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TELECOMMUNICATIONS REGULATORY AUTHORITY
Kingdom of Bahrain - مملكة البحرين

Telecommunications Market Indicators in the Kingdom of Bahrain

Full year 2022 up to Q2 2023

Issued in **October 2023**

Content

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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.

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- This is the **Eighteenth** Telecommunications Markets Indicators report and it covers a large range of telecoms services indicators for 2022 up to Q2 2023 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 – IPLC, etc.
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

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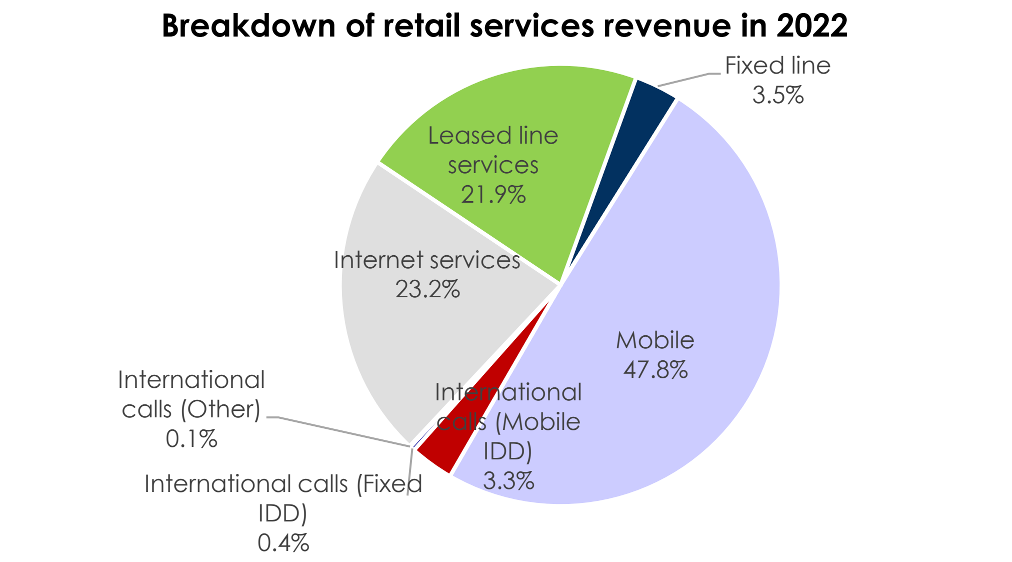
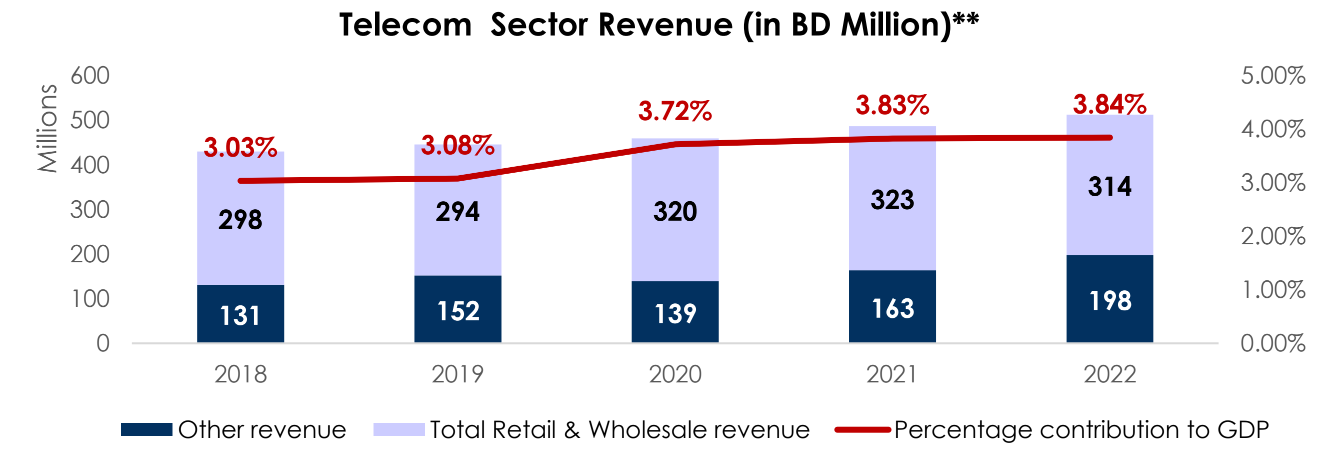
Indicator	2017	2018	2019	2020	2021	2022	CAGR 2017-2022
Number of fixed line telephony (excluding ISDN)	238,969	228,717	226,898	228,422	221,045	216,983	**(1.5%)**
Fixed line telephony penetration (including ISDN)	**19%**	**18%**	**18%**	**18%**	**17%**	**16%**	**-**
Total mobile subscribers	2,364,477	2,092,714	1,918,635	1,770,966	1,923,443	2,141,263	**(1.9%)**
Mobile penetration	**158%**	**139%**	**126%**	**117%**	**128%**	**138%**	**-**
Total broadband subscribers	2,372,742	2,160,052	2,152,692	2,012,253	2,145,530	2,494,834	**0.5%**
Broadband penetration	**164%**	**141%**	**143%**	**134%**	**143%**	**159%**	**-**
Percentage of individuals using the Internet	**96%**	**99%**	**99%**	**99.7%**	**100%**	**100%**	**-**
Telecommunications revenues (BD in million)	424	431	446	460	486	512	**-**
Number of employees in the telecommunications sector	2,914	2,902	2,741	2,920	3,003	3,056	**-**

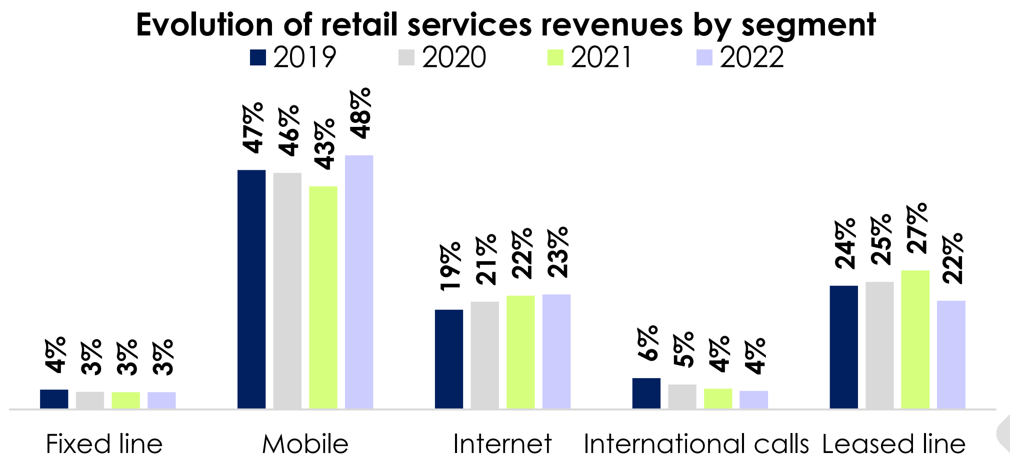
Notes:
1- The number of subscribers refers to the end of the period.
2- Number of broadband subscribers include fixed wired, wireless and mobile. Slight drop in total broadband is due to an operator reporting a drop in Standalone mobile broadband in 2023.
3- The source of Percentage of individuals using the Internet is the ITU and TRA residential survey.
4- Penetration is based on mid-year population estimated by CIO
5- Penetration for Q2 2023 is based on latest published population by BNA.BH: https://www.bna.bh/en/HRHtheCrownPrinceandPrimeMinisterchairstheweeklyCabinetMeeting.aspx?cms=q8FmFJgiscL2fwIzON1%2BDIHIz%2BofVmjO4F61CX7bmSQ%3D

Revenues in the Telecom Sector

- Telecommunications services generated **BD 512 million*** in revenue in 2022 compared to BD 486 million in 2021, an increase of 5%.
- Telecommunications sector revenues represent around **3.8%** of GDP as of 2022.
- The proportion of mobile revenue to total retail revenue increased to **47.8%** in 2022, compared to **43%** in 2021.
- Between 2021 and 2022 total retail revenue dropped by **3%** while reported wholesale revenue increased by **11%**. Other revenue increased by **21%** over the same period.
- Revenue from leased line services increased by **18%** while internet services revenue increased by **13%** between 2017-2022.
- Telecommunications sector revenue increased by **19%** between 2018-2022.



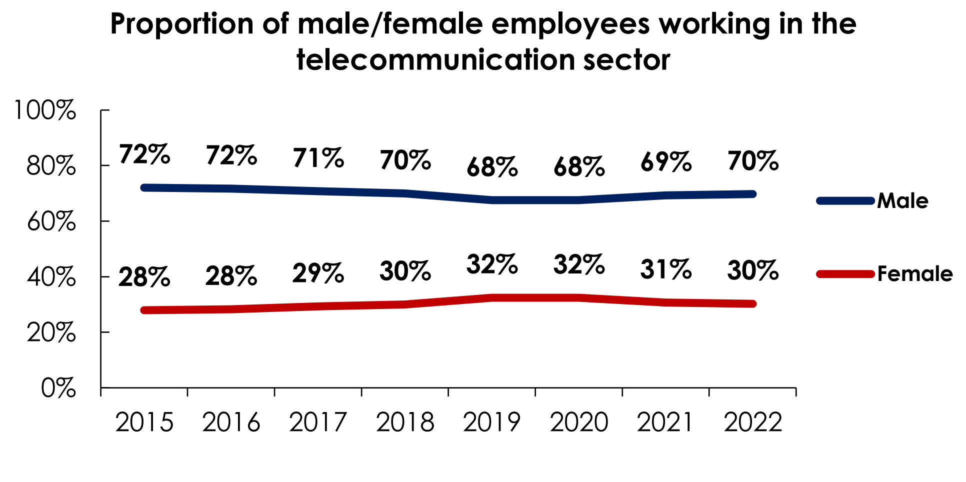


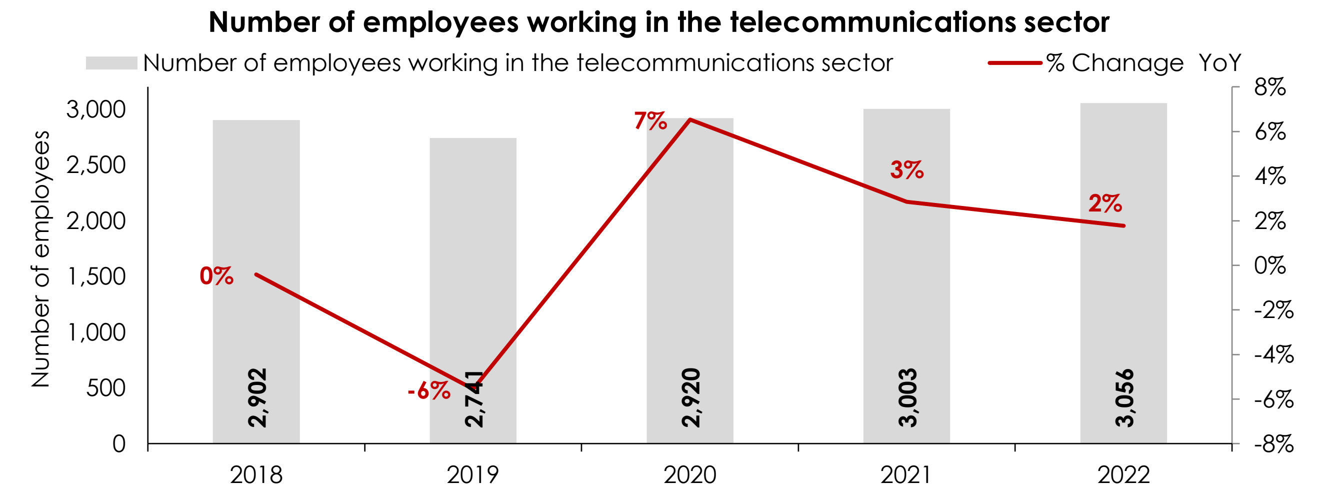


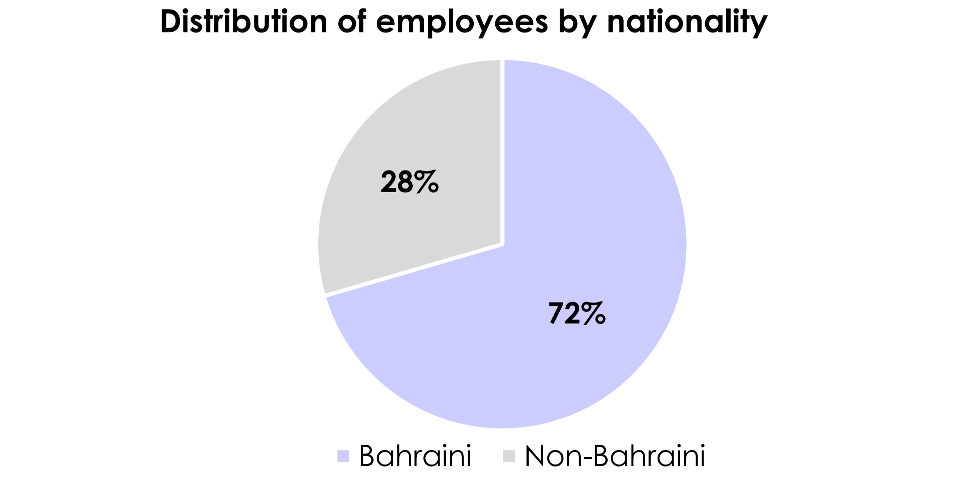
** Other revenue includes but is not limited to (Hardware revenues, ICT, advanced services, etc..)*
*** Includes BNET revenue.*

Employment in the Telecom Sector

- 3,056 employees are working in the telecommunications sector as of 2022.
- The sector achieves high degree of Bahrainisation. As of 2022, 72% of the employees in the sector are Bahrainis.
- Females represent 30% of employees in the telecom sector.

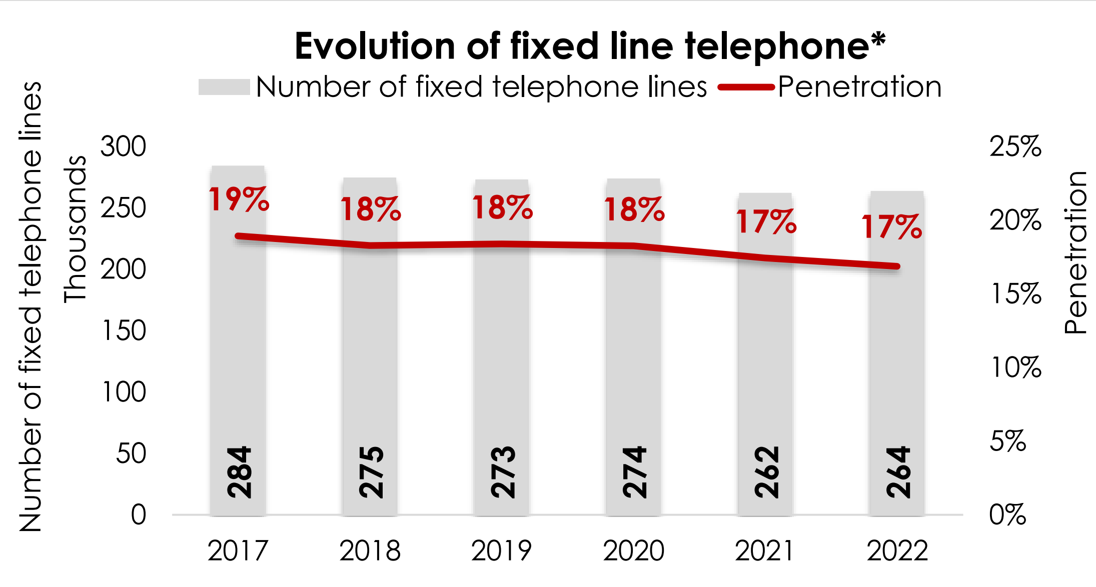






FIXED LINE TELEPHONY SERVICES

Fixed Line Telephony Services



- There were **263,913** fixed-line telephony services (including ISDN) in operation at the end of 2022, compared to 262,161 fixed telephone lines in services at the end of 2021.

- Regarding ISDN service, Basic-rate ISDN has increased by **1.8%** between 2021 & 2022. Similarly, Primary-rate ISDN service increased by **14.5%.**

Number of	2017	2018	2019	2020	2021	2022
***ISDN	2,525	2,428	2,350	2,136	1,980	2,185
Basic-rate	1,086	958	867	657	653	665
Primary-rate	1,439	1,470	1,483	1,479	1,327	1,520

2022		
	216,983	Number of total fixed lines
	14%	Penetration rate
	263,913	Number of fixed lines, including total ISDN lines
	17%	Penetration rate

* 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:

2021	1,504,365
2022	1,557,182

Fixed Line Telephony Services By Customer Type

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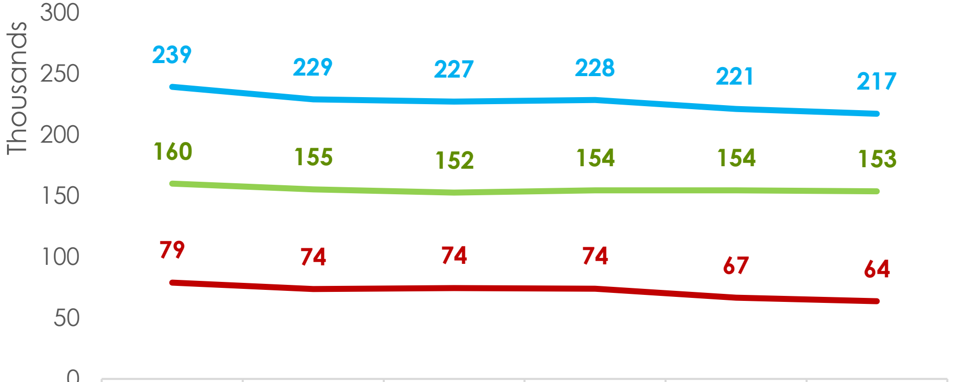
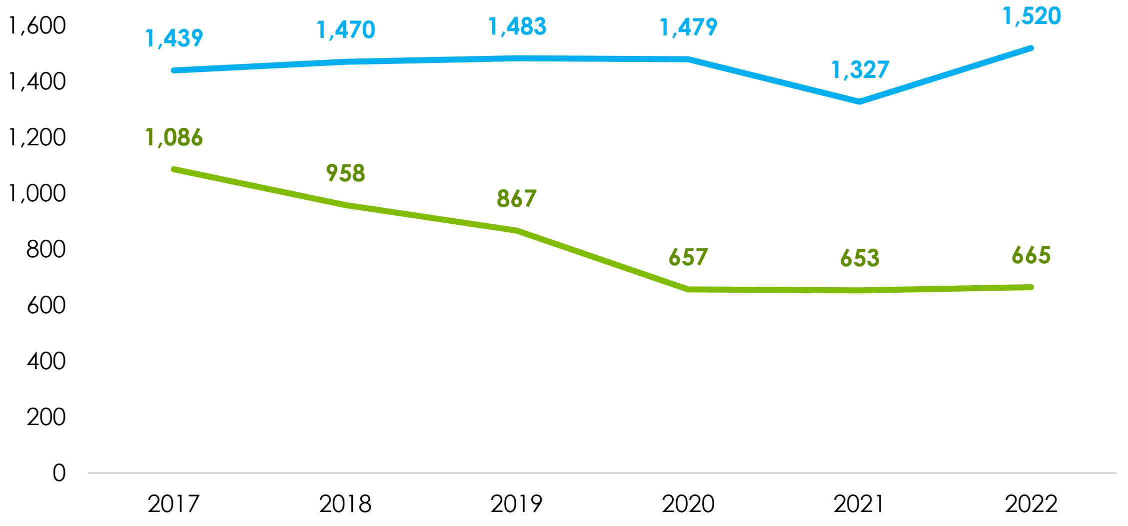
Number of fixed telephony lines by customer type (Excluding ISDN & CPS)



	2017	2018	2019	2020	2021	2022
Residential	159,998	155,209	152,474	154,463	154,474	153,466
Business	78,971	73,508	74,424	73,959	66,571	63,517
Total	238,969	228,717	226,898	228,422	221,045	216,983

Residential Business Total

Number of ISDN subscriptions

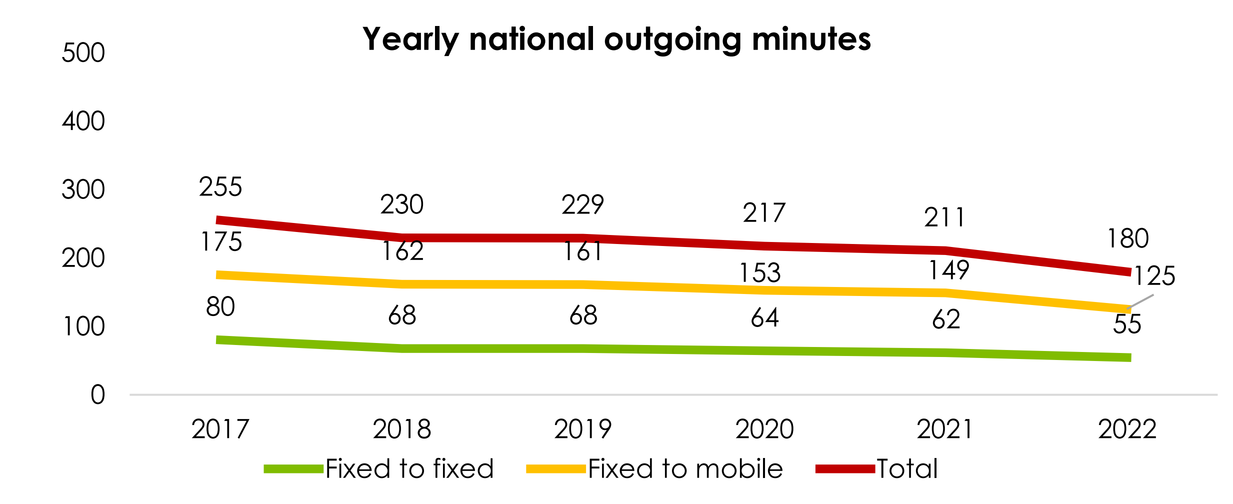


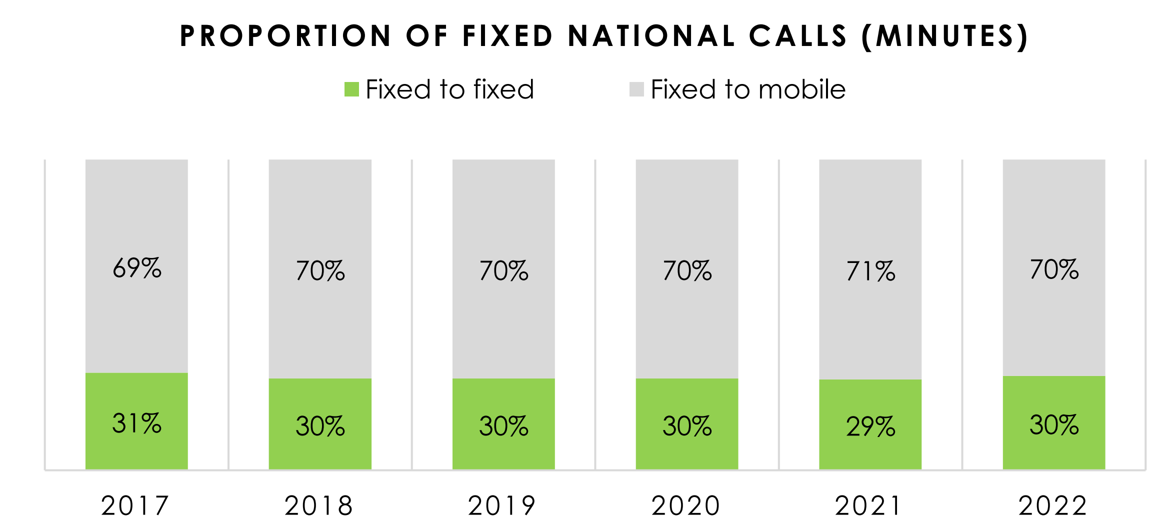
- Total number of fixed telephony lines has decreased by **1.8%.** The total number of residential lines dropped by **1%**, and the total number of business lines dropped by **5%** relative to 2021.
- By end of 2022, Basic rate ISDN increased by **1.8%** while Primary rate ISDN increased by **14.5%.**
- Since 2017, Primary rate ISDN increased by **6%** by while Basic rate ISDN dropped by **39%** relative to 2022.

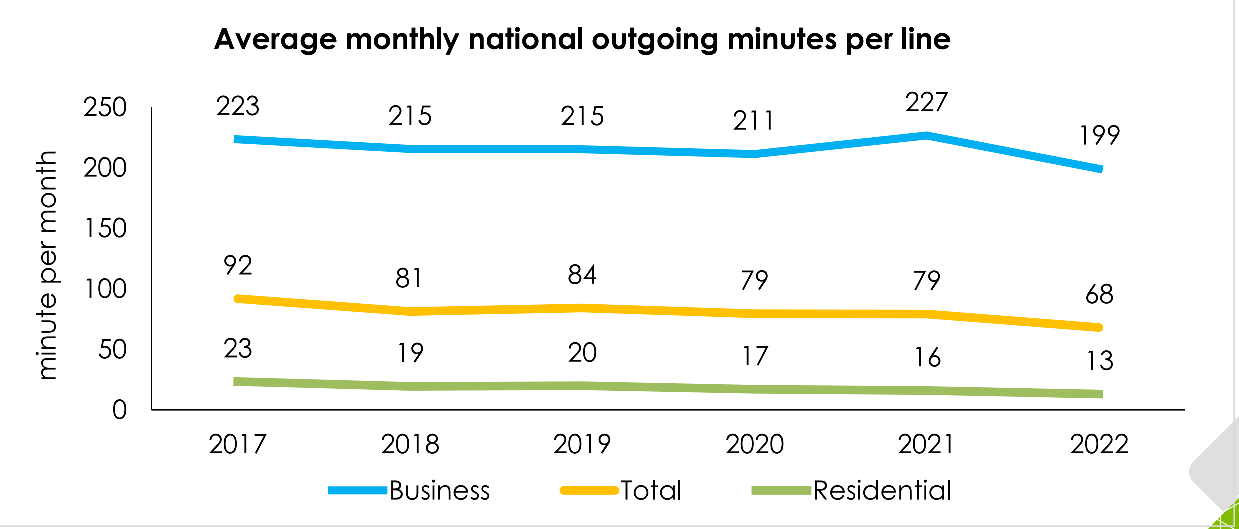
Fixed Line Telephony Outgoing Minutes

- The outgoing fixed call minutes fell by around **12%** from 211 to 180 million minutes between 2021 and 2022 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 20%. Similarly, average minutes for business fixed lines dropped by around 12%.



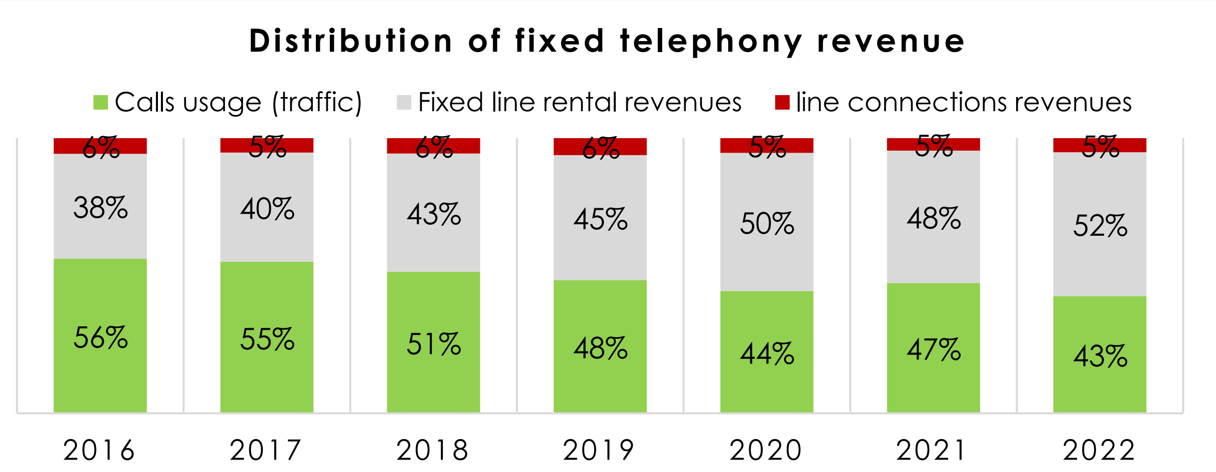


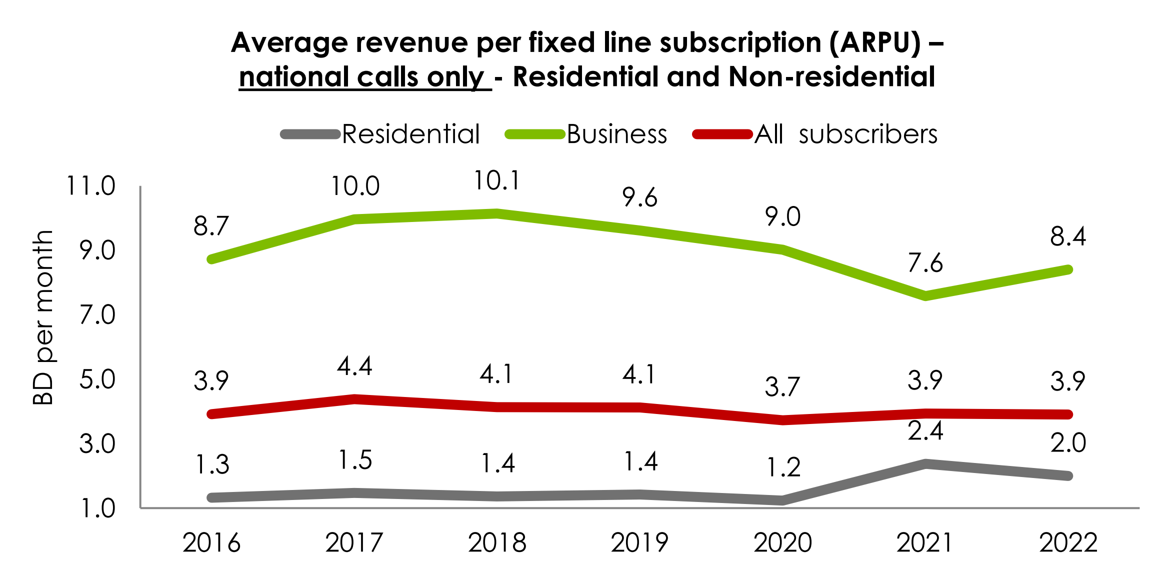


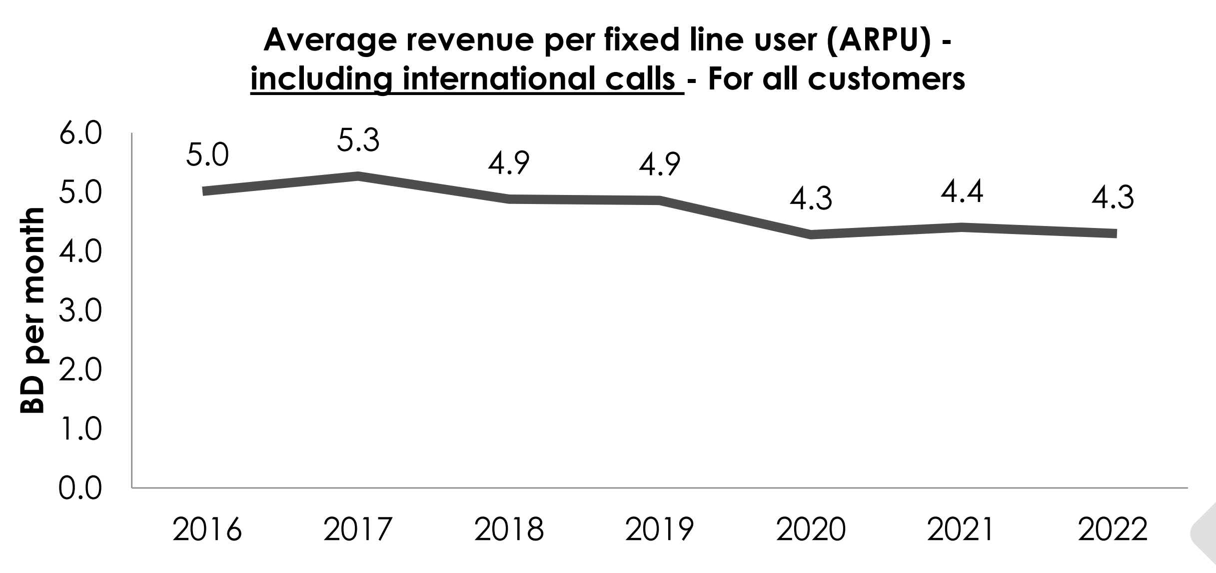
Fixed Line Telephony Service Revenue

- Fixed line revenue dropped between 2021 & 2022 by around **1%** from **BHD10.5 million** to **BHD10.4 million**.

- The average monthly revenue per user for national calls only remained stable at **3.9** while the average revenue including international calls slightly dropped to **4.3**.

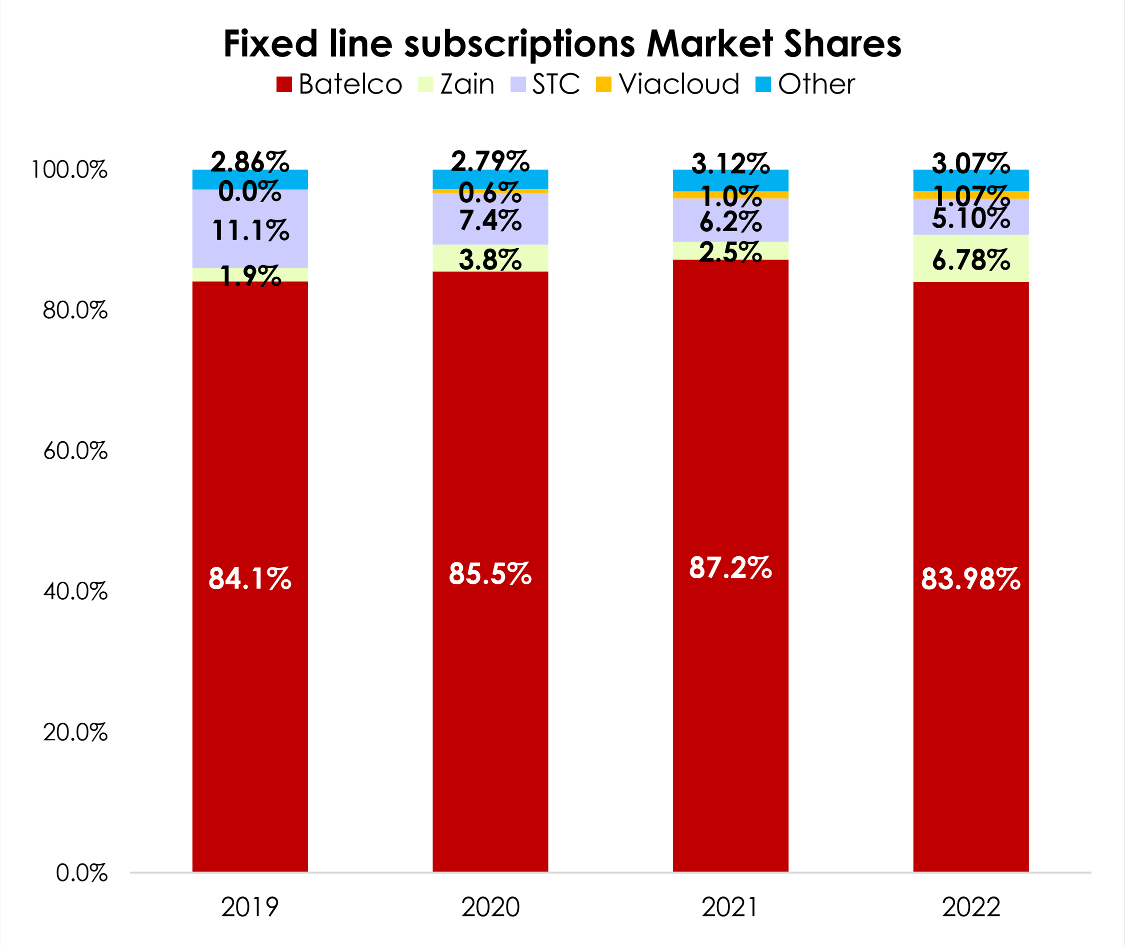


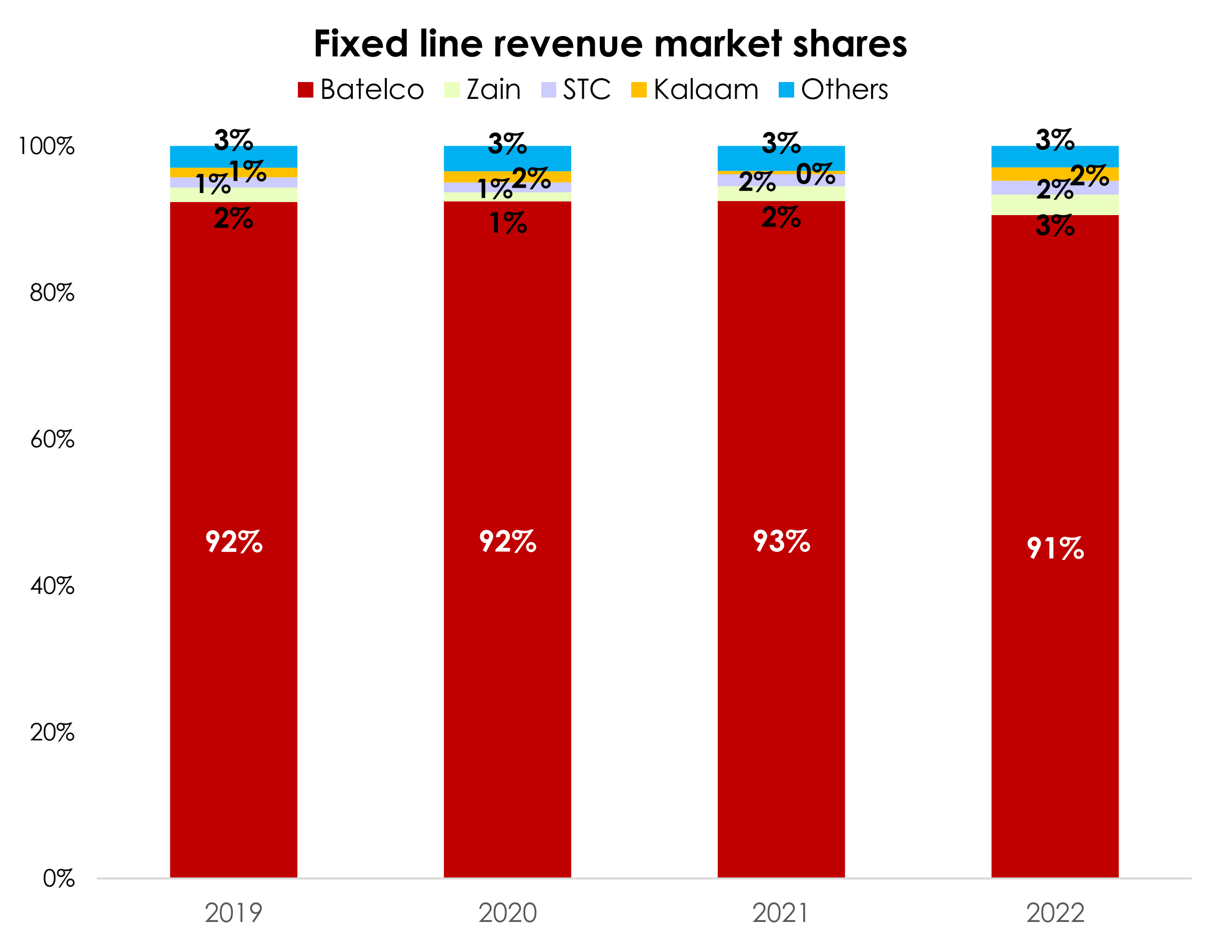




* Increase in residential ARPU is due to enhanced reporting for 2021, which better captures the ARPU for each category.

Fixed line telephony subscriptions and revenue market shares





MOBILE SERVICES

Mobile Services

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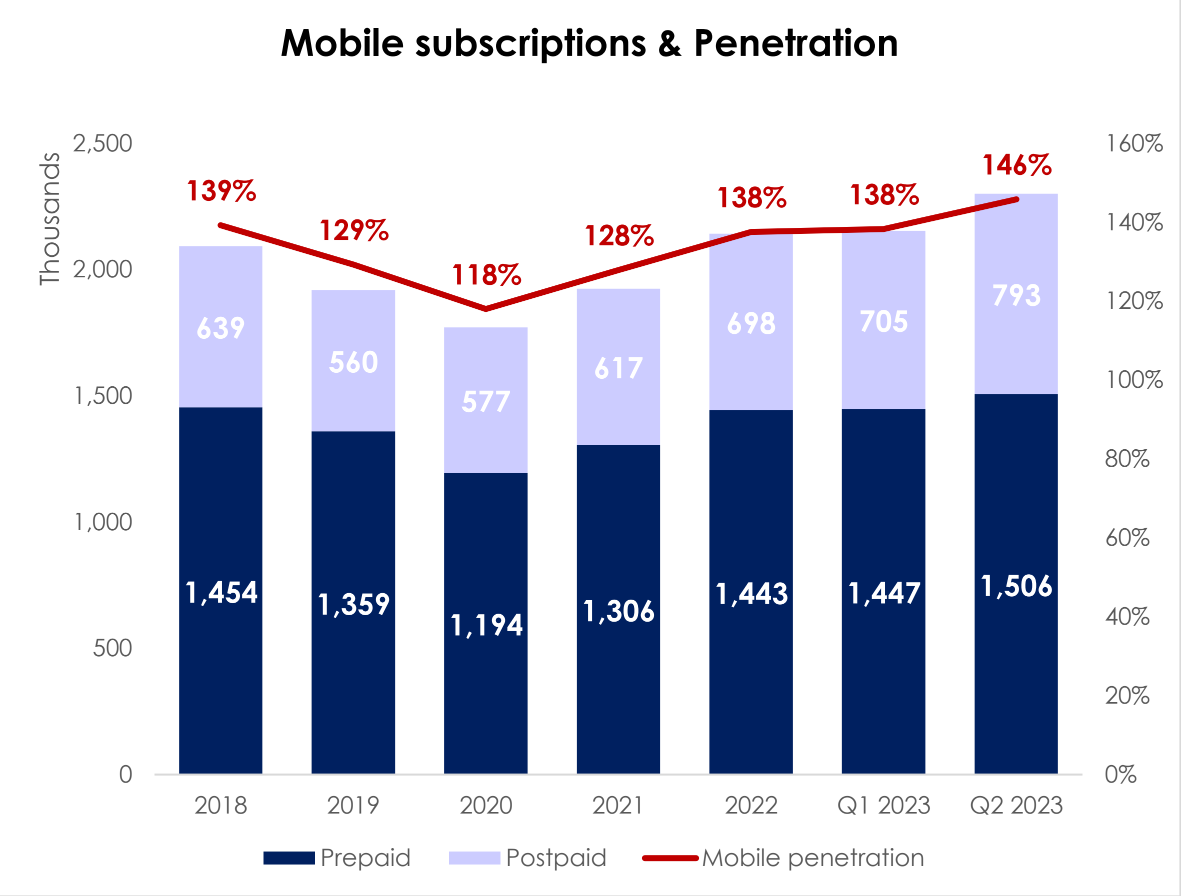
- By the end of 2022, the number of total mobile subscriptions increased by **11%** relative to 2021.

- By Q2 2023, the number of mobile subscriptions increased by around **20%** relative to 2021.

- Postpaid subscribers increased by **13%** between 2021-2022 and prepaid subscribers grew by **10.5%** over the same period.

End of Q2 2023		
	2,299,208	Number of total mobile subscriptions
	146%	Penetration rate

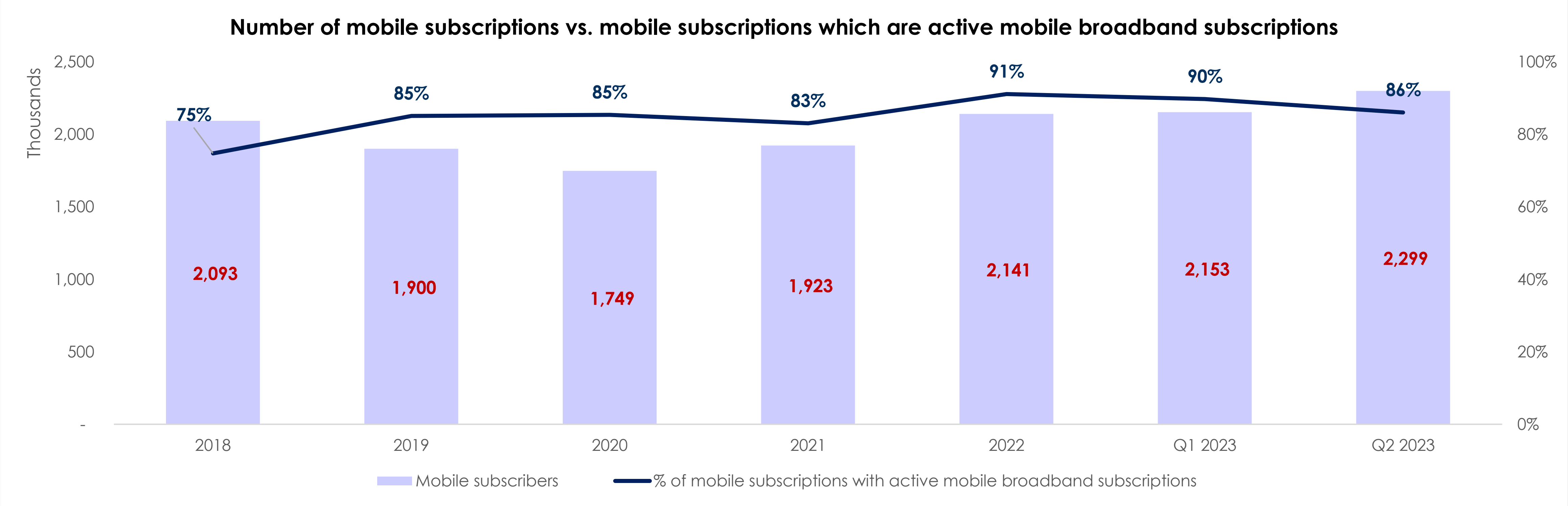
	2018	2019	2020	2021	2022	Q2 2023
Total	2,092,714	1,903,644	1,754,109	1,923,443	2,141,263	2,299,208
% of Prepaid	69%	71%	67%	68%	67%	66%
% of Postpaid	31%	29%	33%	32%	33%	34%



Mobile Subscriptions with Active data subscriptions

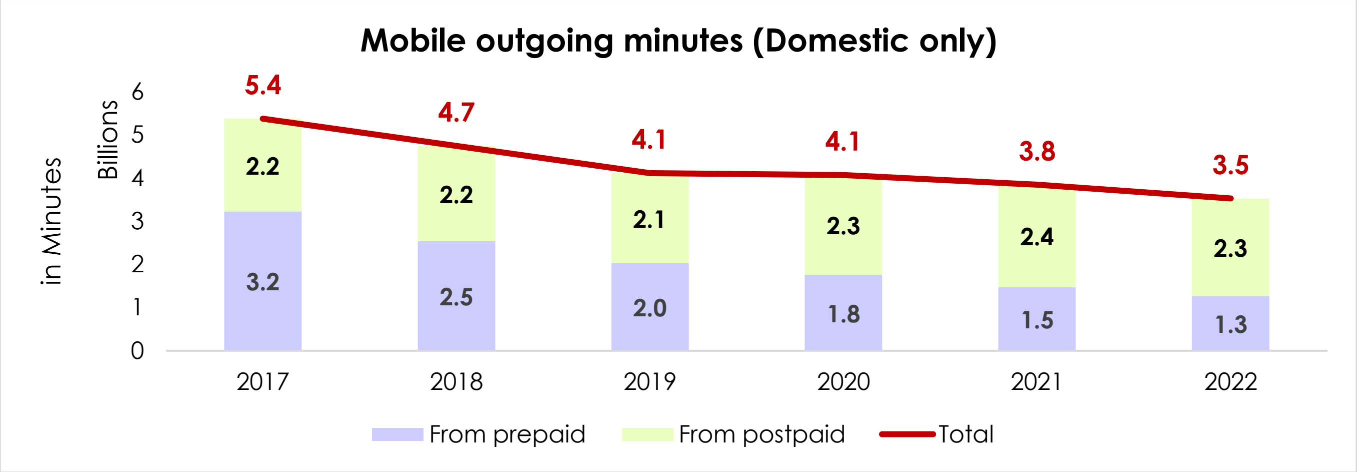
- By Q2 2023, there were **1.98** million mobile subscribers <u>with active mobile data subscriptions</u> (pay per use, add-on and bundles) compared to around 1.56 million subscribers with active mobile data subscriptions in 2021 (Increased by 24%).

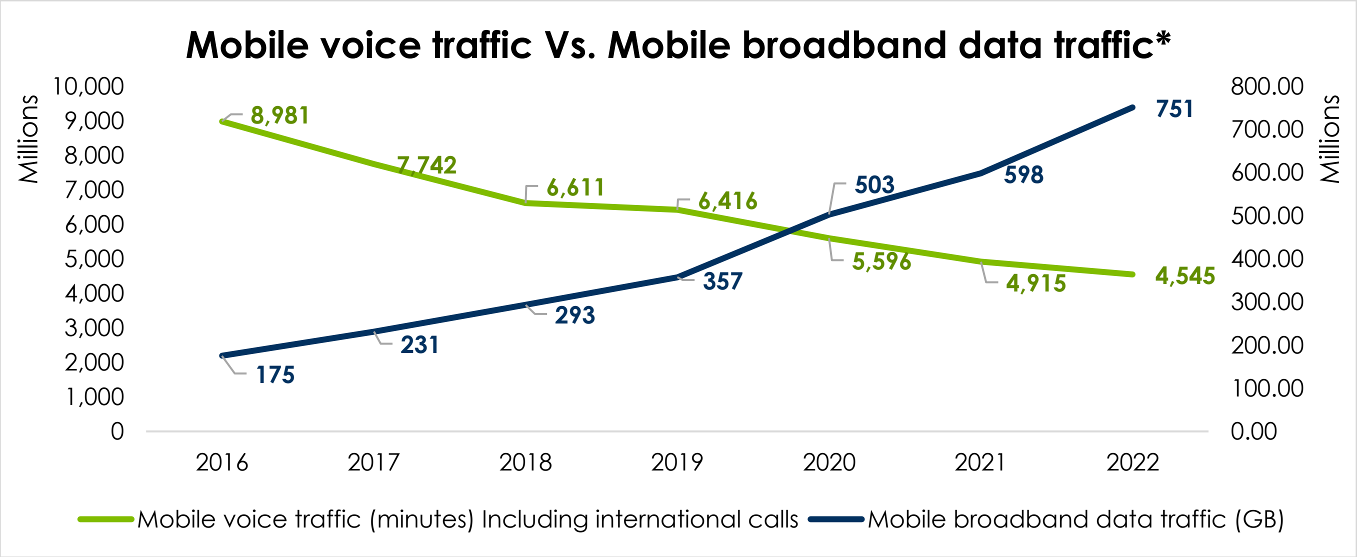
- Active mobile broadband subscriptions (pay per use, add-on and bundles) represent **86%** of total mobile subscriptions by Q2 2023 compared to 75% of total mobile subscriptions at the end of 2018.



Mobile Traffic

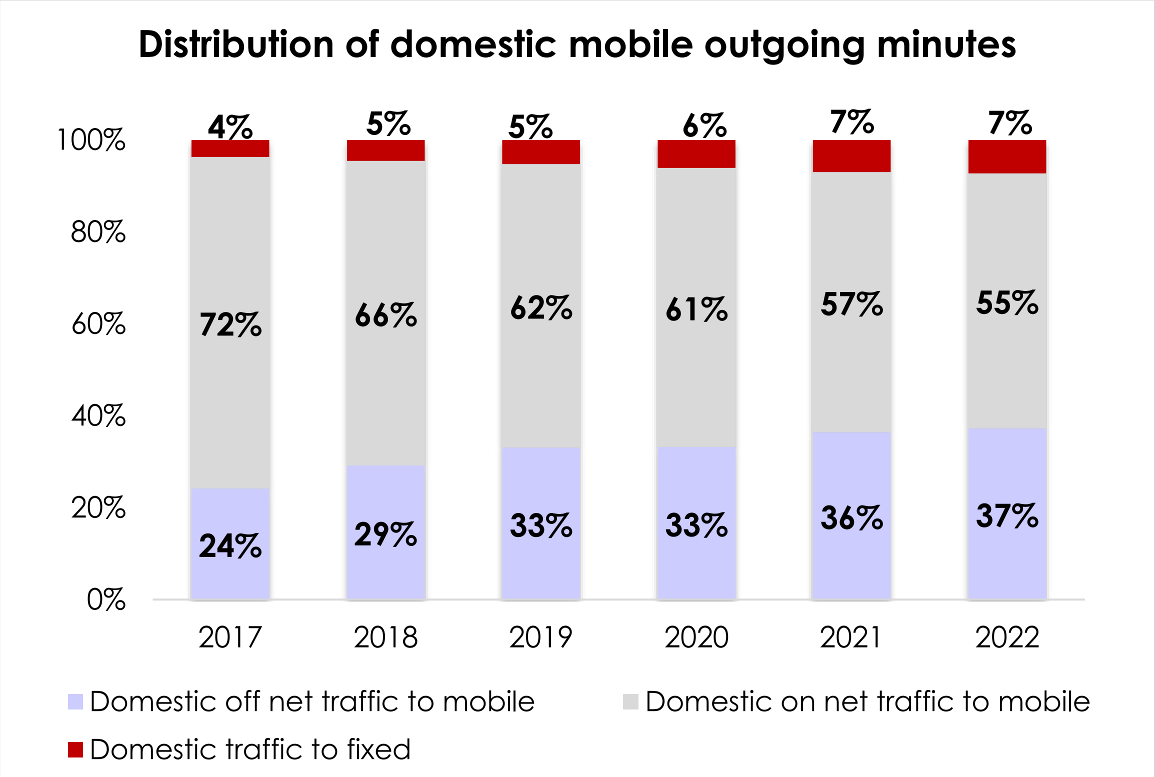
- At the end of 2022, mobile generated 3.5 billion domestic minutes, representing an 8% drop compared to the previous year.
- The compound annual growth rate is -6.8% in domestic mobile originated traffic between 2017 and 2022.
- Comparing 2022 to 2021, the domestic postpaid mobile outgoing minutes dopped by 4.4%, while the traffic originated from prepaid decreased by 15%.
- While total mobile voice traffic (including international calls) decreased by 8%, data traffic increased by 26% between 2021 and 2022.

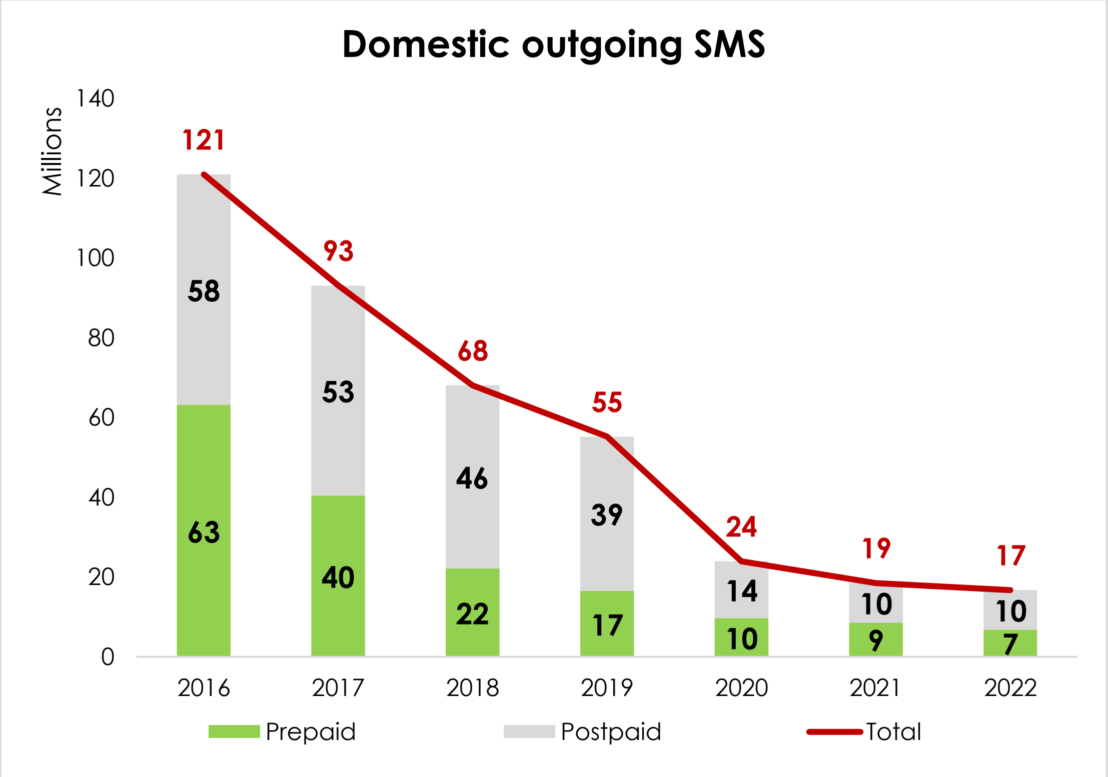




Data traffic is used for all Internet activities

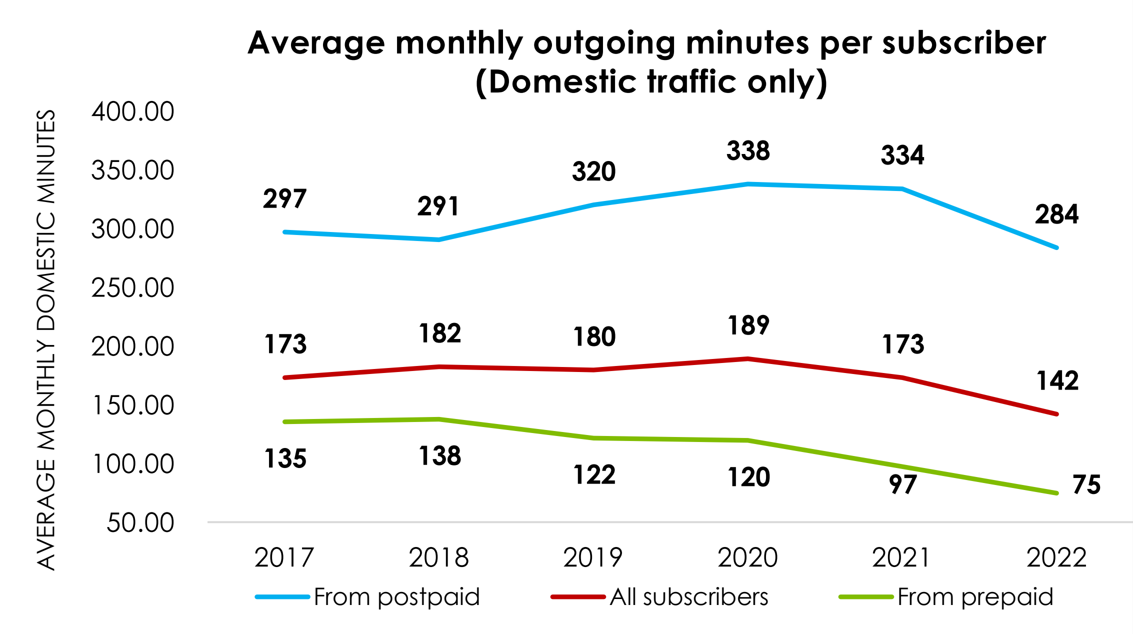
Mobile Traffic

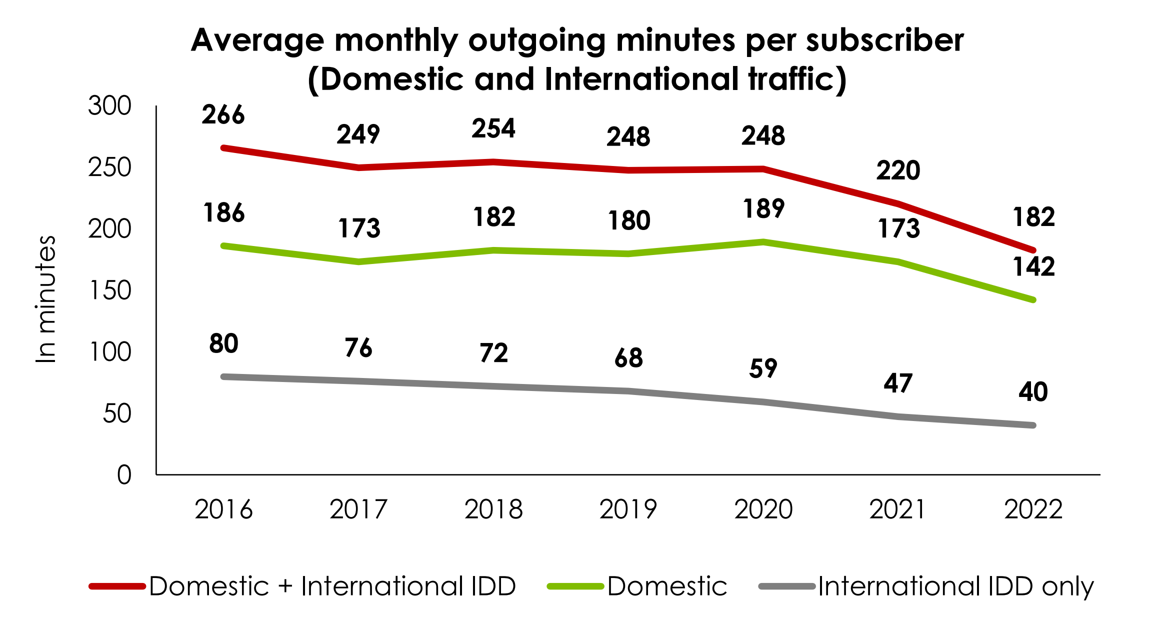




- In 2022, domestic mobile originated on-net traffic dropped by 9.5% relative to the previous year.
- In 2022, domestic mobile originated off-net voice traffic dropped by 5.5% relative to the previous year.

Mobile Average Monthly Outgoing Minutes

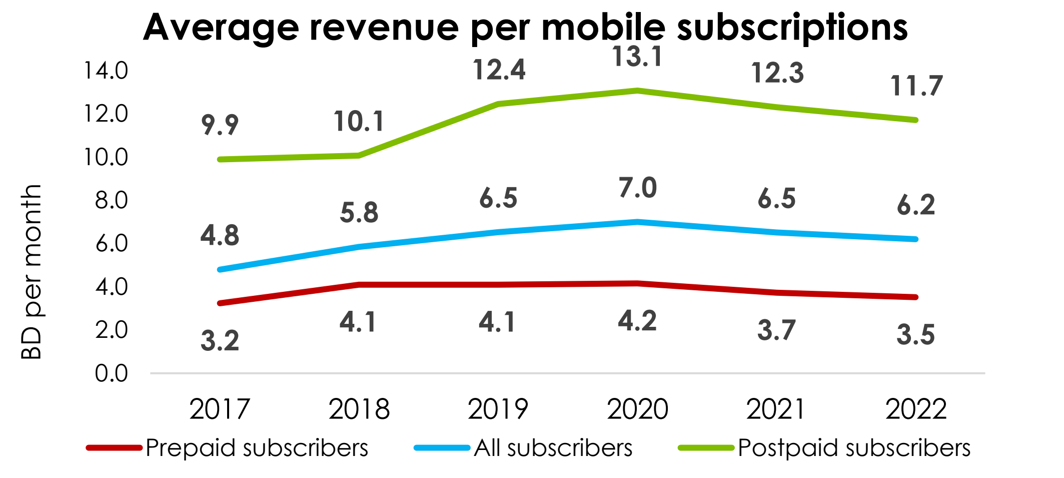


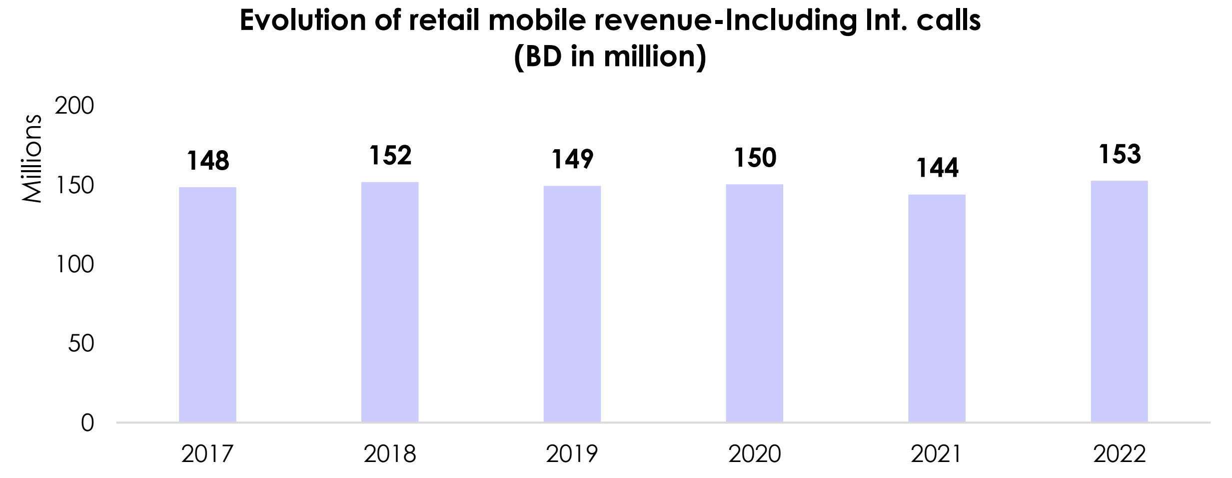


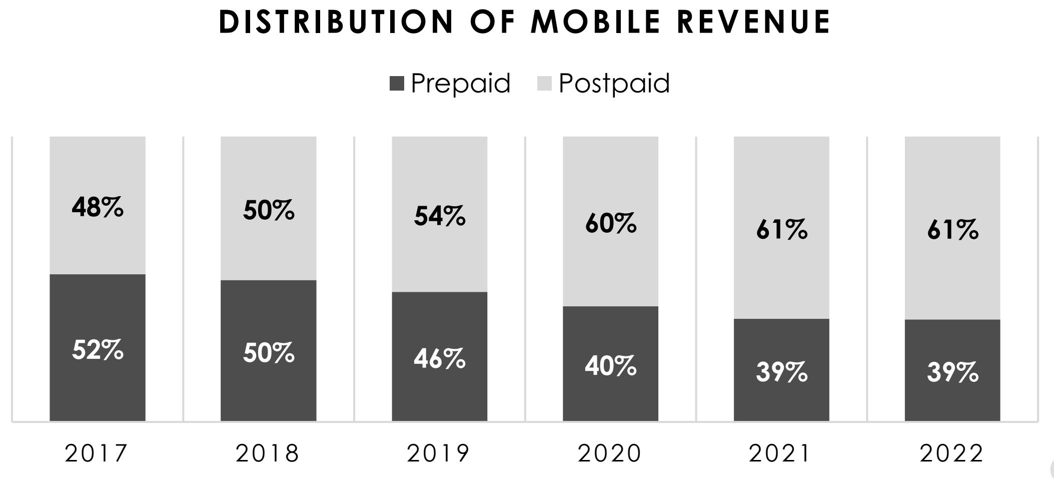
- As demonstrated above, the average monthly domestic traffic (in minutes) for postpaid subscribers dropped from 334 minutes in 2020 to 284 minutes in 2022, a 15% drop relative to the previous year.
- The average monthly domestic traffic (in minutes) for prepaid customers dropped from 97 minutes in 2021 to 75 minutes in 2022 , a 23% drop relative to the previous year.
- The average monthly volume of international direct dial (IDD) calls dropped to 40 minutes in 2022.

Mobile Revenue

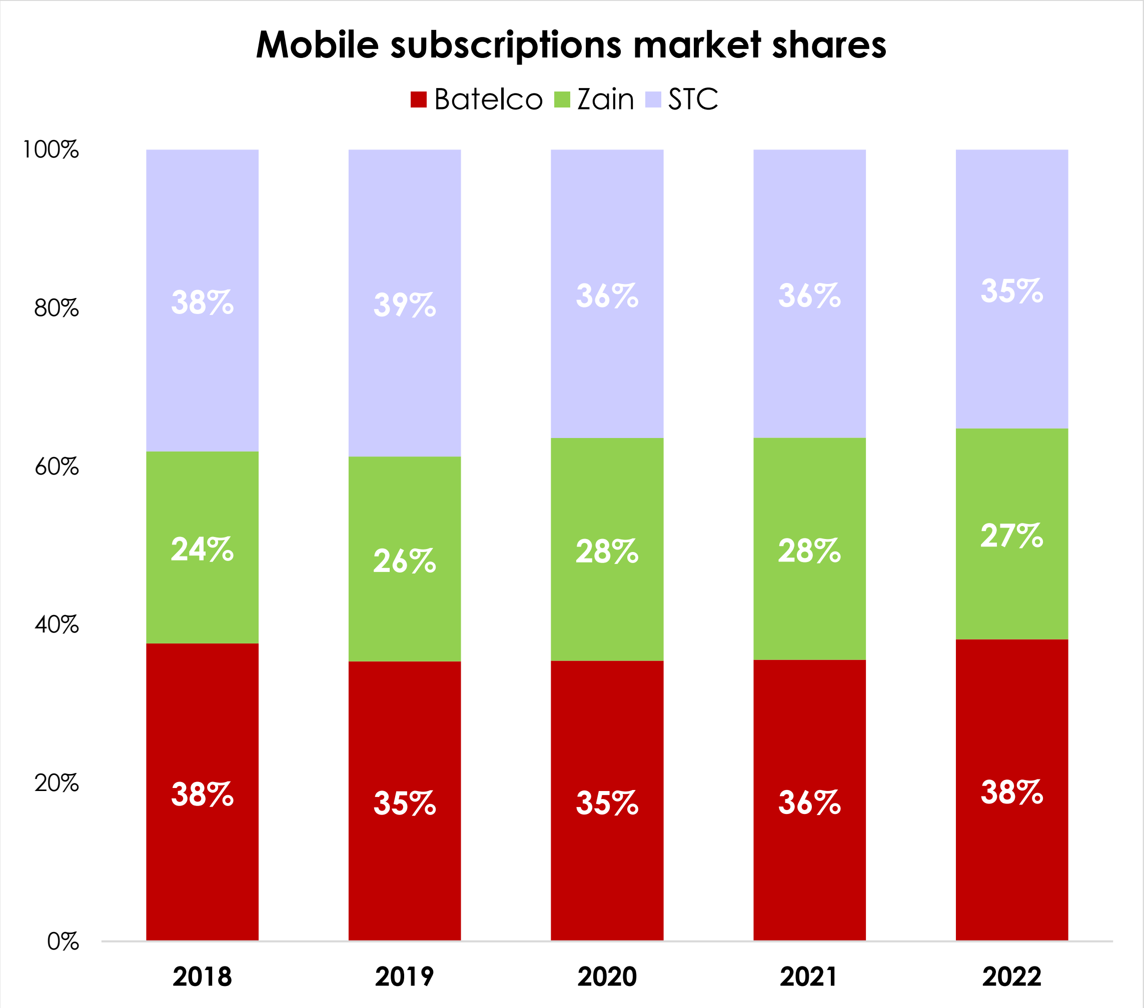
- Between 2021 and 2022, Mobile revenue increased by around 6% to reach BHD 153 Million.
- Revenue generated from postpaid mobile subscriptions represented 61% of the total retail mobile revenue in 2022.
- ARPU for postpaid subscribers has dropped by 5.3% relative to 2021. Similarly, prepaid ARPU dropped by 5.5% over the same period. Overall, Mobile ARPU dropped by 5.1%.

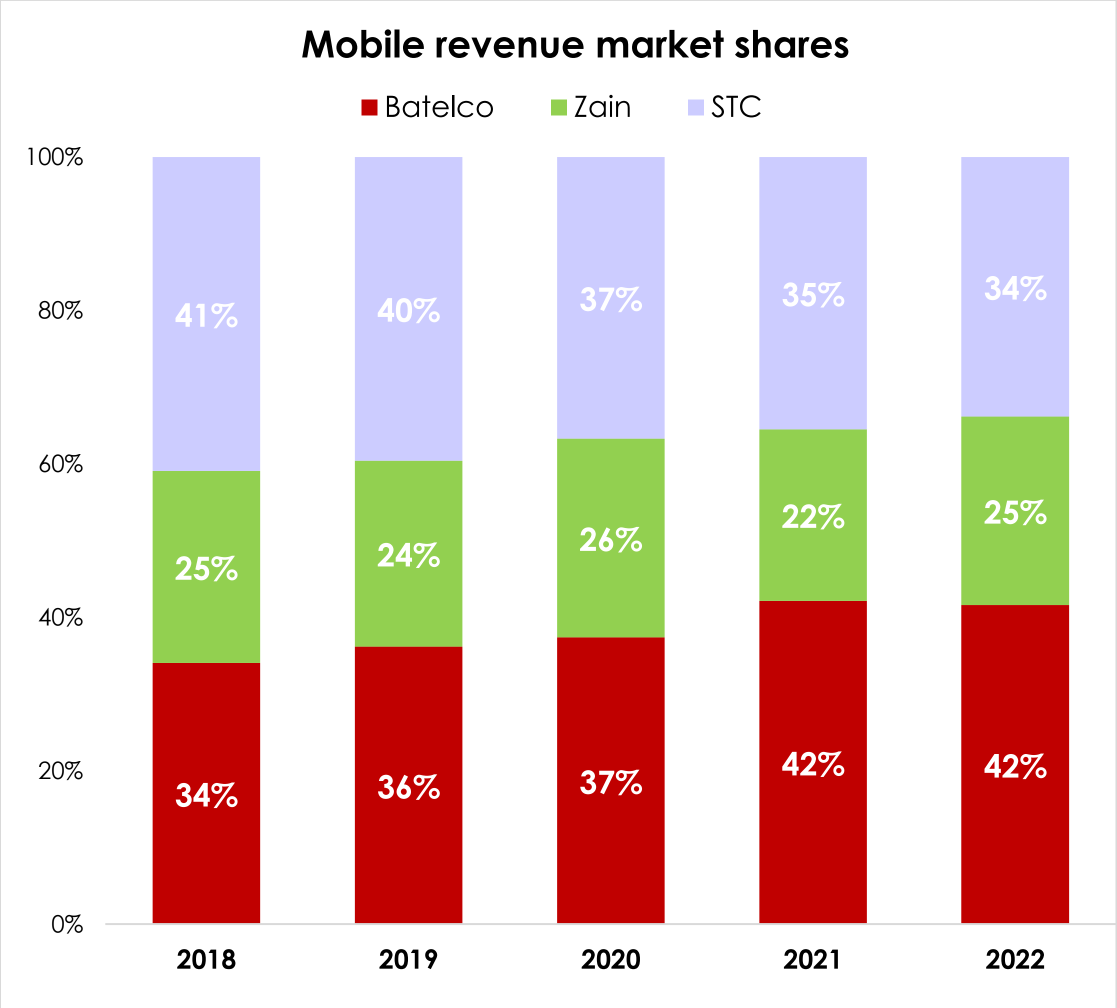




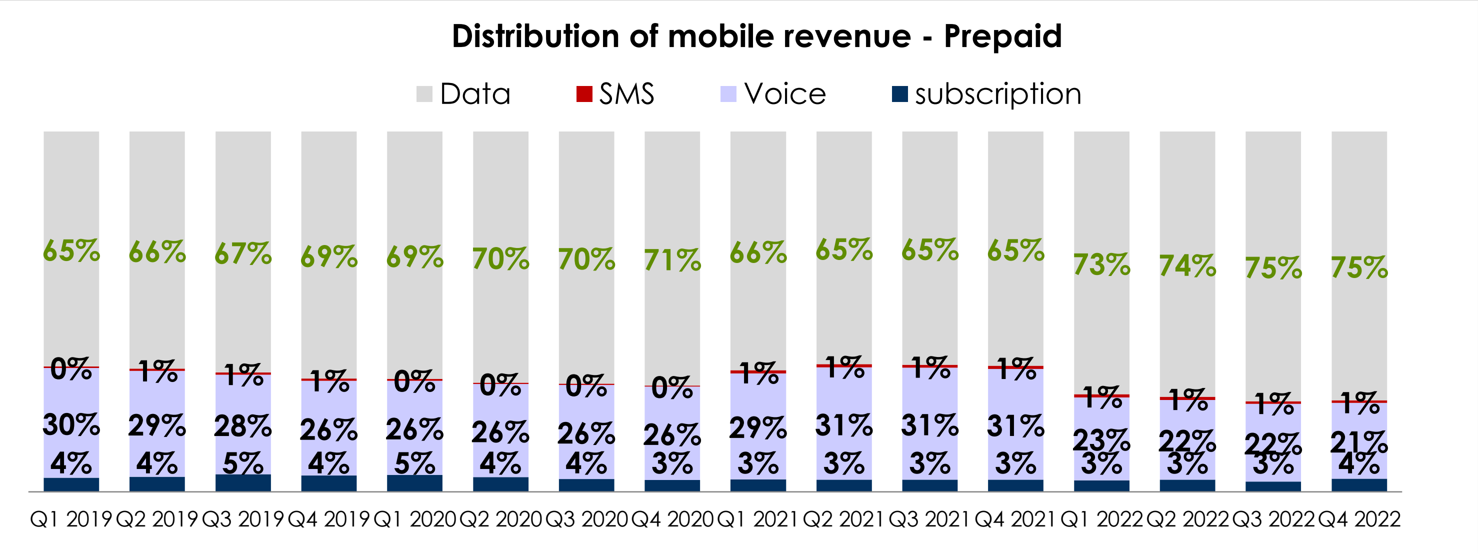


Mobile subscriptions and revenue market shares

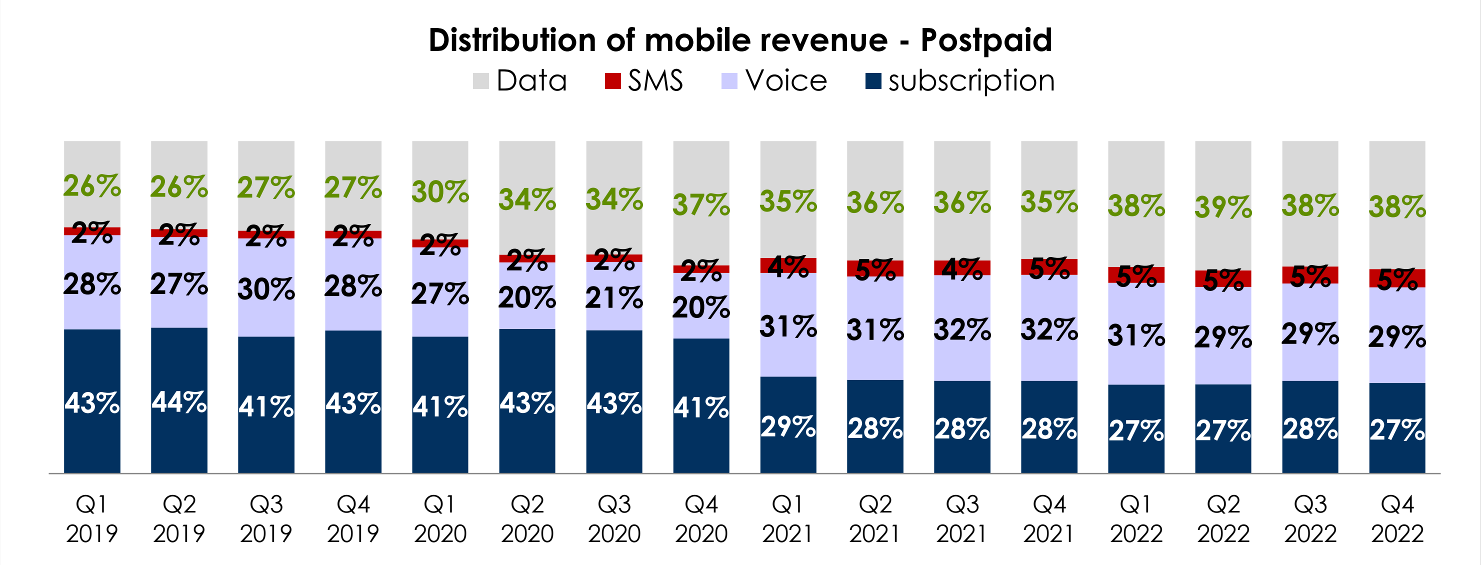


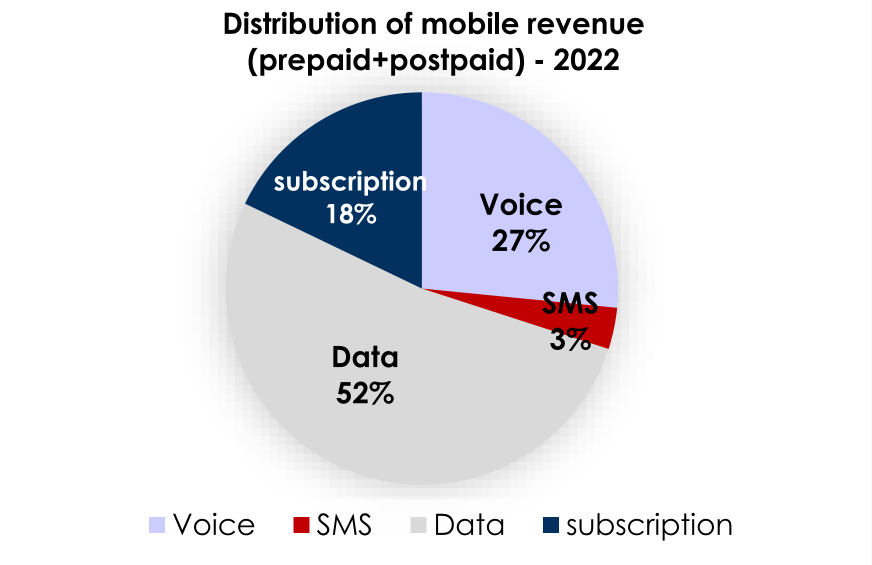


Distribution of Mobile Revenue

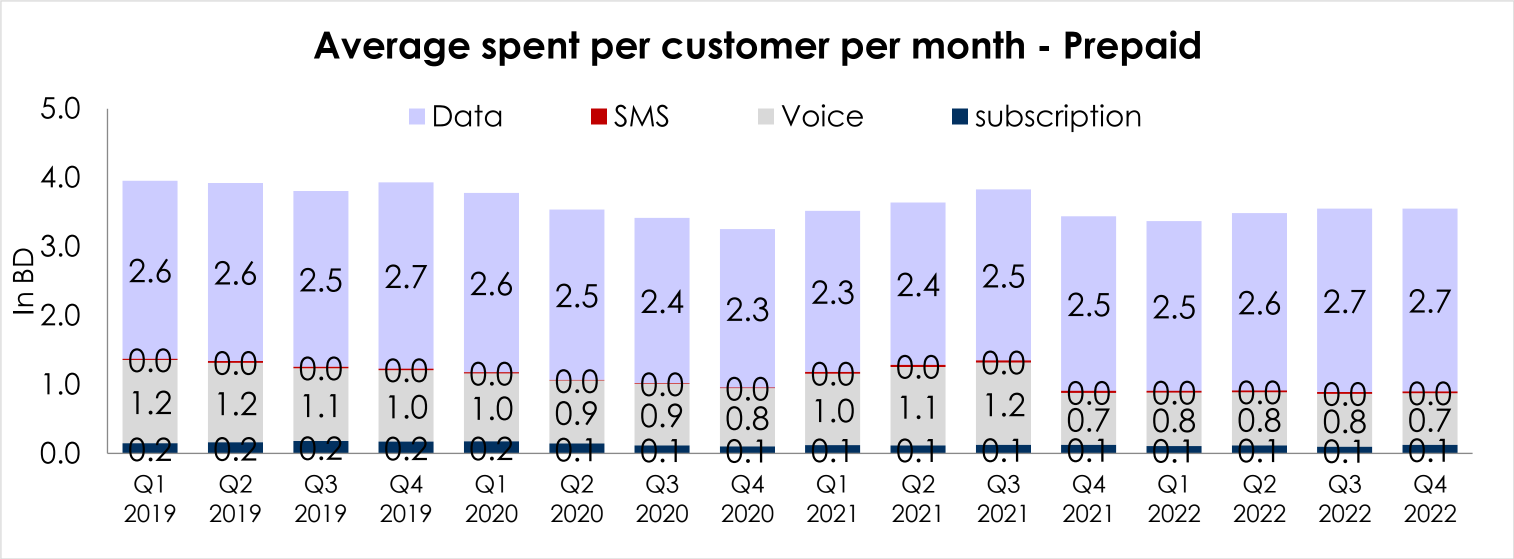


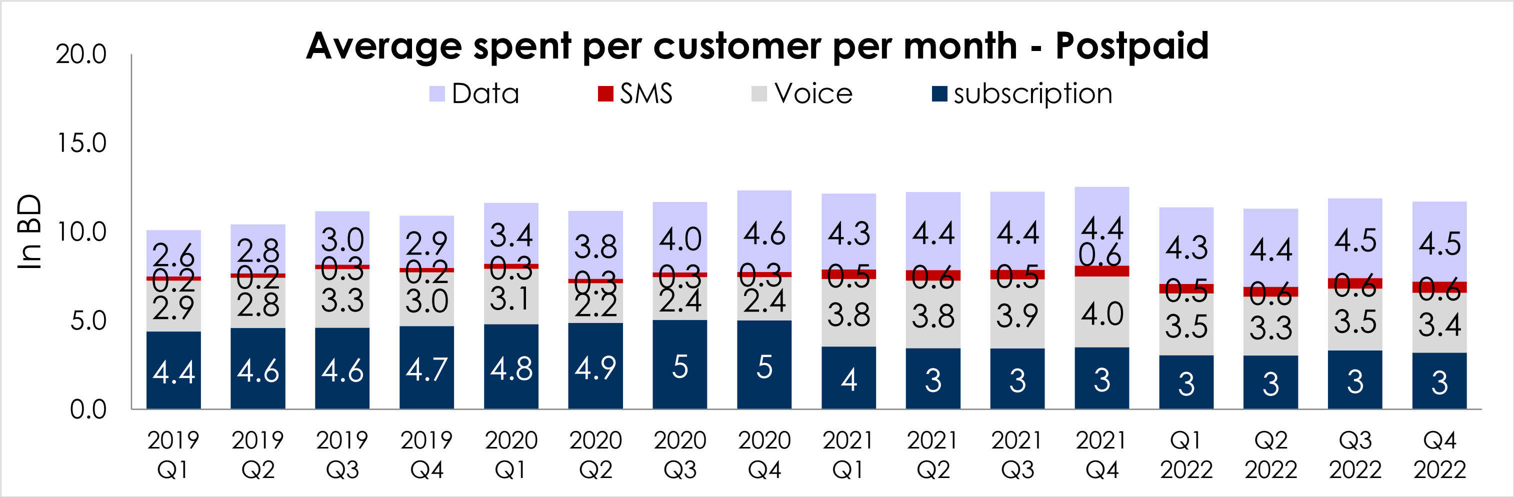
- By 2022, Data services were the main source of revenue for mobile operators, followed by Voice revenues, which slightly dropped relative to the previous year. Subscription and SMS remained stable.
- In 2022, for <u>prepaid,</u> data revenue remained the main source of revenue generating 75% in Q4 2022, relative to65% in Q4 2021.
- As for <u>postpaid</u>, Data is also the main source of revenue contributing 38% to mobile revenue in Q4 2022. Voice revenue slightly dropped to 29% compared to 32% in Q4 2021. Subscription revenue also dropped to 27% compared to 28% in Q4 2021. SMS revenue remained at 5% relative to 2021.





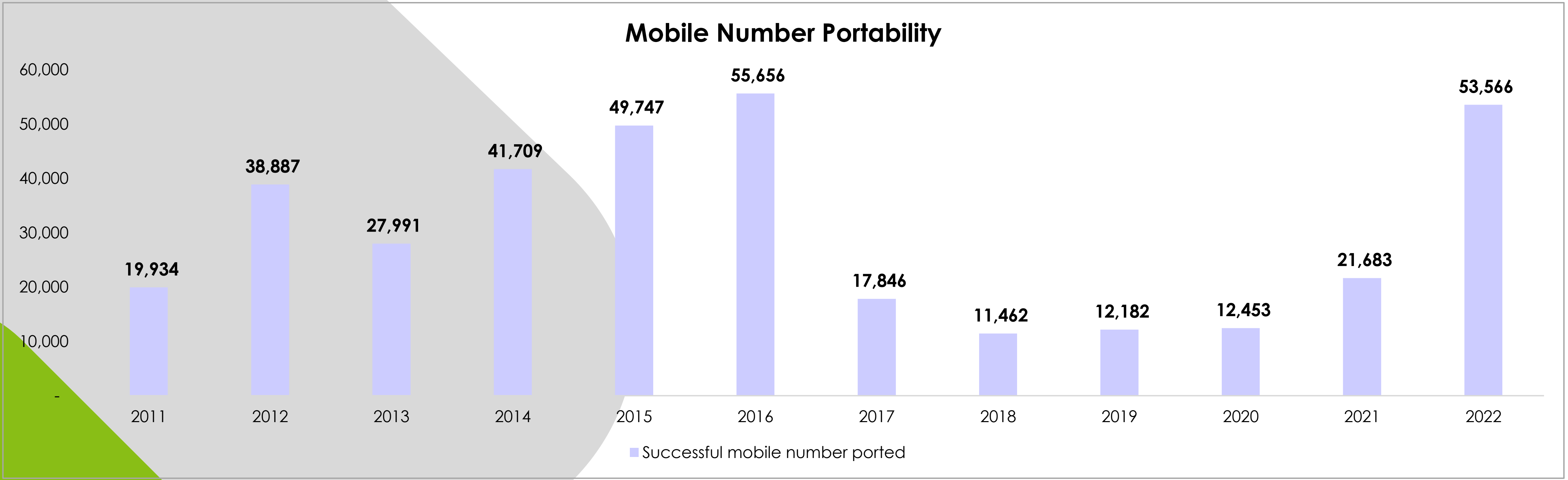
Mobile Average Spend per Subscriber per Month





- In Q4 2022, prepaid subscribers spent BD 3.6 monthly for their subscription, phone calls, SMS and data, comparing to BD 3.4 spent on the same services during Q4 2021.
- In Q4 2022 postpaid subscribers spent BD 11.7 monthly for the same services compared to BD 12.5 during Q4 2021.
- For prepaid subscribers, the average monthly spend per subscriber for voice remained stable at BD 0.7 during Q4 2022. However, data revenue increased to BD 2.7 relative to 2021.
- During Q4 2022, the average monthly spend per postpaid subscriber for data increased to BD 4.5 while voice revenue dropped from BD 4 to BD 3.4.

Mobile Number Portability



- The volume of mobile numbers successfully ported increased compared to 2021. By end of 2022, total successful mobile numbers ported were 53,566, a noticeable increase compared to 21,683 in 2021.

- A total of approximately 363,116 mobile numbers had been ported successfully since the introduction of number portability in 2011.

INTERNATIONAL OUTGOING MINUTES

International Outgoing Minutes

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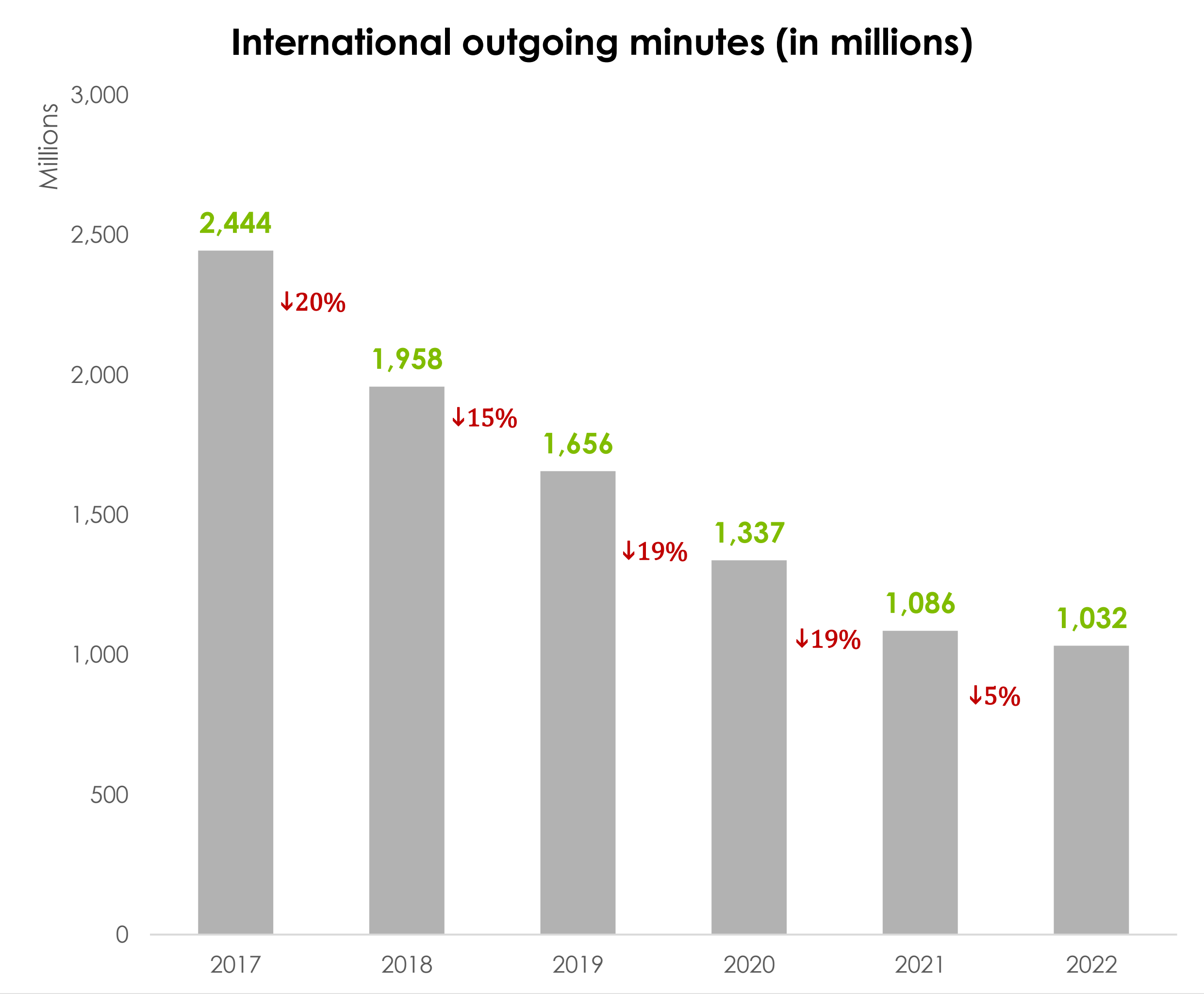
TELECOMMUNICATIONS REGULATORY AUTHORITY
Kingdom of Bahrain - مملكة البحرين

- During 2022 international outgoing minutes continued to drop, reaching **1,032** million minutes compared to 1,086 million minutes during 2021.

- The drop in traditional voice services could be attributed to change in consumer behavior.

2022	**1,031,771,053**	International outgoing minutes
	99%	of calls originated from mobile
	91%	of outgoing traffic went to South Asian countries



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- International outgoing minutes dropped by **5%** between 2021-2022 and International calls revenue also decreased by **11%** over the same period.
- This decline indicates a change in the overall subscribers' behavior and usage.

International outgoing minutes

Minutes (in millions)	2017	2018	2019	2020	2021	2022	% Change 2021-2022
GCC	65.3	58.7	53.1	40.2	37.2	36.2	**-3%**
Zone 2	2,259	1,805	1,529	1,236	993.9	943.9	**-5%**
Zone 3	35.6	32.9	28.7	26.3	26.1	23.1	**-12%**
Zone 4	84	58.6	43.8	34	28.7	28.6	**0%**
Total	**2,443.9**	**1,995**	**1,655**	**1,337**	**1,086**	**1,032**	**-5%**

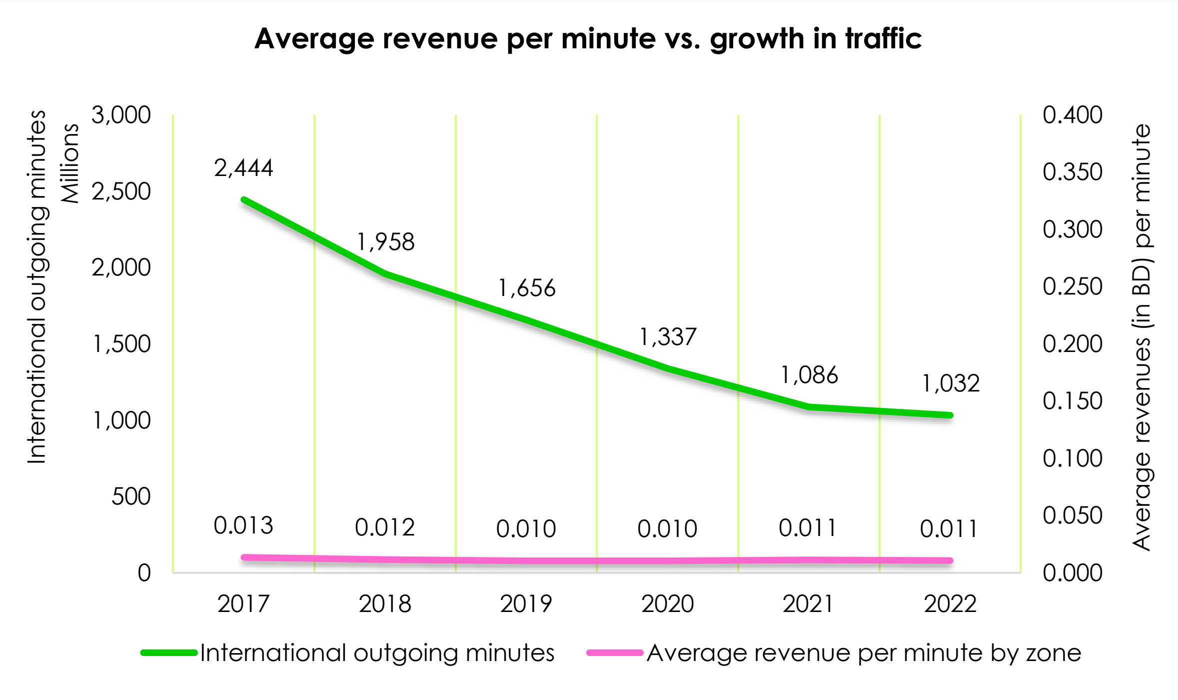
International calls revenue

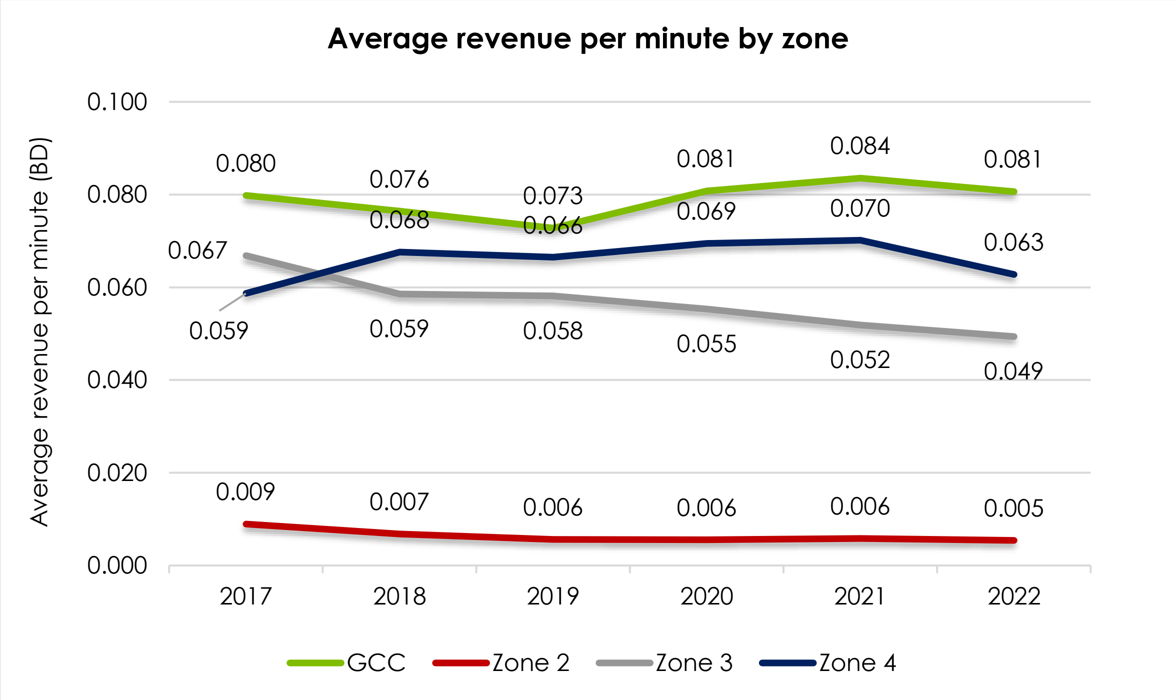
Revenues (BD in millions)	2017	2018	2019	2020	2021	2022	% Change 2021-2022
GCC	5.2	4.48	3.86	3.25	3.1	2.9	**-6%**
Zone 2	20.26	12.2	8.6	6.85	5.8	5.1	**-12%**
Zone 3	2.38	1.93	1.67	1.45	1.35	1.1	**-16%**
Zone 4	4.9	3.97	2.9	2.36	2	1.8	**-11%**
Total	**32.7**	**22.6**	**17.06**	**13.9**	**12.26**	**10.96**	**-11%**

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.

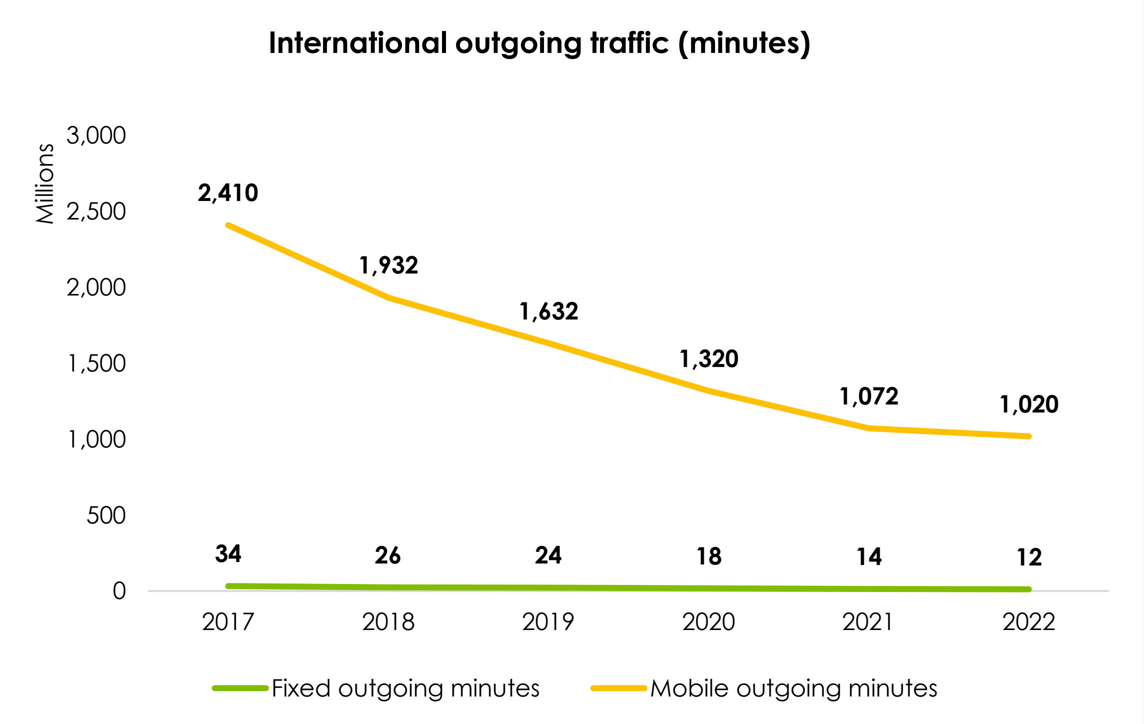
Average Revenue per Minute for International Calls

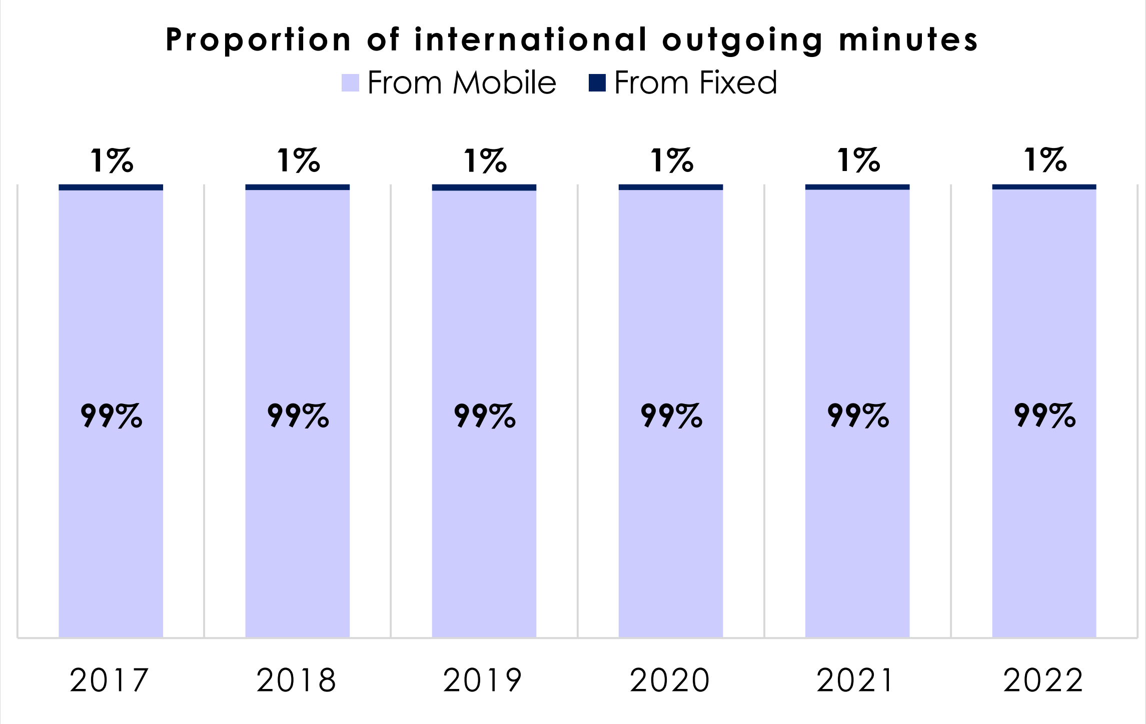
- The average revenue per minute for international calls has fallen by almost **21%** from 2017 to 2022.
- Despite the substantial decrease in traffic, the overall average revenue per minute slightly dropped from 0.024 in 2020 to 0.023 in 2021.
- In comparison to 2021, average revenue per minute dropped altogether in 2022. The highest drop was mainly from Zone 4 countries (-10.5% drop).
- By end of 2022, the total international voice traffic in minutes was **1,031,771,053** with revenue of **BD 10,962,199**.





International Outgoing Minutes*

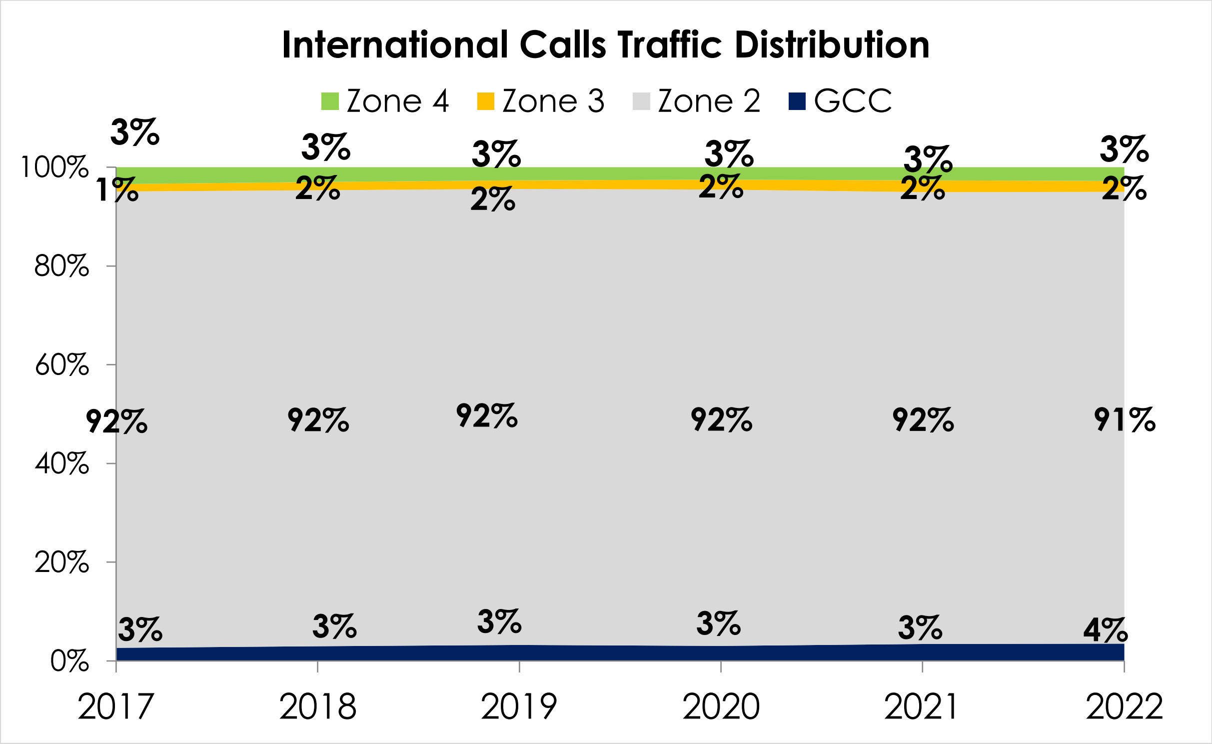


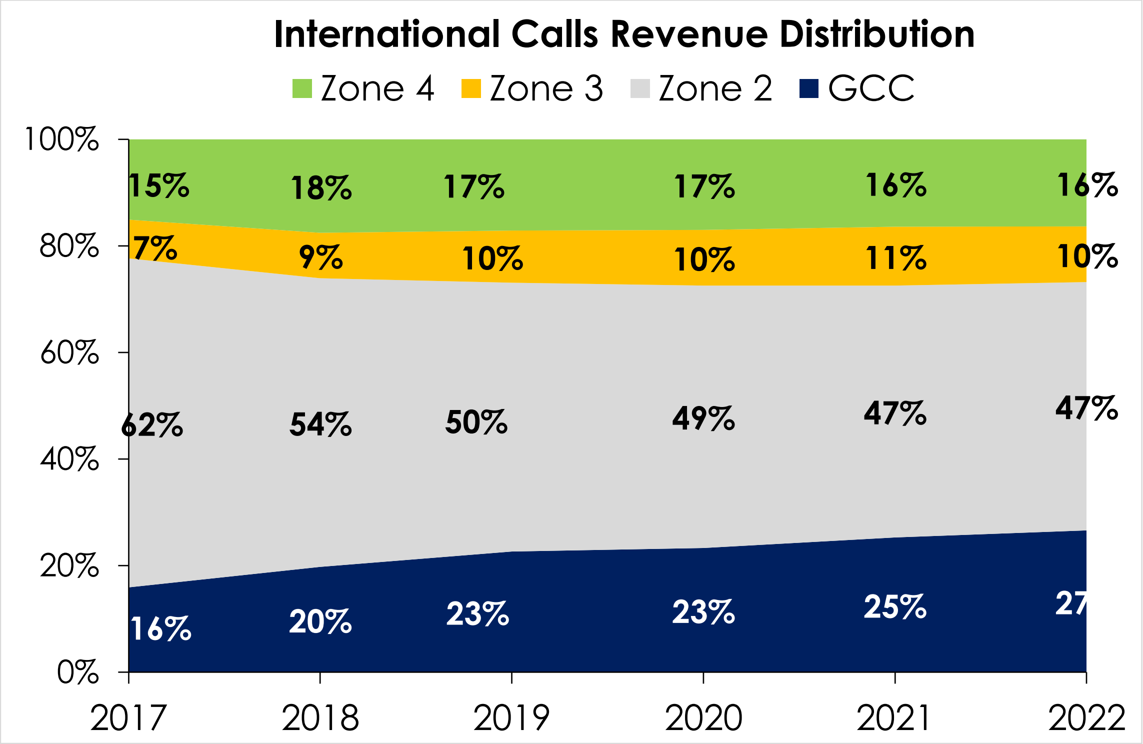


- In 2021, International outgoing minutes originated from mobile decreased by 19% compared to 2020, while minutes originated from fixed fell by 23% over the same period.
- International outgoing minutes originated on mobile represented 99% of the total international outgoing minutes in 2022.

Minutes including prepaid calling card traffic.

International Traffic vs. Revenues by Destination Called



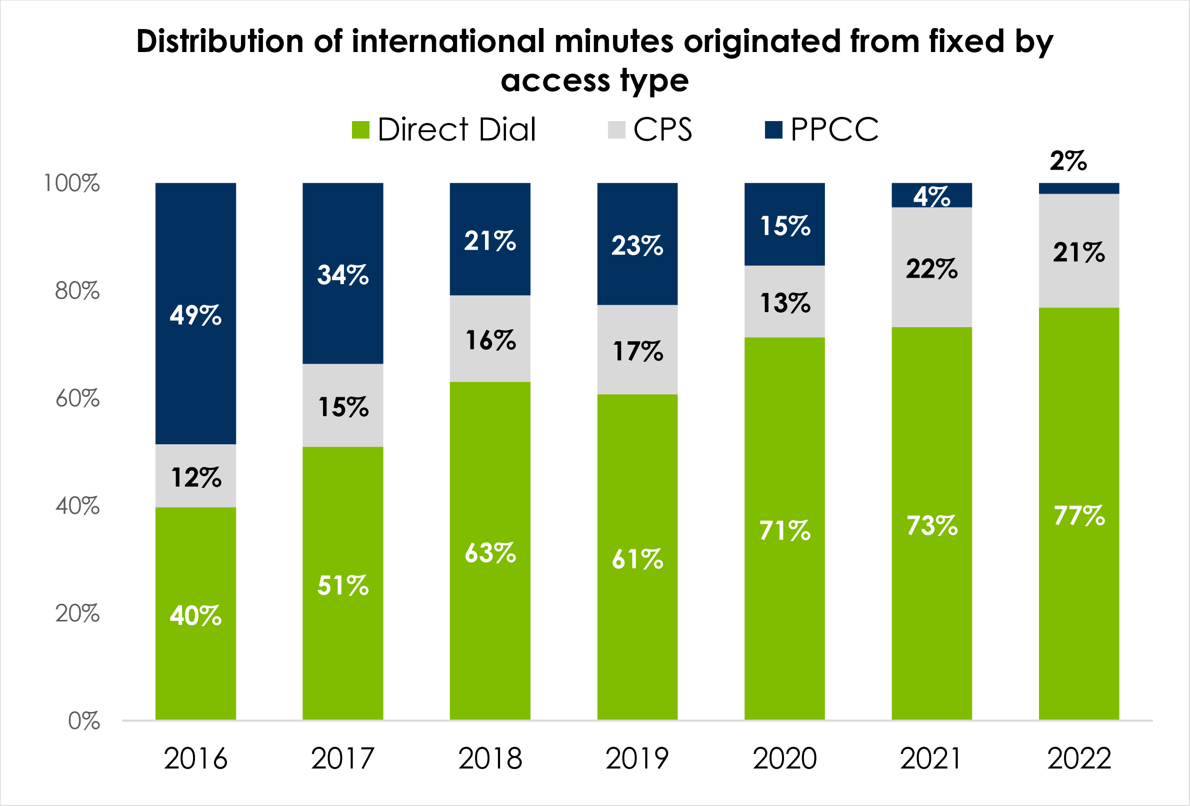


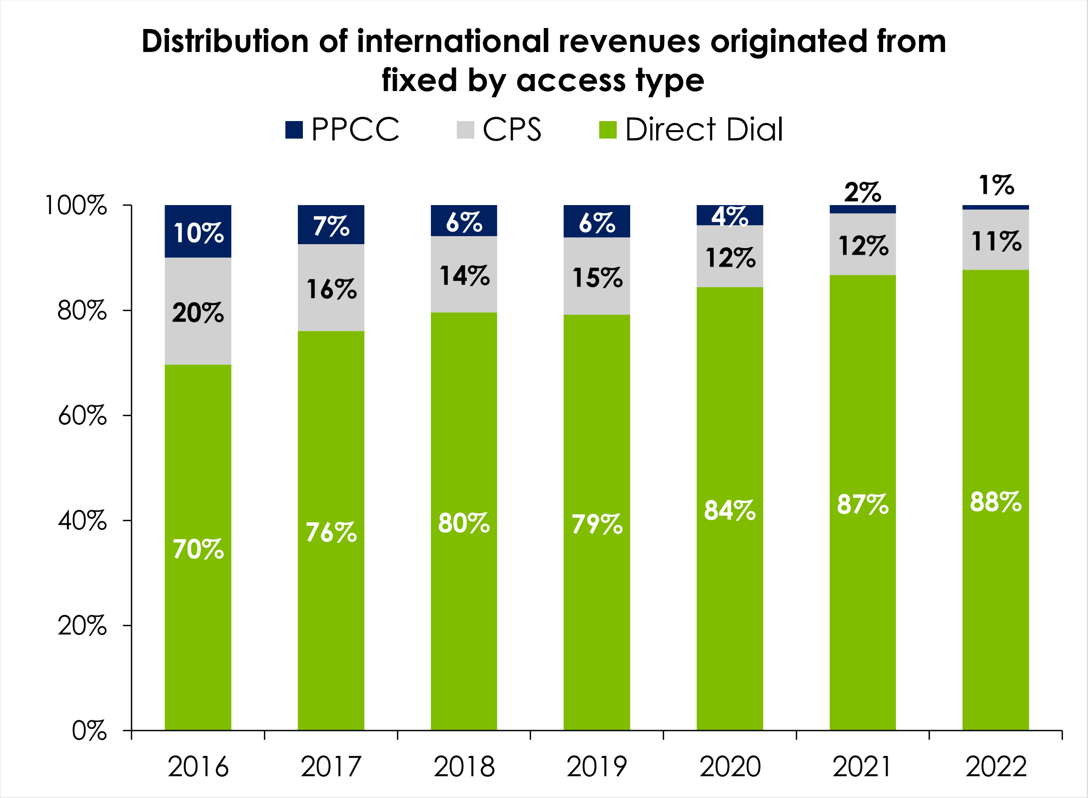
- **92% of total international calls minutes were made to Zone 2 (South Asian countries) in 2022.**

- **47% of international revenues were generated from calls to Zone 2 (South Asian countries) in 2022.**

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

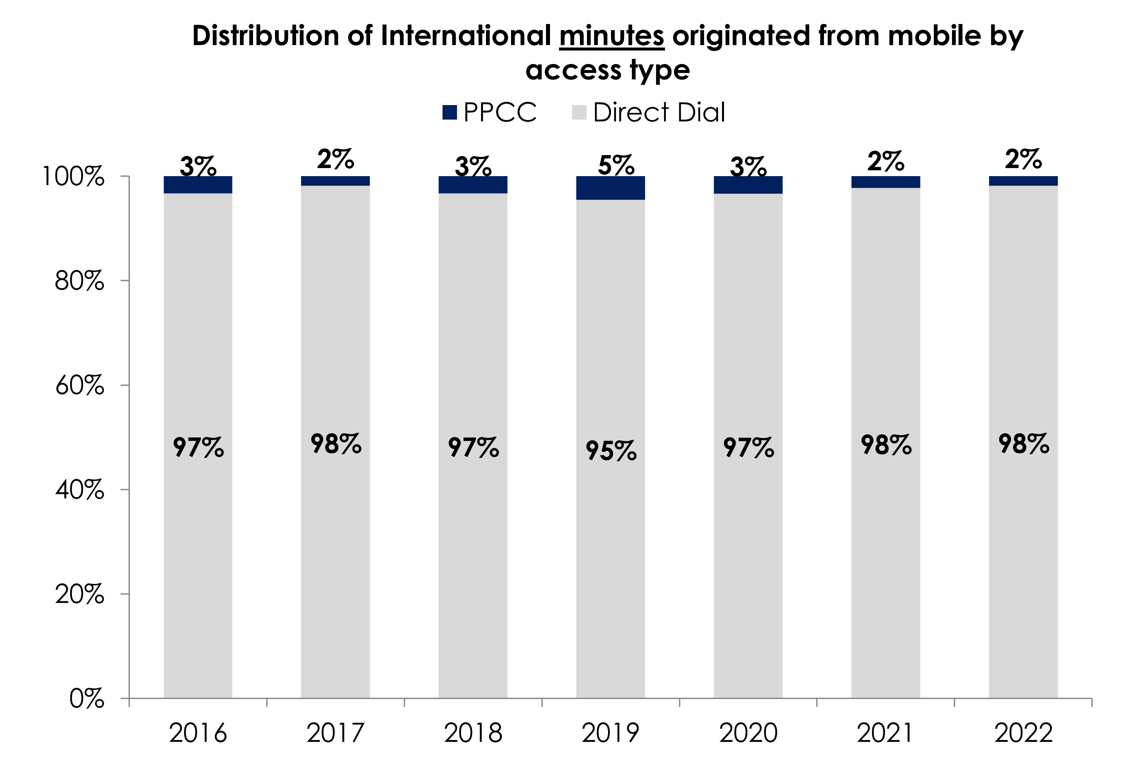
Distribution of International Outgoing Minutes/Revenues by Access Type - Fixed Telephony

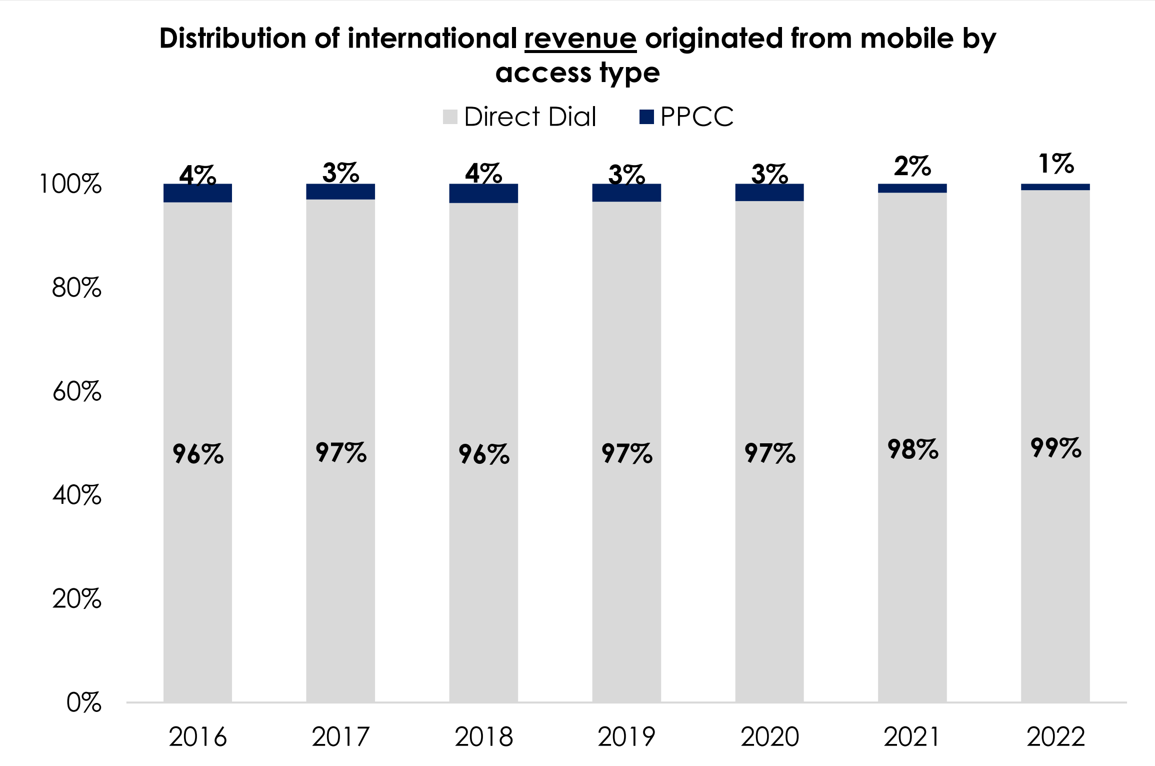




- PPCC represents 2% of total fixed originated minutes as of 2022. Its revenue represents 1% of total fixed telephony traffic revenue.
- Direct dial's fixed originated minutes represent 77% of total minutes and represents 88% of total revenue.

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





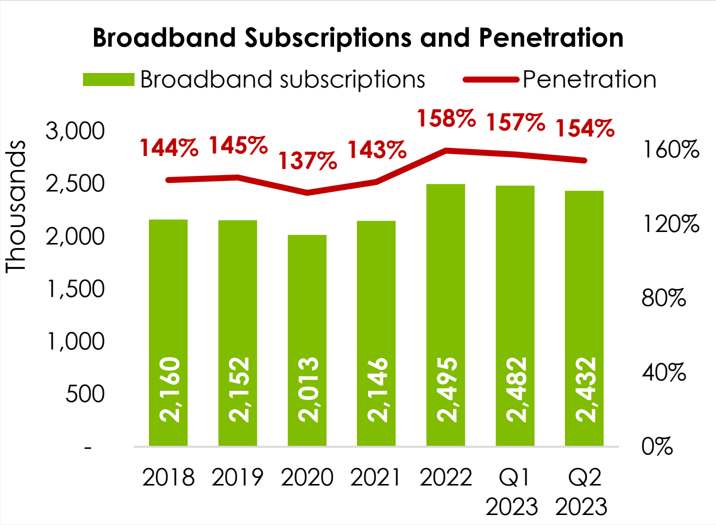
- In 2022, international direct dial traffic originated from mobile represented 98% of the total traffic. The pricing of mobile-originated international direct dial services has become even more competitive in recent years.
- Direct dial represented 99% of total revenues originated from mobile.

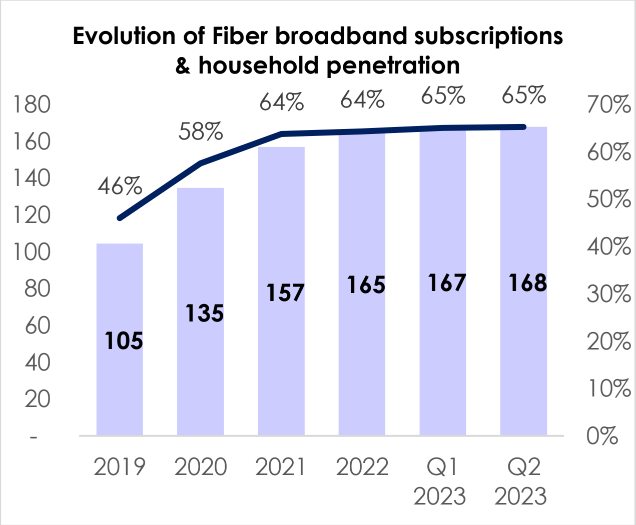
BROADBAND SERVICES

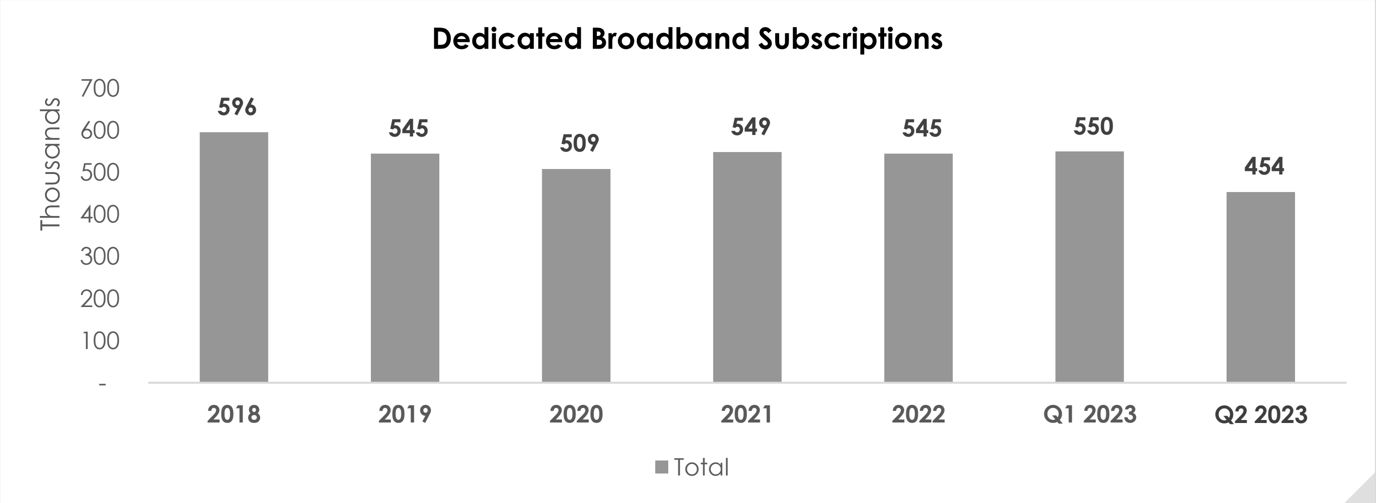
Broadband Services*

- The total broadband market shows a positive increase in terms of both mobile and fixed broadband services, with the penetration rate being **154%** as of **Q2 2023**.
- Looking at the evolution of the fiber broadband market, it shows significant growth since 2019, with subscriptions growing year on year to reach around **168,000** subscriptions as of Q2 2023. Penetration per household is also growing steadily and has reached **65%** as of Q2 2023.
- By Q2 2023, there were around **454,000** 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 2023		
	2,432,195	**Broadband subscription**
	154%	**Penetration rate**





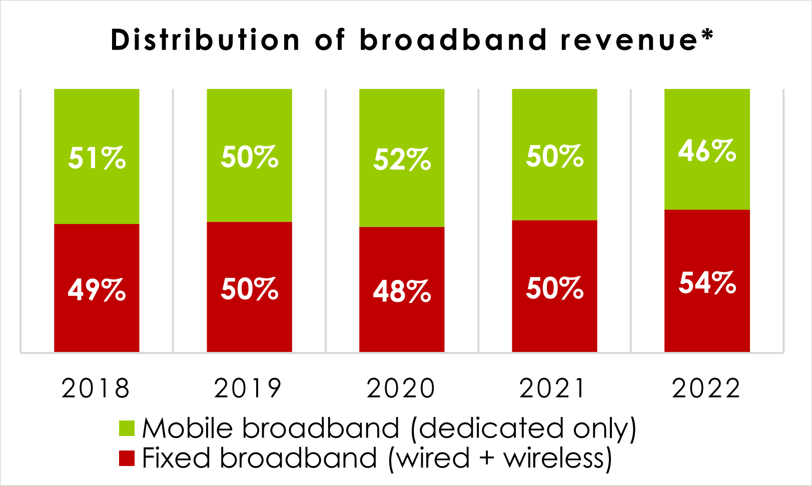


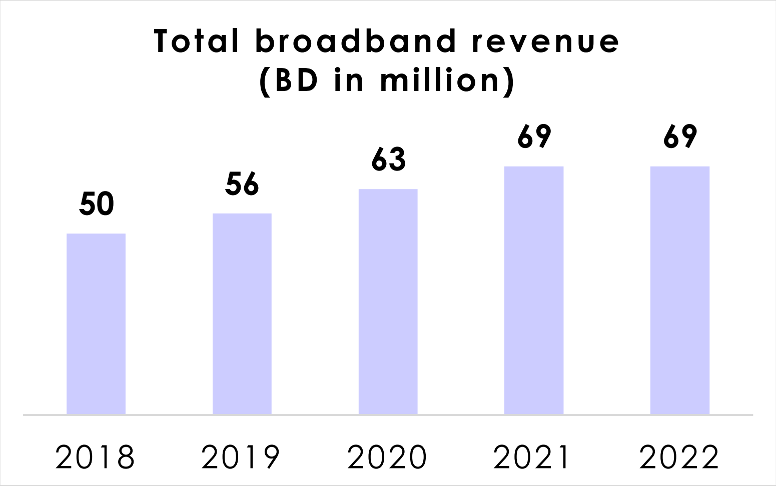
# of Households* By IGA	2018	2019	2020	2021	2022
	189,534	239,750	245,983	257,268	257,268

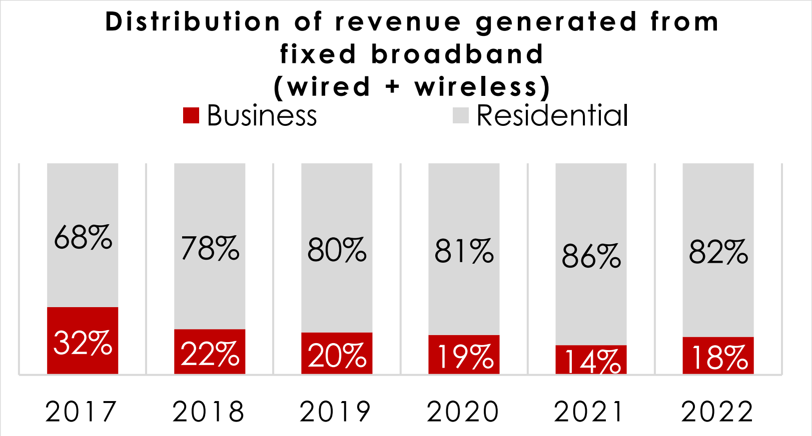
** Dedicated broadband data is currently under validation and therefore is subject to change.*
Fixed-wired subscriptions include DSL and fibre subscriptions.
** Drop is due to an operator activating voice service on its mobile broadband service, therefore the subscriptions shifted under mobile-voice.*

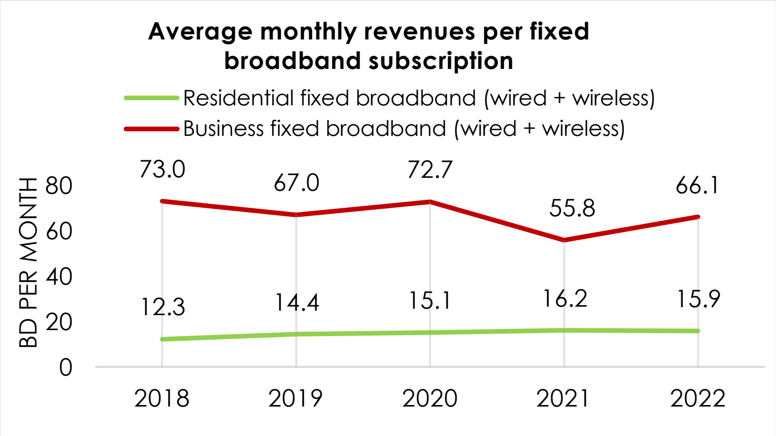
Broadband Revenue

- Broadband revenues slightly dropped (by 0.1%) to 69.1 million BD at the end of 2022, with a slight redistribution between residential and business fixed broadband revenue.
- Revenue generated from mobile broadband represented 46% of total broadband revenue in 2022 relative to 50% in 2021.
- Revenue generated from business fixed broadband represented 18% of total fixed broadband revenue in 2022.
- The average revenue per subscription for residential fixed broadband dropped by 2% over the last year, reaching BD 15.9 in 2022. However, the average revenue per subscription for business broadband has increased by 18% to reach BD 66.1 in 2022.



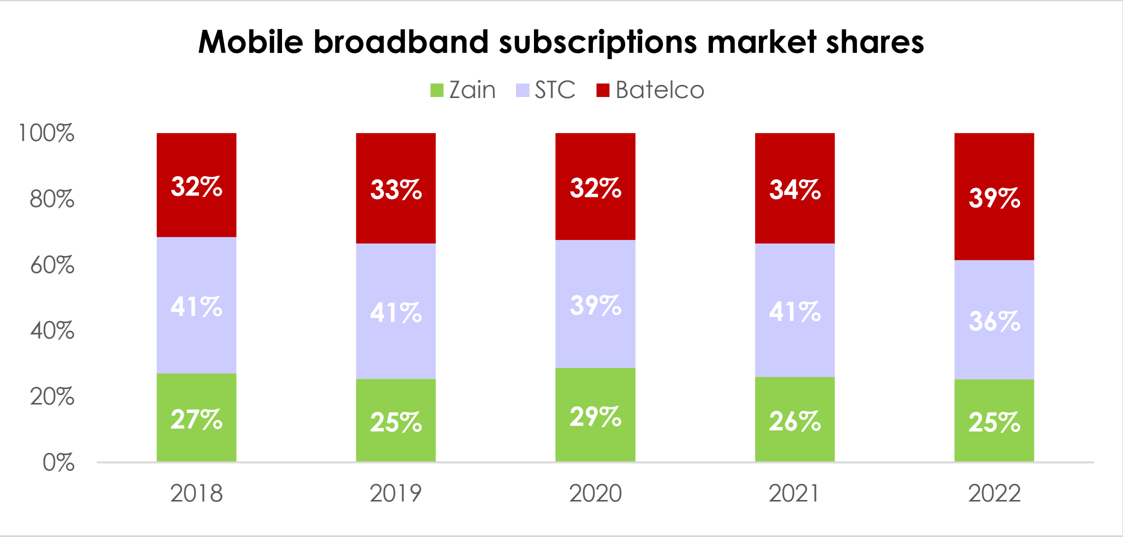


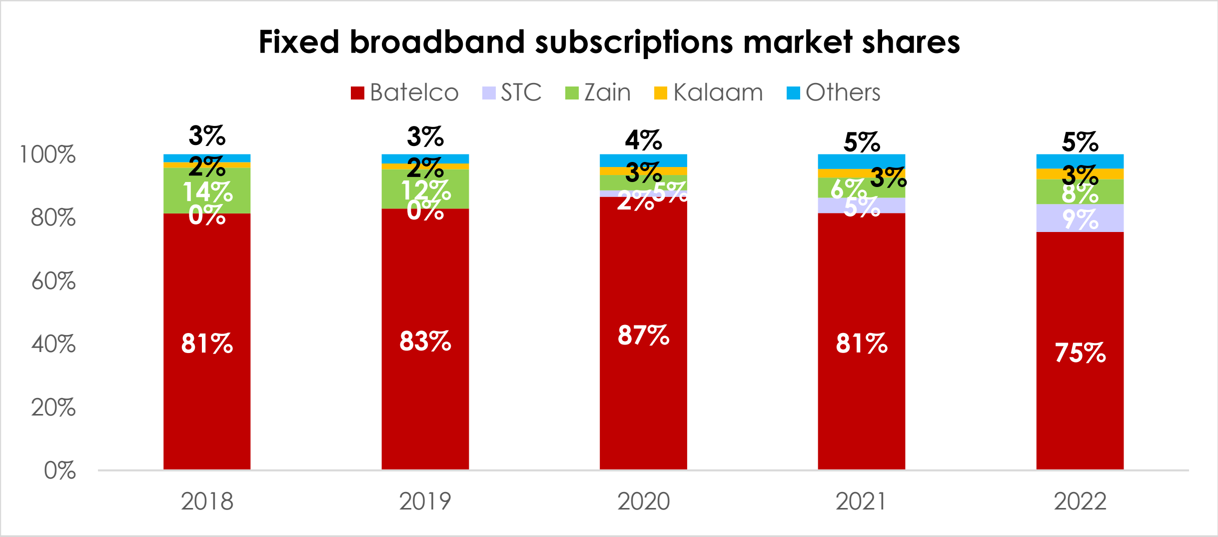


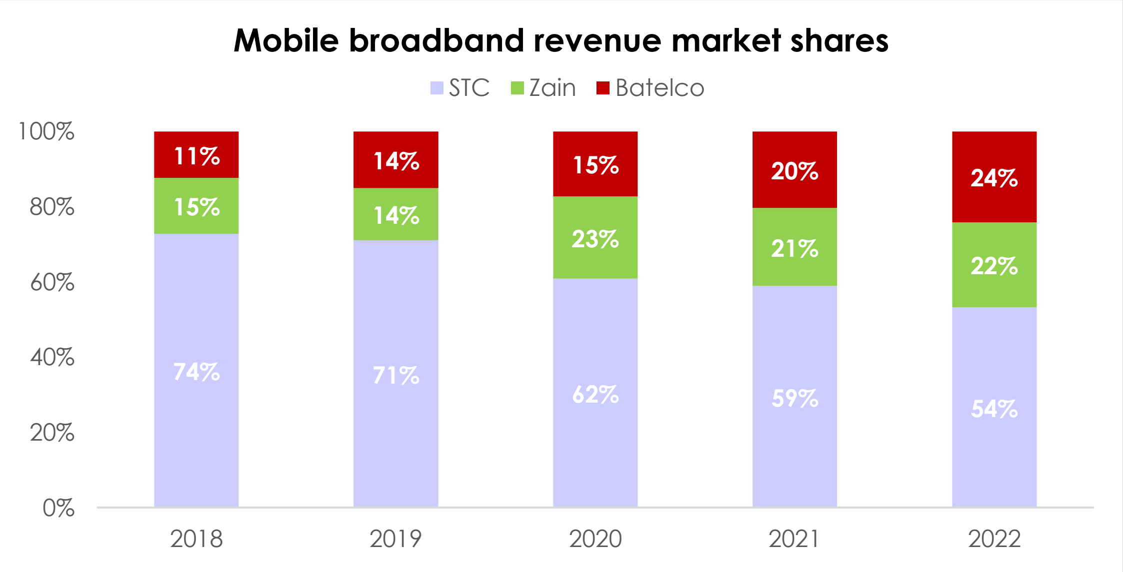


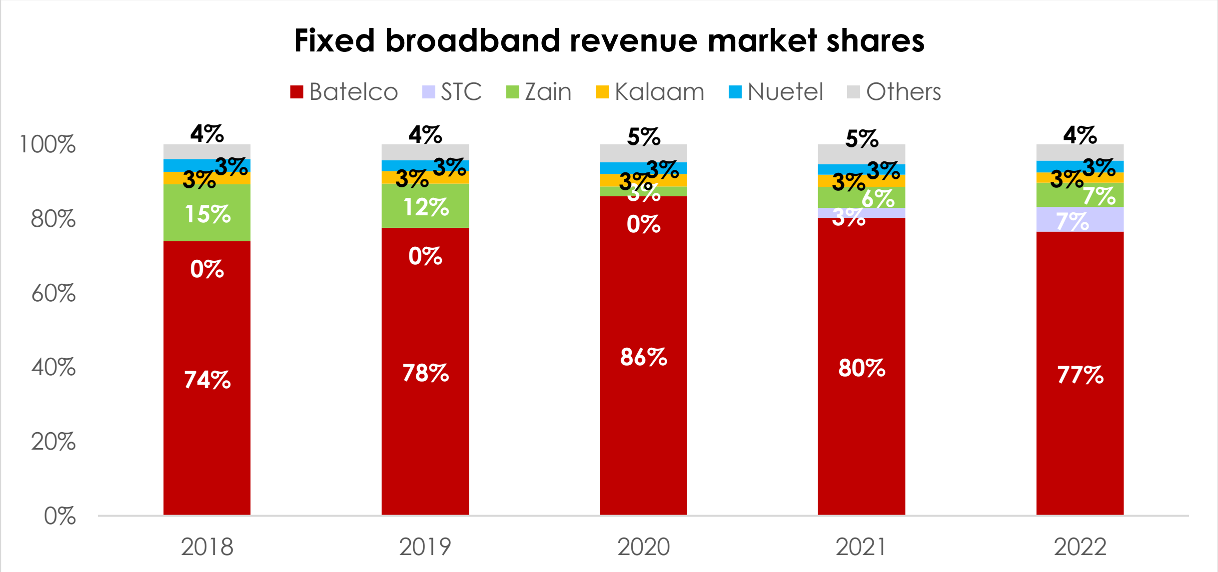
*The shift in the distribution of broadband revenue is due to higher fiber take-up as of 2021.

Broadband subscriptions and revenue market shares



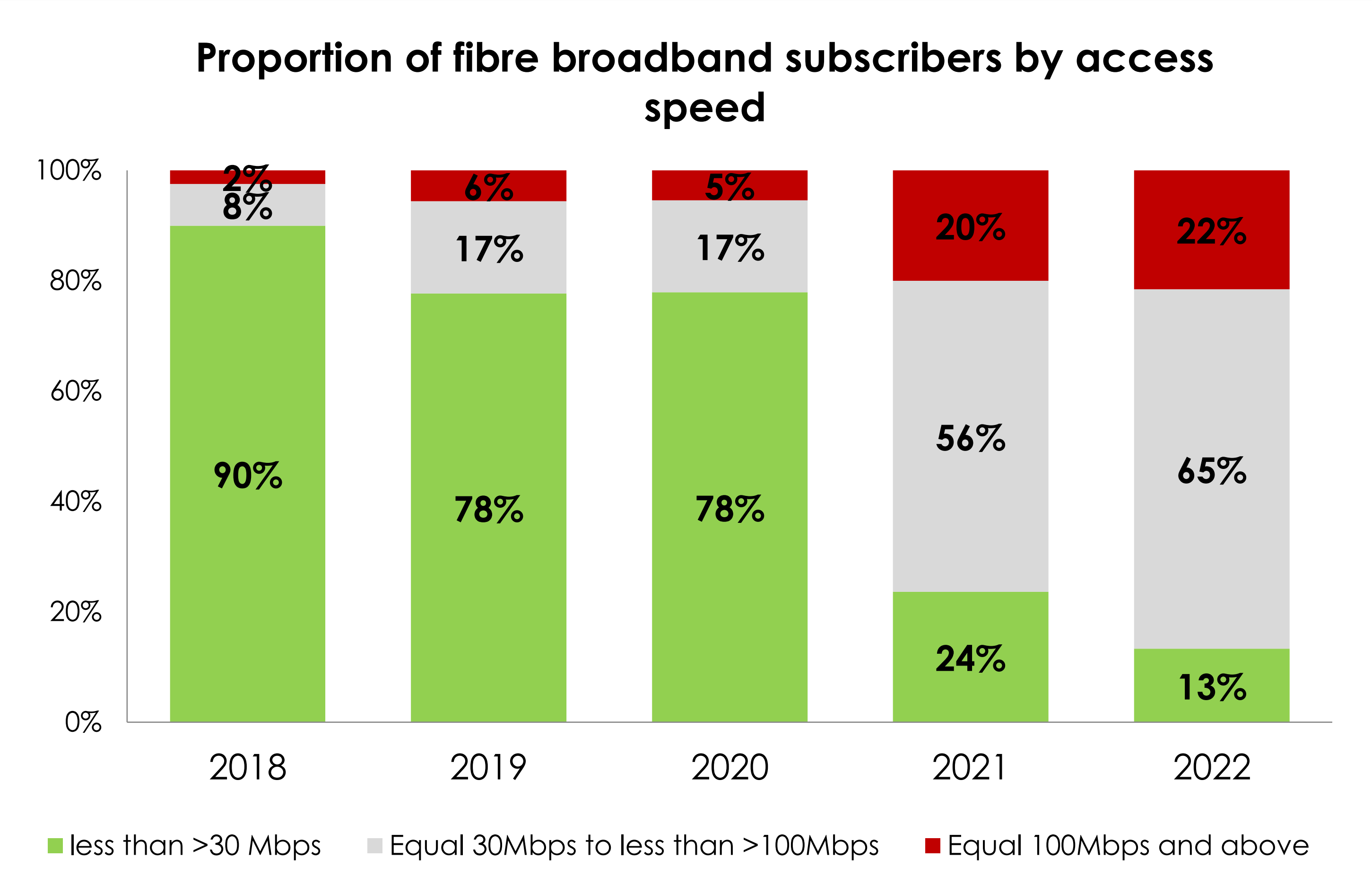




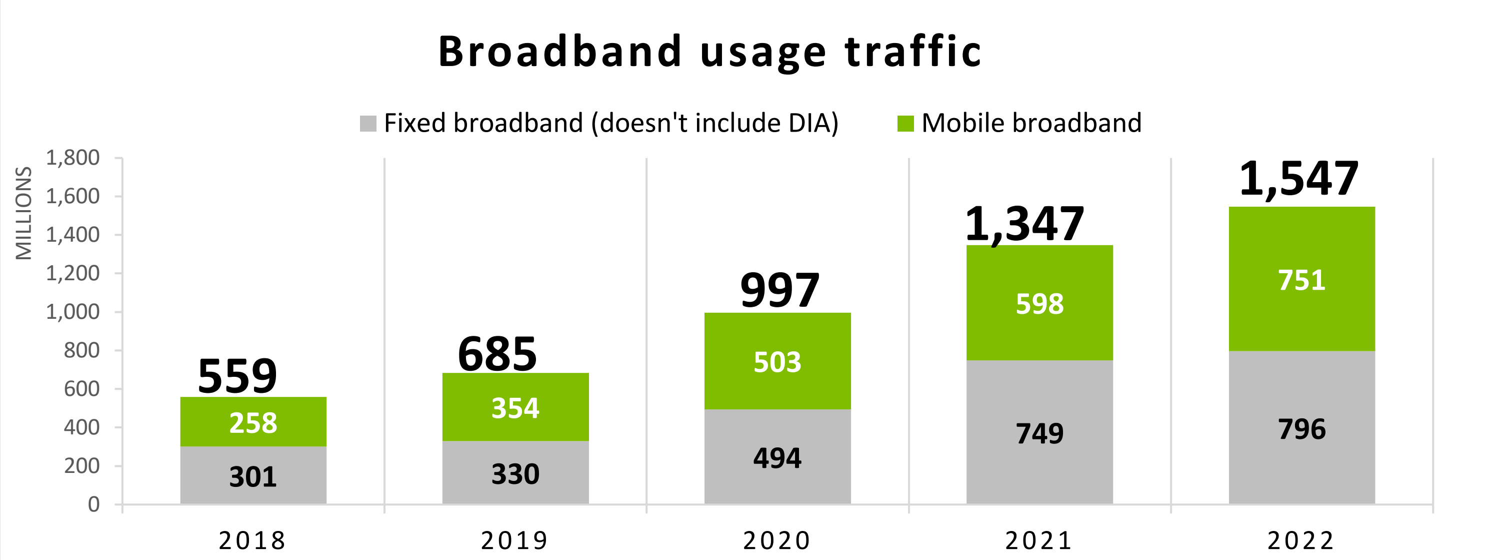


Proportion of fibre Broadband Subscribers by Access Speed

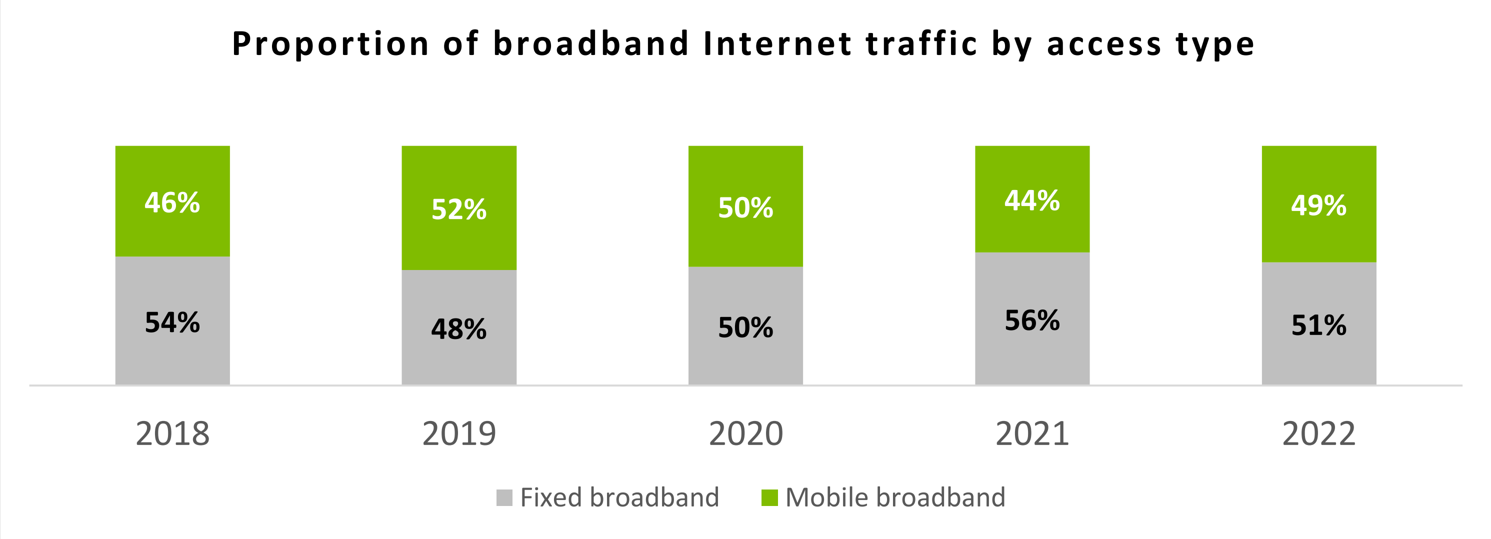
- In 2022, **87%** of subscribers opted for fibre broadband packages with speed equal to 30Mbps or more.
- In 2018, there was around **3,000** subscribers to speeds equaling to 100Mbps or more. In 2022 this number reached **around 37,000** subscribers.



Broadband Usage

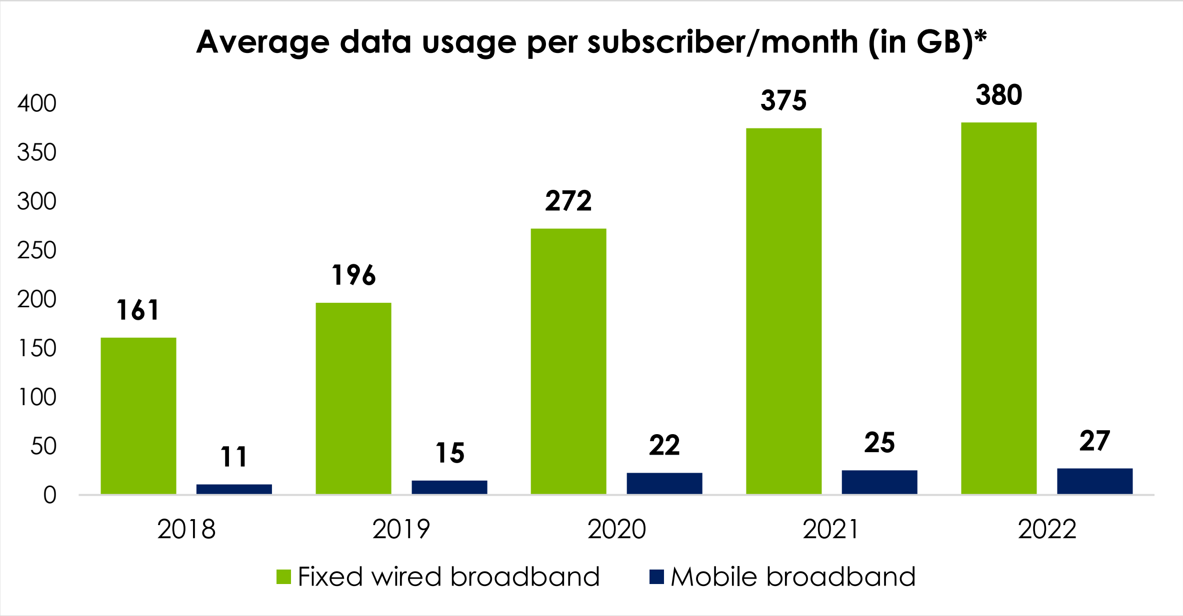


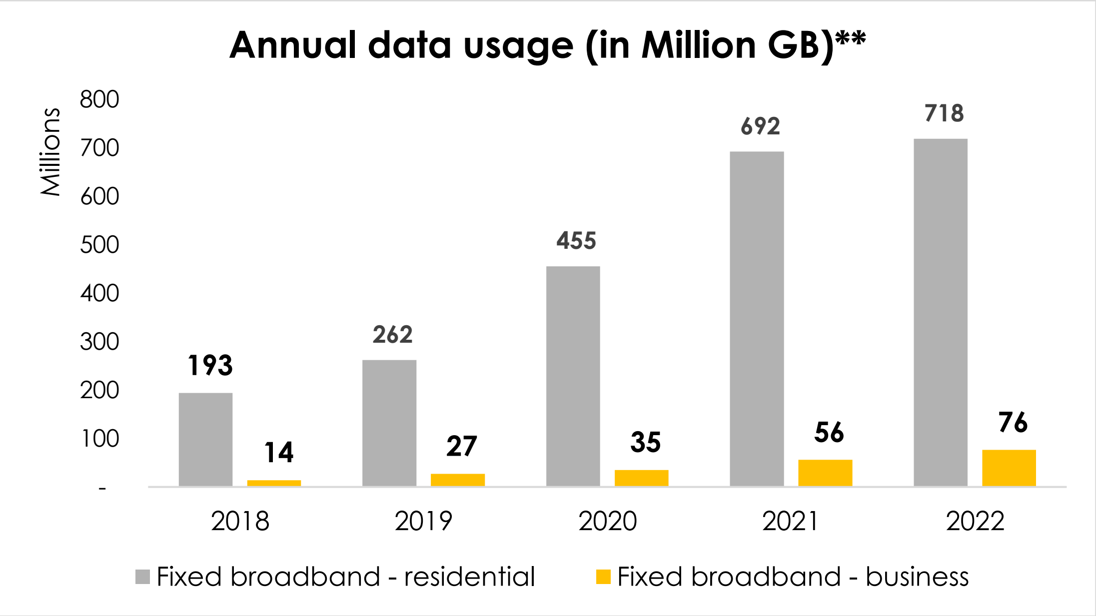
** Includes data roaming*



- In 2022 total broadband usage reached 1,547 million GB compared to 559 million GB in 2018 (around Threefold increase between 2018 and 2022)
- Between 2018 and 2022, Mobile broadband usage increased Threefold.
- The traffic (in GB) generated from mobile broadband represented around 49% of the total broadband usage in 2022, compared to 46% in 2018.
- Between 2021 and 2022, fixed broadband usage increased by 6% and mobile broadband usage increased by 26%.

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.

LEASED LINES

Domestic Leased Lines

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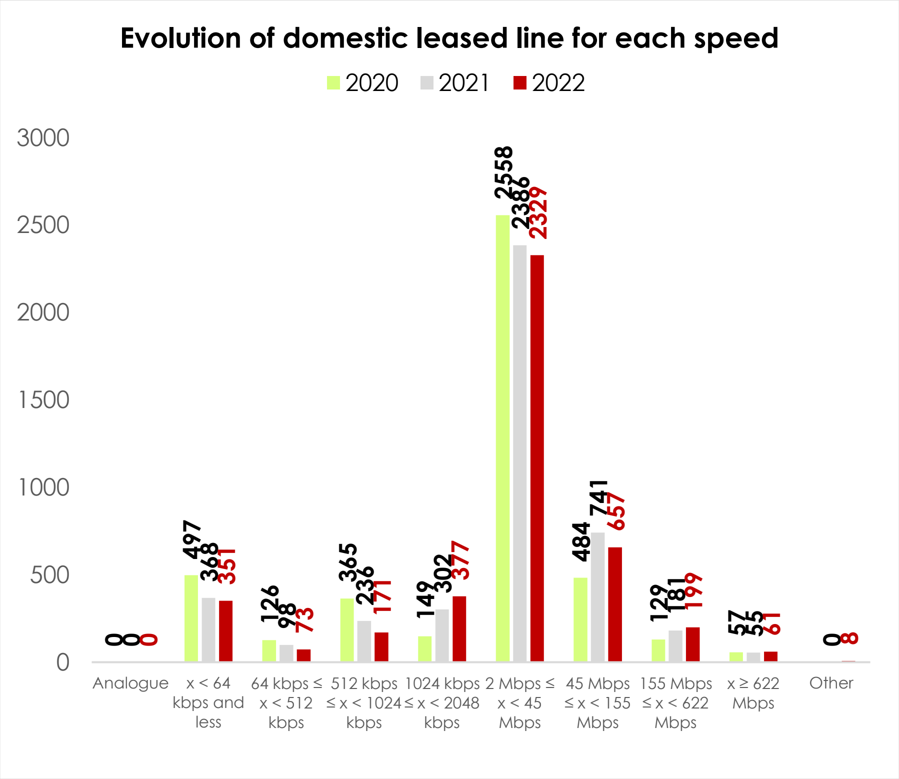
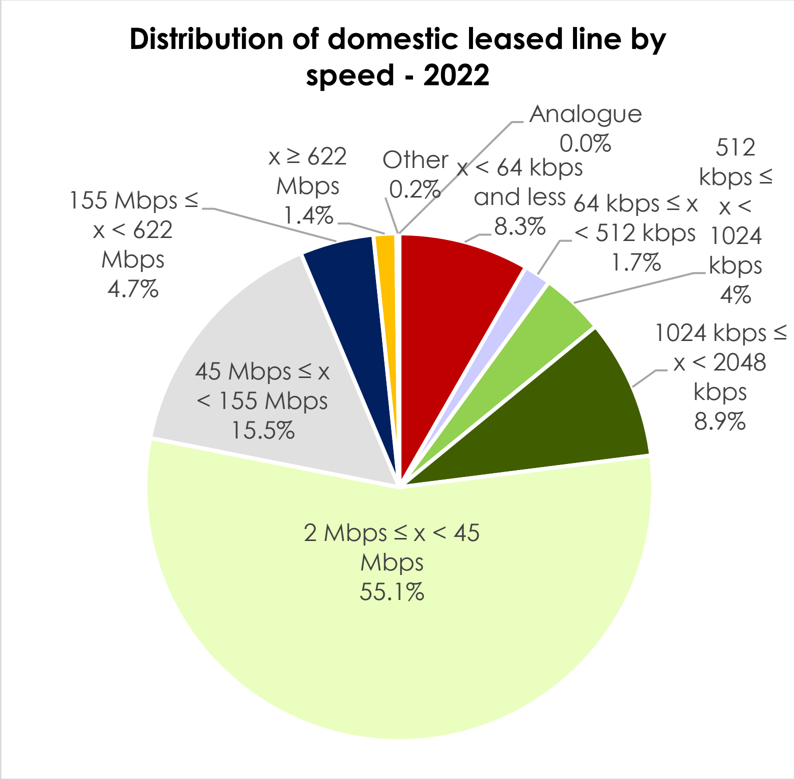
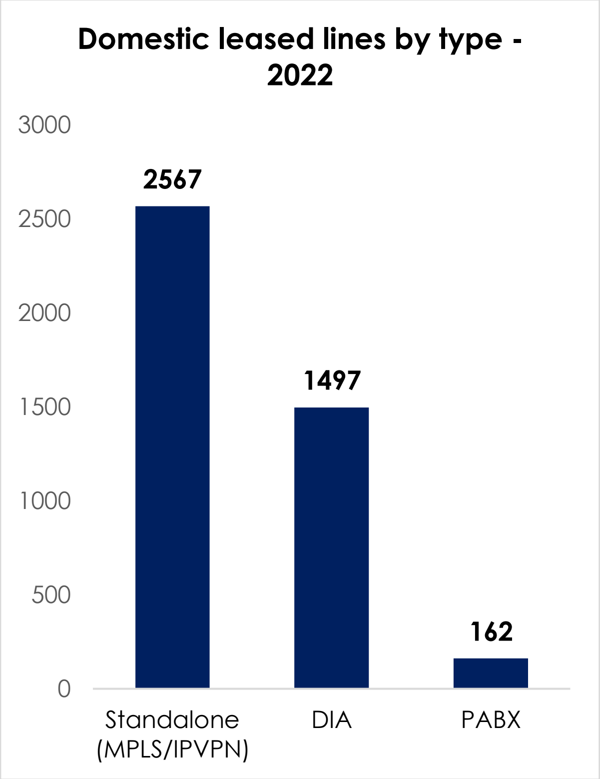


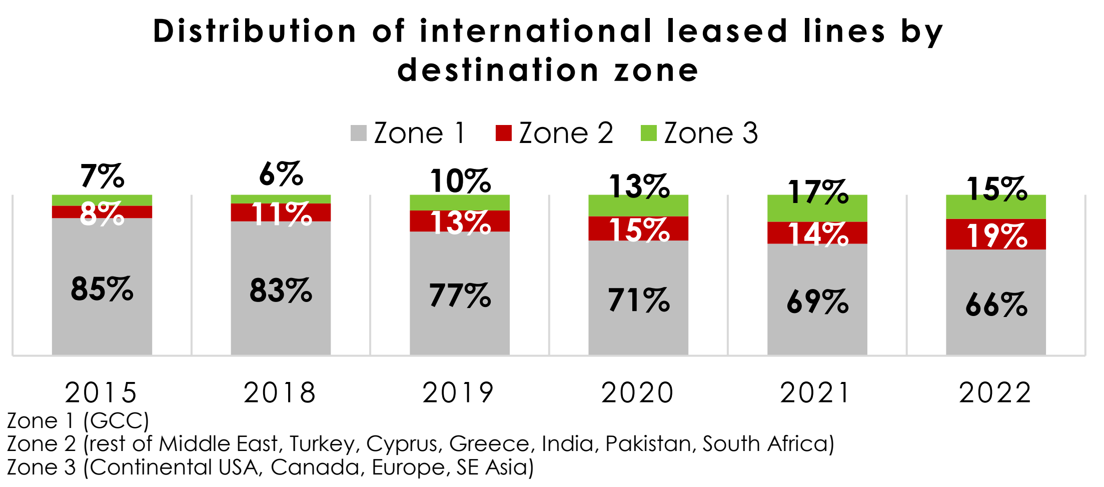


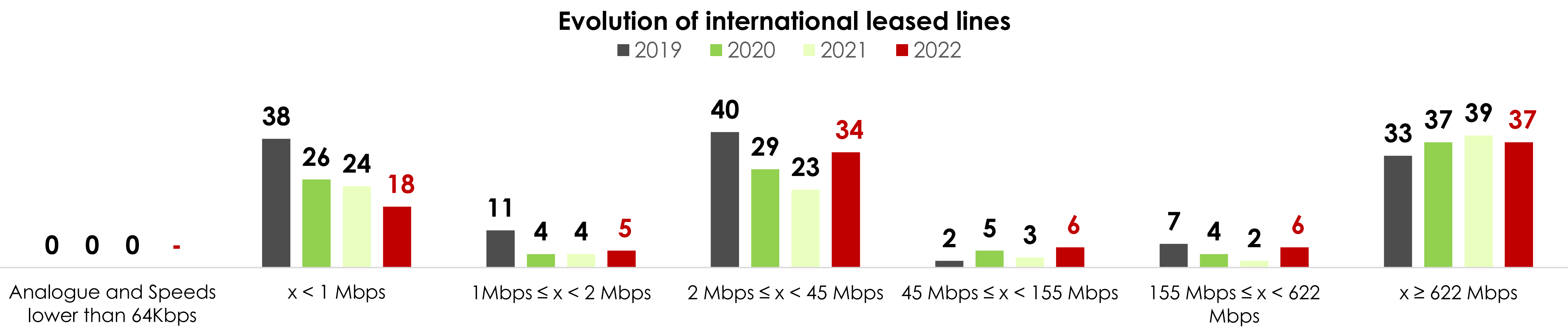


- The total number of domestic leased dropped from 4,367 lines in 2021 to **4,226** in 2022.
- The continuous drop in slower speed services is a result of migration to higher speed packages.

International Leased Lines

- Total Number of International leased lines slightly increased from 95 lines at the end of 2021 to 106 lines in 2022.
- 22% of international leased lines are for speeds less than 2Mbps, while 78% are for speeds more than 2Mbps.
- 66% of international leased lines are in the GCC area.





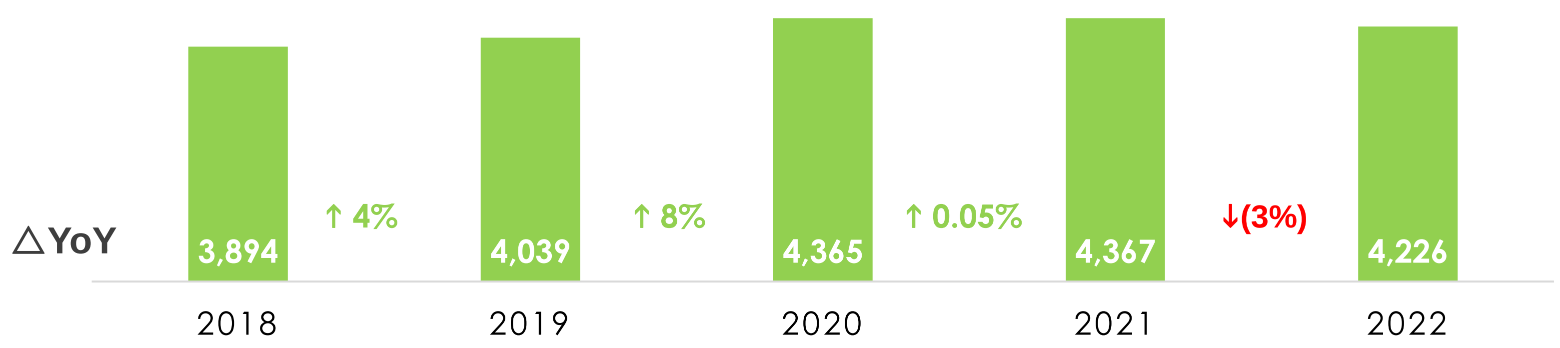
Leased Lines

- In 2022, the total number of domestic leased lines dropped by 3% compared to 2021. However, the number of international leased lines increased by 12% relative to the previous year.

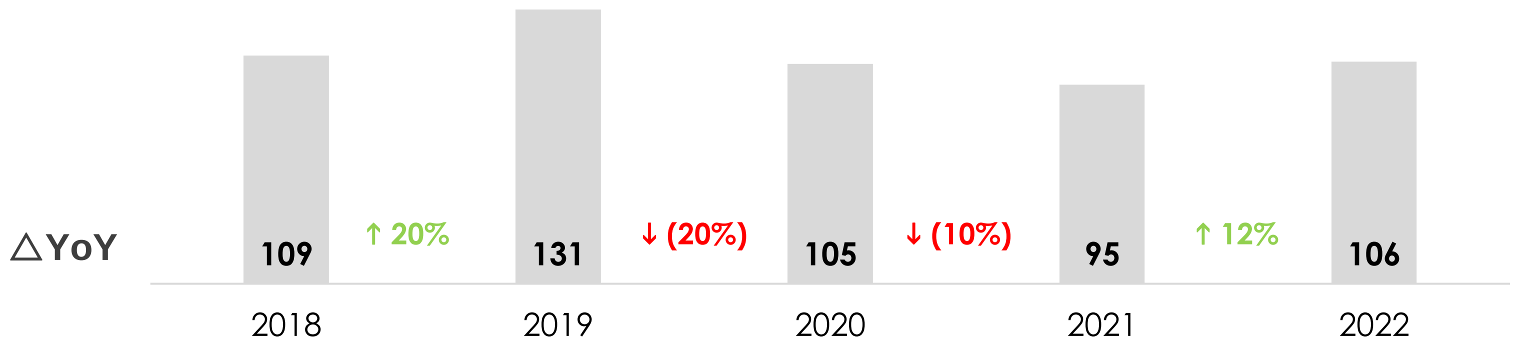
- Leased lines revenue dropped by 1% to reach BHD 65 Million in 2022.

End of 2022		
	4,226	Domestic leased lines
	106	International leased lines
	BD 65,345,373	Leased lines revenues

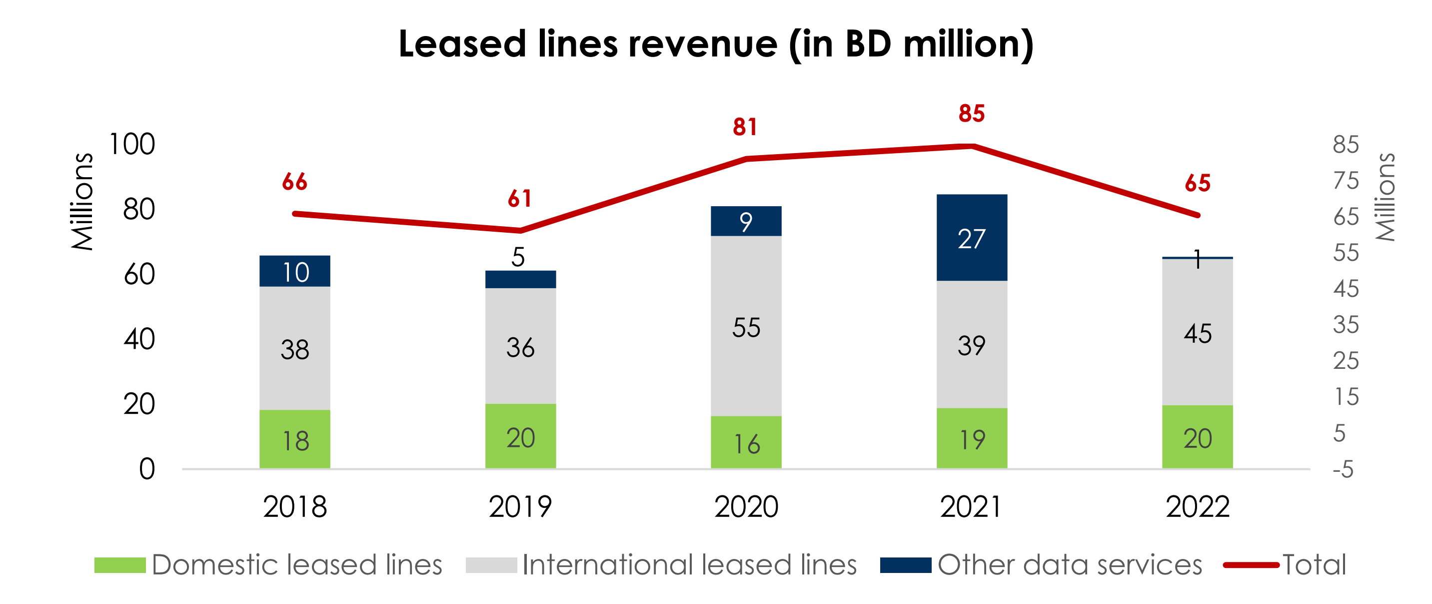
Evolution of domestic leased line

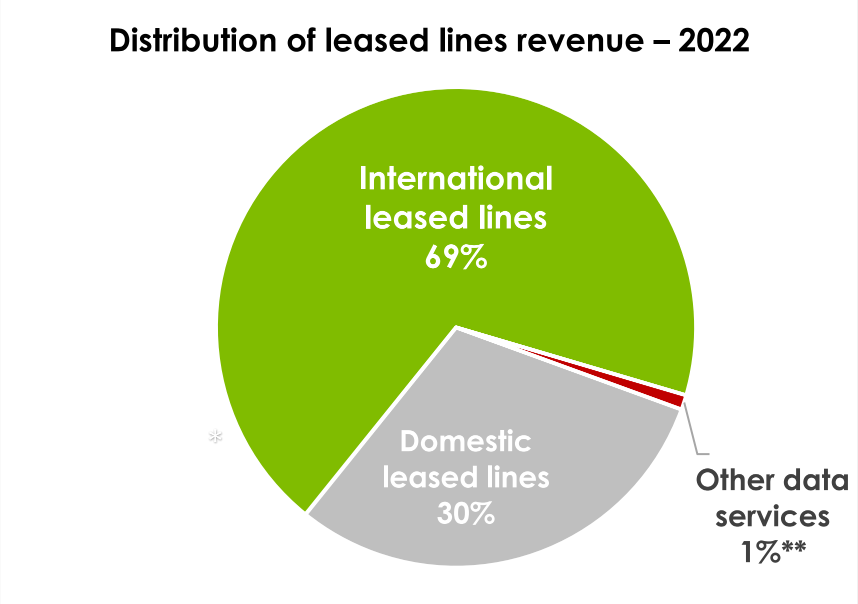


Evolution of international leased line



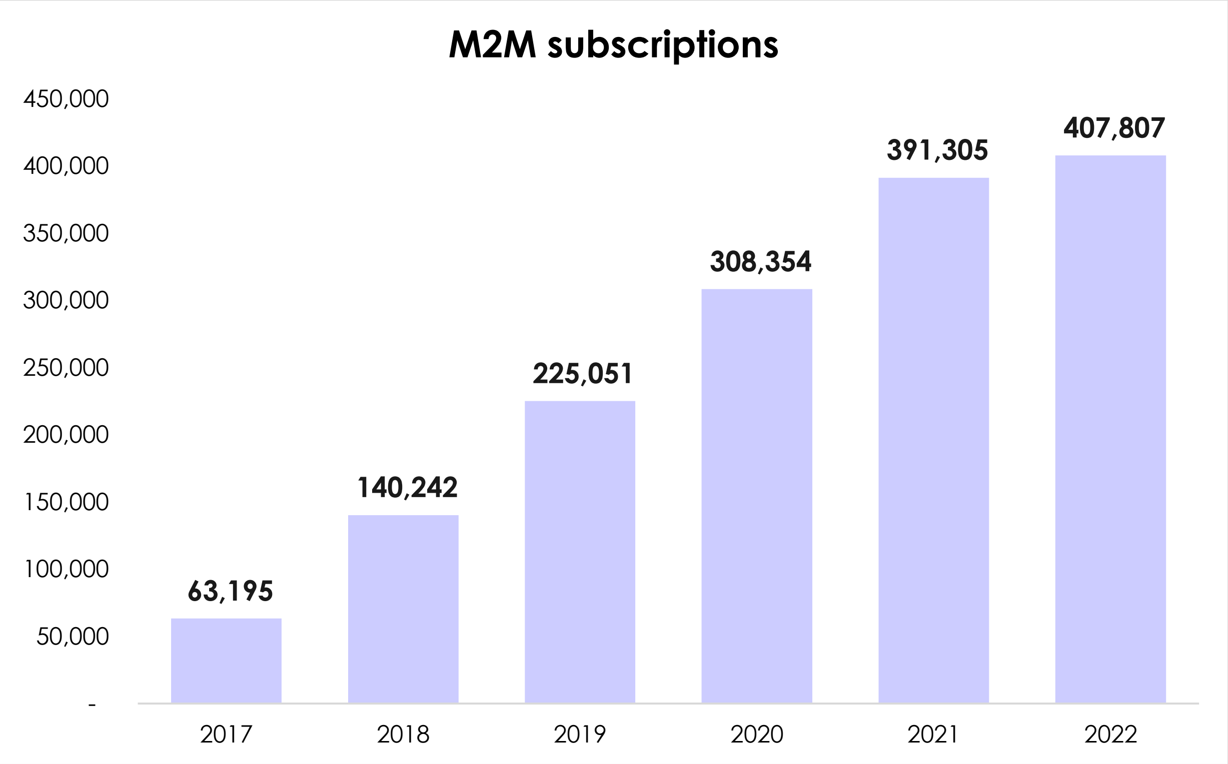
Leased Line Revenues

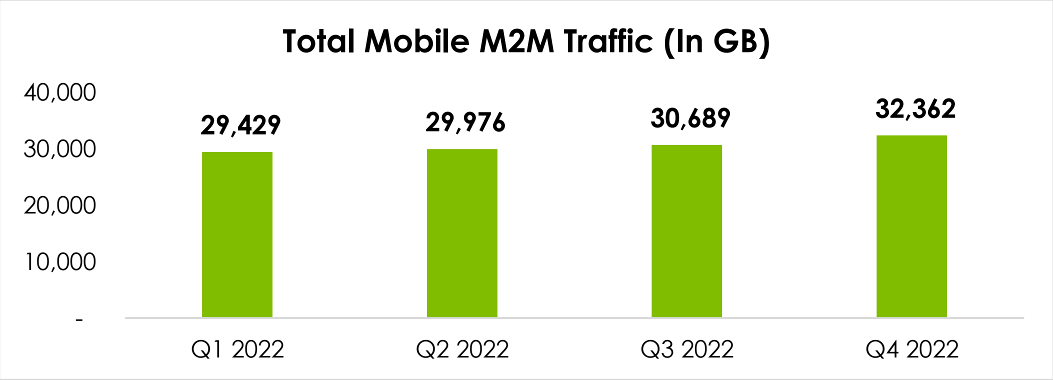


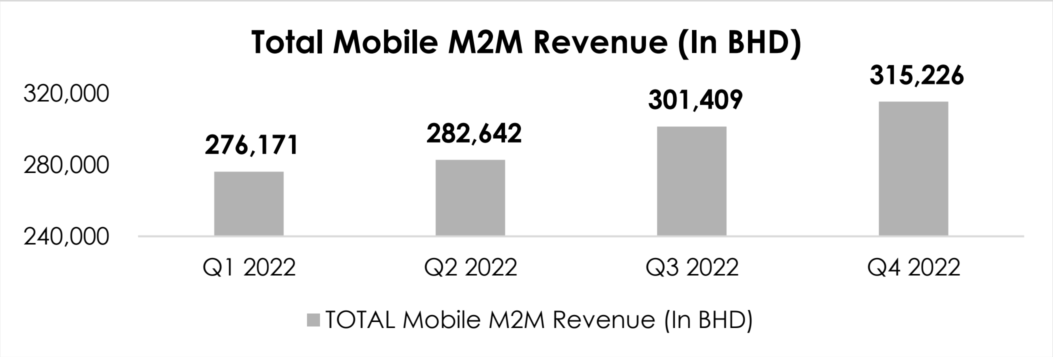


- International leased lines revenue increased by 15% in 2022 and domestic leased lines revenues increased by 5% during the same period. Please note that leased line subscriptions and revenue are subject to further review and change

Mobile M2M Subscriptions





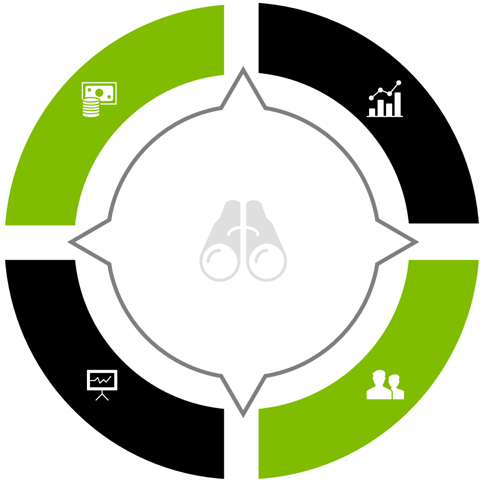


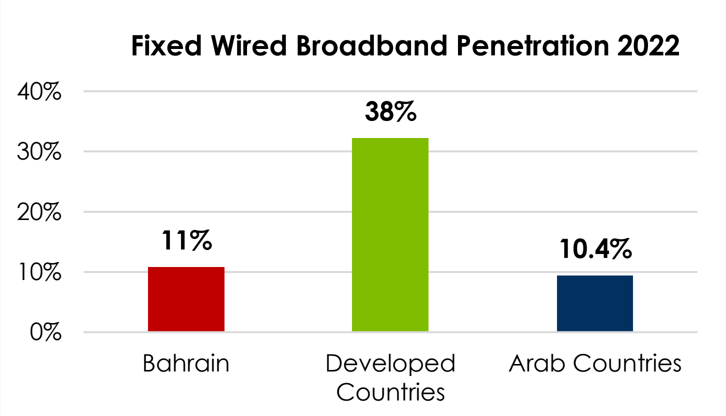
- M2M subscriptions have grown by around 99 thousand subscriptions in the last 3 years. All in all, by 2022, M2M subscriptions increased Sixfold relative to 2017.
- M2M subscriptions include banking services, vehicle tracking, Point of Sales, Smart meters among other services.

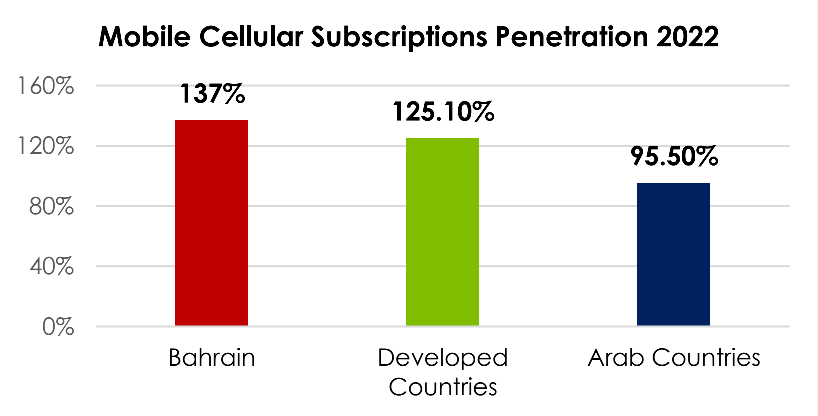
Benchmarking of telecom service penetration rates with Arab countries

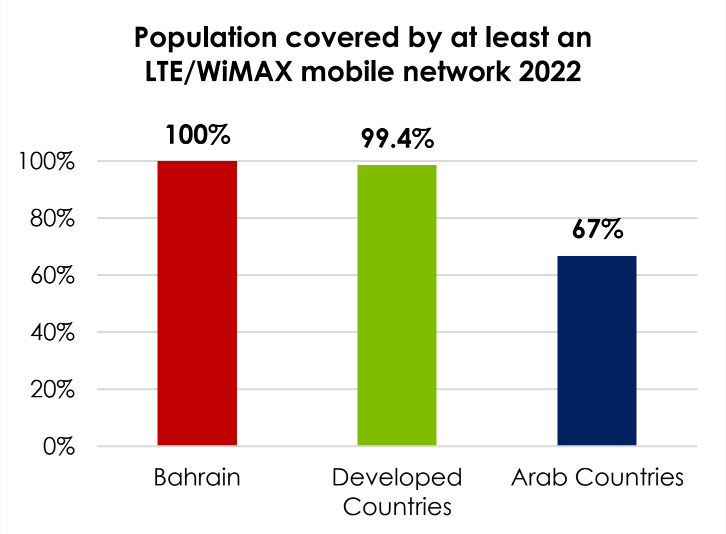
- Bahrain compares very well with other Arab Countries and with Developed (high-income) countries** in terms of telecoms services penetration. Specifically in Mobile penetration and Percentage of Individuals using the internet.

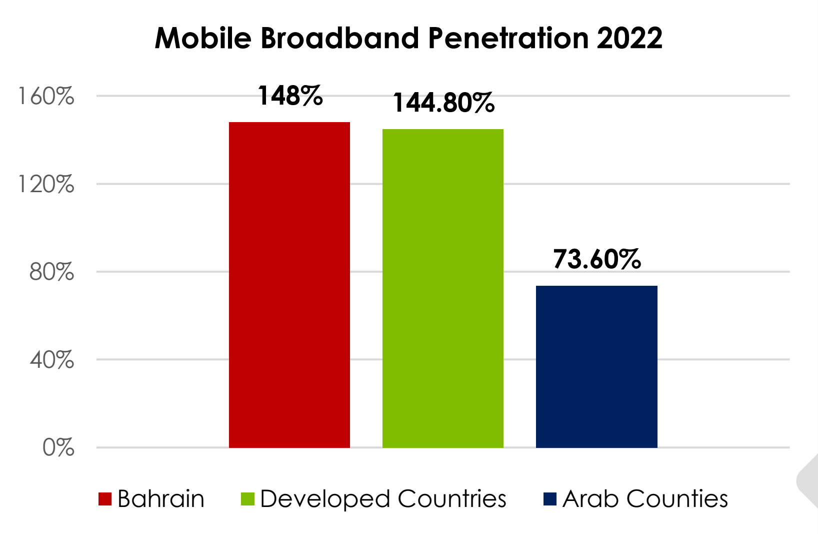
** Estimates by ITU*
*** For further info on the list of developed countries, pls refer to ITU's official website.*











List of Acronyms

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

Definitions

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Indicator	Definition
Fixed-telephone subscriptions	Fixed-telephone subscriptions refers to the sum of all active i) analogue fixed-telephone lines, ii) voice-over-IP (VoIP) subscriptions, iii) fixed wireless local loop (WLL) subscriptions, iv) ISDN voice-channel equivalents, v) fixed public payphones and vi) satellite-based subscriptions provided to fixed locations that allow for a voice communication. This indicator was previously called Main telephone lines in operation. *Active lines are those that have registered an activity in the past three months.
Prepaid mobile subscribers (i271p)	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).
Postpaid mobile subscribers (i271pd)	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.
Active mobile-broadband subscriptions (i271mw)	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. 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)

Source: ITU

Thank you

Annex A

Retail services	2019	2020	2021	2022
Fixed line services	11,223,432	10,231,244	12,365,078	10,400,022
Mobile services (Excluding International Mobile IDD)	134,827,944	137,982,859	132,918,723	142,749,349
International calls - Mobile IDD	14,546,035	12,418,631	11,013,005	9,890,396
International calls - Fixed IDD	1,583,145	1,512,744	1,251,678	1,071,804
International calls – Other	934,147	647,196	357,711	255,750
International calls services	**17,063,327**	**13,931,374**	**12,264,449**	**10,962,199**
Internet services	56,046,834	62,844,699	69,168,428	69,153,388
Leased line services	61,102,959	80,927,119	84,576,580	65,345,373*
Total	**279,747,214**	**305,917,296**	**309,423,525**	**298,610,331**

Wholesale services	2019	2020	2021	2022
Termination	2,818,203	2,931,529	2,797,238	2,646,132
Origination	141,645	124,505	110,117	45,743
WSIDD	766,523	934,526	1,211,175	1,327,363
Incoming calls				
Wholesale domestic leased lines	1,692,323	1,462,133	1,172,720	1,402,379
Wholesale international leased lines	1,349,594	1,792,328	1,879,297	2,662,819
Bitstream and WSDSL	85,079	22,804	21,332	2,855
Termination on your network of SMS	1,594,955	2,787,762	4,208,133	4,696,389
Termination on your network of MMS	9,485	6,006	5,790	5,122
Transit for calls				
International incoming calls	4,308,818	3,617,255	2,582,294	2,828,388
Directory Assistance (DQ) (Only Batelco)	105,718	75,399	51,088	34,371
Duct	907,122	N/A	N/A	N/A
Total	**13,779,465**	**13,754,247**	**14,039,184**	**15,651,562**

	2019	2020	2021	2022
Retail Services Revenue	279,747,214	305,917,296	309,423,525	298,610,331
Wholesale Services Revenue	13,779,465	13,754,247	14,039,184	15,651,562
Other Revenue	151,726,486	139,264,366	163,220,109	197,813,336
Total	**445,253,164**	**458,935,908**	**486,682,818**	**512,075,229****

* Leased line revenue is currently under validation and is therefore subject to change.
** 2019-2021 revenue amended.