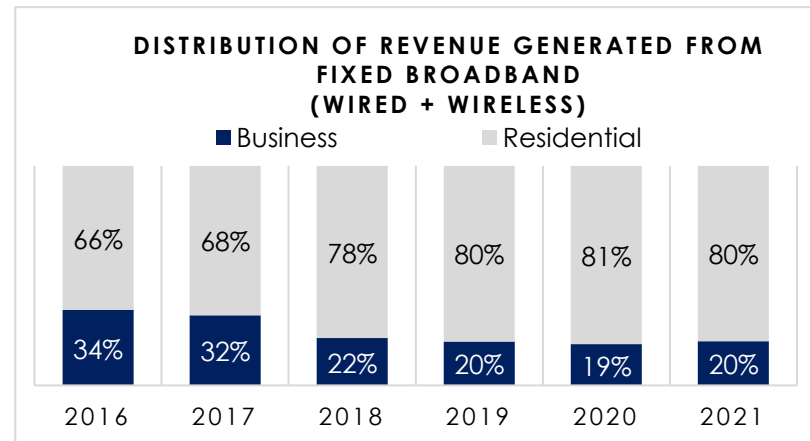
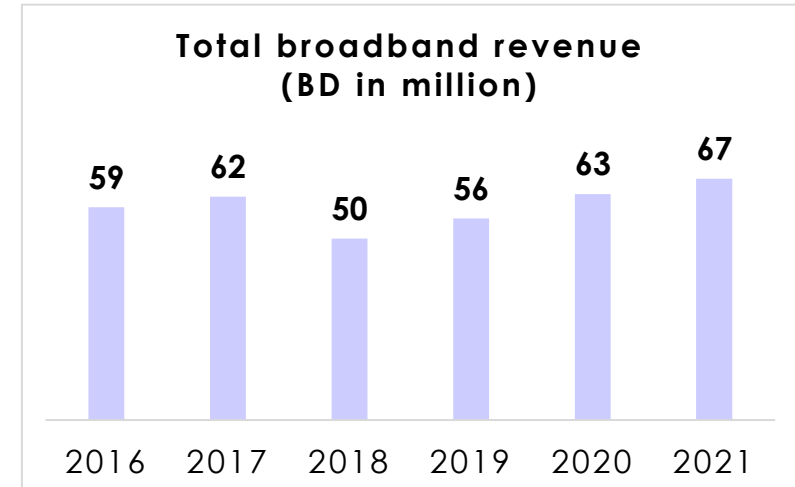
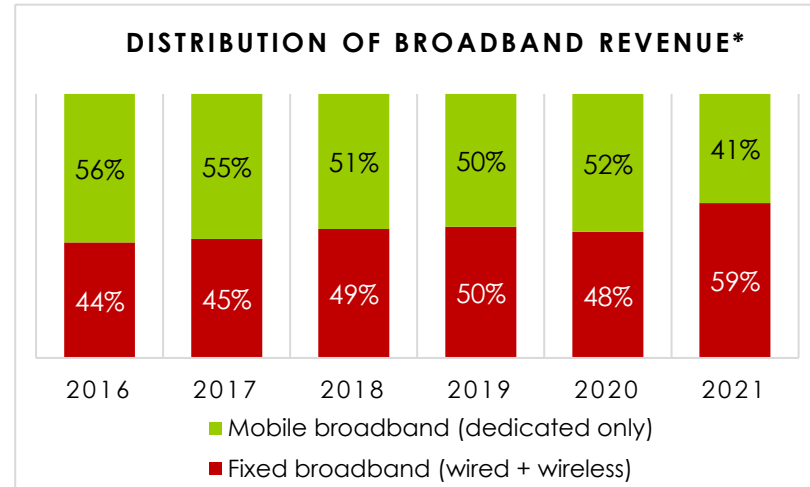
- The average usage (in GB) per subscriber varies based on the broadband access type.
- Fixed wired broadband subscribers generated the highest average monthly usage, relative to the number of subscribers. Lowest usage was generated by mobile broadband subscribers (although the overall average mobile broadband usage per subscriber is heavily influenced by low use of pay-per-use subscribers).

\* Mobile broadband includes dedicated mobile broadband and broadband added to voice

\*\* Increase in Business broadband usage is due to an operator's high Fibre broadband usage as of 2021.

# Broadband Revenue

- Broadband revenues increased to reach 67 million BD at the end of 2021.
- Revenue generated from mobile broadband represents 41% of total broadband revenue in 2021 relative to 52% in 2020.
- Revenue generated from business fixed broadband represents 20% of total fixed broadband revenue in 2021 compared to 34% in 2016.
- The average revenue per subscription for residential fixed broadband increased by 13% over the last year, reaching BD 17 in 2021. Similarly, the average revenue per subscription of business broadband has increased by 13% as well over the same period to reach BD 88.7.

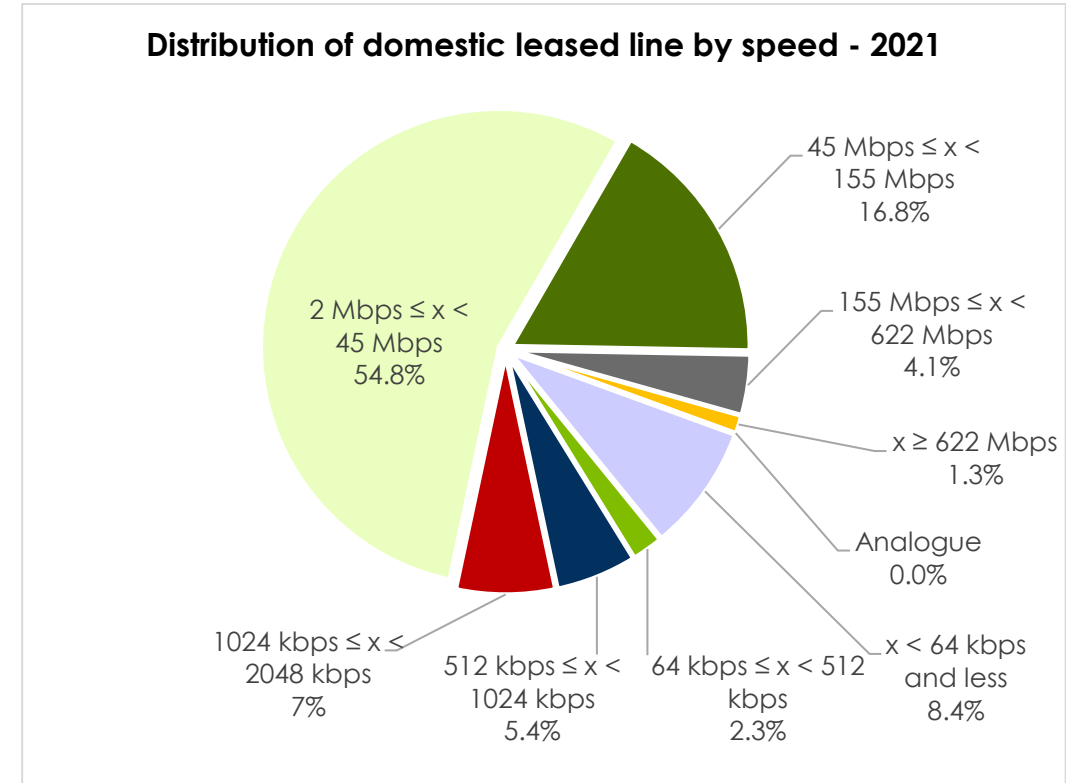
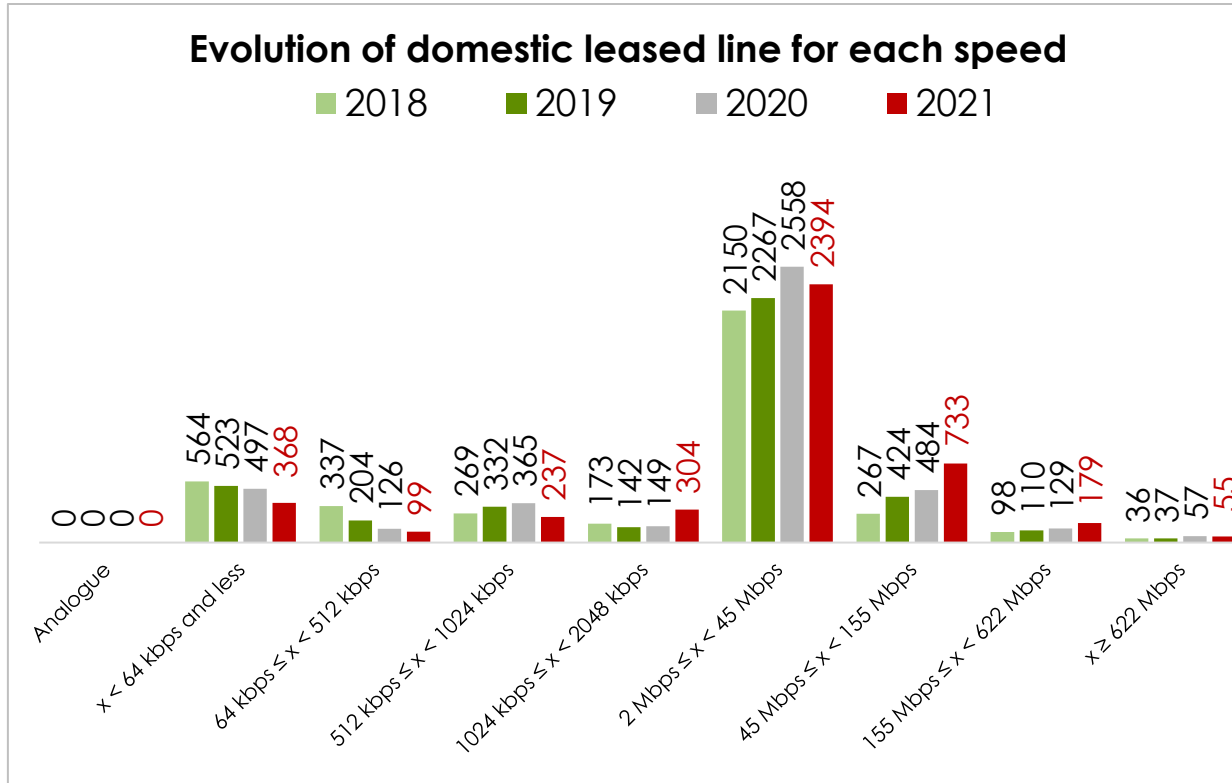


\*The shift in the distribution of broadband revenue is due to higher fiber take-up as of 2021.



# LEASED LINE

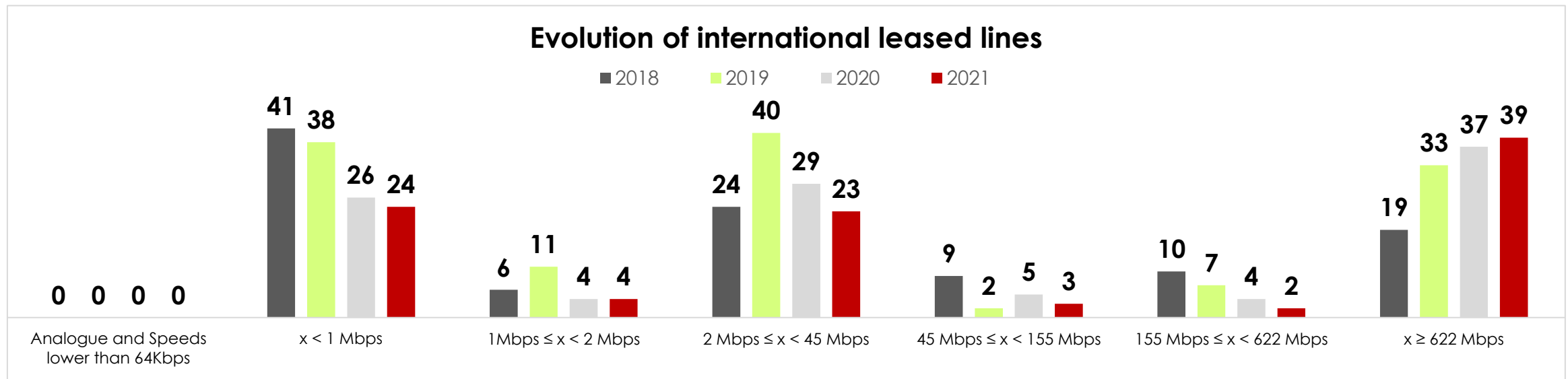
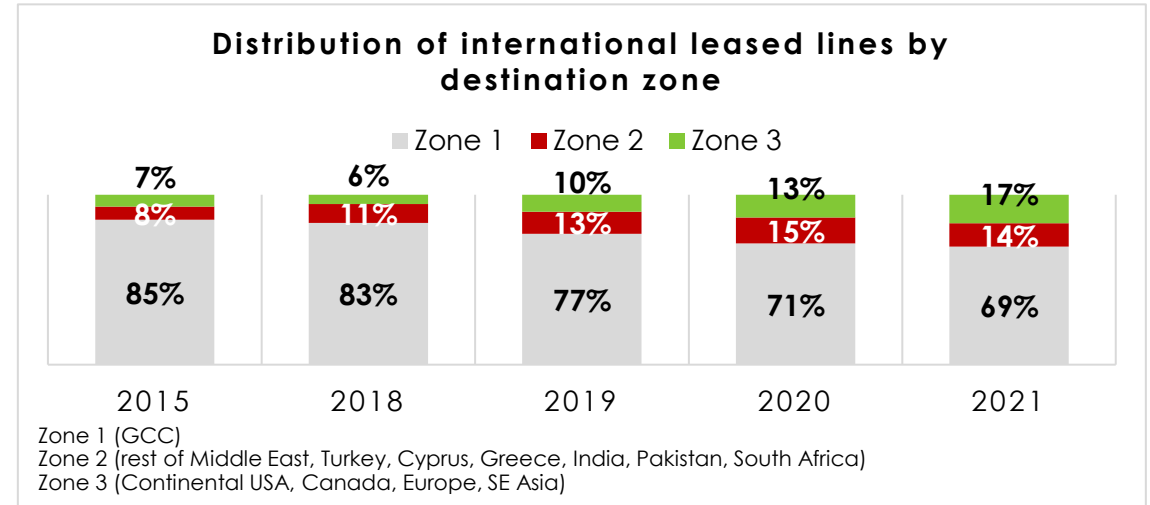
# Domestic Leased Lines



- The total number of domestic leased slightly increased from 4,365 lines in 2020 to 4,370 in 2021.
- The continuous drop in slower speed services is a result of migration to higher speed packages.

# International Leased Lines

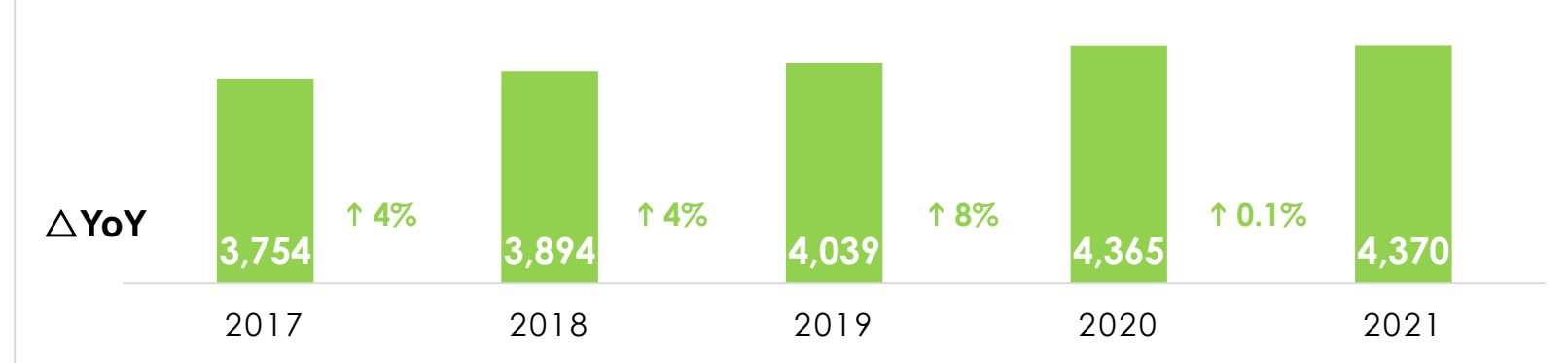
- Total Number of International leased lines dropped from 105 lines at the end of 2020 to 95 lines in 2021.
- 29% of international leased lines are for speeds less than 2Mbps, while 71% are for speeds more than 2Mbps.
- 69% of international leased lines are in the GCC area.



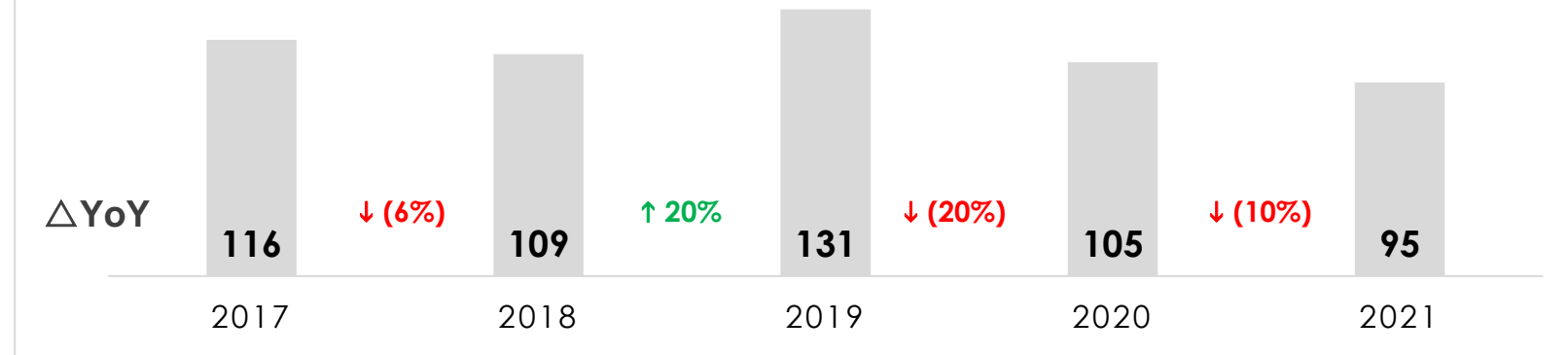
# Leased Lines

- In 2021, the total number of domestic leased lines slightly increased by 0.1% compared to 2020. However, the number of international leased lines dropped by 10% relative to the previous year.
- Leased lines revenue increased by 1% to reach BHD 81.7 Million in 2021 compared to BHD 80.9 Million in 2020.

### Evolution of Domestic leased lines

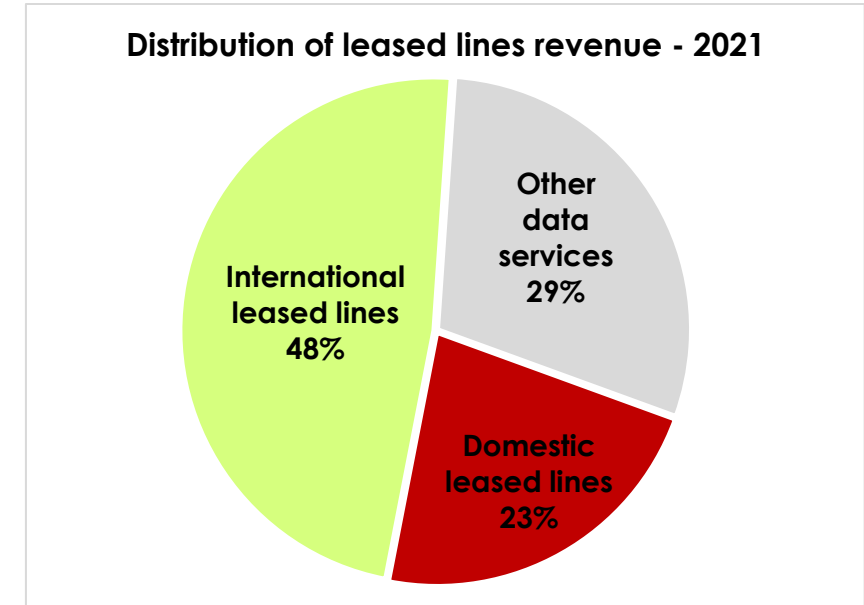
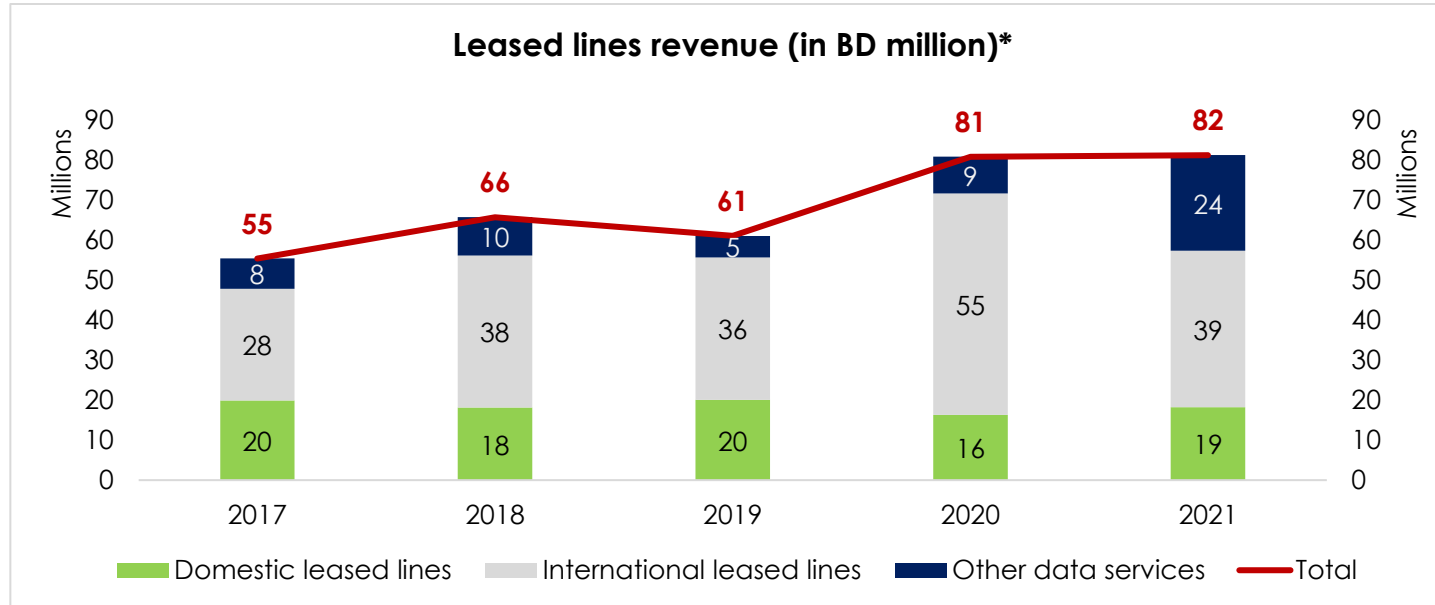


### Evolution of International leased lines



End of 2021	<b>4,370</b>	Domestic leased lines
	<b>95</b>	International leased lines
	<b>BD 81,708,398</b>	Leased lines revenues

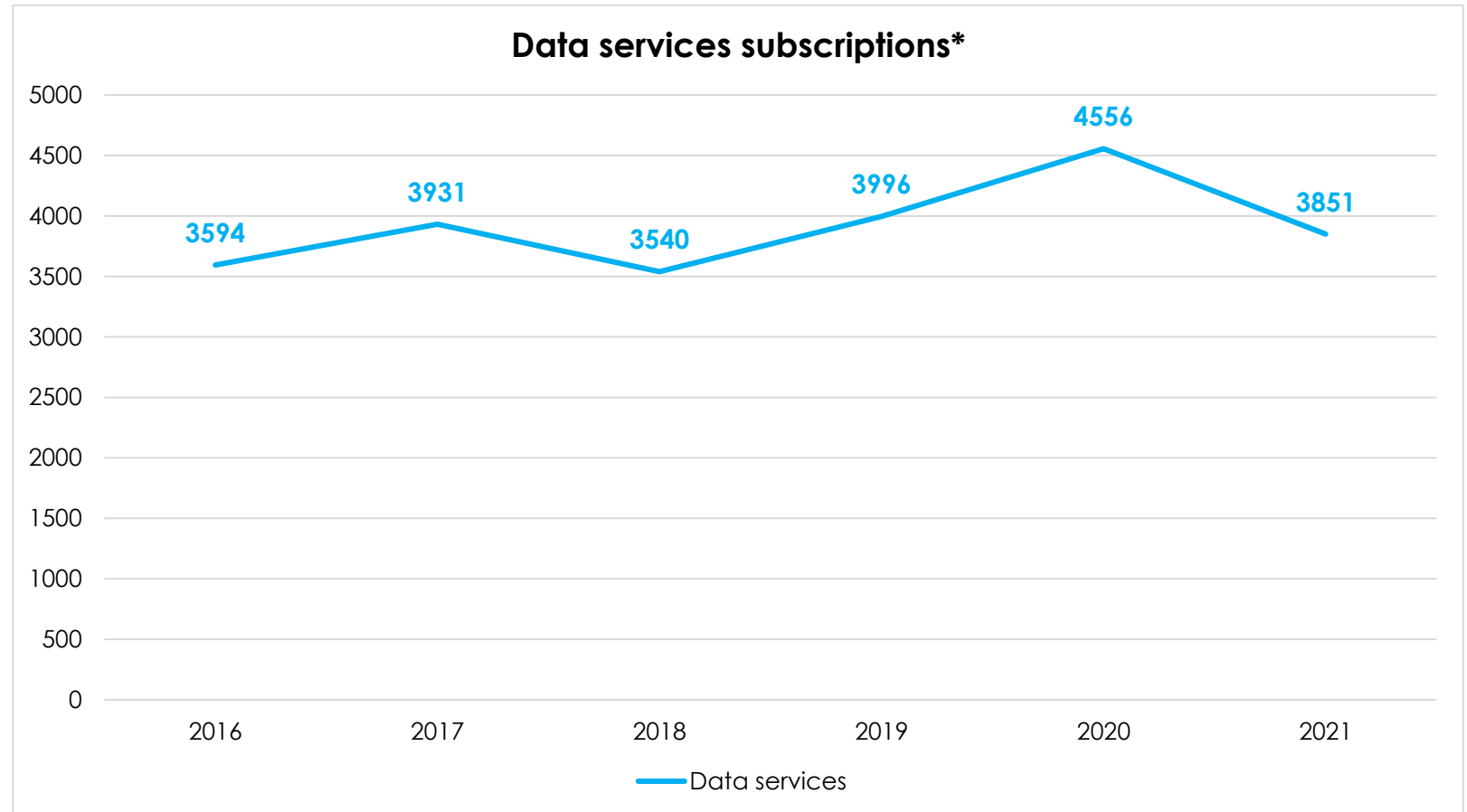
# Leased Line Revenues



- The revenue generated from leased lines services increased by 1% in 2021 relative to 2020. While international leased lines revenue decreased by 29% in 2021, domestic leased lines revenues increased by 12% during the same time period. Other data services revenue increased by 162% relative to the previous year.

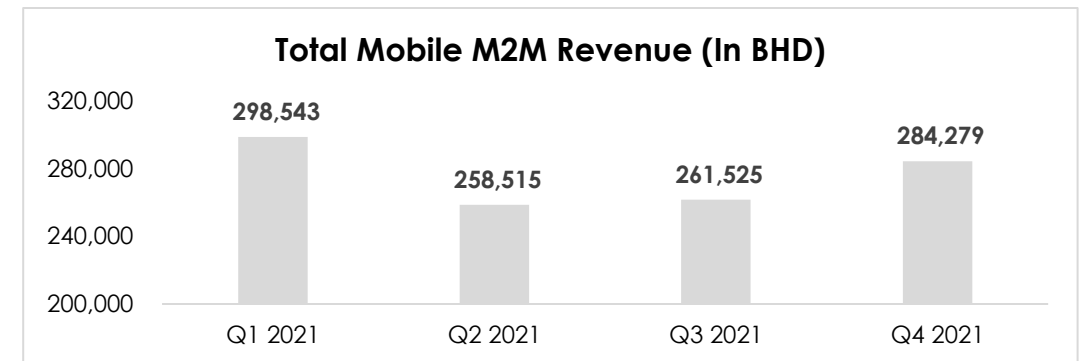
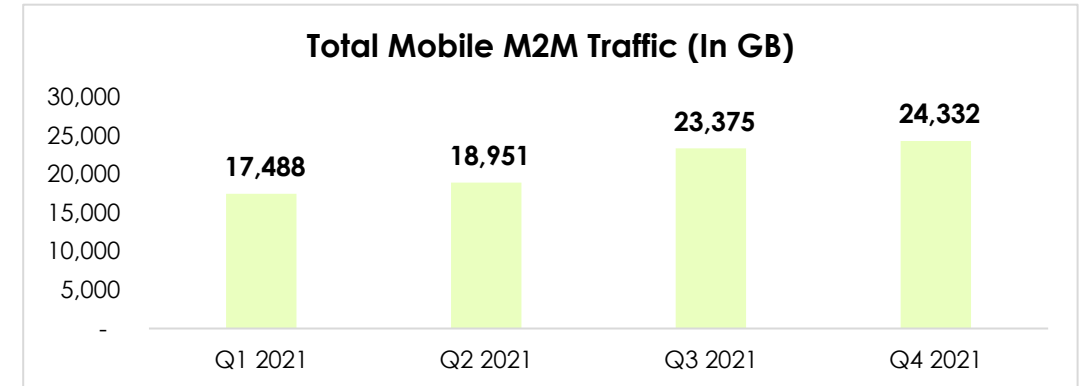
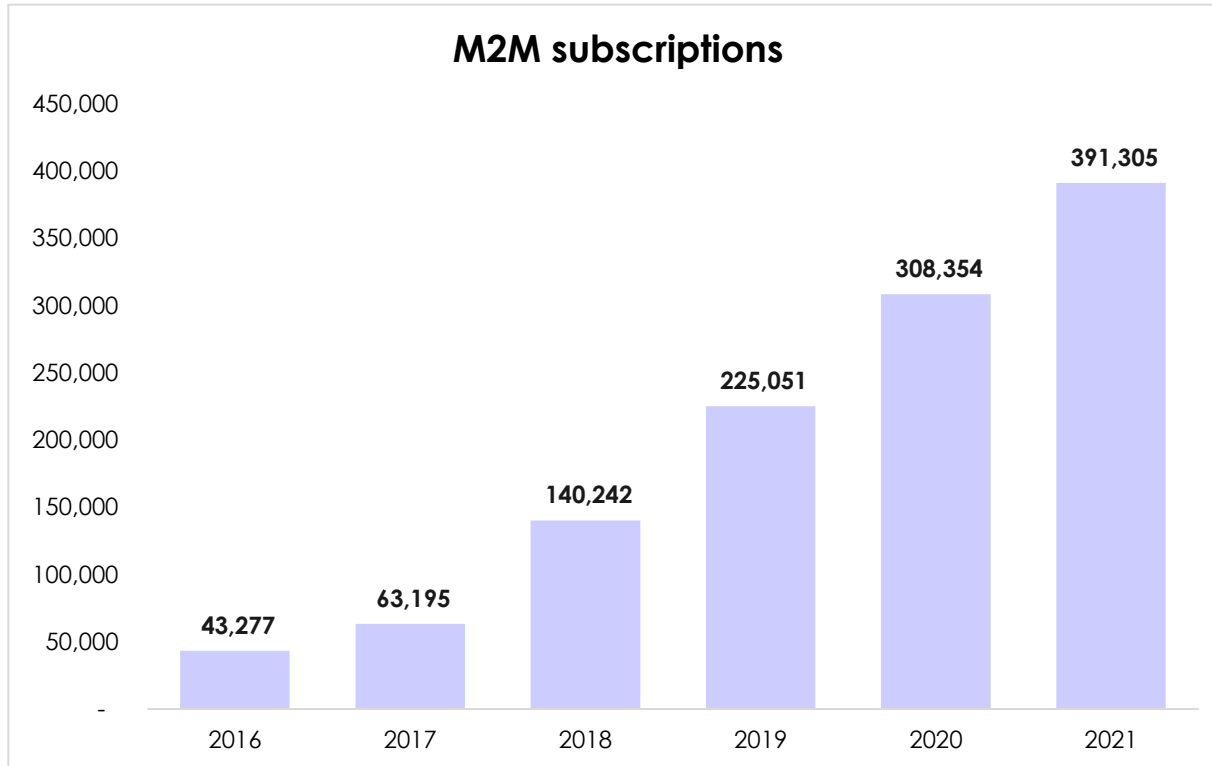
\* Increase in "Other data services" revenue is due to an operator reporting an increase in take-up as well as service upgrade of some DIA circuits.

- Data services dropped by 15% in 2021 relative to 2020.
- Most of the data services are National MPLS/IPVPN services, which account for almost 86% of data services in 2021.
- Other major data services reported include: Inet dedicated and International MPLS/IPVPN services.



\*Includes MPLS/IPVPN service, Inet dedicated and International managed leased line service

# Mobile M2M Subscriptions



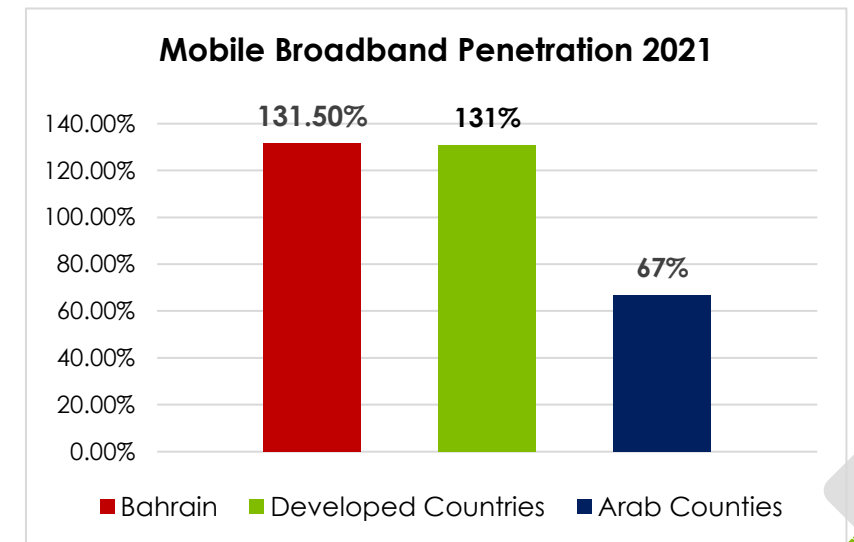
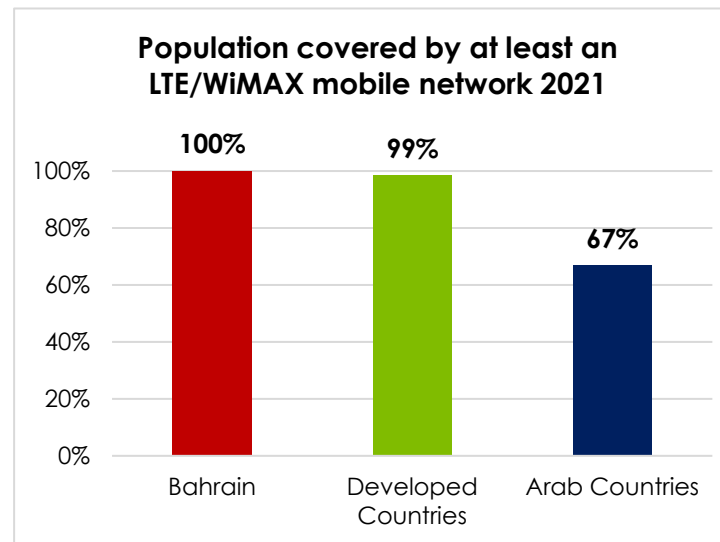
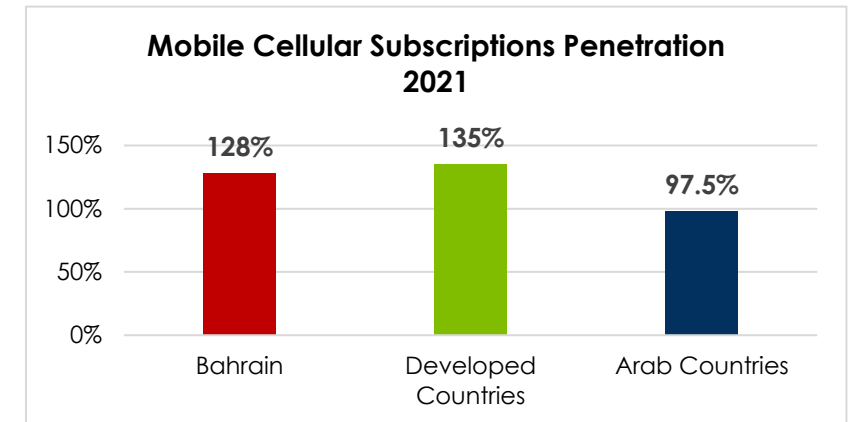
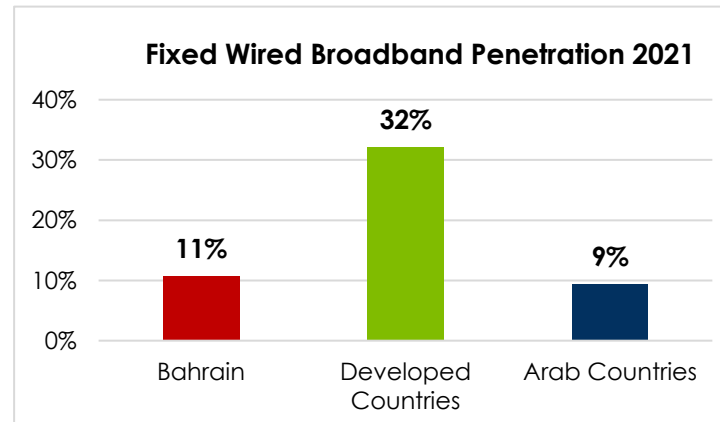
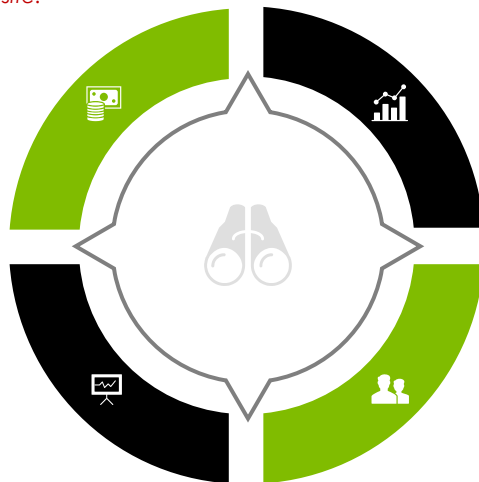
- M2M subscriptions have grown by around **166 thousand** subscriptions in the last 3 years. All in all, by 2021, M2M subscriptions increased **Ninefold** relative to 2016.
- M2M subscriptions include banking services, vehicle tracking, Point of Sales, Smart meters among other services.

# Benchmarking of telecom service penetration rates with Arab countries

- Bahrain compares very well with other Arab Countries and with Developed countries\*\* in terms of telecoms services penetration. Specifically in Mobile penetration and Percentage of Individuals using the internet.

\* Estimates by ITU

\*\* For further info on the list of developed countries, pls refer to ITU's official website.



# List of Acronyms

<b>DSL</b>	Digital Subscriber Line
<b>BHD</b>	Bahraini Dinar
<b>CPS</b>	Carrier Pre-Selection
<b>CAGR</b>	Compound Annual Growth Rate
<b>GCC</b>	Gulf Cooperation Council
<b>IDD</b>	International Direct Dial
<b>ITU</b>	International Telecommunication Union
<b>Kb/s</b>	Kilobit per second
<b>Mb</b>	Megabit
<b>Mbps</b>	Megabit per second
<b>OLO</b>	Other licensed operator
<b>PPCC</b>	Pre-Paid Calling Card
<b>PSTN</b>	Public Switched Telephone Network
<b>PPP</b>	Purchasing power parity
<b>SMS</b>	Short Message Service
<b>TRA</b>	Telecommunications Regulatory Authority



Indicator	Definition
<b>Fixed-telephone subscriptions</b>	<p>Fixed-telephone subscriptions refers to the sum of all active</p> <ul style="list-style-type: none"> <li>i) analogue fixed-telephone lines,</li> <li>ii) voice-over-IP (VoIP) subscriptions,</li> <li>iii) fixed wireless local loop (WLL) subscriptions,</li> <li>iv) ISDN voice-channel equivalents,</li> <li>v) fixed public payphones and vi) satellite-based subscriptions</li> </ul> <p>provided to fixed locations that allow for a voice communication. This indicator was previously called Main telephone lines in operation.</p> <p>*Active lines are those that have registered an activity in the past three months.</p>
<b>Prepaid mobile subscribers (i271p)</b>	<p>Prepaid mobile-cellular telephone subscriptions (ITU code i271p) refers to the total number of mobile-cellular telephone subscriptions that use prepaid refills. These are subscriptions where, instead of paying an ongoing monthly fee, users purchase blocks of usage time. Only active subscriptions should be included (those used at least once in the last three months for making or receiving a call or carrying out a non-voice activity such as sending or reading an SMS or accessing the Internet).</p>
<b>Postpaid mobile subscribers (i271pd)</b>	<p>Postpaid mobile-cellular telephone subscriptions refers to the total number of mobile-cellular subscriptions where subscribers are billed after their use of mobile services, at the end of each month. The postpaid service is provided on the basis of a prior arrangement with a mobile cellular operator. Typically, the subscriber's contract specifies a limit or allowance of minutes, text messages, etc. The subscriber will be billed at a flat rate for any usage equal to or less than that allowance. Any usage above that limit incurs extra charges. Theoretically, a subscriber in this situation has no limit on use of mobile services and, as a consequence, unlimited credit.</p>
<b>Active mobile-broadband subscriptions (i271mw)</b>	<p>Active mobile-broadband subscriptions refers to the sum of active handset-based and computer-based (USB/dongles) mobile-broadband subscriptions that allow access to the Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets. Subscriptions must include a recurring subscription fee or if in the prepayment modality, pass a usage requirement – users must have accessed the Internet in the last three months.</p> <p>Clarification: For mobile data subscription to be considered broadband, the operator must advertise a connection that will be capable of using at least a 3G/UMTS network, so that a nominal downloading speed of 256 kbit/s is at a minimum expected. Hence, subscriptions that are only to use GPRS and EDGE technologies are to be excluded. A contract (post pay) subscription pays a recurrent bill with a predetermined frequency. It should be counted as an active mobile broadband subscription no matter the effective data consumption realized by the user. A prepayment or a pay-as-you-go subscription needs to pass the activity criterion to be considered as 'active': a billable Internet connection must have occurred in the last three months. Note that for a mobile subscription to be considered broadband it must allow access to the public open Internet, hence, any subscription that limits access only to walled garden or services provided in exclusivity by the mobile operator, are not counted as access to the open Internet, and hence, are not 'broadband'. Several cases are defined below. (See Table 4 in ITU document)</p>

Source: ITU



# Thank you

# Annex A

Retail services	2018	2019	2020	2021
Fixed line services	12,181,521	12,080,199	10,231,244	12,365,078
Mobile services (Excluding International Mobile IDD)	132,199,313	134,827,944	137,982,859	135,623,606
<i>International calls - Mobile IDD</i>	<i>19,661,754</i>	<i>14,546,035</i>	<i>12,418,631</i>	<i>11,013,005</i>
<i>International calls - Fixed IDD</i>	<i>1,783,416</i>	<i>1,583,145</i>	<i>1,512,744</i>	<i>1,251,678</i>
<i>International calls – Other</i>	<i>1,179,025</i>	<i>934,147</i>	<i>647,196</i>	<i>357,711</i>
International calls services	<b>22,624,195</b>	<b>17,063,327</b>	<b>14,578,571</b>	<b>12,622,394</b>
Internet services	50,492,400	56,046,834	62,844,699	67,094,642
Leased line services	67,878,070	69,362,087	74,521,904	81,708,398
<b>Total</b>	<b>284,905,661</b>	<b>288,523,623</b>	<b>300,159,278</b>	<b>309,414,118</b>

Wholesale services	2018	2019	2020	2021
Termination	2,887,124	2,818,203	2,931,529	2,797,238
Origination	200,258	141,645	124,505	110,117
WSIDD	275,819	293,032	934,526	1,211,175
Incoming calls				
Wholesale domestic leased lines	2,464,531	1,692,323	1,462,133	1,172,720
Wholesale international leased lines	2,998,679	1,349,594	1,792,328	1,879,297
Bitstream and WDSL	364,566	85,079	22,804	21,332
Termination on your network of SMS	233,729	1,594,955	2,787,762	4,208,133
Termination on your network of MMS	11,136	9,485	6,006	5,790
Transit for calls				
International incoming calls	4,783,607	4,308,818	3,617,255	2,582,294
Directory Assistance (DQ) (Only Batelco)	155,214	105,718	75,399	51,088
Duct	1,814,244	907,122	N/A	N/A
<b>Total</b>	<b>16,188,907</b>	<b>13,305,974</b>	<b>13,754,247</b>	<b>14,039,184</b>

	2018	2019	2020	2021
<b>Retail Services Revenue</b>	284,905,661	288,523,623	300,159,278	309,414,118
<b>Wholesale Services Revenue</b>	16,188,907	13,305,974	13,754,247	14,039,184
<b>Other Revenue</b>	128,474,213	142,950,076	144,583,340	162,702,436
<b>Total</b>	<b>429,568,781</b>	<b>445,253,164</b>	<b>458,935,908</b>	<b>486,155,738</b>