هيئة تنظيم الاتصالات
TELECOMMUNICATIONS REGULATORY AUTHORITY
Kingdom of Bahrain - مملكة البحرين

Telecommunications Market Indicators in the Kingdom of Bahrain

Full year 2023 up to Q2 2024

Issued in **October 2024**

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 **Nineteenth** Telecommunications Markets Indicators report and it covers a large range of telecoms services indicators for 2023 up to Q2 2024 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

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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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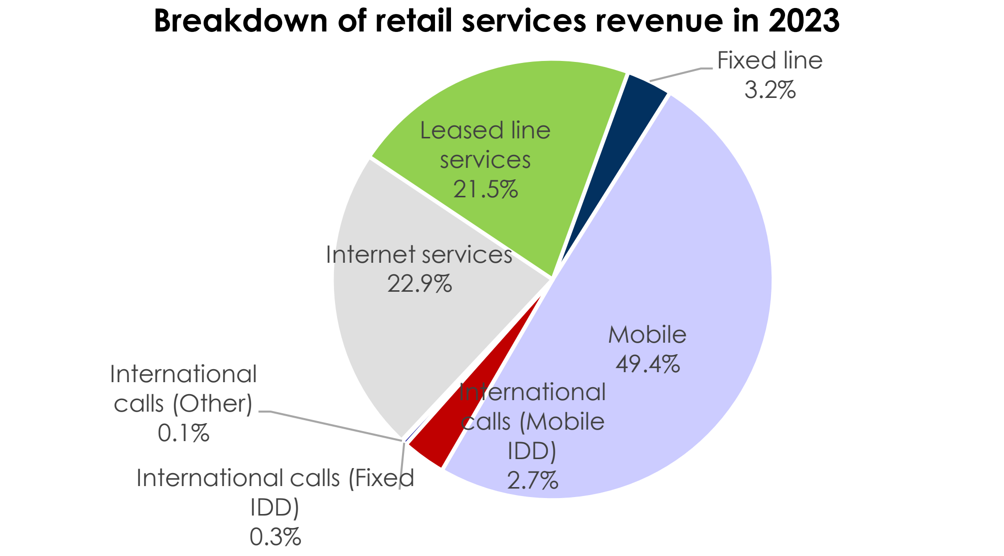
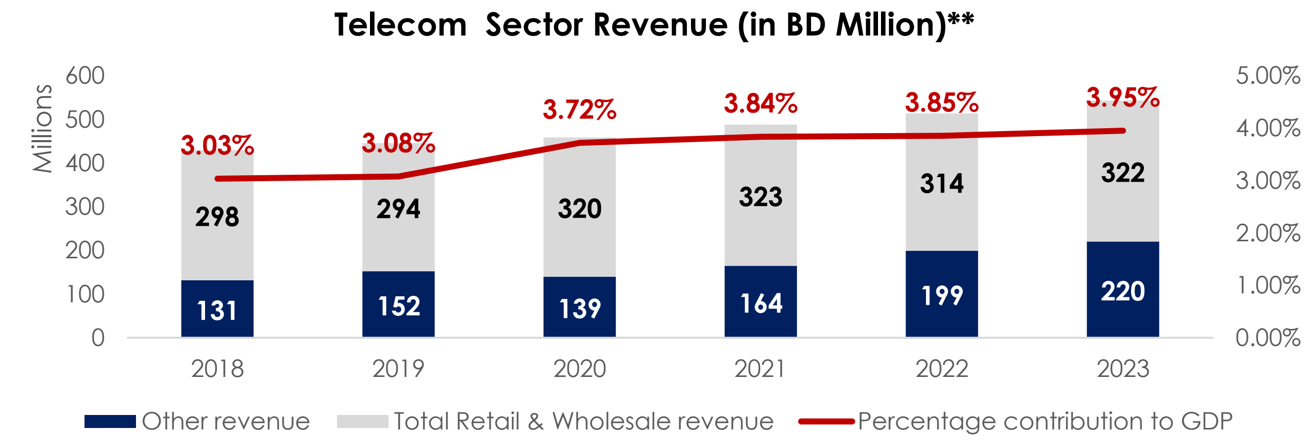
Indicator	2018	2019	2020	2021	2022	2023	CAGR 2018-2023
Number of fixed line telephony (excluding ISDN)	228,717	226,898	228,422	221,045	216,983	212,109	(1.5%)
Fixed line telephony penetration (including ISDN)	**18%**	**18%**	**18%**	**17%**	**17%**	**17%**	-
Total mobile subscribers	2,092,714	1,918,635	1,770,966	1,923,443	2,141,263	2,415,794	2.9%
Mobile penetration	**139%**	**126%**	**117%**	**128%**	**138%**	**153%**	-
Total broadband subscribers	2,160,052	2,152,692	2,012,253	2,145,530	2,494,834	2,458,675	2.5%
Broadband penetration	**141%**	**143%**	**134%**	**143%**	**158%**	**159%**	-
Percentage of individuals using the Internet	**99%**	**99%**	**99.7%**	**100%**	**100%**	**100%**	-
Telecommunications revenues (BD in million)	431	446	460	486	514	542	-
Number of employees in the telecommunications sector	2,902	2,741	2,920	3,003	3,056	3,277	-

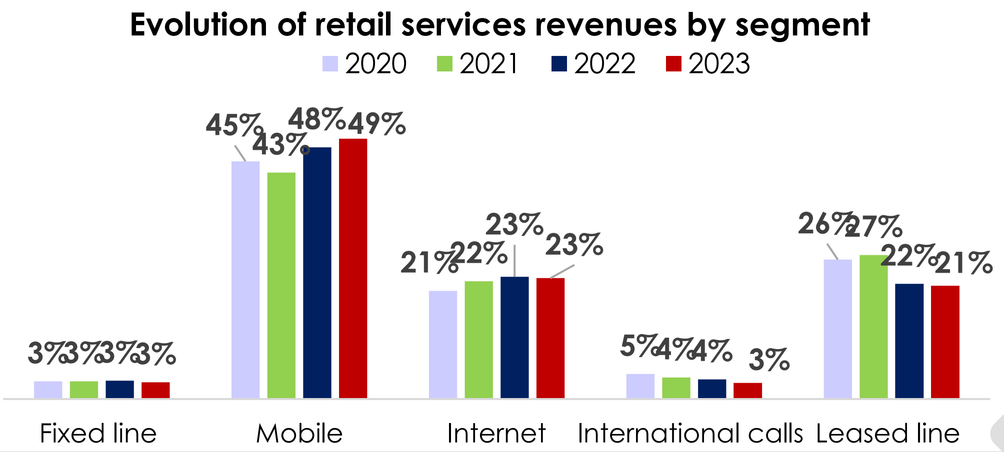
Notes:
1- The number of subscribers refers to the end of the period.
2- Number of broadband subscribers include fixed wired, wireless and mobile. Slight drop in total broadband is due to an operator reporting a drop in Standalone mobile broadband in 2023.
3- The source of Percentage of individuals using the Internet is the ITU and TRA residential survey.
4- Penetration is based on mid-year population estimated by GIA

Revenues in the Telecom Sector

- Telecommunications services generated **BD 542 million*** in revenue in 2023 compared to BD 514 million in 2022, an increase of **5%**.
- Telecommunications sector revenues represent around **3.95%** of GDP as of 2023.
- The proportion of mobile revenue to total retail revenue increased to **49.4%** in 2023, compared to **47.8%** in 2022.
- Between 2022 and 2023 total retail revenue dropped by **2.9%** while reported wholesale revenue dropped by **5.4%**. Other revenue increased by **11%** over the same period.
- Revenue from leased line services increased by less than **1%** while internet services revenue increased by **40%** between 2018-2023.
- Telecommunications sector revenue increased by **26%** between 2018-2023.



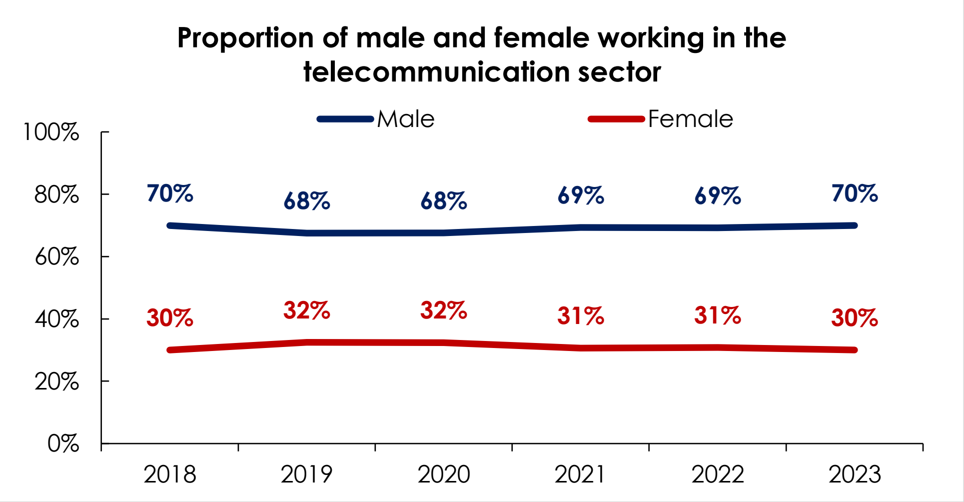


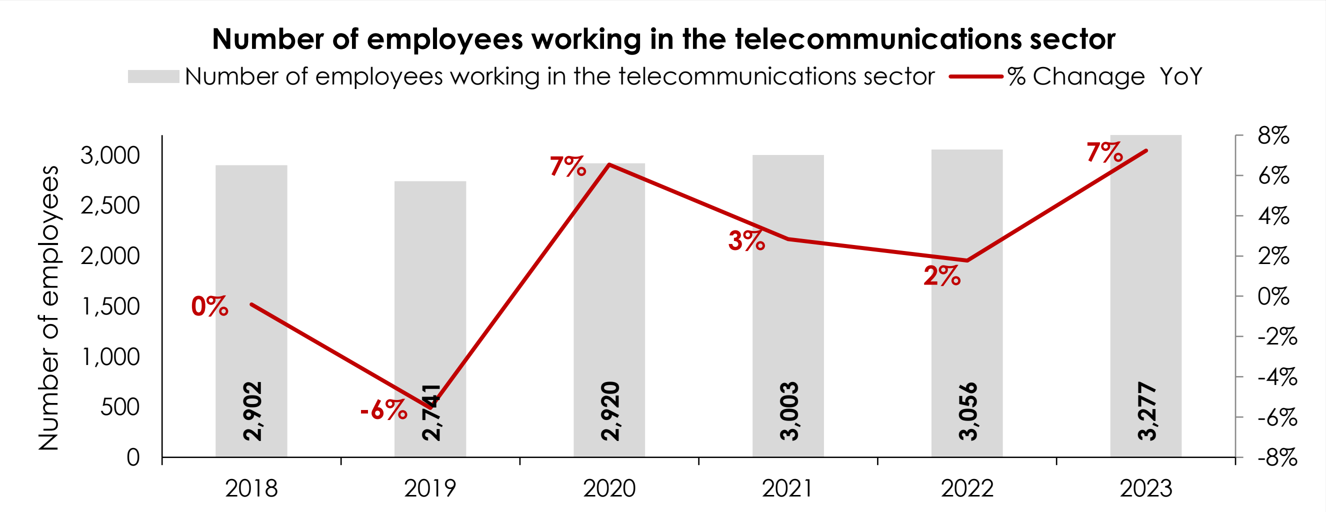


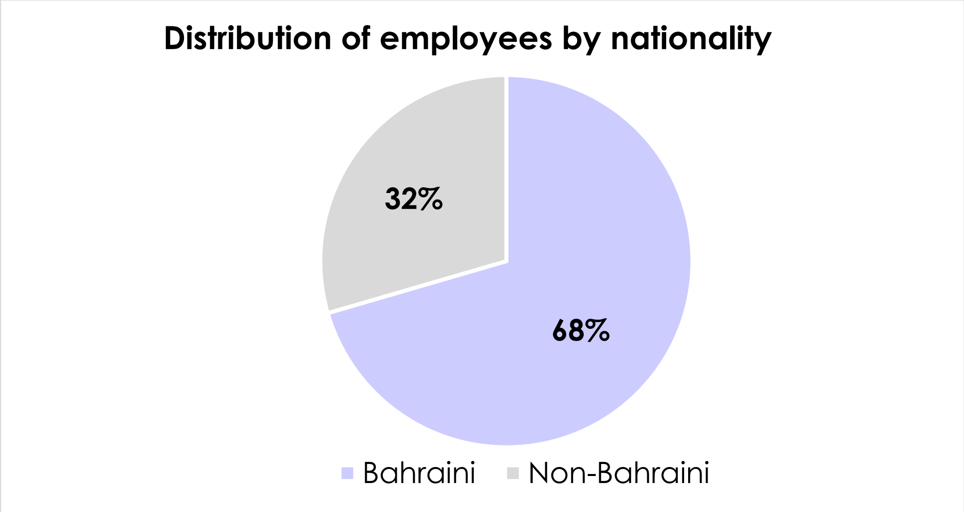
** Other revenue includes but is not limited to (Hardware revenues, ICT, advanced services, etc..)*
*** Includes BNET revenue.*

Employment in the Telecom Sector

- **3,277** employees are working in the telecommunications sector as of 2023.
- The sector achieves high degree of Bahrainisation. As of 2023, **68%** of the employees in the sector are Bahrainis.
- Females represent **30%** of employees in the telecom sector.







MOBILE SERVICES

Mobile Services

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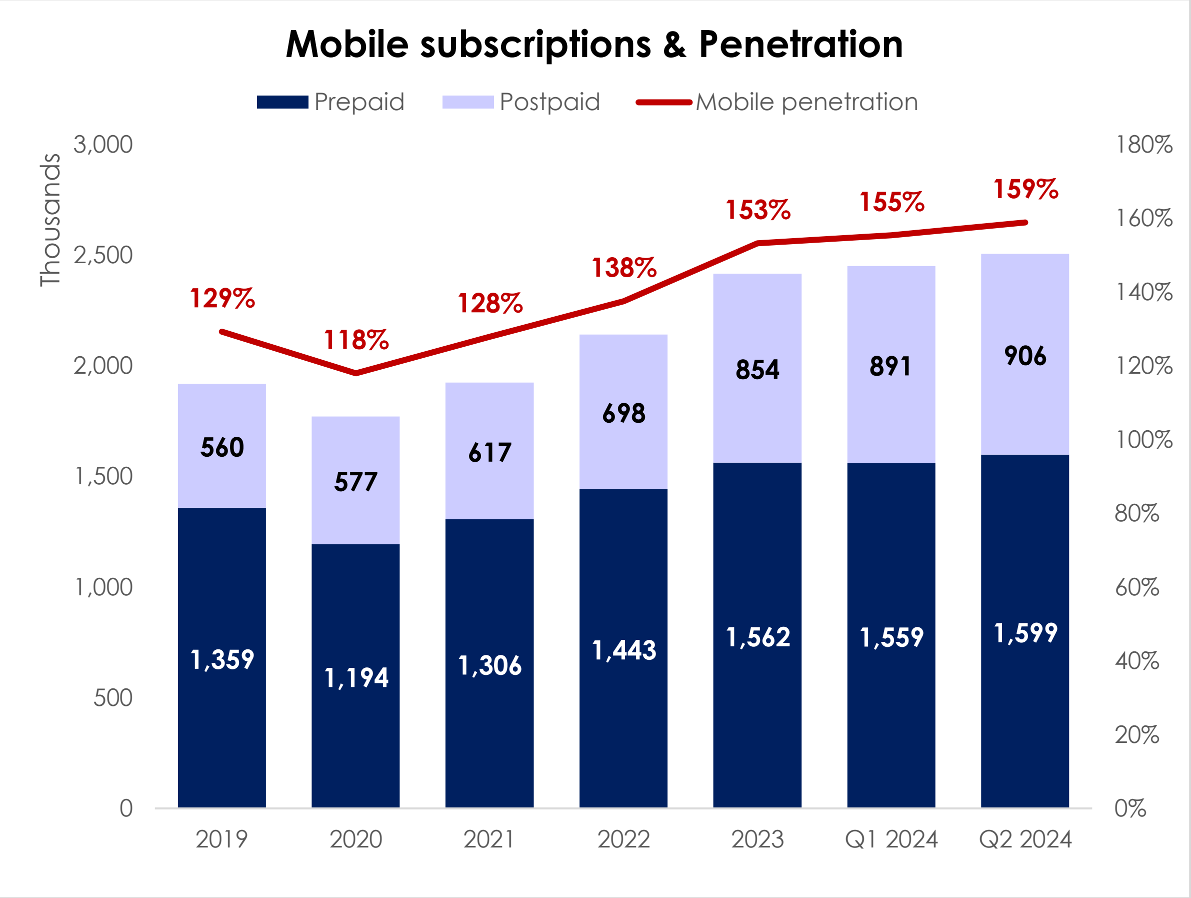
- By the end of 2023, the number of total mobile subscriptions increased by **13%** relative to 2022.
- By Q2 2024, the number of mobile subscriptions increased by **4%** relative to 2023.
- Postpaid subscribers increased by **22%** between 2022-2023 and prepaid subscribers increased by **9%** over the same period.

End of Q2 2024		
	2,504,794	Number of total mobile subscriptions
	159%	Penetration rate

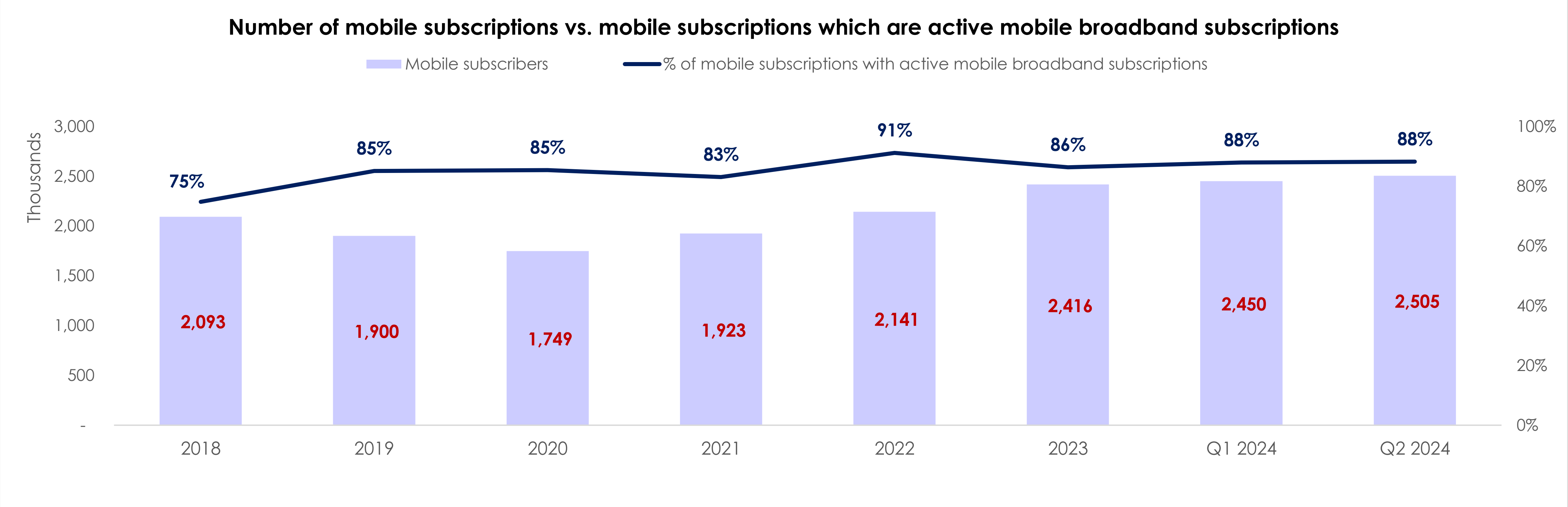
	2019	2020	2021	2022	2023	Q2 2024
Total	**1,903,644**	**1,754,109**	**1,923,443**	**2,141,263**	**2,415,714**	**2,504,794**
% of Prepaid	71%	67%	68%	67%	65%	64%
% of Postpaid	29%	33%	32%	33%	35%	36%



Mobile Subscriptions with Active data subscriptions

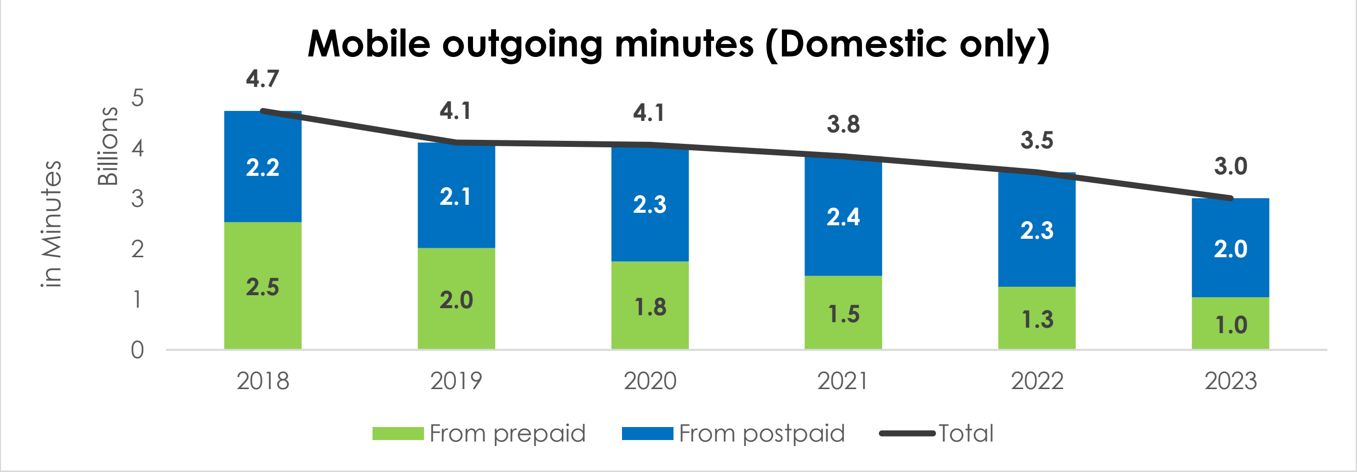
- By Q2 2024, there were **2.2** million mobile subscribers with active mobile data subscriptions (pay per use, add-on and bundles) compared to around **1.95** million subscribers with active mobile data subscriptions in 2022 (Increased by 13%).

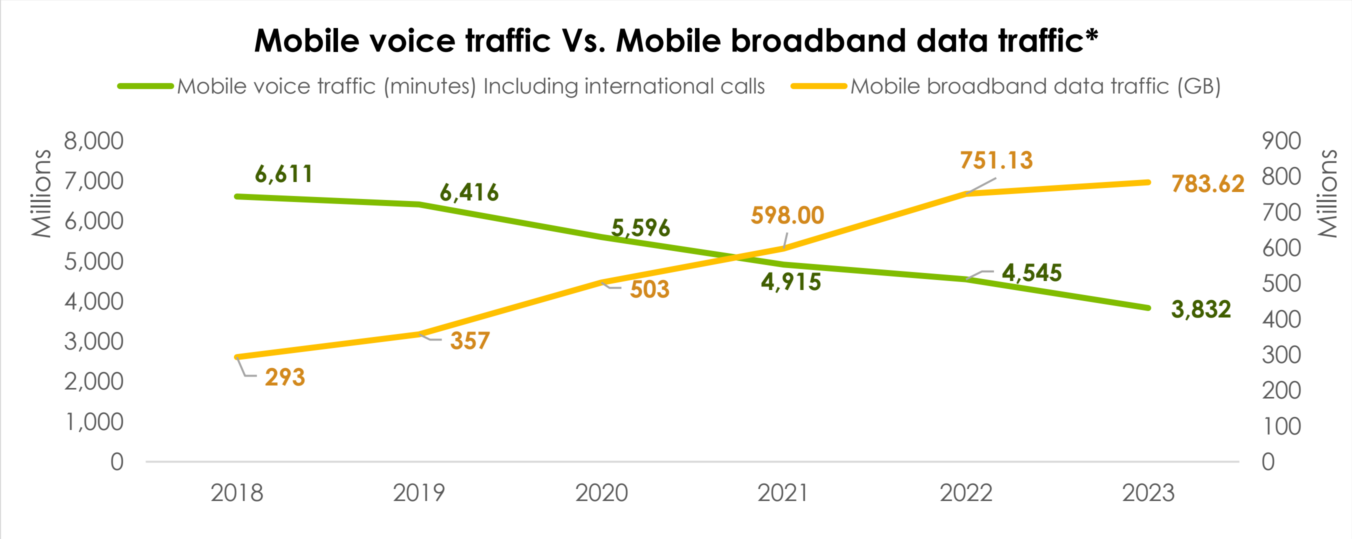
- Active mobile broadband subscriptions (pay per use, add-on and bundles) represent **88%** of total mobile subscriptions by Q2 2024 compared to 75% of total mobile subscriptions at the end of 2018.



Mobile Traffic

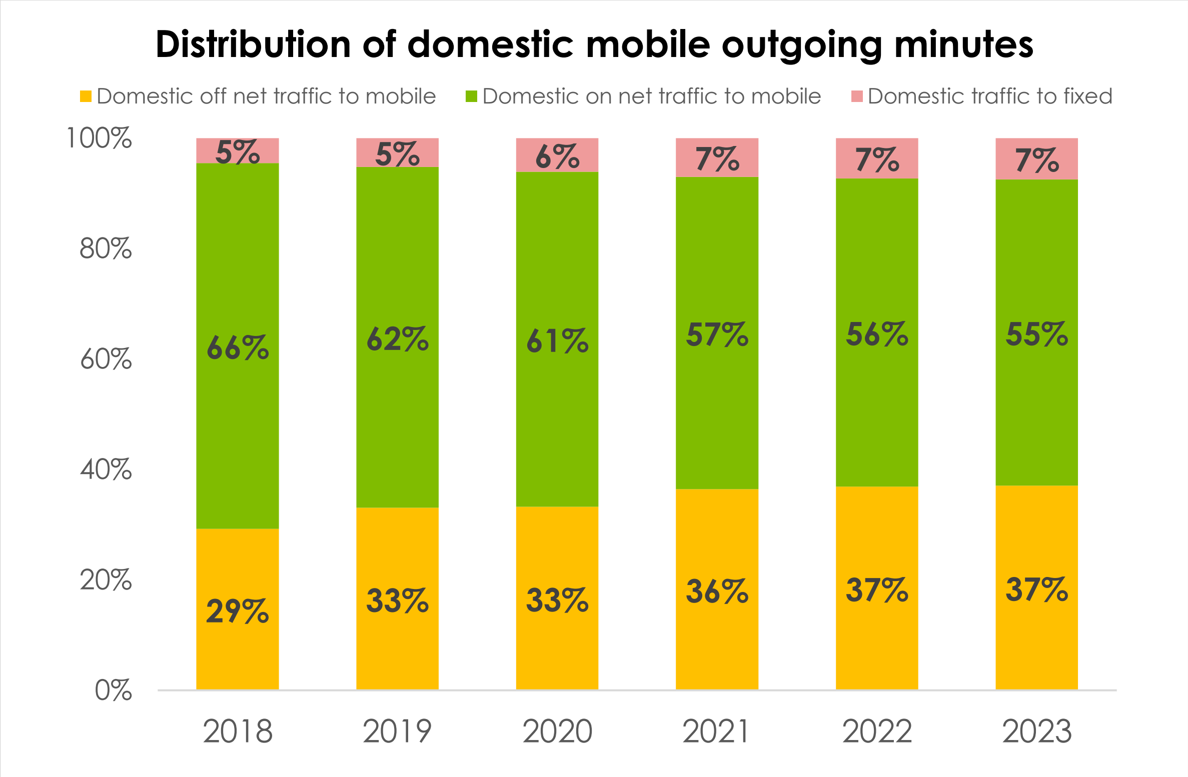
- At the end of 2023, mobile generated 3 billion domestic minutes, representing a 15% drop compared to the previous year.
- The compound annual growth rate is -7.3% in domestic mobile originated traffic between 2018 and 2023.
- Comparing 2023 to 2022, the domestic postpaid mobile outgoing minutes dopped by 13%, while the traffic originated from prepaid decreased by 17%.
- While total mobile voice traffic (including international calls) decreased by 16%, data traffic increased by 4% between 2022 and 2023.

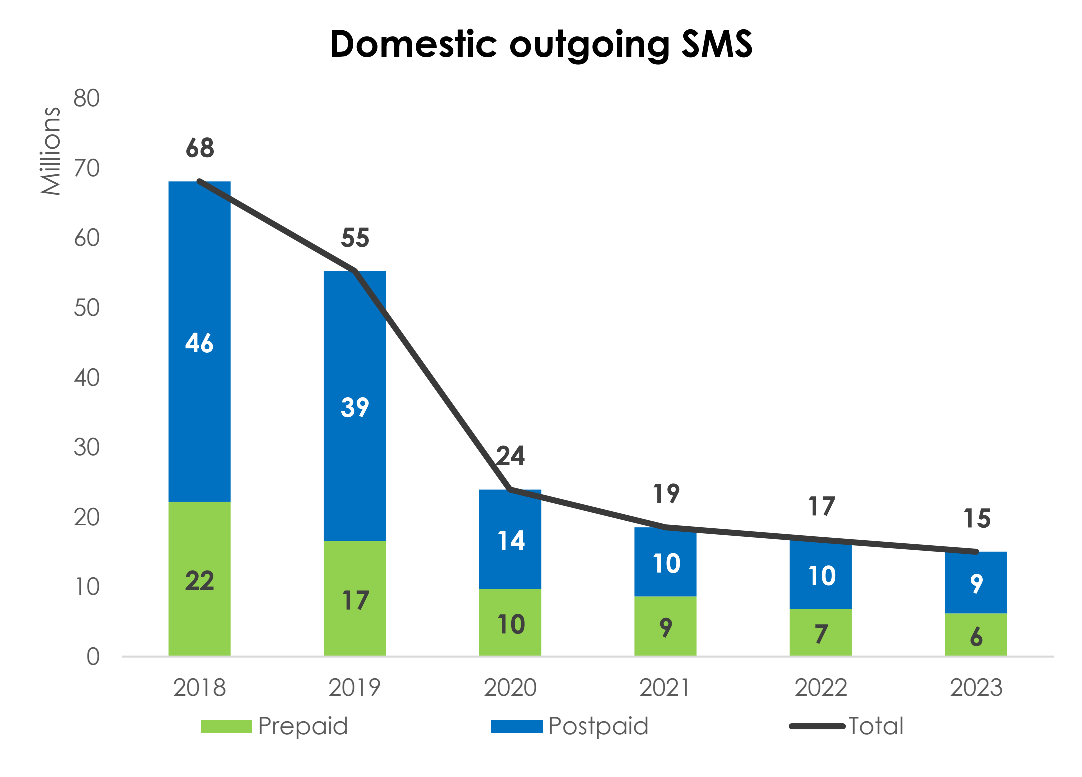




*Data traffic is used for all Internet activities

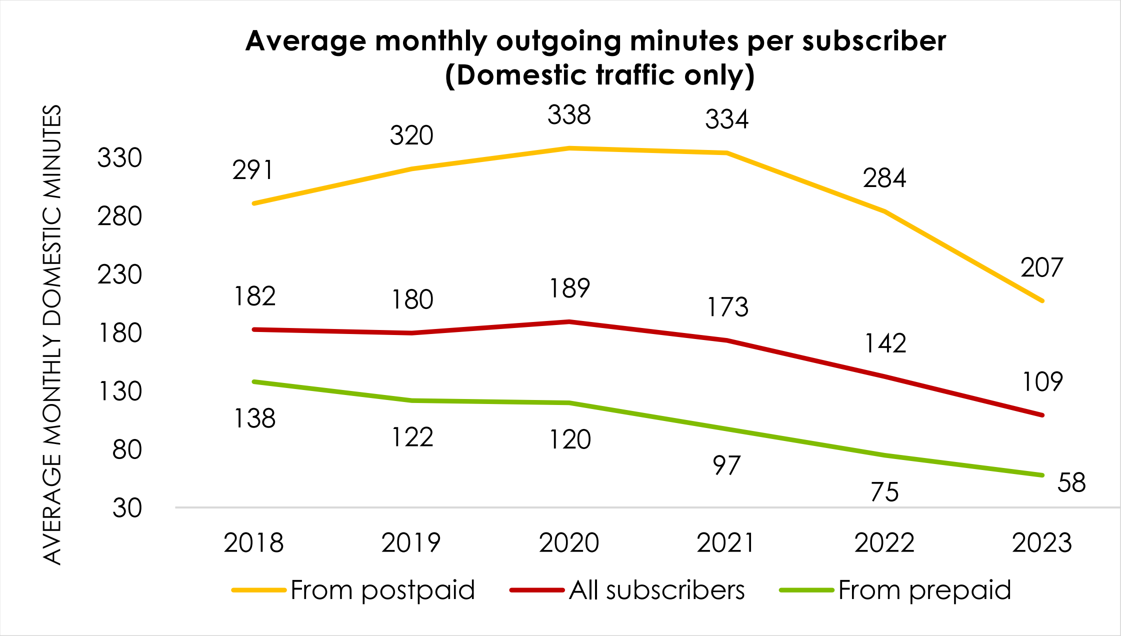
Mobile Traffic

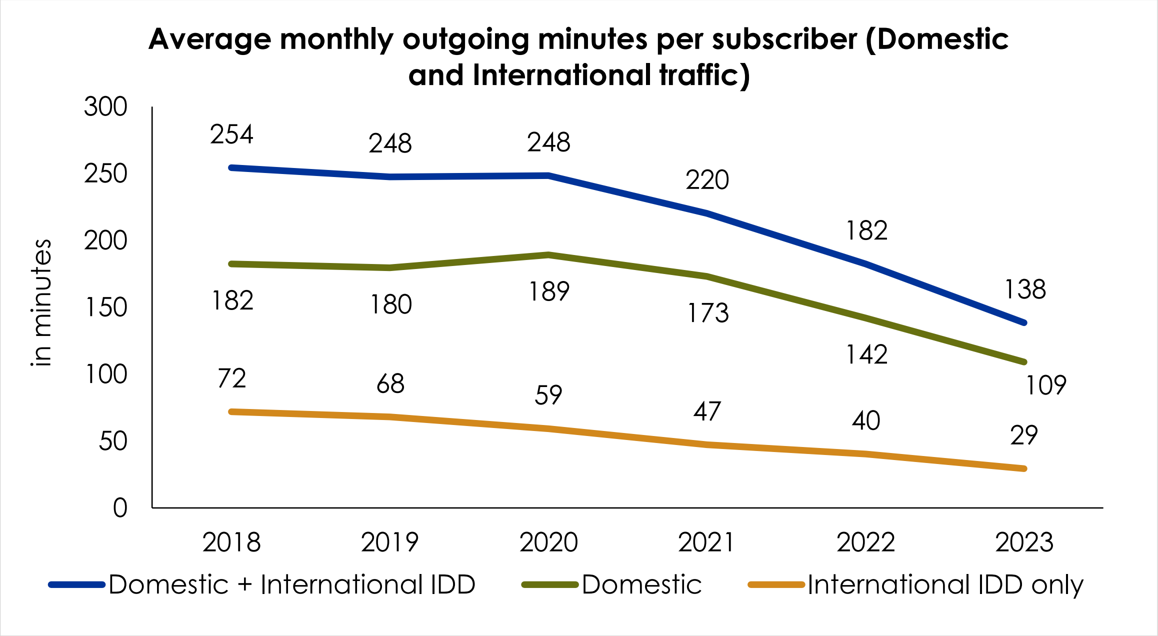




- In 2023, domestic mobile originated on-net traffic dropped by 15% relative to the previous year.
- In 2023, domestic mobile originated off-net voice traffic dropped by 14% relative to the previous year.

Mobile Average Monthly Outgoing Minutes

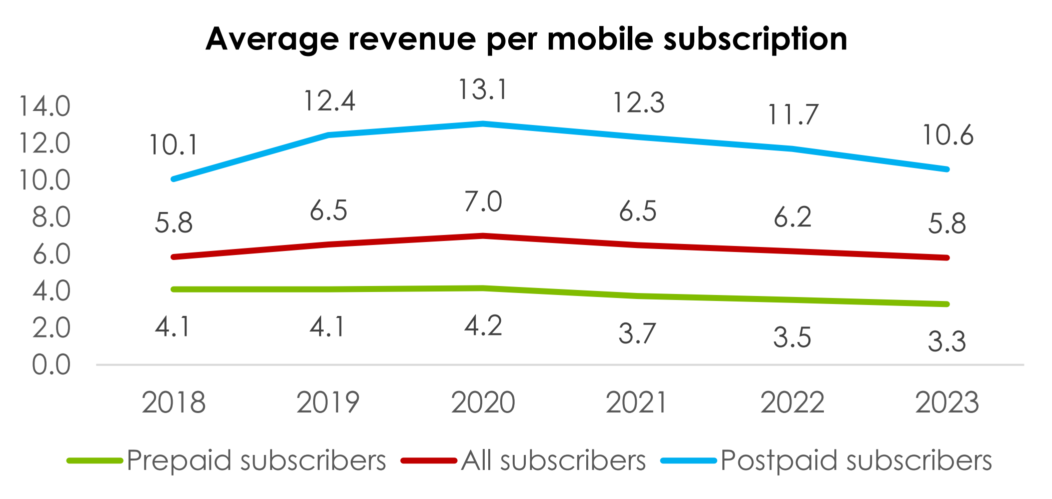


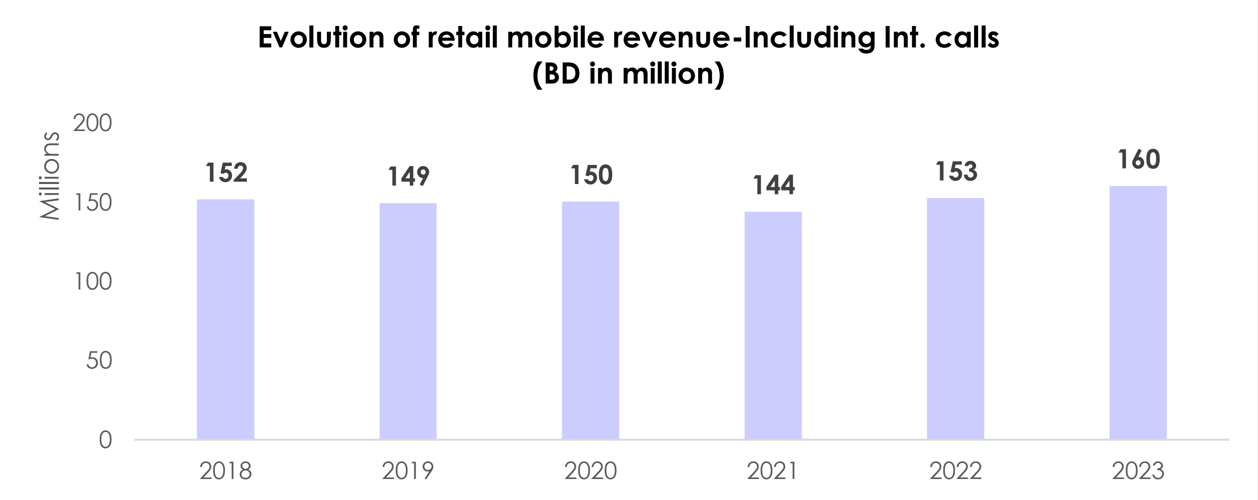


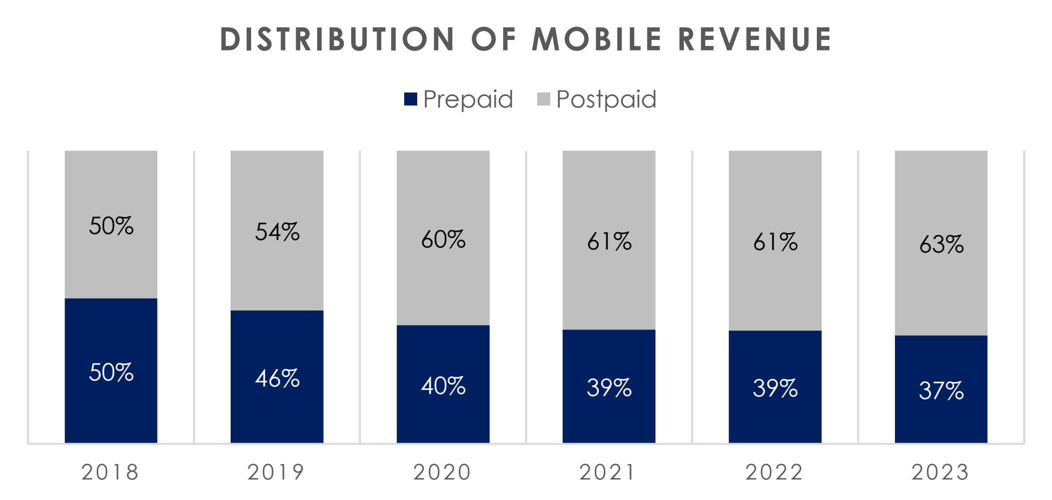
- As demonstrated above, the average monthly domestic traffic (in minutes) for postpaid subscribers dropped from 284 minutes in 2022 to **207** minutes in 2023, a 27% drop relative to the previous year.
- The average monthly domestic traffic (in minutes) for prepaid customers dropped from 75 minutes in 2022 to **58** minutes in 2023 , a 23% drop relative to the previous year.
- The average monthly volume of international direct dial (IDD) calls dropped to **29** minutes in 2023.

Mobile Revenue

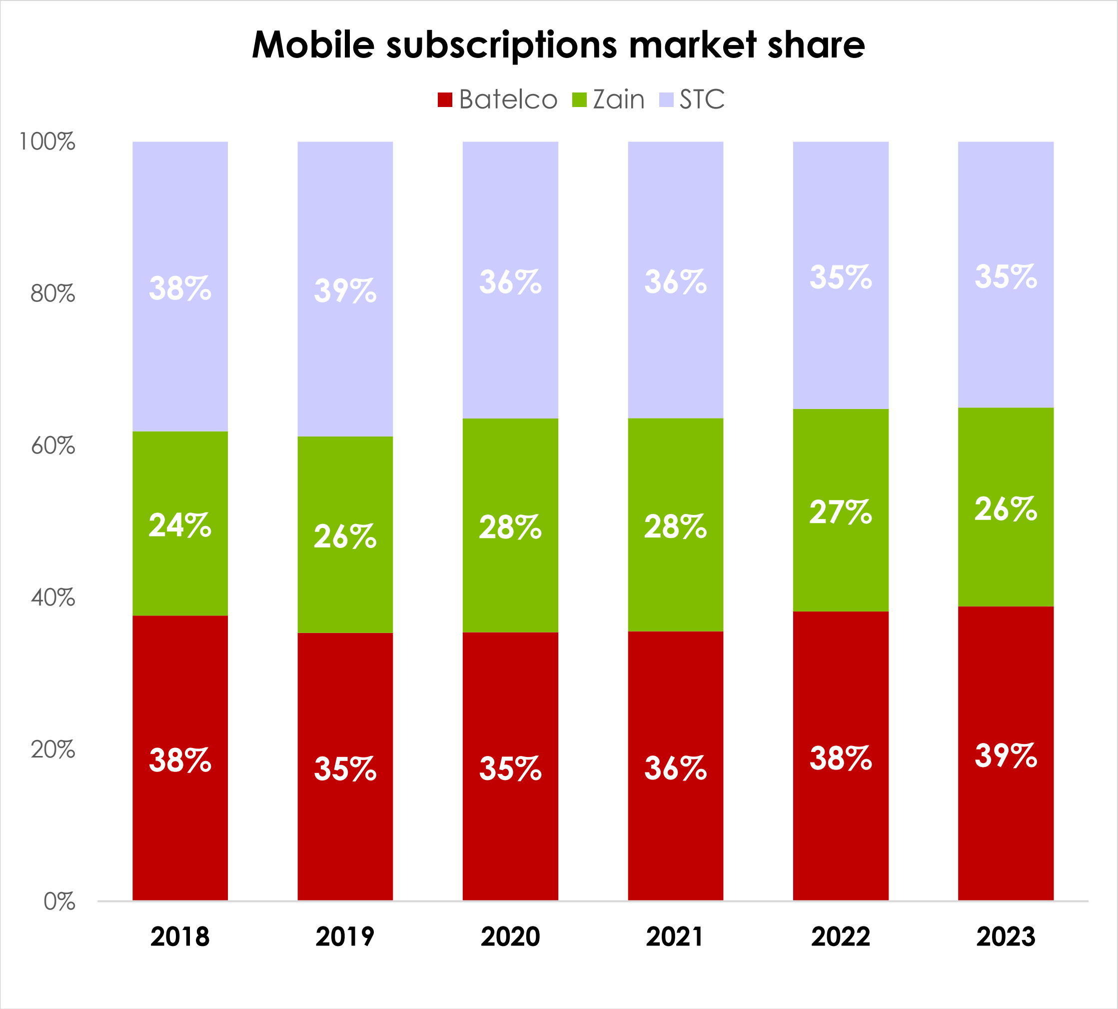
- Between 2022 and 2023, Mobile revenue increased by around 5% to reach BHD 160.2 Million.
- Revenue generated from postpaid mobile subscriptions represented 63% of the total retail mobile revenue in 2023.
- ARPU for postpaid subscribers dropped by 9.3% relative to 2022. similarly, prepaid ARPU dropped by 6.5% over the same period. Overall, Mobile ARPU dropped by 5.6%.

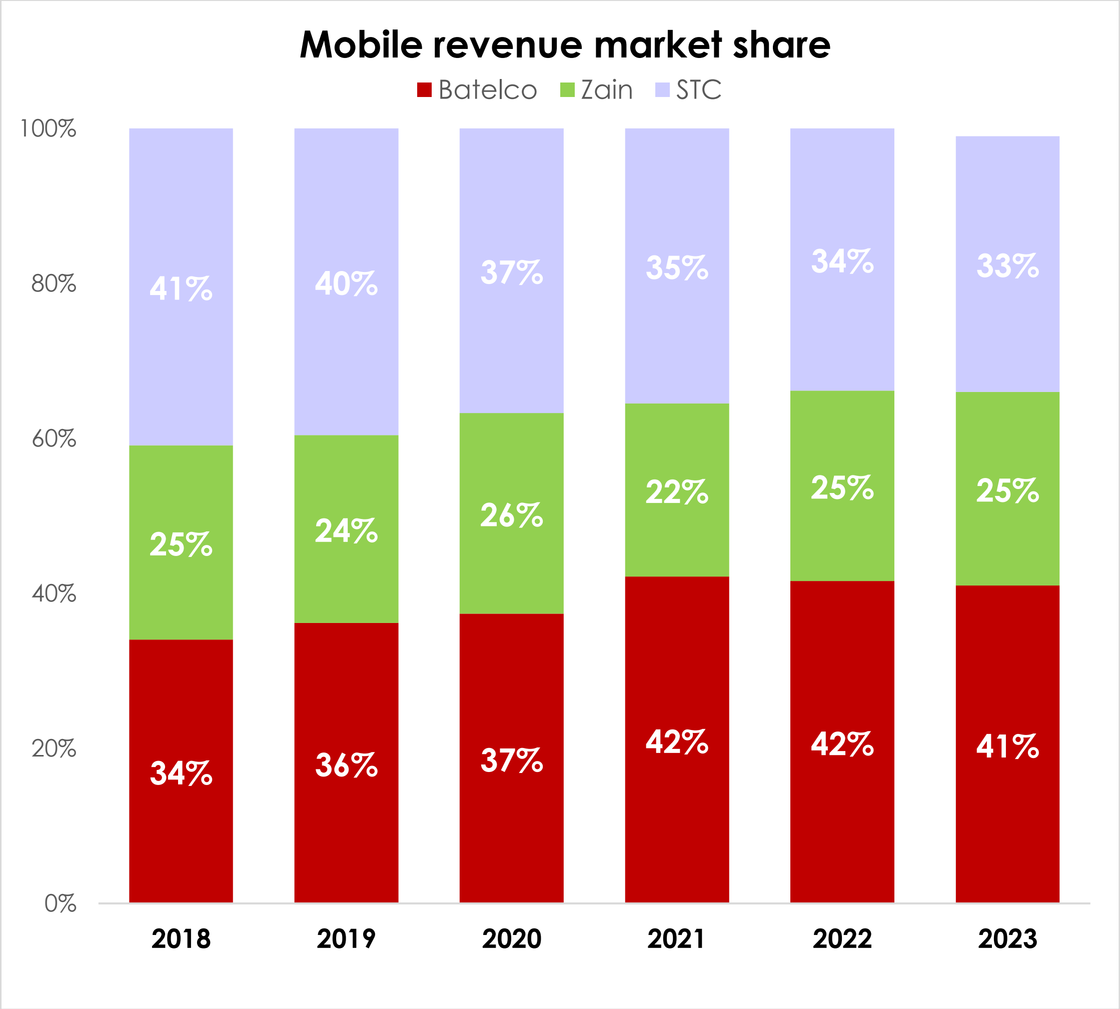




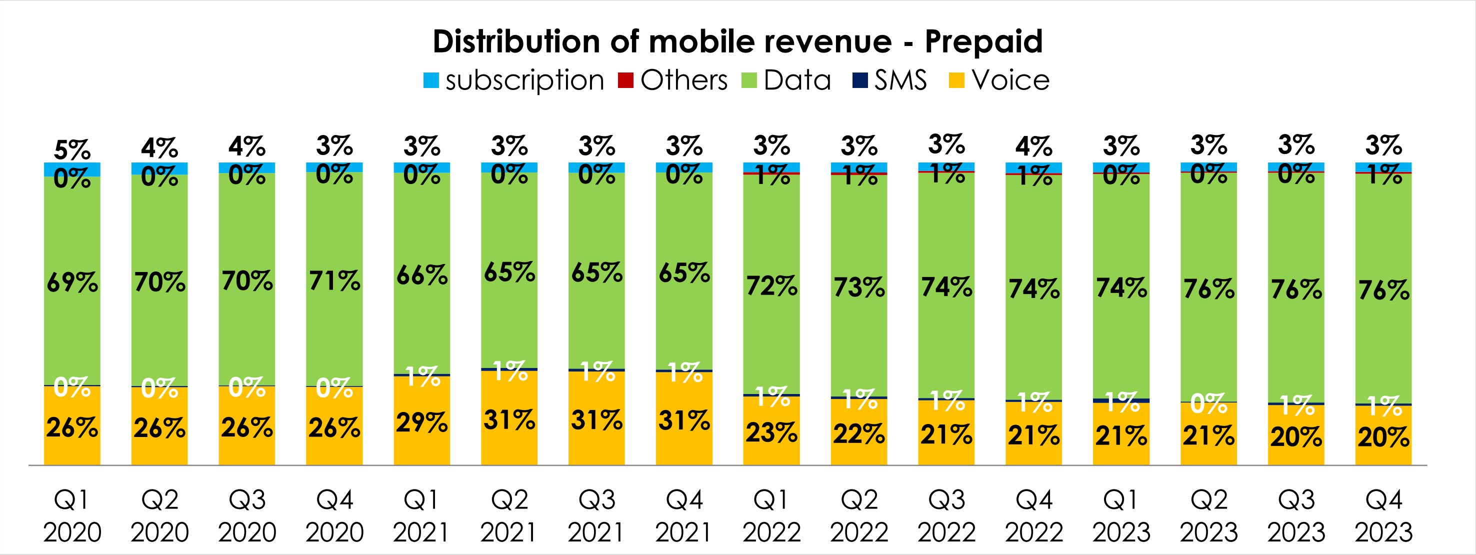


Mobile subscriptions and revenue market shares

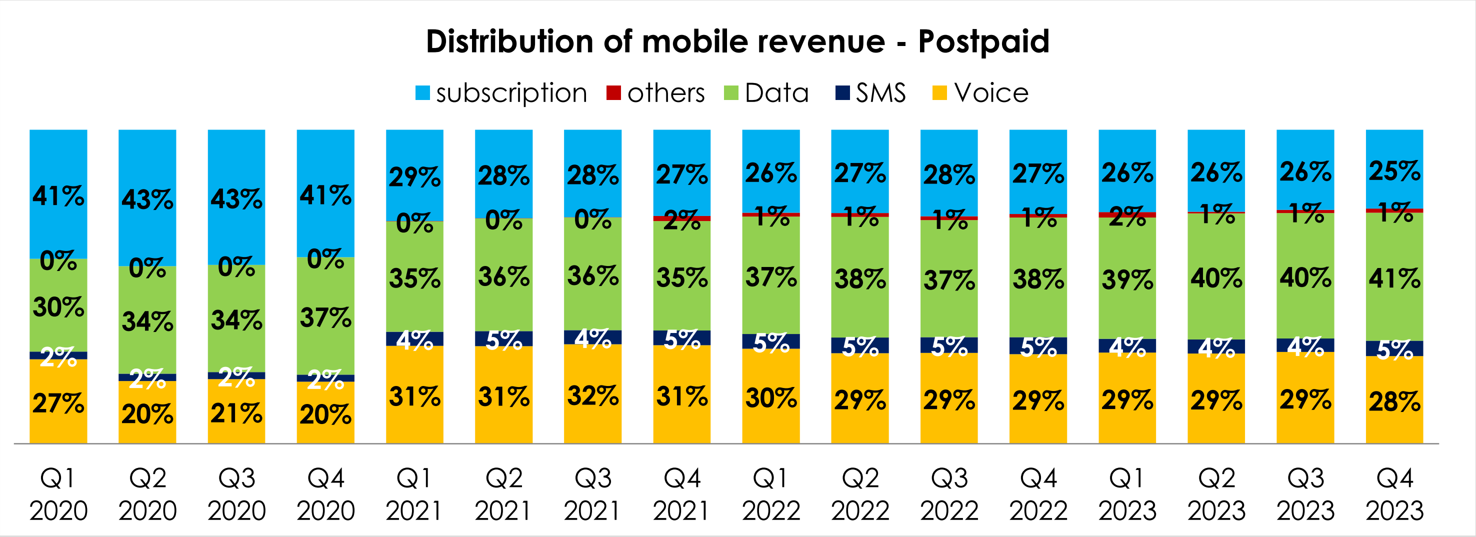


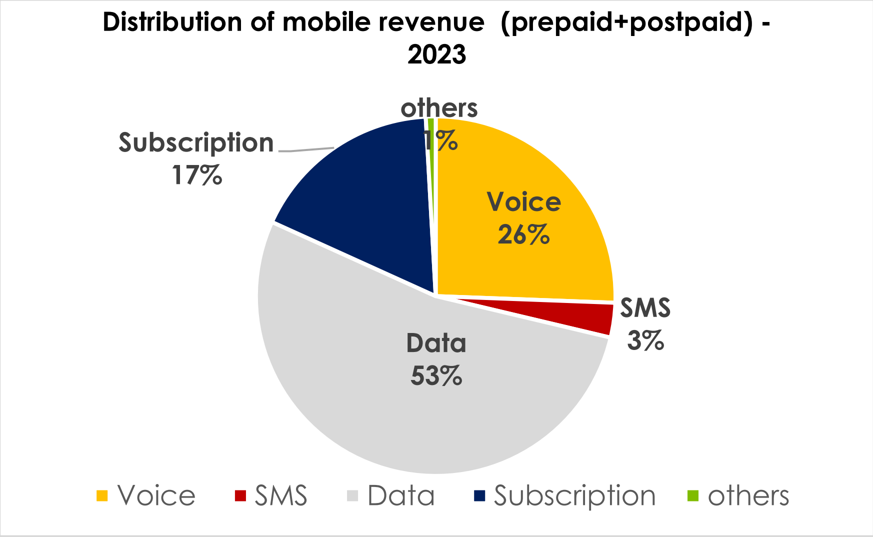


Distribution of Mobile Revenue



- By 2023, 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 2023, for prepaid, data revenue remained the main source of revenue generating 76% in Q4 2023, a slight increase from 74% in Q4 2022.
- As for postpaid, Data is also the main source of revenue contributing 41% to mobile revenue in Q4 2023. Voice revenue slightly dropped to 28% compared to 29% in Q4 2022. Subscription revenue also dropped to 25% compared to 27% in Q4 2022. SMS revenue remained at 5%.





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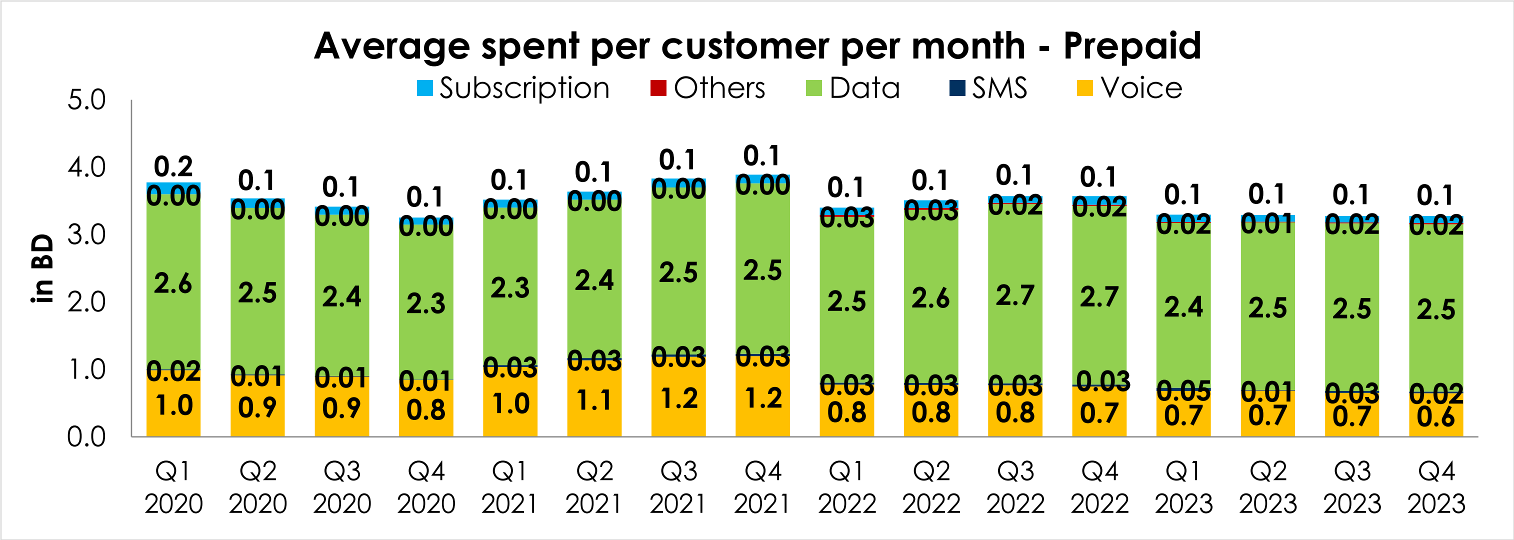
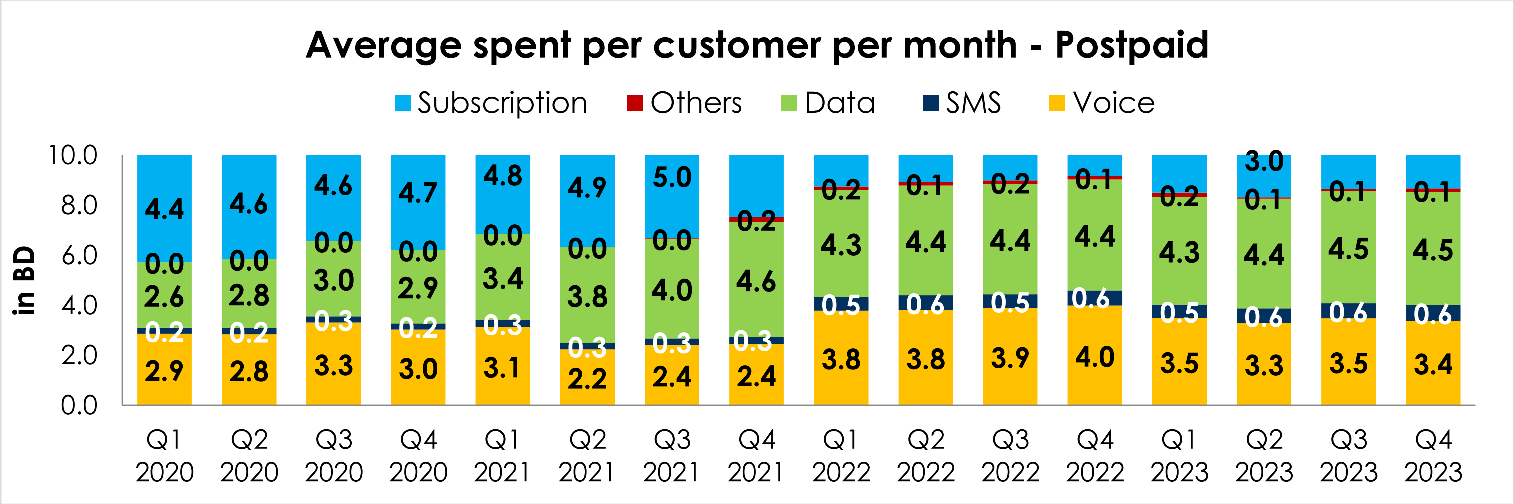
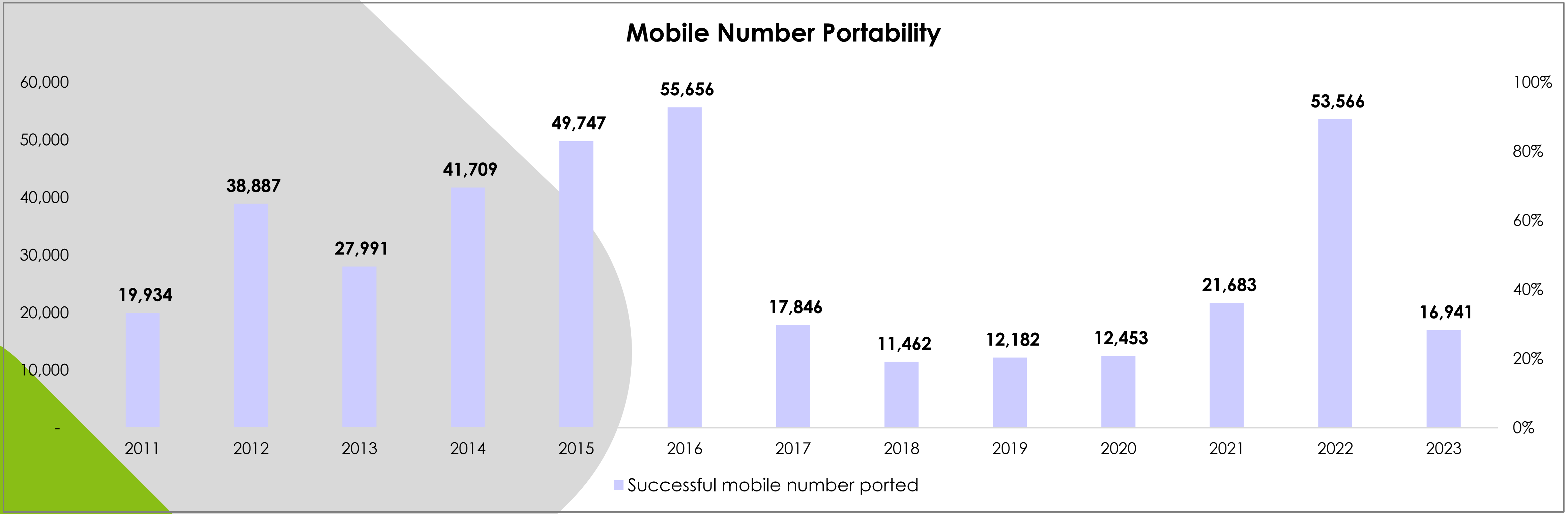
Mobile Average Spend per Subscriber per Month





- In Q4 2023, prepaid subscribers spent BD 3.3 monthly for their subscription, phone calls, SMS and data, comparing to BD 3.6 spent on the same services during Q4 2022.
- In Q4 2023 postpaid subscribers spent BD 11.1 monthly for the same services compared to BD 11.8 during Q4 2022.
- For prepaid subscribers, the average monthly spend per subscriber for voice slightly dropped to BD 0.6 during Q4 2023. similarly, data revenue dropped to BD 2.5.
- During Q4 2023, the average monthly spend per postpaid subscriber for data remained at BD 4.5 while voice revenue dropped from BD 3.4 to BD 3.1.

Mobile Number Portability



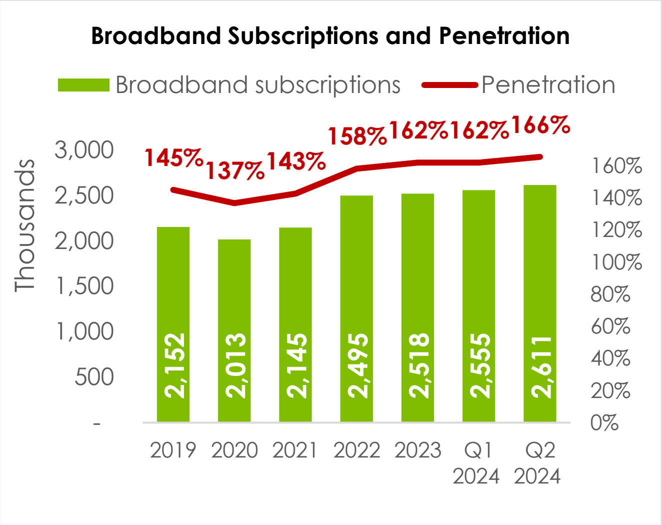
- The volume of mobile numbers successfully ported dropped compared to 2022. By end of 2023, total successful mobile numbers ported were 16,941.
- A total of approximately 380,057 mobile numbers had been ported successfully since the introduction of number portability in 2011.

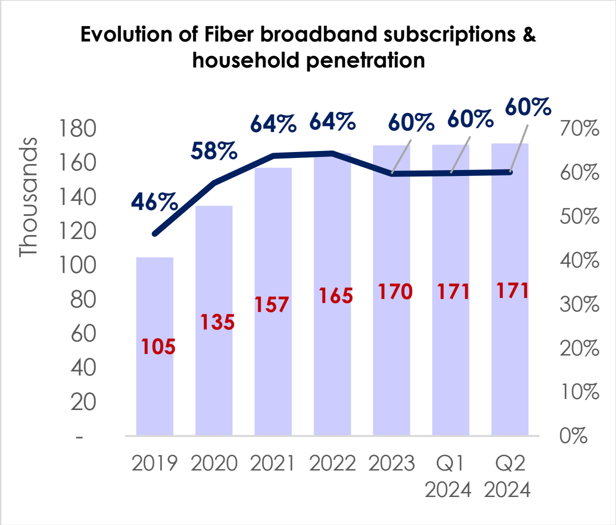
BROADBAND SERVICES

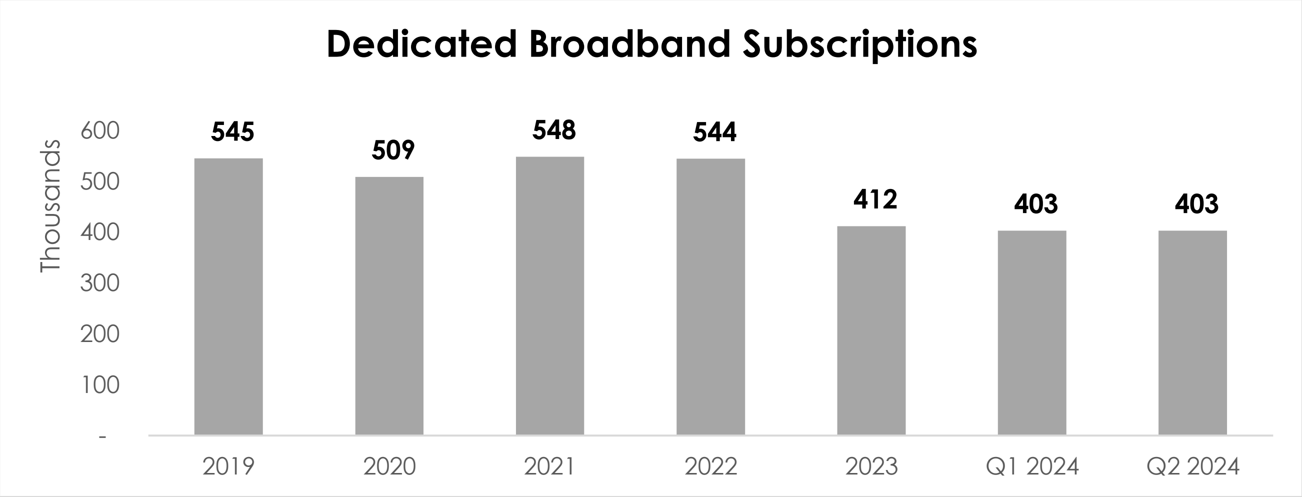
Broadband Services*

- The total broadband market shows a positive increase in terms of both mobile and fixed broadband services, with the penetration rate being **166%** as of **Q2 2024**.
- Looking at the evolution of the fiber broadband market, it shows significant growth since 2019, with subscriptions growing year on year to reach around **171,000** subscriptions as of Q2 2024. Penetration per household is **60%** as of Q2 2024.
- By Q2 2024, there were around **403,000** subscriptions for dedicated broadband services.

End of Q2 2024		
	2,611,135	**Broadband subscription**
	166%	**Penetration rate**





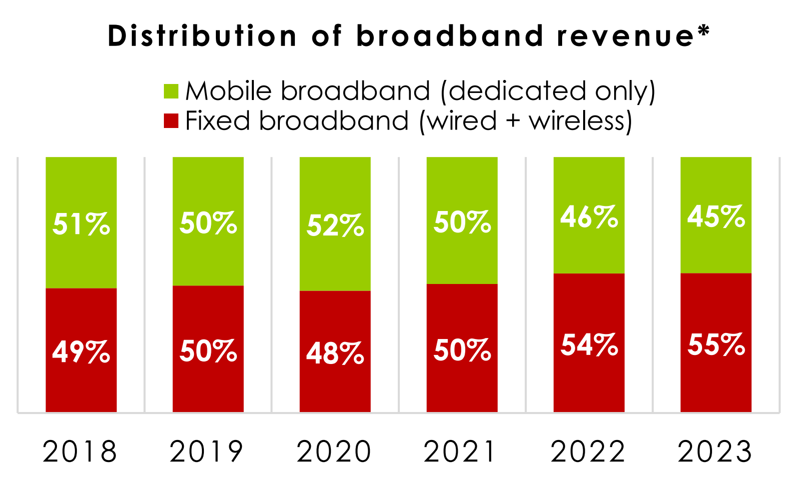


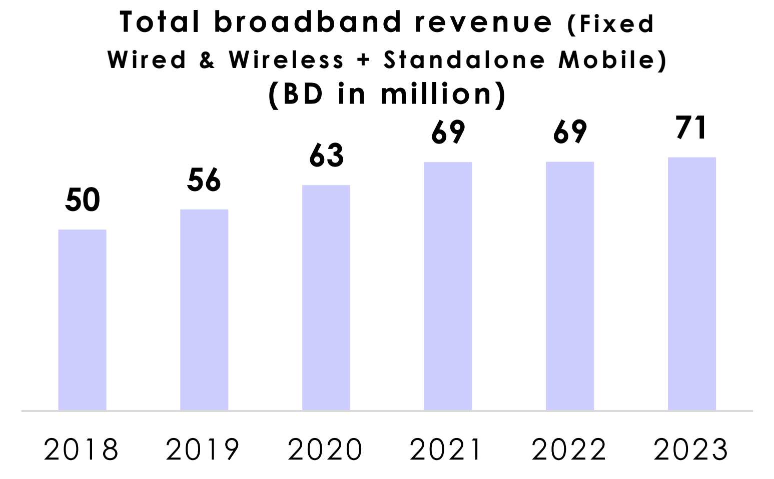
# of Households* By IGA	2019	2020	2021	2022	2023	2024
	239,750	245,983	257,268	257,268	285,024	285,024

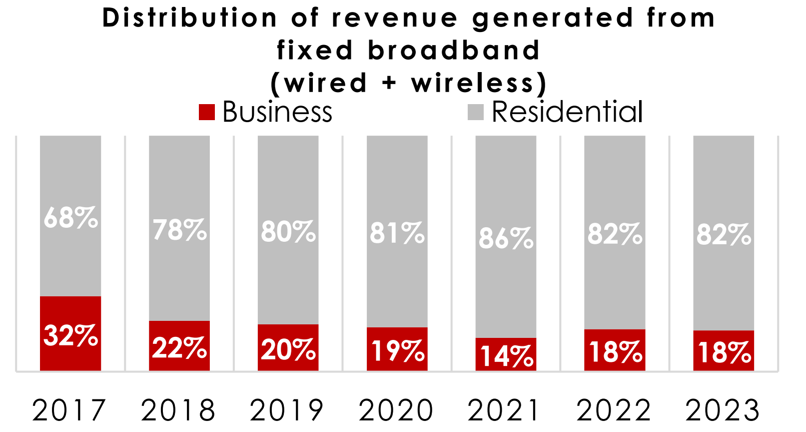
** Dedicated broadband data is currently under validation and therefore is subject to change.*
Fixed-wired subscriptions include DSL and fibre subscriptions.
** Drop is due to an operator activating voice service on its mobile broadband service, therefore the subscriptions shifted under mobile-voice.*

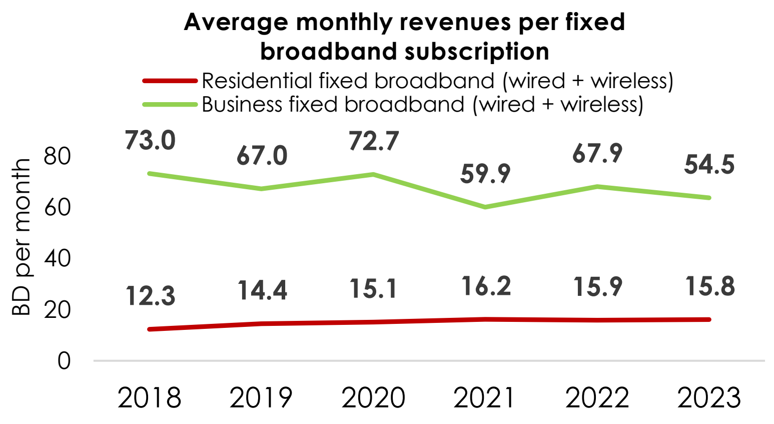
Broadband Revenue

- Broadband revenues increased (by 1.7%) to 70.5 million BD at the end of 2023, with a slight redistribution between residential and business fixed broadband revenue.
- Revenue generated from mobile broadband represented 45% of total broadband revenue in 2023 relative to 46% in 2022.
- Revenue generated from business fixed broadband represented 18% of total fixed broadband revenue in 2023.
- The average revenue per subscription for residential fixed broadband dropped by 0.3% over the last year, reaching BD 15.8 in 2023. Similarly, the average revenue per subscription for business broadband has dropped by 19.7% to reach BD 54.5 in 2023.









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

Broadband subscriptions and revenue market shares

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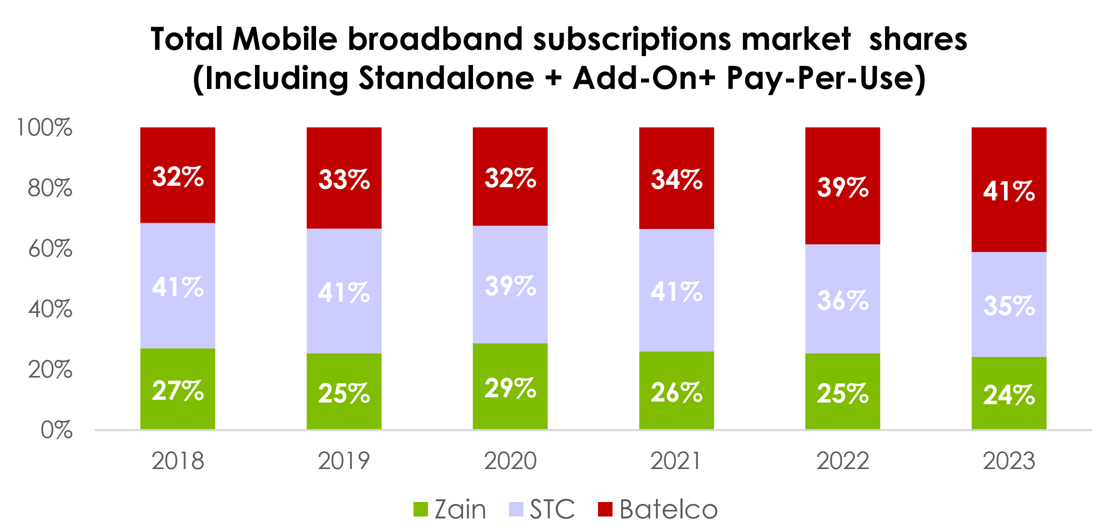
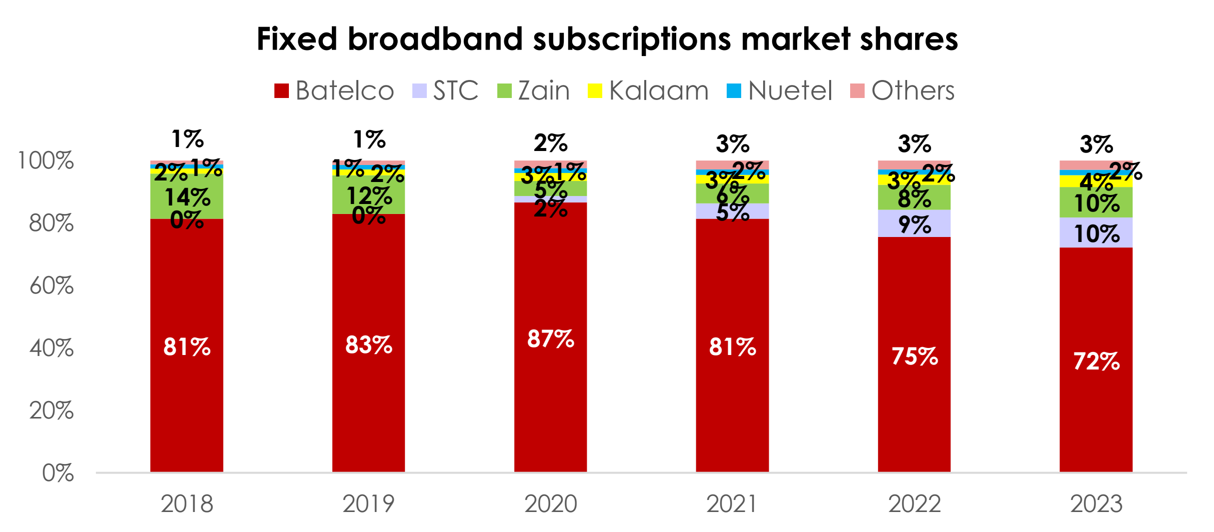
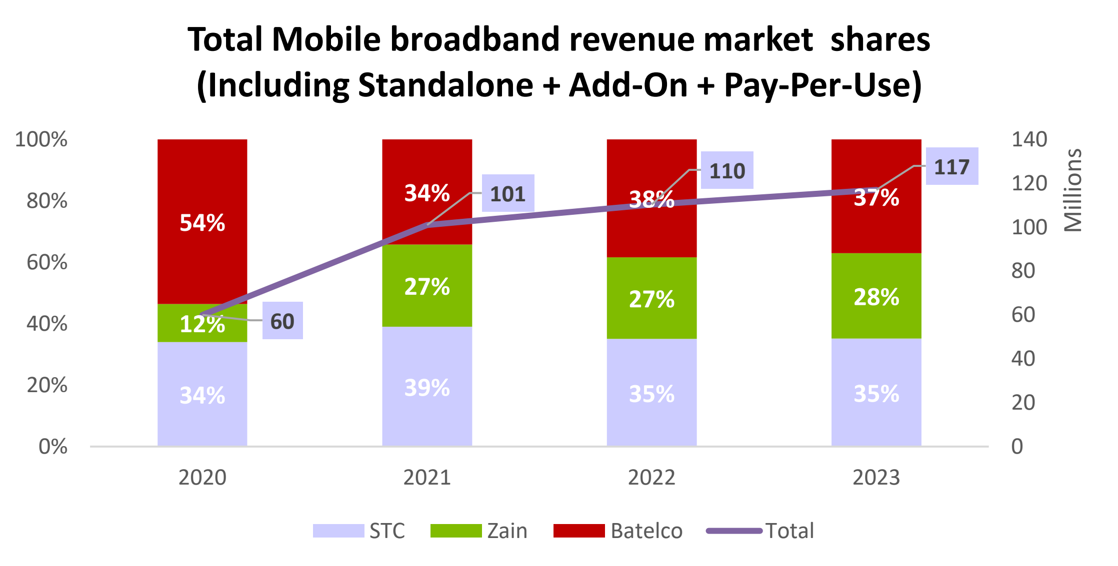
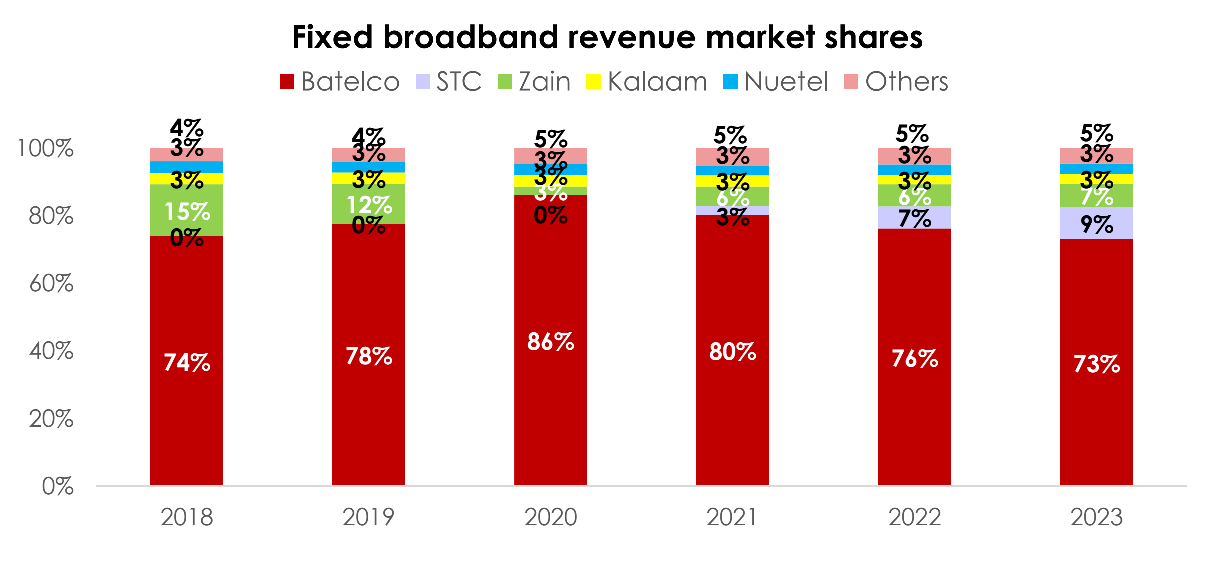
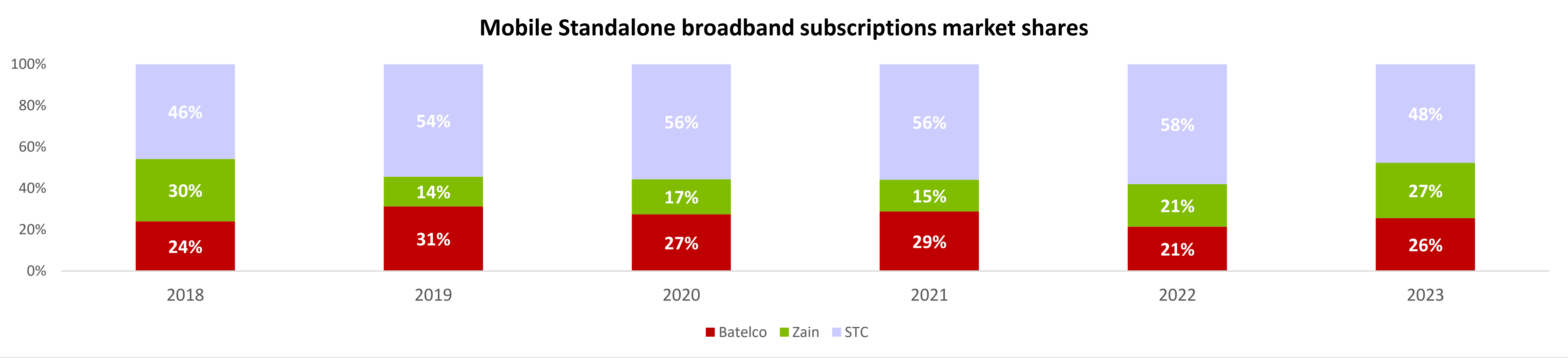


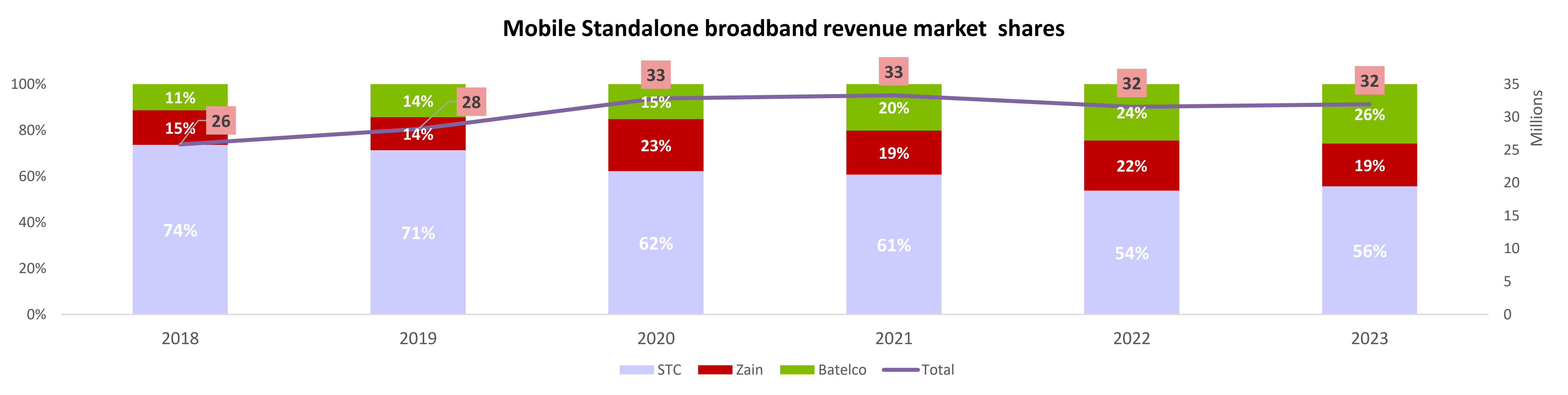






Broadband subscriptions and revenue market shares





Proportion of fibre Broadband Subscribers by Access Speed

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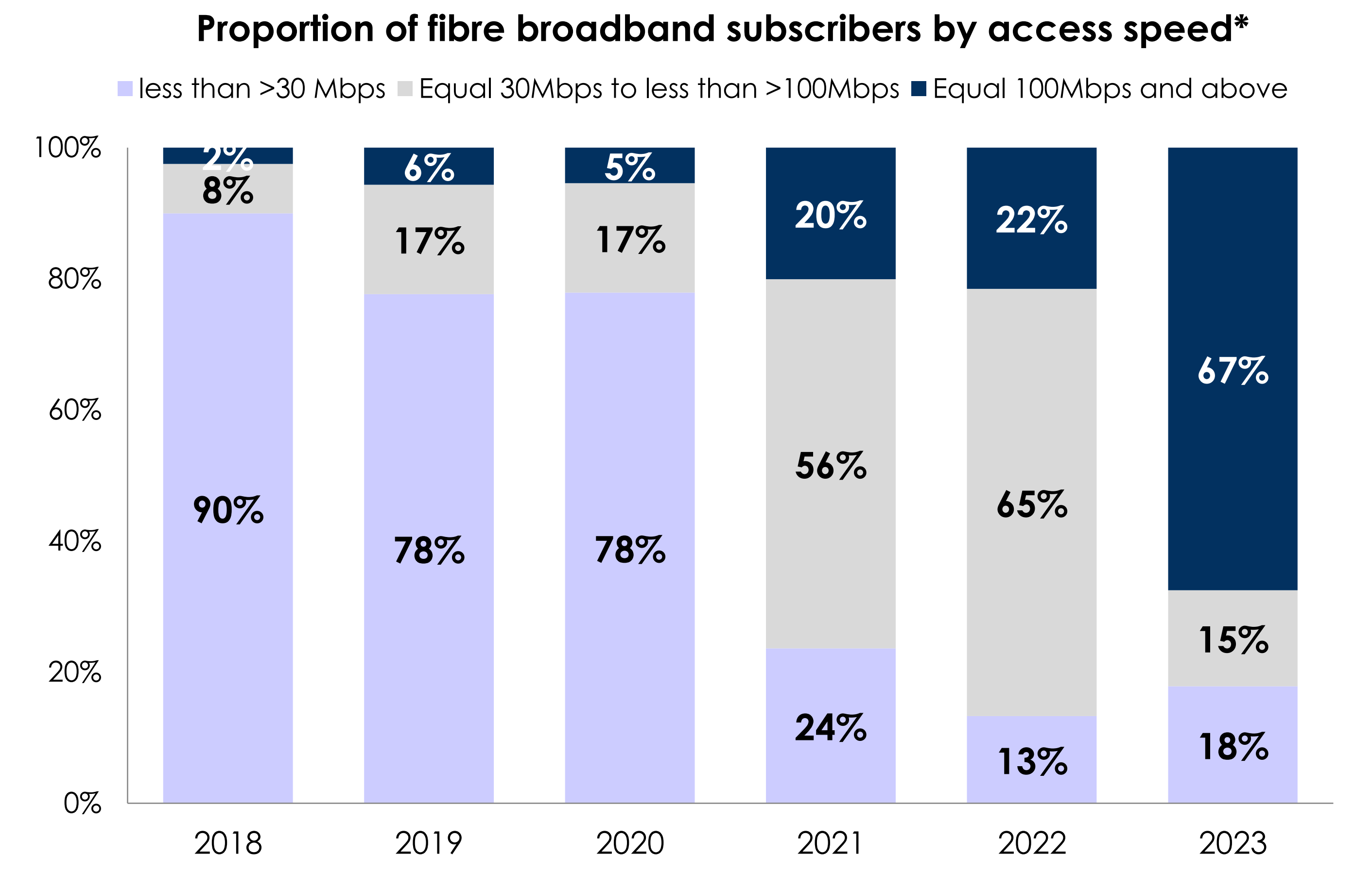
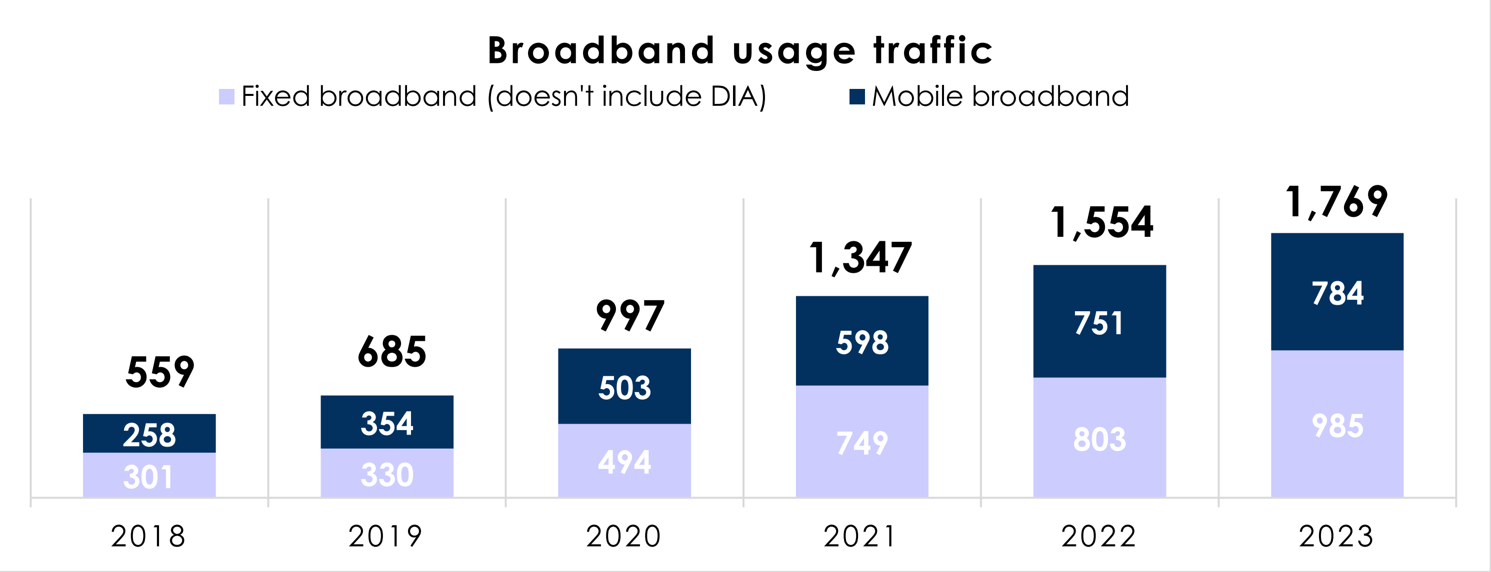
- In 2023, **67%** of subscribers opted for fibre broadband packages with speed equal to 100Mbps or more.
- In 2018, there was around **3,000** subscribers to speeds equaling to 100Mbps or more. In 2023 this number reached **around 117,000** subscribers.

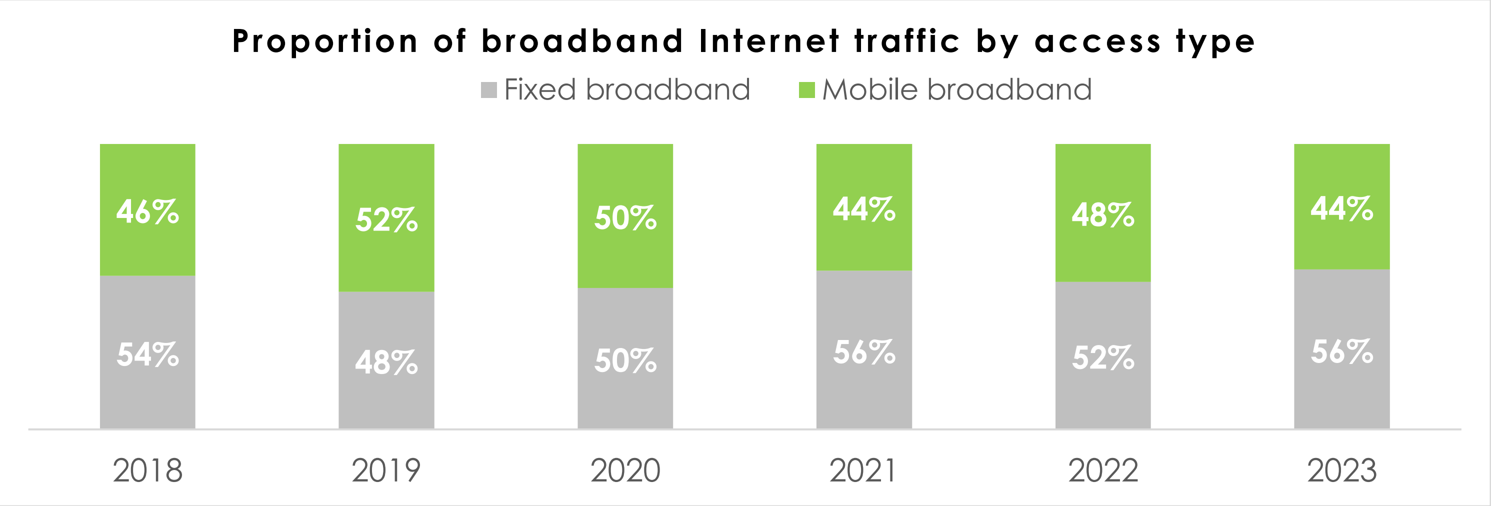


* Fibre broadband speeds equal to 100 Mbps and above

Broadband Usage

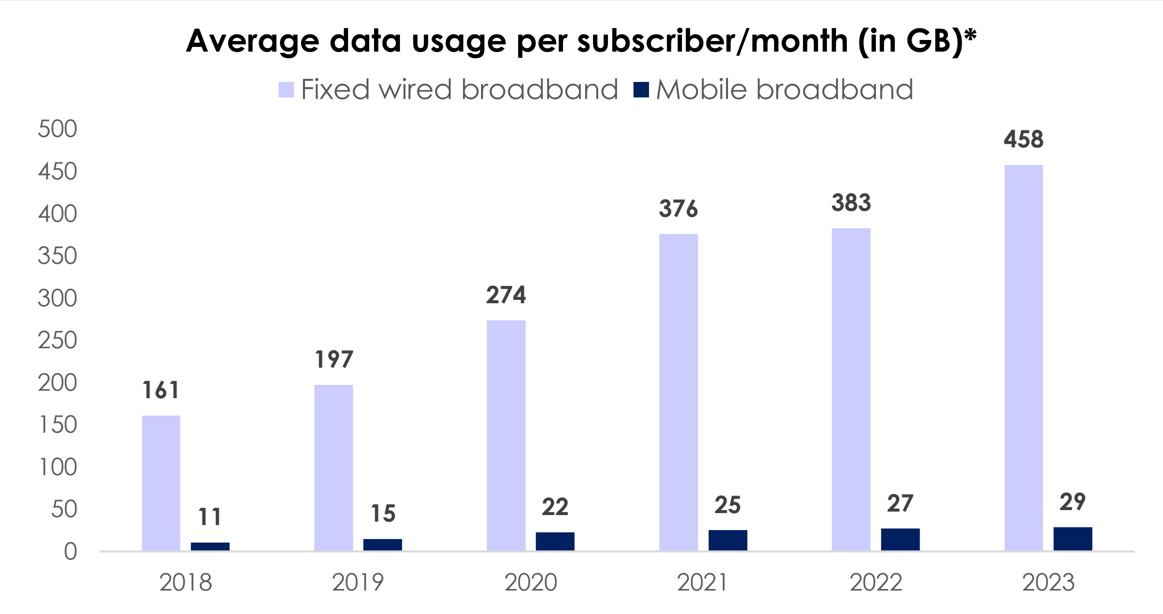


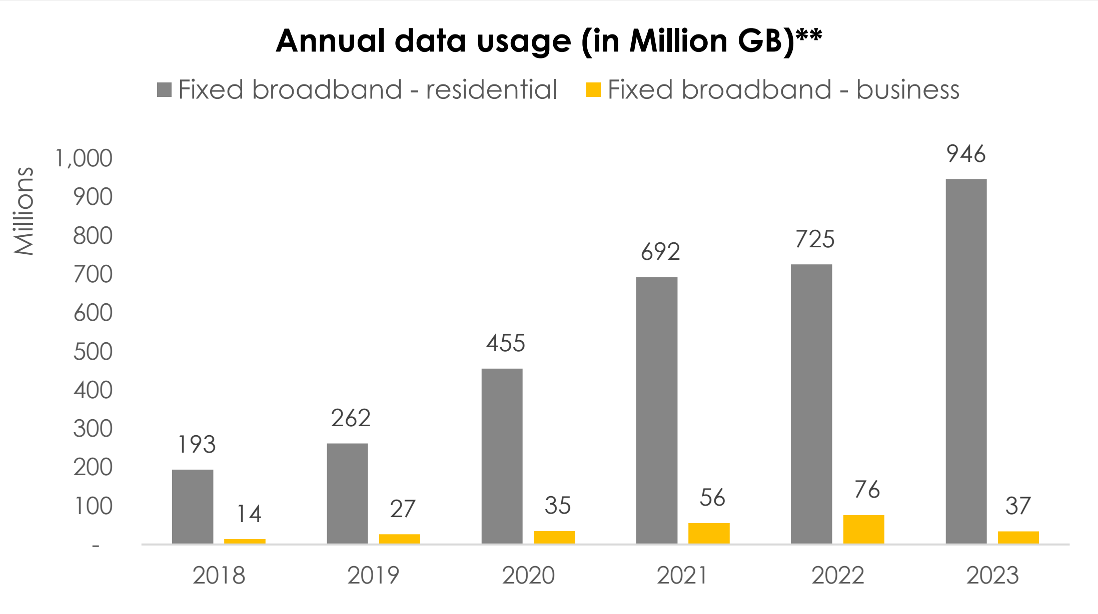
* *Includes data roaming*



- In 2023 total broadband usage reached 1,769 million GB compared to 559 million GB in 2018 (around Threefold increase between 2018 and 2022)
- Between 2018 and 2023, Mobile broadband usage increased Threefold.
- The traffic (in GB) generated from mobile broadband represented 44% of the total broadband usage in 2023, compared to 46% in 2018.
- Between 2022 and 2023, fixed broadband usage increased by 23% while mobile broadband usage dropped by 14%.

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.

FIXED LINE TELEPHONY SERVICES

Fixed Line Telephony Services

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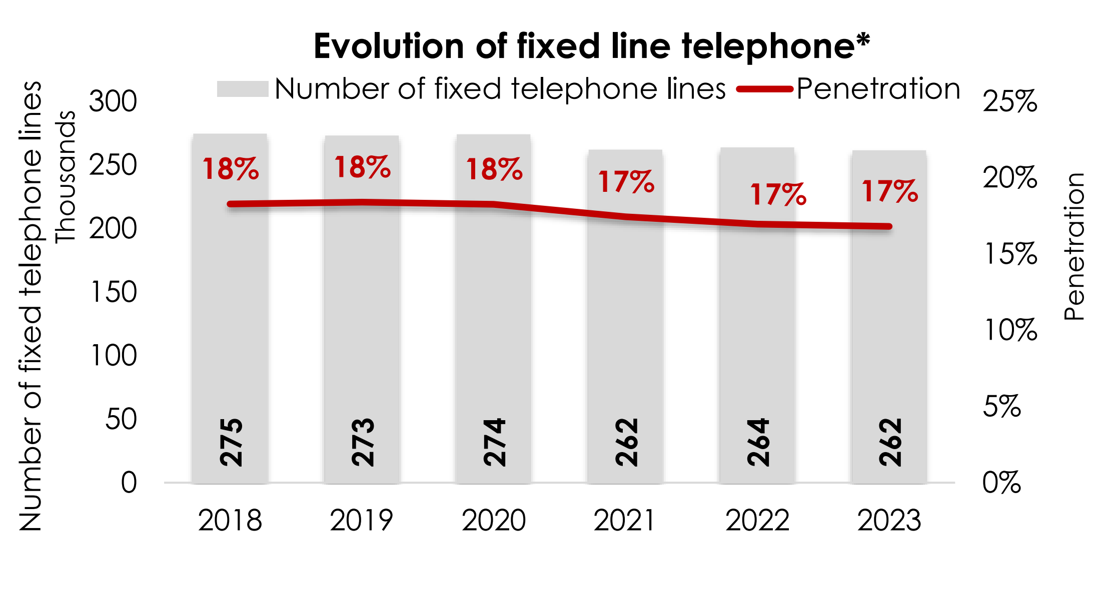


Number of	2018	2019	2020	2021	2022	2023
***ISDN	2,428	2,350	2,136	1,980	2,185	2,196
Basic-rate	958	867	657	653	665	583
Primary-rate	1,470	1,483	1,479	1,327	1,520	1,613

* 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:

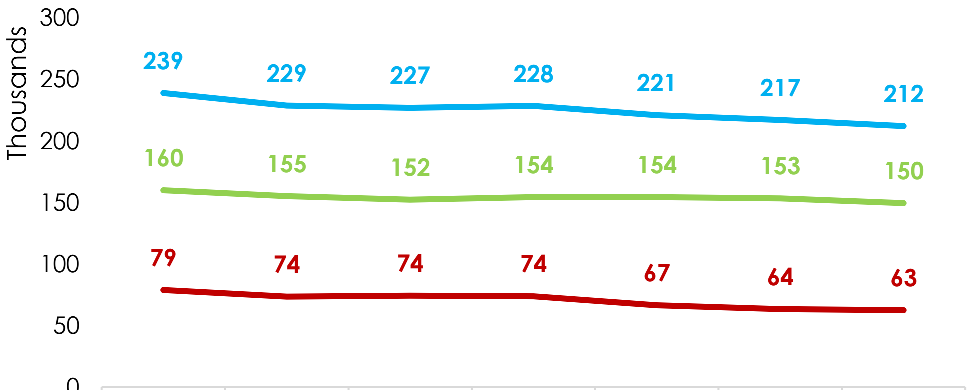
2022	1,577,182
2023	1,583,934

- There were **261,665** fixed-line telephony services (including ISDN) in operation at the end of 2023, compared to 263,913 fixed telephone lines in services at the end of 2022.
- Regarding ISDN service, Basic-rate ISDN has dropped by **12%** between 2022 & 2023 while Primary-rate ISDN service increased by **6%.**

2023		
	212,109	Number of total fixed lines
	14%	Penetration rate
	261,665	Number of fixed lines, including total ISDN lines
	17%	Penetration rate

Fixed Line Telephony Services By Customer Type

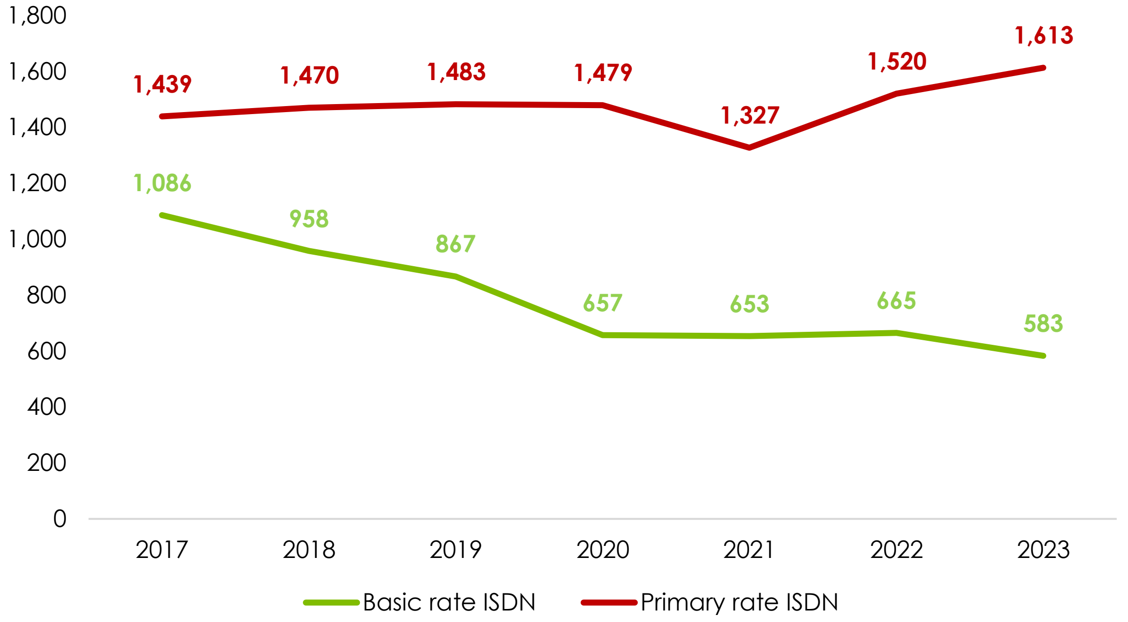
Number of fixed telephony lines by customer type (Excluding ISDN & CPS)



	2017	2018	2019	2020	2021	2022	2023
Residential	159,998	155,209	152,474	154,463	154,474	153,466	149,543
Business	78,971	73,508	74,424	73,959	66,571	63,517	62,566
Total	238,969	228,717	226,898	228,422	221,045	216,983	212,109

Residential Business Total

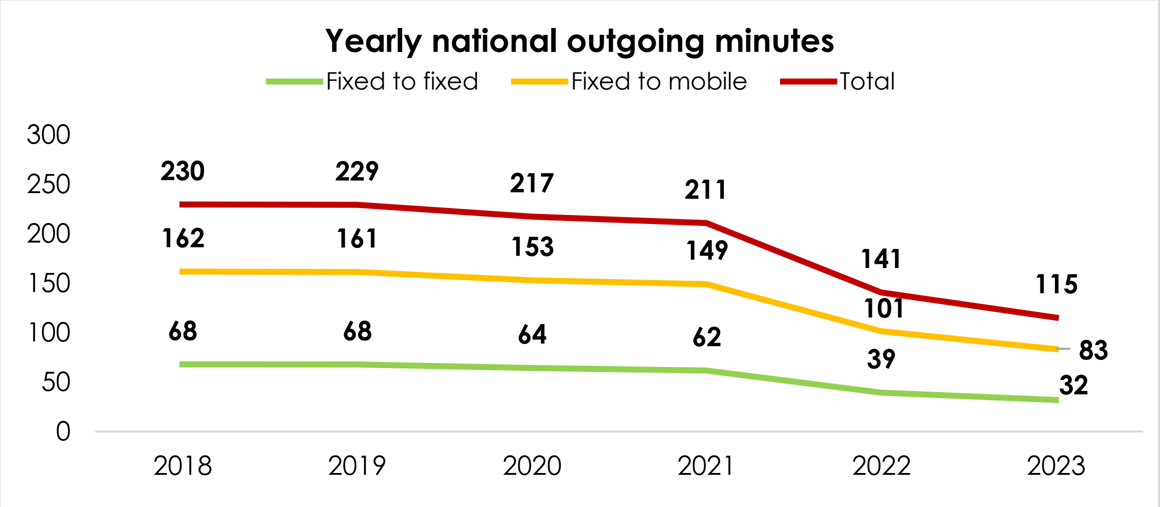
Number of ISDN subscriptions

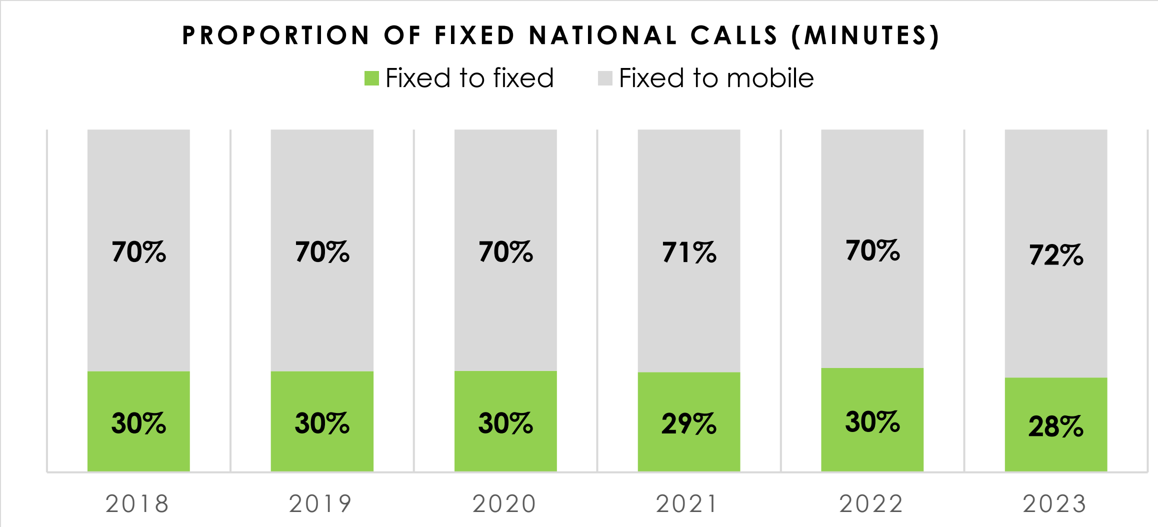


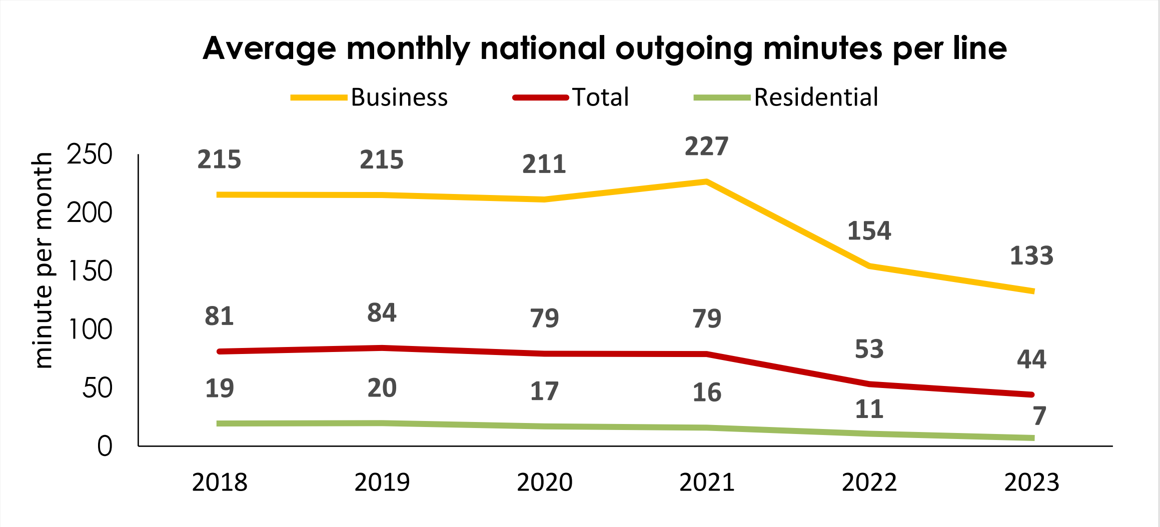
- Total number of fixed telephony lines has decreased by **2.2%.** The total number of residential lines dropped by **3%**, and the total number of business lines dropped by **1%** relative to 2022.
- By end of 2023, Basic rate ISDN dropped by **12%** while Primary rate ISDN increased by **6%.**
- Since 2017, Primary rate ISDN increased by **12%** while Basic rate ISDN dropped by **46%** relative to 2023.

Fixed Line Telephony Outgoing Minutes

- The outgoing fixed call minutes fell by around **18%** from 141 to 115 million minutes between 2022 and 2023 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 35% while average minutes for business fixed lines dropped by around 17%.



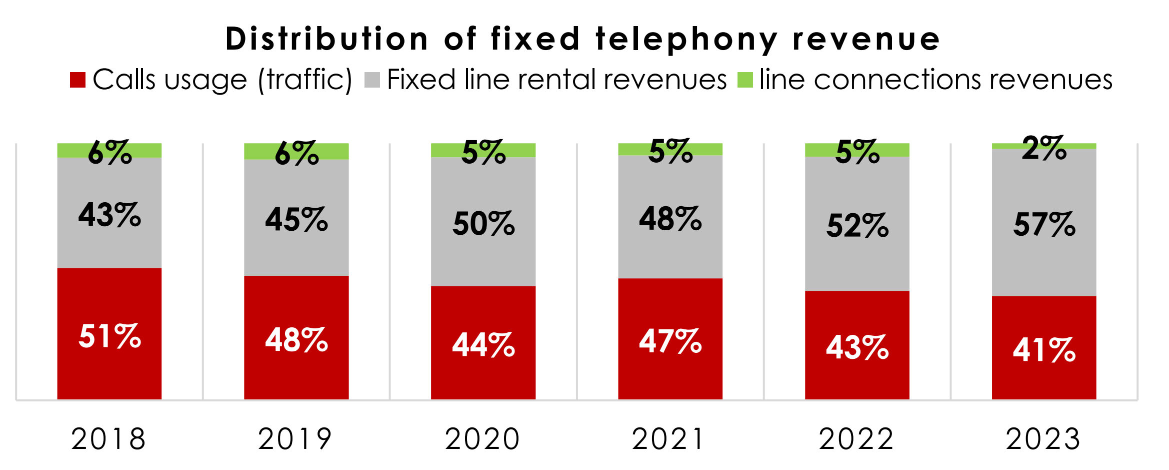


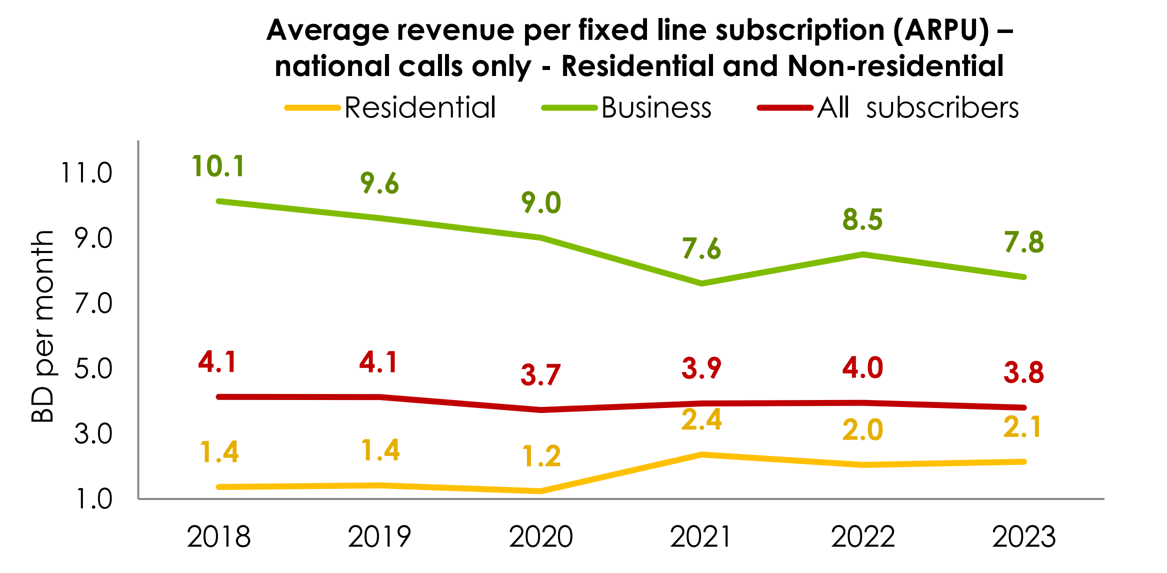


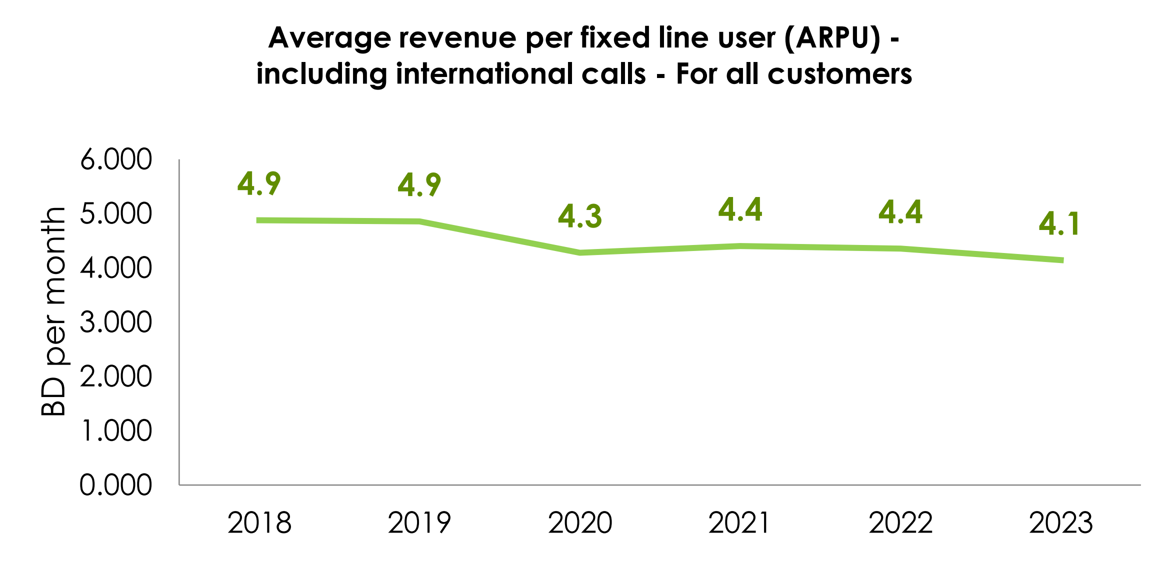
Fixed Line Telephony Service Revenue

- Fixed line revenue dropped between 2022 & 2023 by **6%** from **BHD10.5 million** to **BHD9.8 million**.

- The average monthly revenue per user for national calls only slightly dropped to **3.8** while the average revenue including international calls slightly dropped to **4.1**.







* 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

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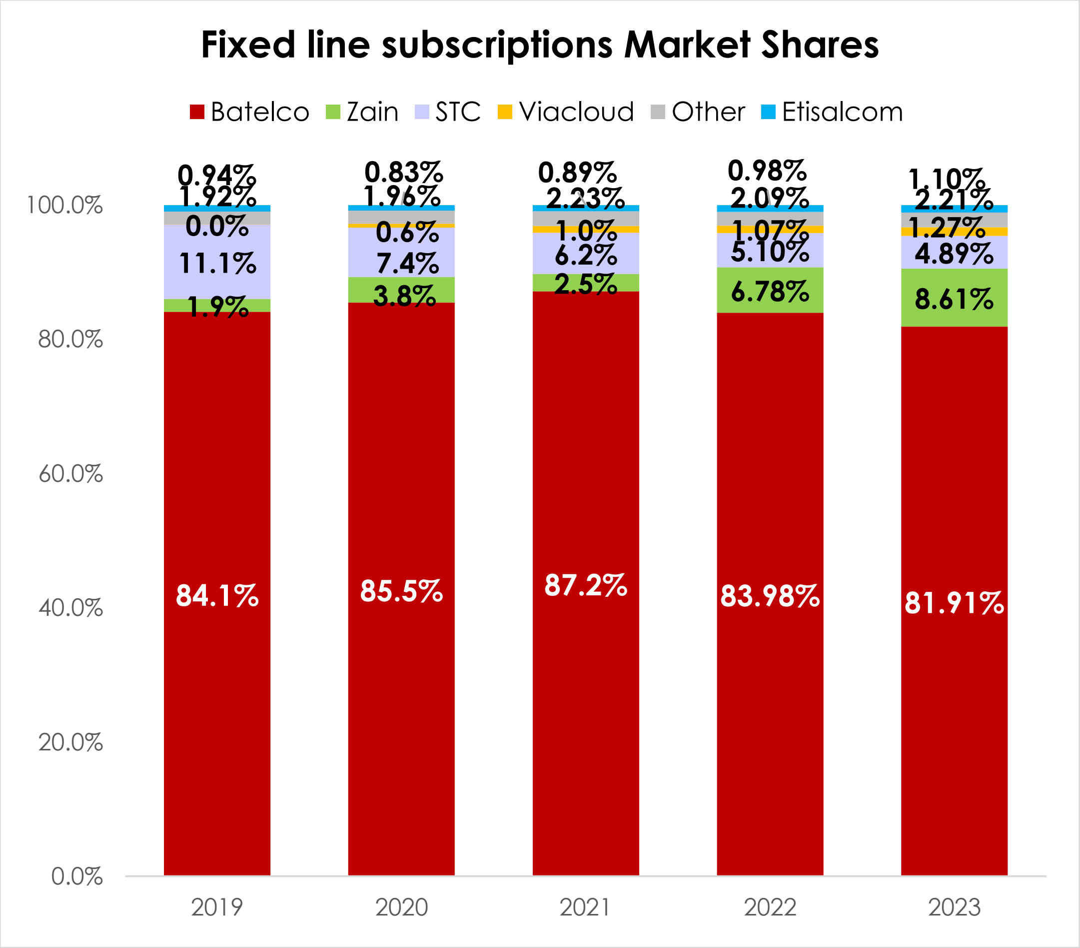
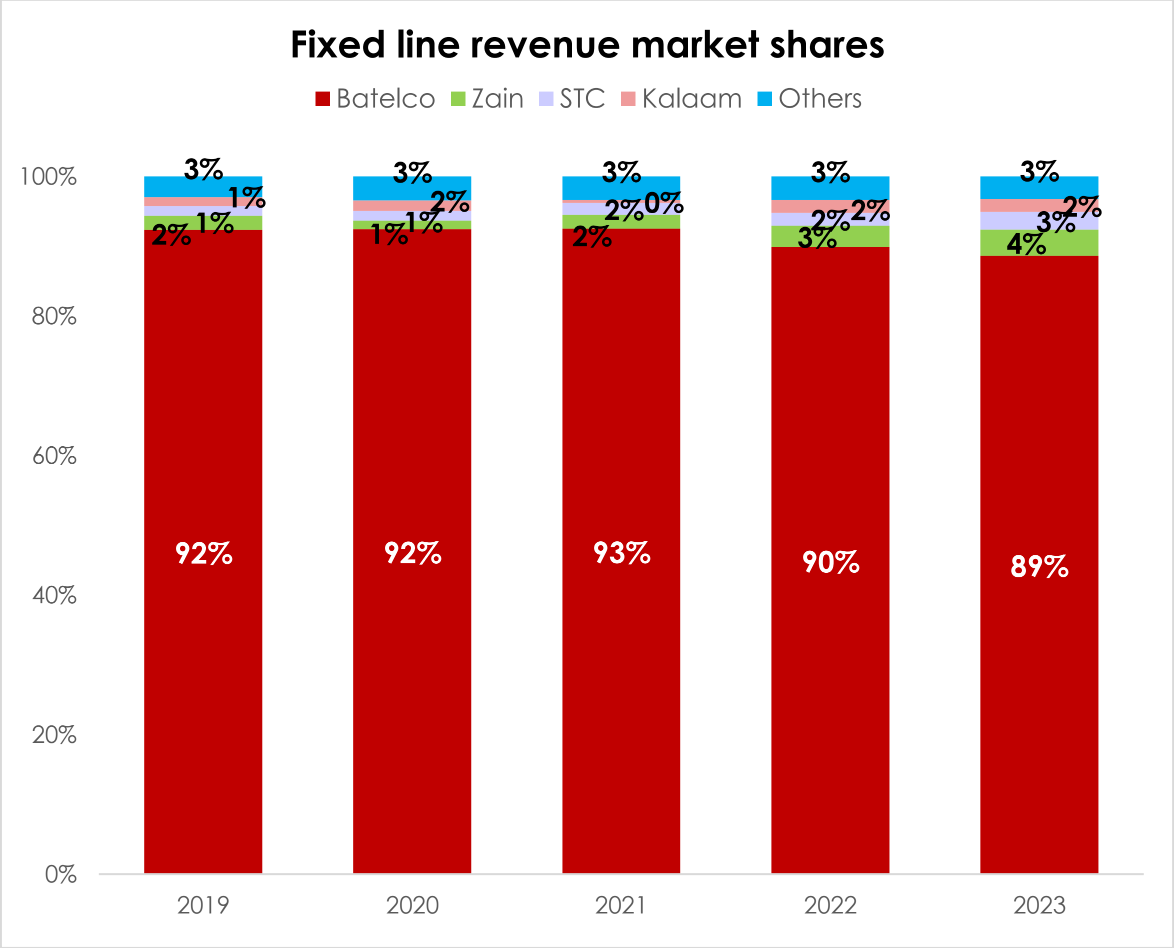


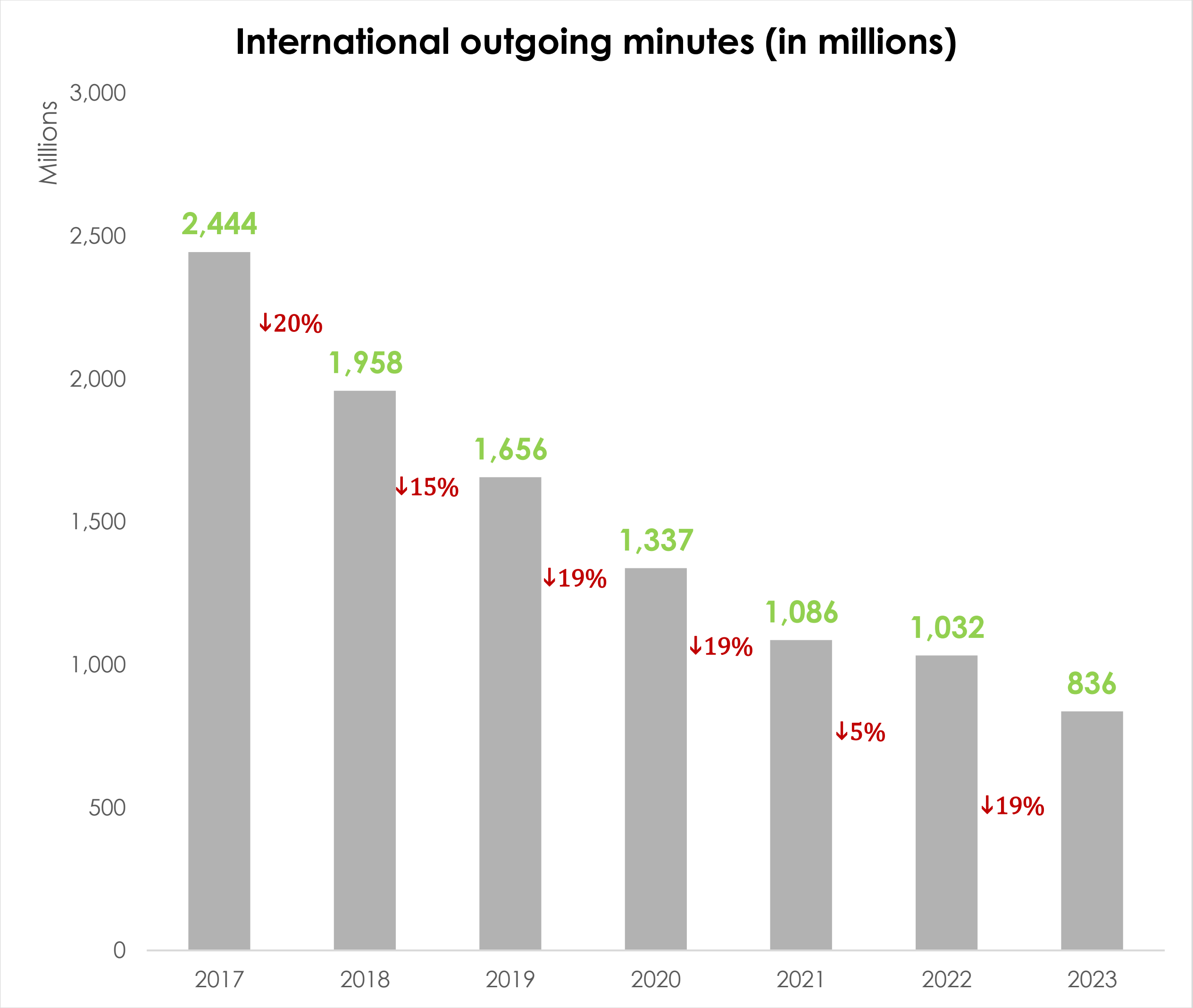


INTERNATIONAL OUTGOING MINUTES

International Outgoing Minutes

- During 2023 international outgoing minutes continued to drop, reaching **836** million minutes compared to 1,032 million minutes in 2022.
- The drop in traditional voice services could be attributed to change in consumer behavior.

2023	**836,430,826**	
	98%	of calls originated from mobile
	90%	of outgoing traffic went to South Asian countries



International Outgoing Minutes

- International outgoing minutes dropped by **19%** between 2022-2023 and International calls revenue also decreased by **15%** over the same period.
- This decline indicates a change in the overall subscribers' behavior and usage.

International outgoing minutes

Minutes (in millions)	2018	2019	2020	2021	2022	2023	% Change 2022-2023
GCC	58.7	53.1	40.2	37.2	36.2	32.3	**-11%**
Zone 2	1,805	1,529	1,236	993.9	943.9	754.7	**-20%**
Zone 3	32.9	28.7	26.3	26.1	23.1	18.5	**-20%**
Zone 4	58.6	43.8	34	28.7	28.6	30.7	**8%**
Total	**1,995**	**1,655**	**1,337**	**1,086**	**1,032**	**836**	**-19%**

International calls revenue

Revenues (BD in millions)	2018	2019	2020	2021	2022	2023	% Change 2022-2023
GCC	4.48	3.86	3.25	3.1	2.9	2.6	**-8%**
Zone 2	12.2	8.6	6.85	5.8	5.1	4.2	**-18%**
Zone 3	1.93	1.67	1.45	1.35	1.1	0.8	**-27%**
Zone 4	3.97	2.9	2.36	2	1.8	1.5	**-13%**
Total	**22.6**	**17.06**	**13.9**	**12.26**	**10.96**	**9.3**	**-15%**

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

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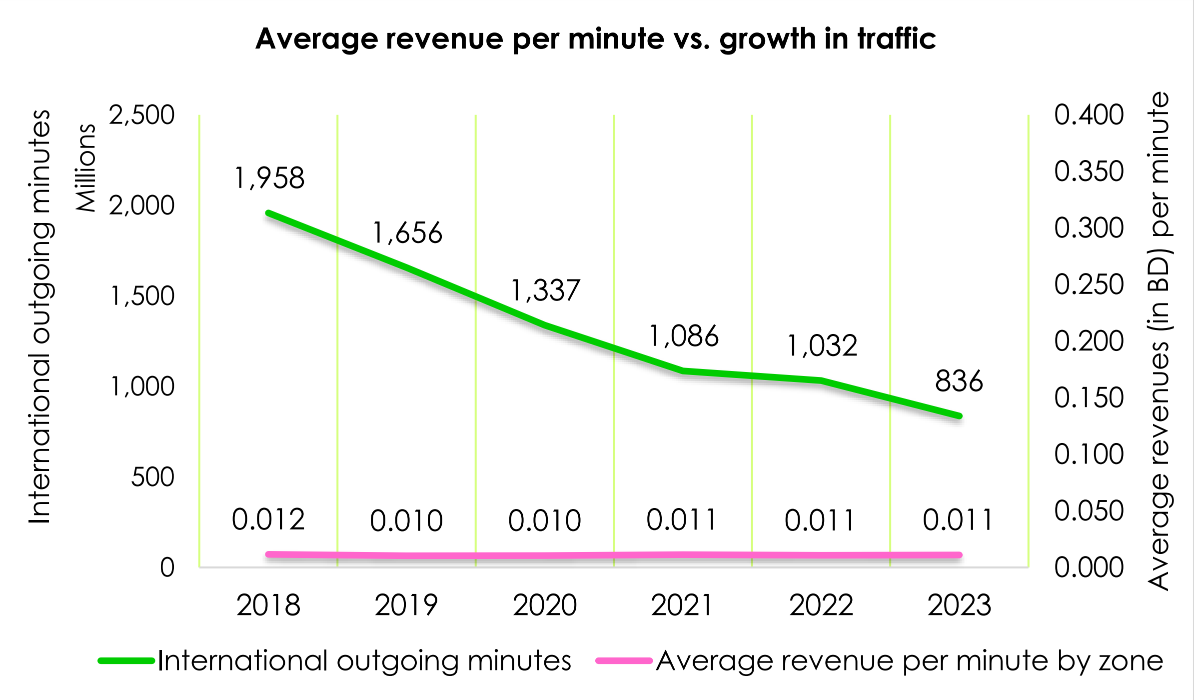
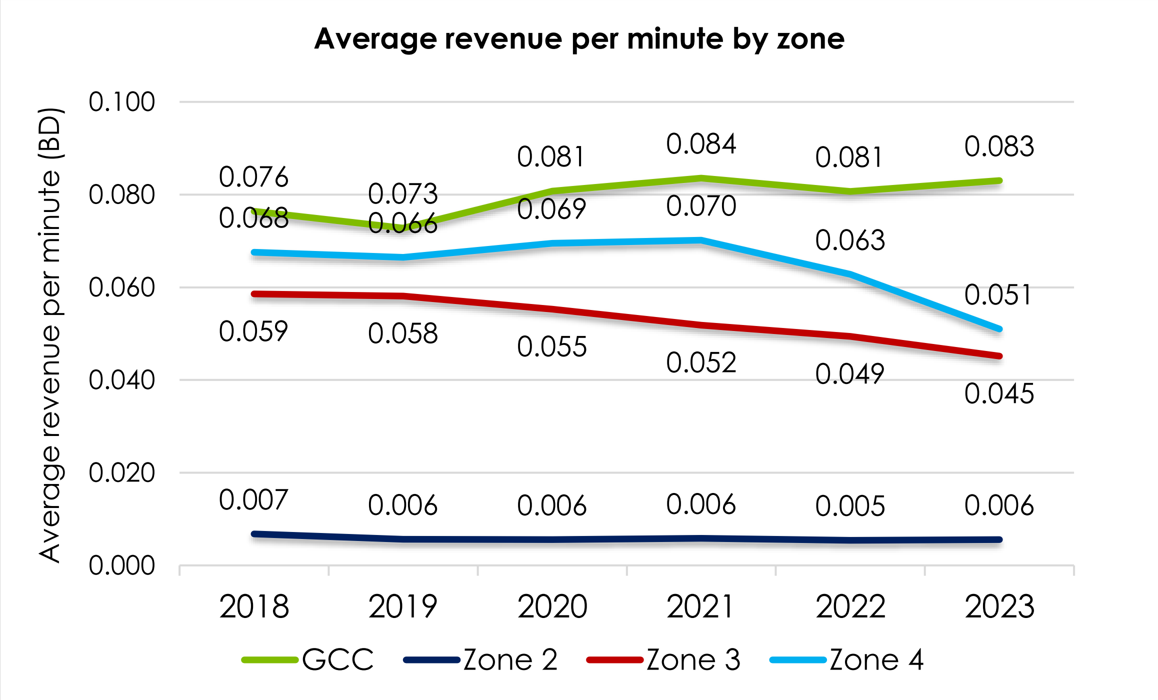
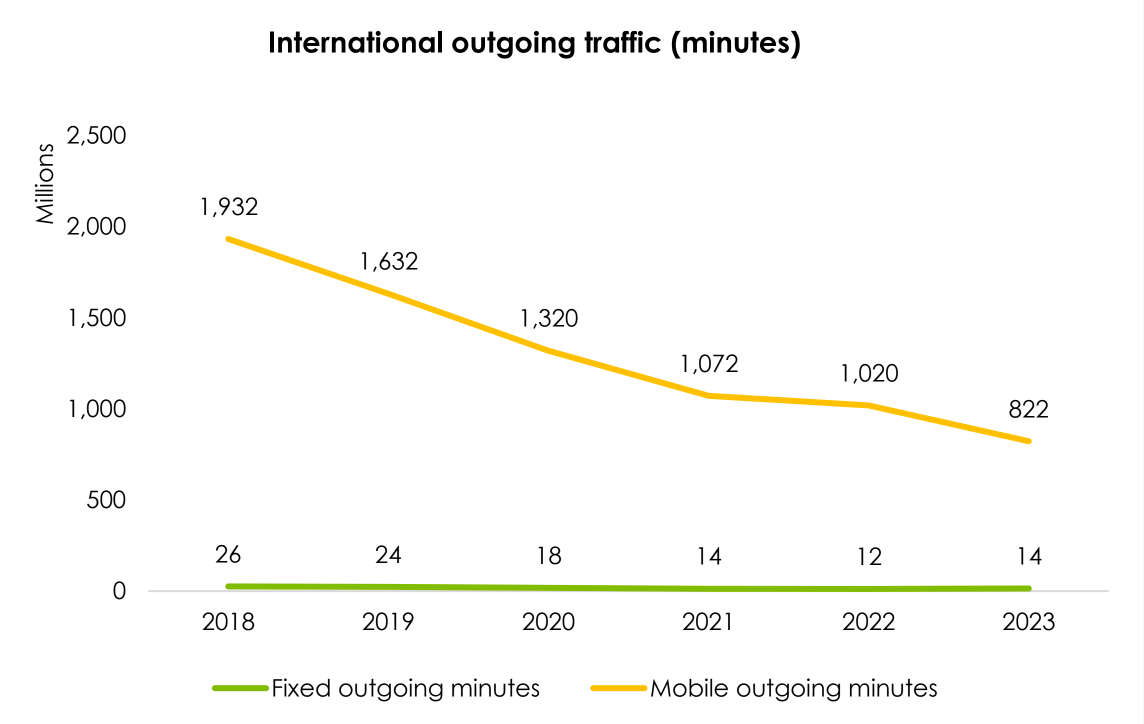
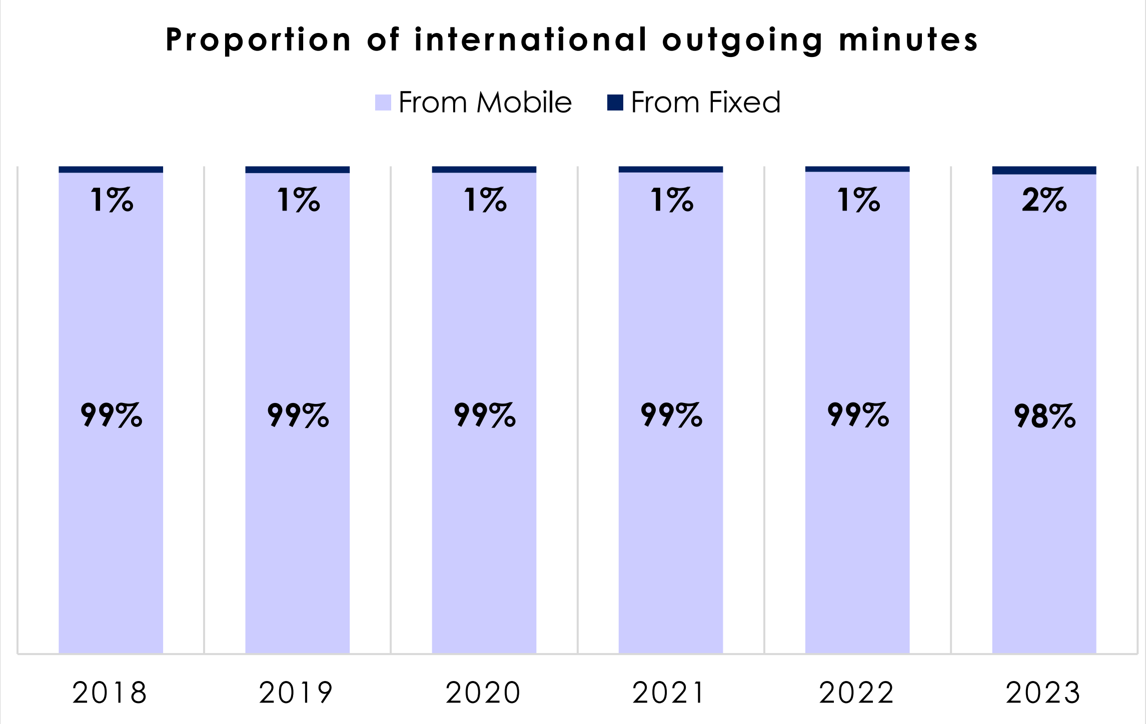
- The average revenue per minute for international calls has fallen by almost **4%** from 2018 to 2023.
- Despite the substantial decrease in traffic, the overall average revenue per minute remained stable at 0.011.
- In comparison to 2022, average revenue per minute dropped altogether in 2023. The highest drop was mainly from Zone 4 countries (-18.7% drop).
- By end of 2023, the total international voice traffic in minutes was **836,430,826** with revenue of **BD 9,307,419**.





International Outgoing Minutes*





- In 2023, International outgoing minutes originated from mobile dropped by 19% compared to 2022, while minutes originated from fixed increased by 17% over the same period.
- International outgoing minutes originated on mobile represented 98% of the total international outgoing minutes in 2023.

**Minutes including prepaid calling card traffic.*

International Traffic vs. Revenues by Destination Called

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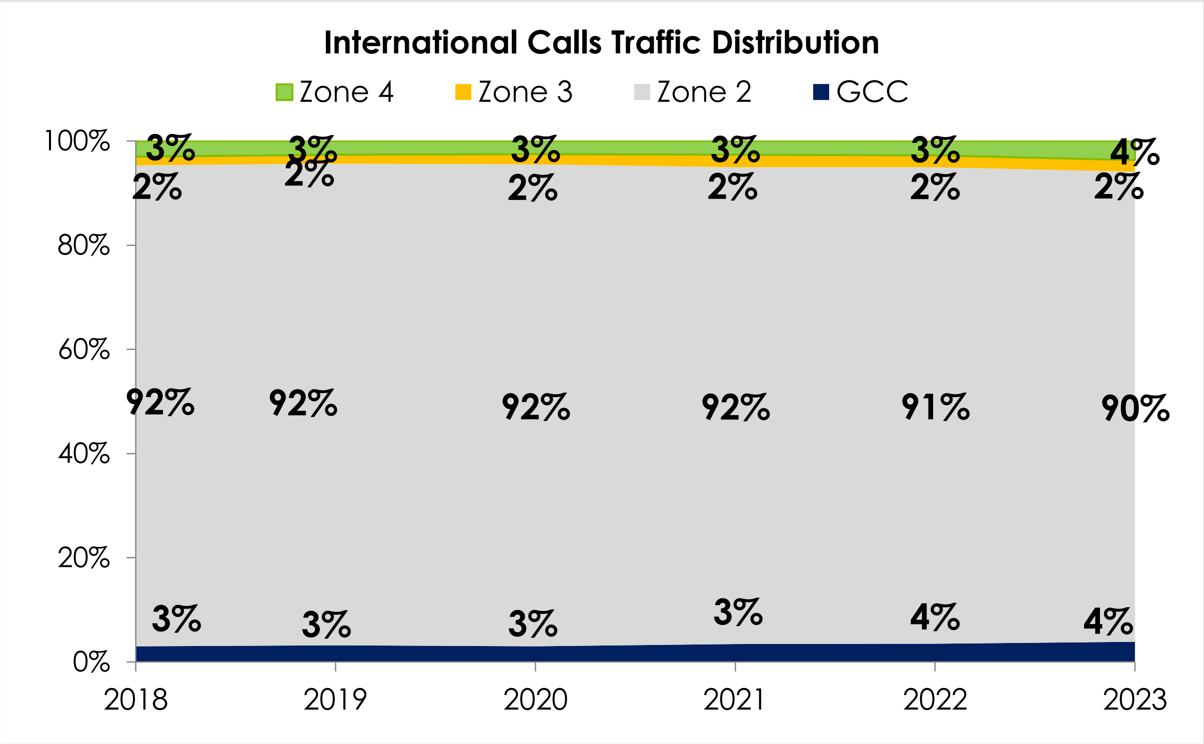
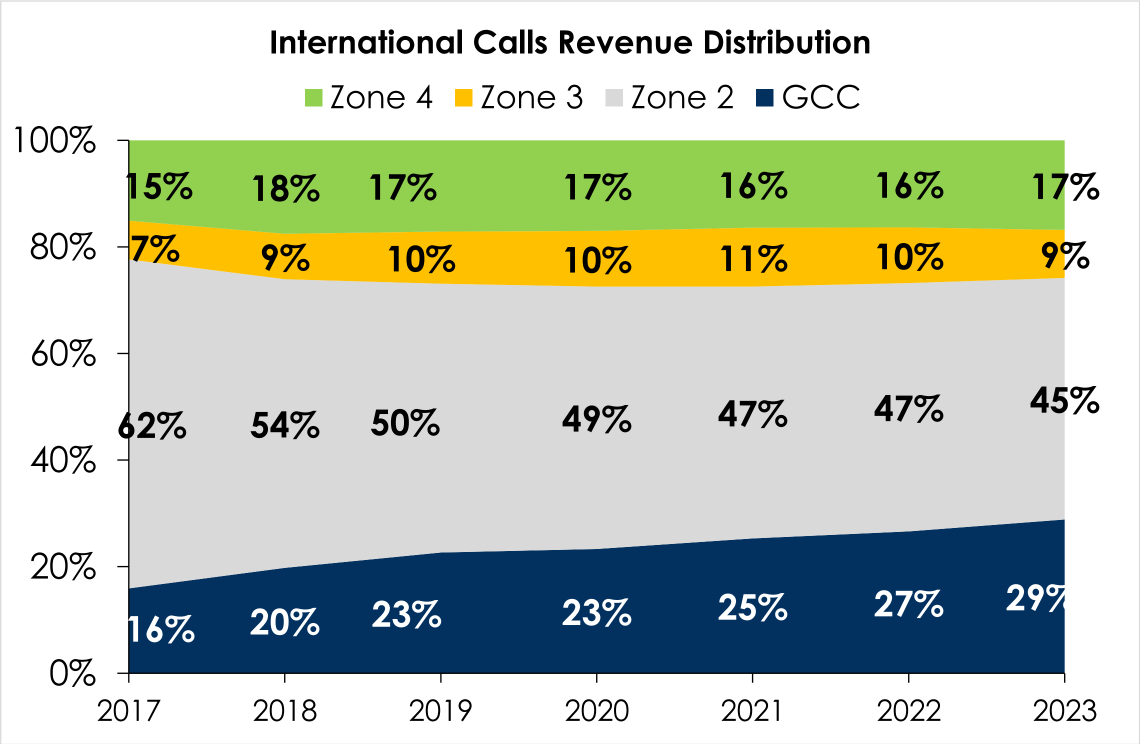
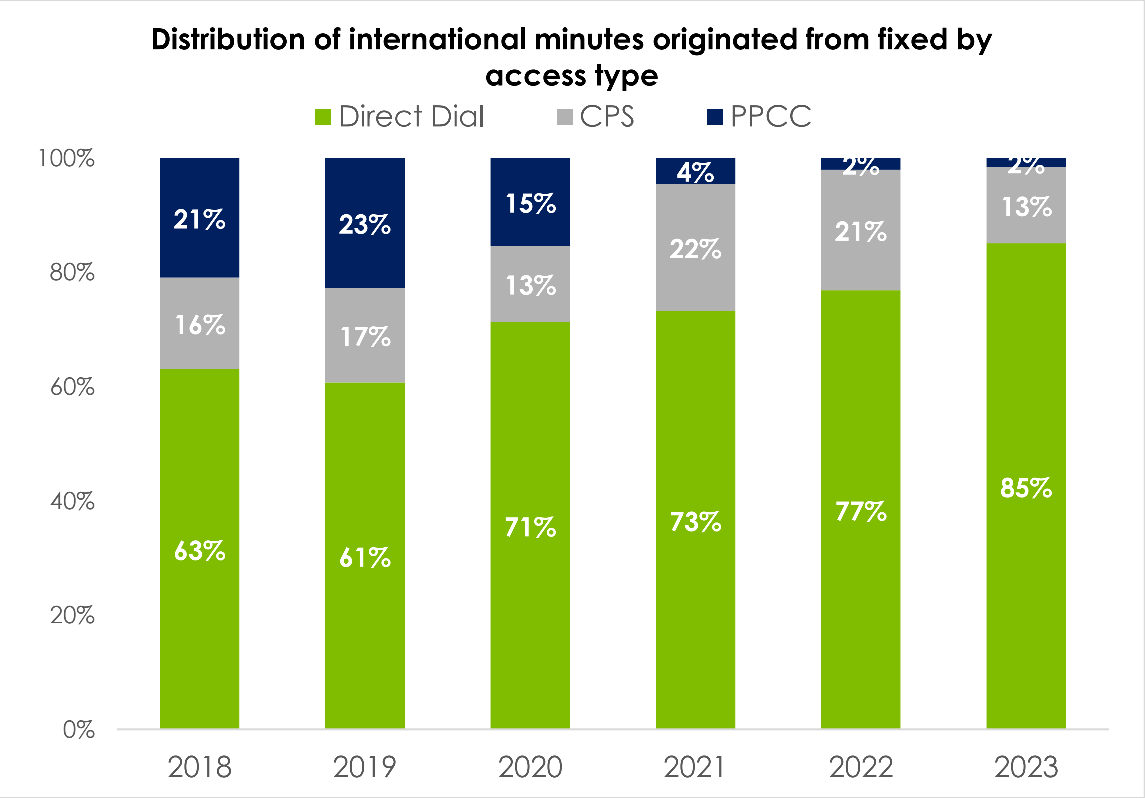


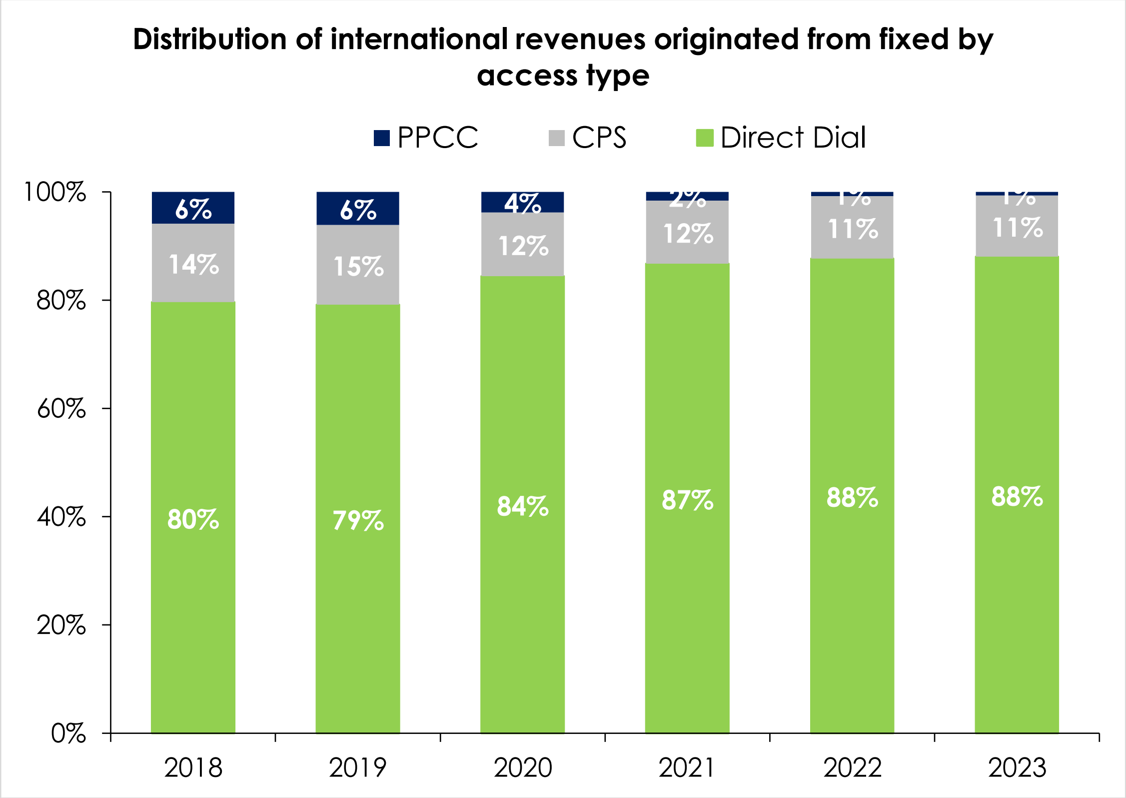


- **90% of total international calls minutes were made to Zone 2 (South Asian countries) in 2023.**
- **45% of international revenues were generated from calls to Zone 2 (South Asian countries) in 2023.**

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

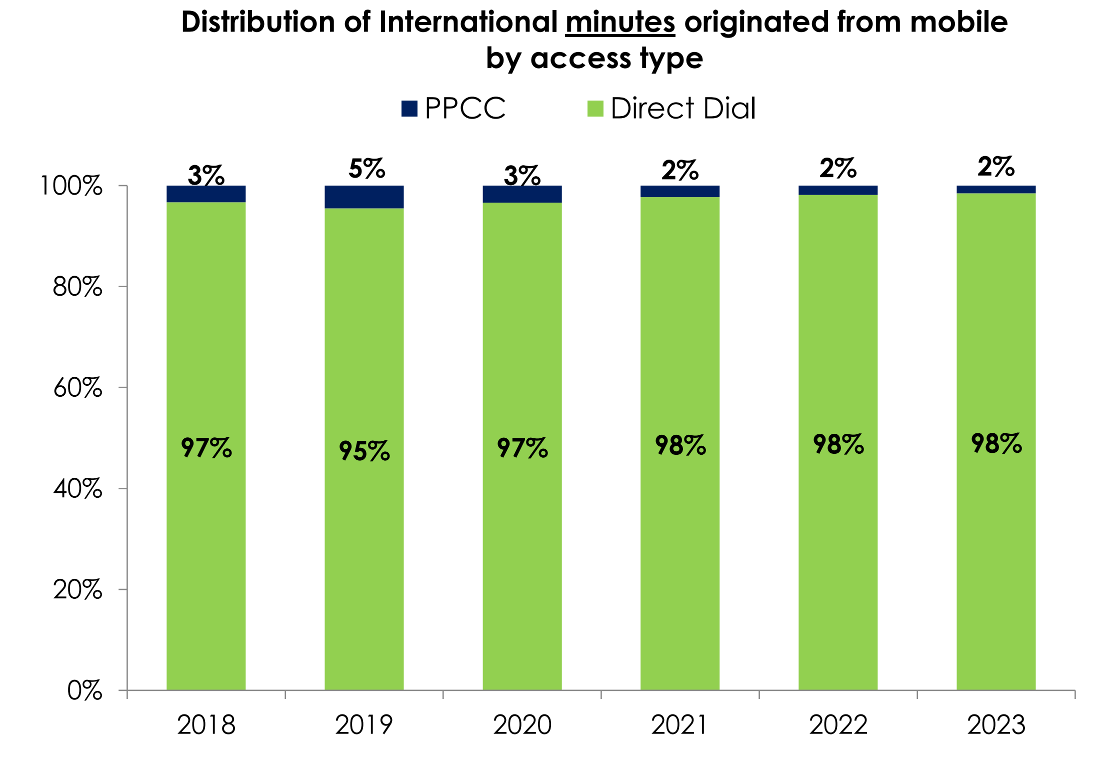
Distribution of International Outgoing Minutes/Revenues by Access Type - Fixed Telephony

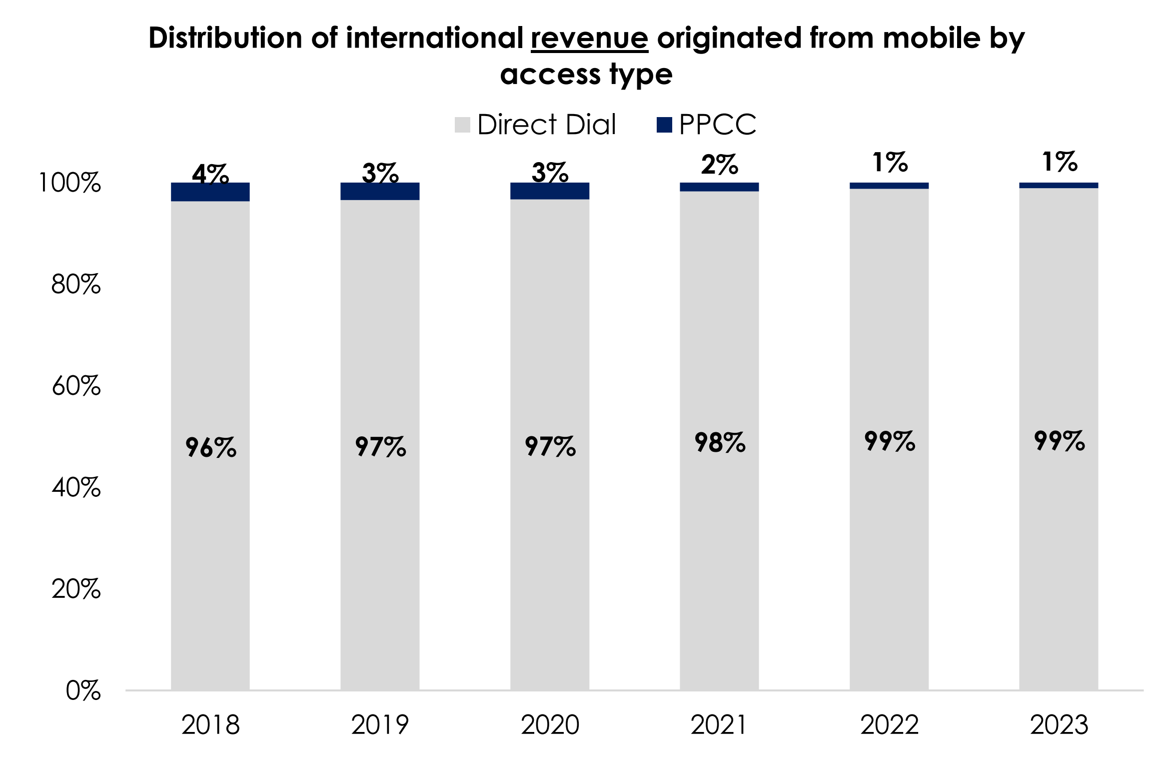




- PPCC represents 2% of total fixed originated minutes as of 2023. Its revenue represents 1% of total fixed telephony traffic revenue.
- Direct dial's fixed originated minutes represent 85% of total minutes and represents 88% of total revenue.

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

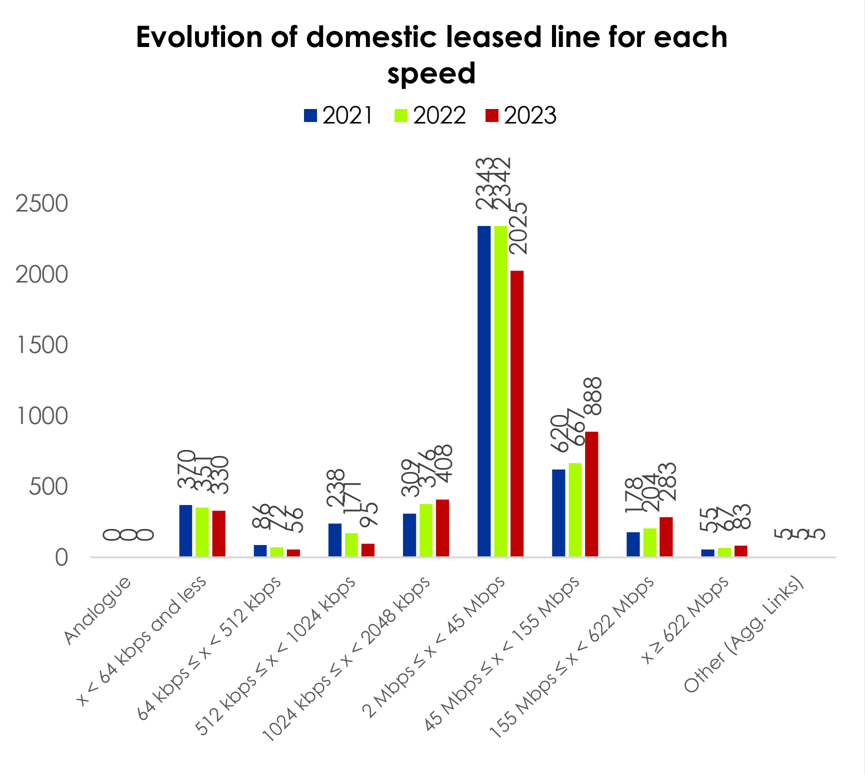


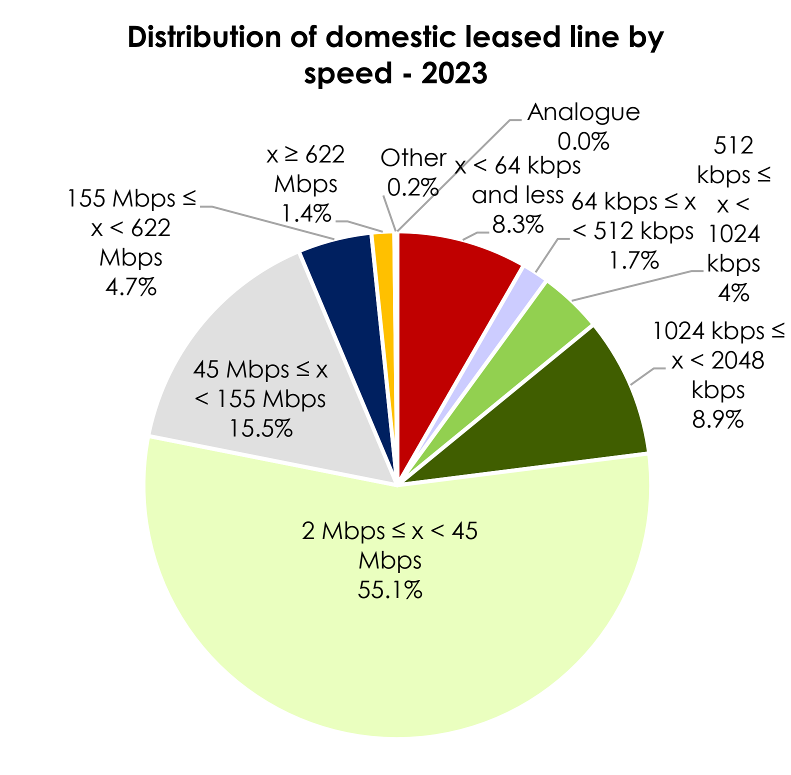


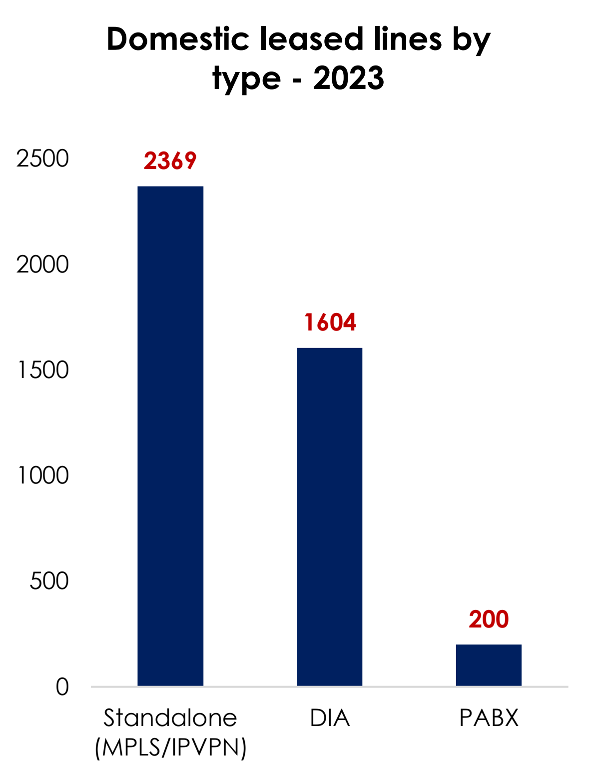
- In 2023, international direct dial traffic originated from mobile represented 98% of the total traffic. The pricing of mobile-originated international direct dial services has become even more competitive in recent years.
- Direct dial represented 99% of total revenues originated from mobile.

LEASED LINES

Domestic Leased Lines



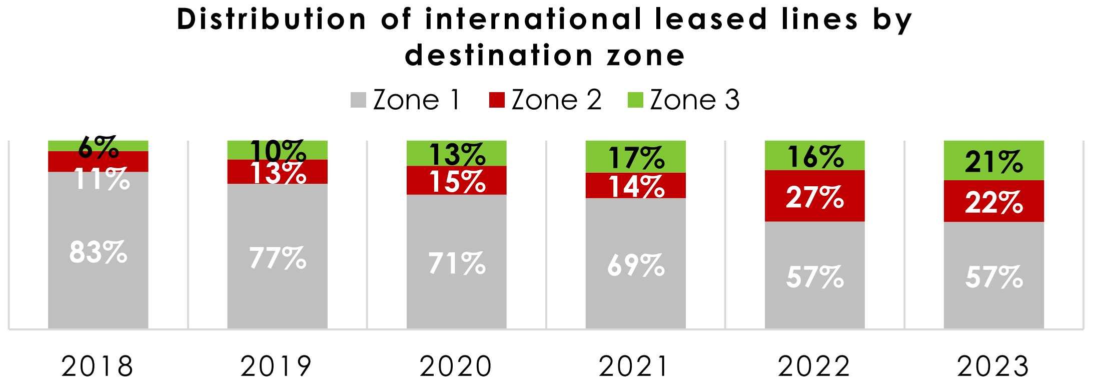




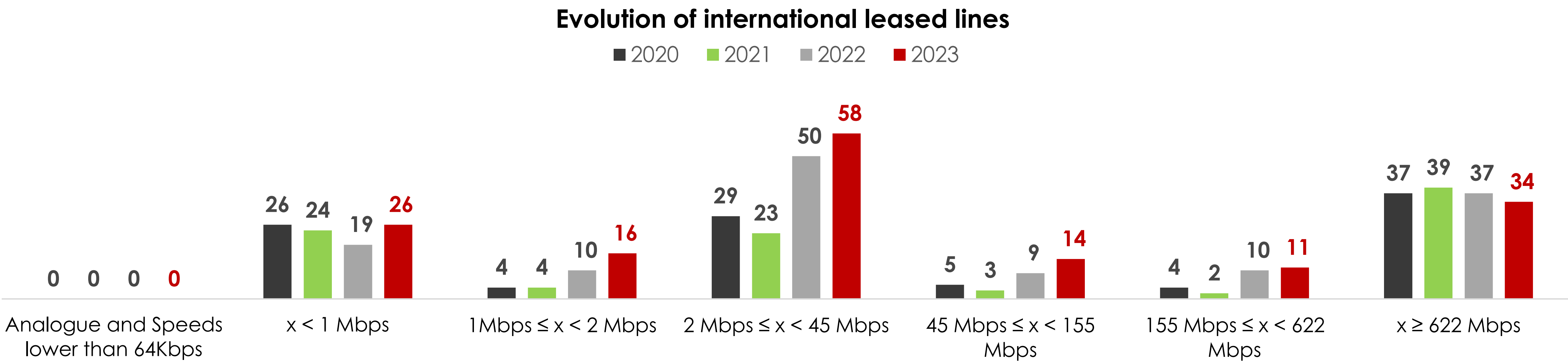
- The total number of domestic leased dropped from 4,255 lines in 2022 to **4,173** in 2023.
- The continuous drop in slower speed services is a result of migration to higher speed packages.

International Leased Lines

- Total Number of International leased lines increased from 135 lines at the end of 2022 to **159** lines in 2023.
- **26%** of international leased lines are for speeds less than 2Mbps, while **74%** are for speeds more than 2Mbps.
- **57%** of international leased lines are in the GCC area.



Zone 1 (GCC)
Zone 2 (rest of Middle East, Turkey, Cyprus, Greece, India, Pakistan, South Africa)
Zone 3 (Continental USA, Canada, Europe, SE Asia)



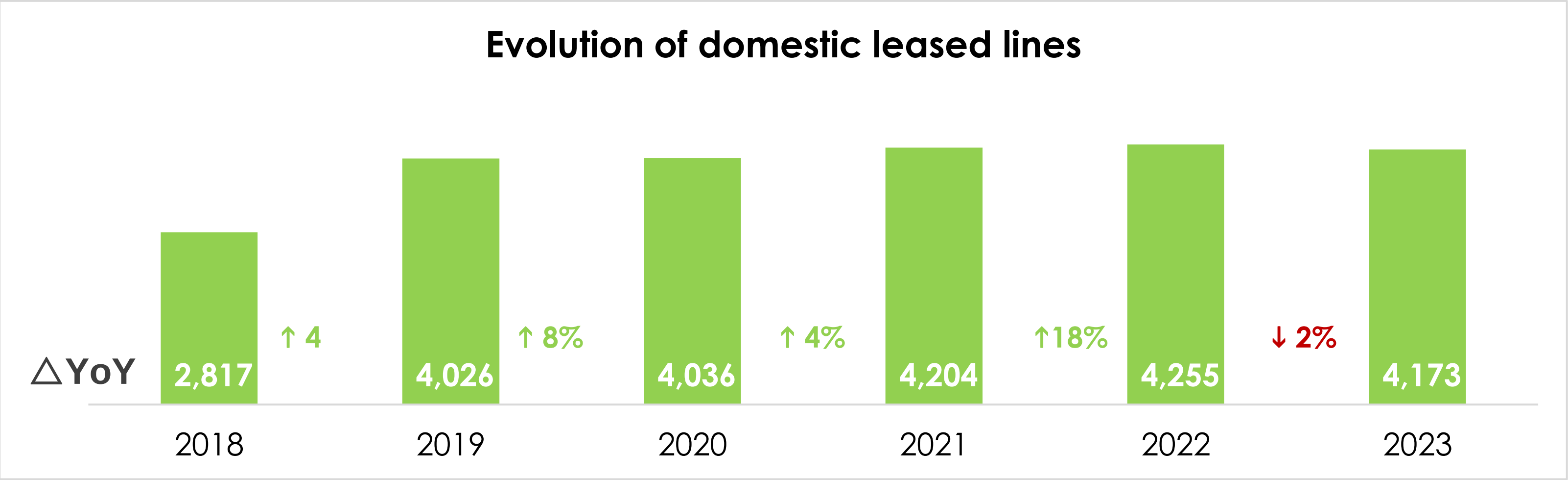
Leased Lines

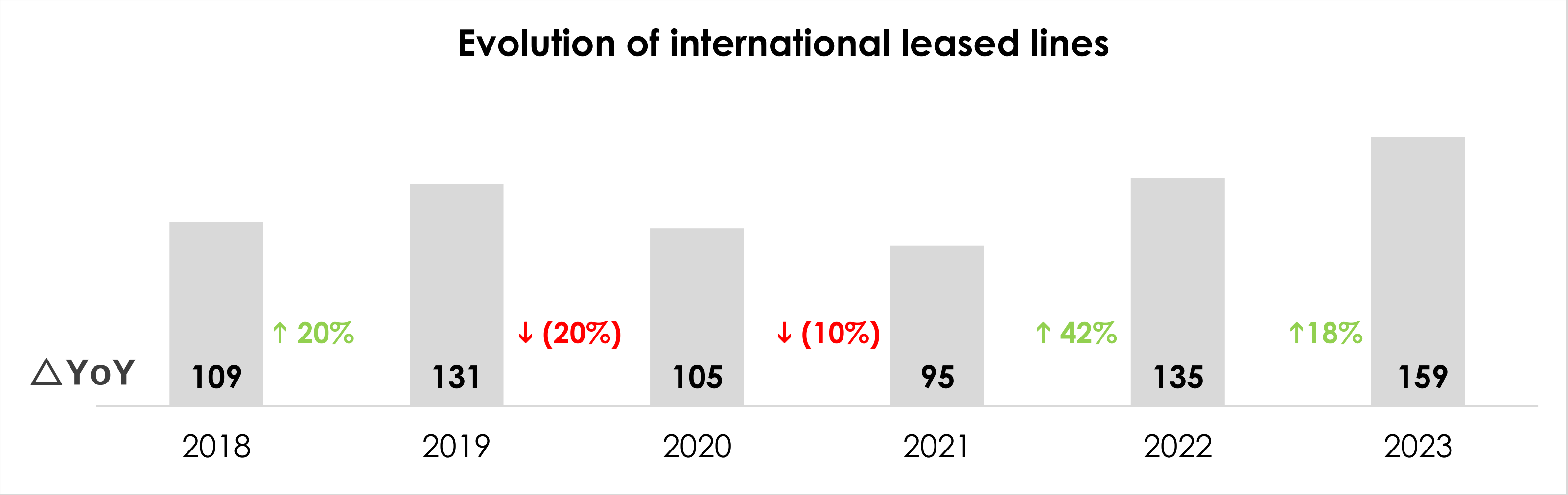
- In 2023, the total number of domestic leased lines dropped by **2%** compared to 2022. However, the number of international leased lines increased by **18%** relative to the previous year.

- Leased lines revenue increased by 1% to reach BHD **66** Million in 2023.

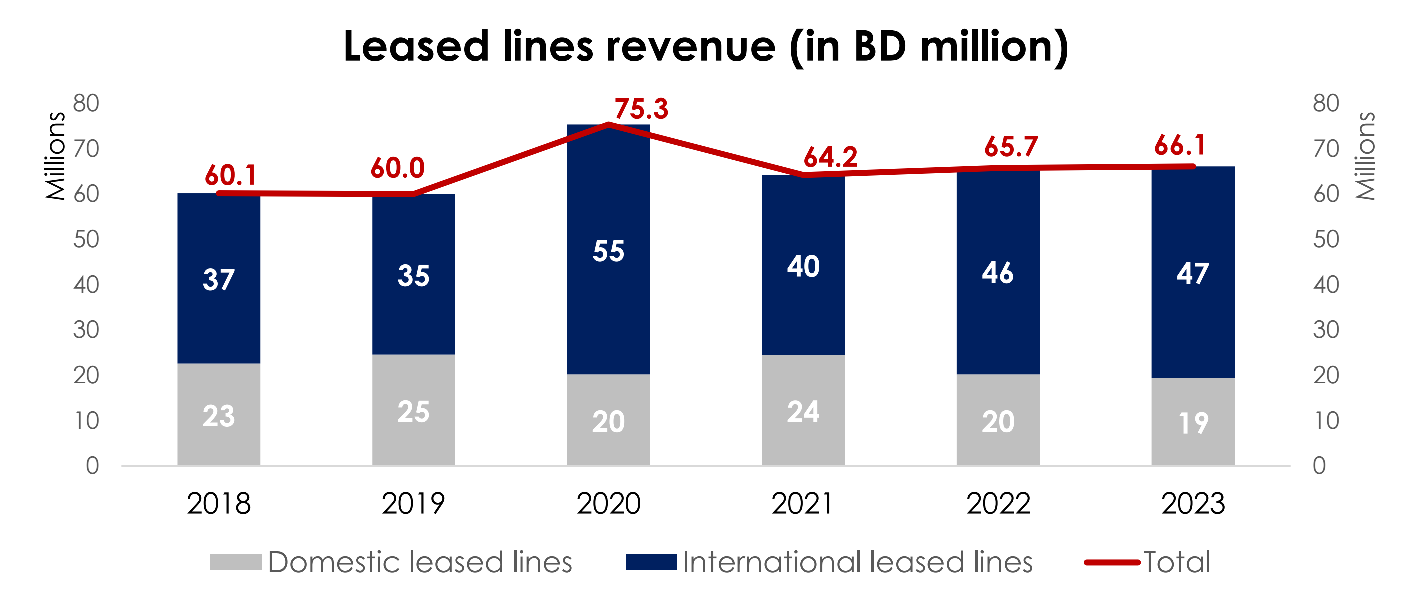
End of 2023

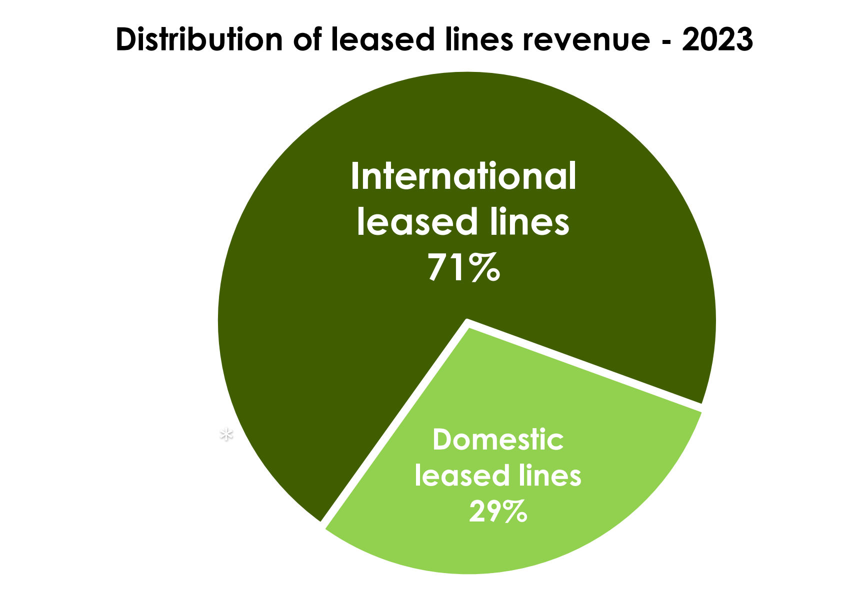
4,173	**Domestic leased lines**
159	**International leased lines**
BD 66,055,499	**Leased lines revenues**





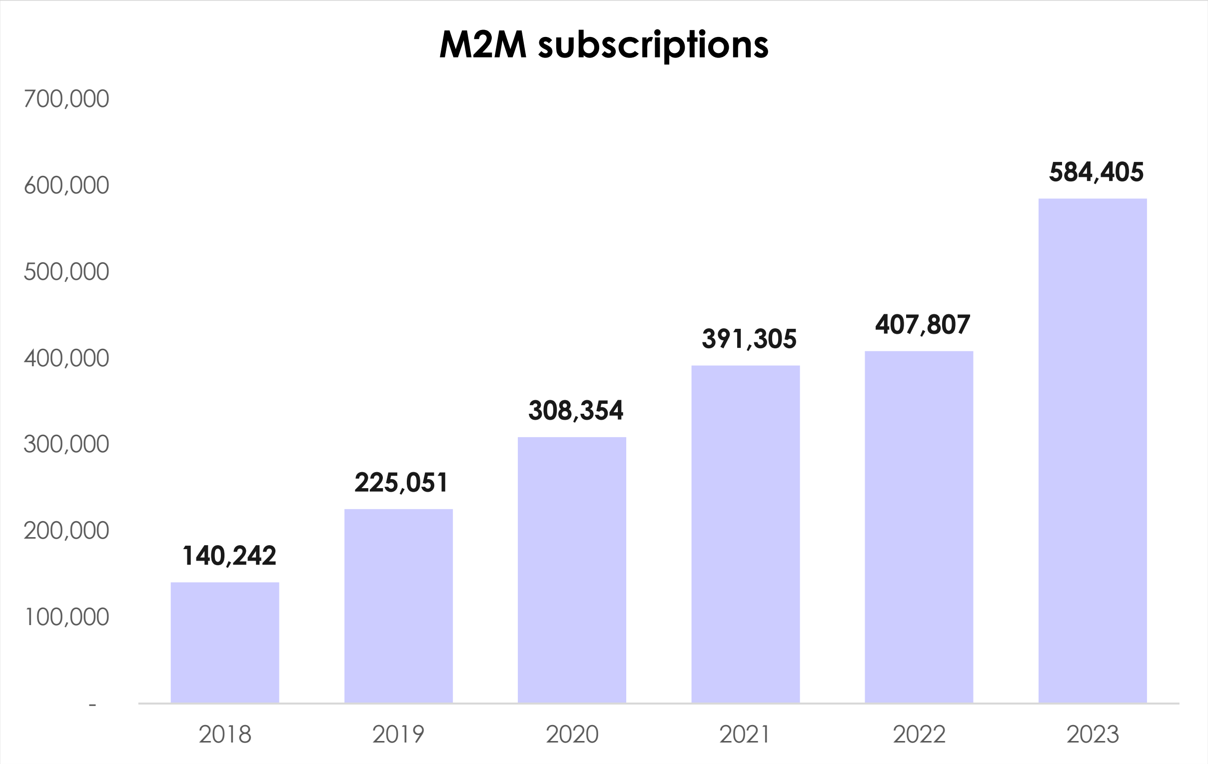
Leased Line Revenues

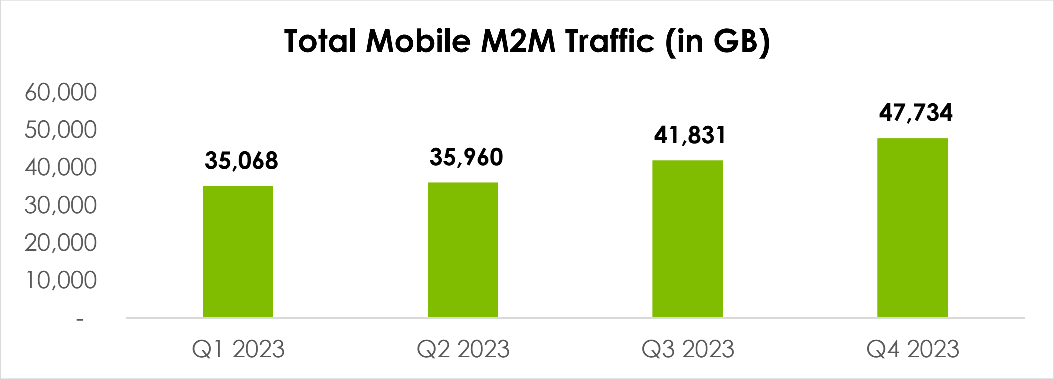


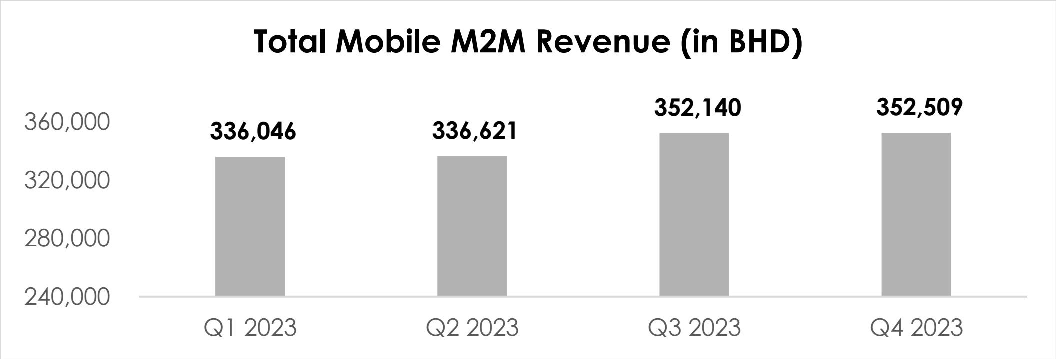


- In 2023, domestic leased lines revenue slightly dropped by **4%** while International leased lines revenues increased by **3%**.

Mobile M2M Subscriptions





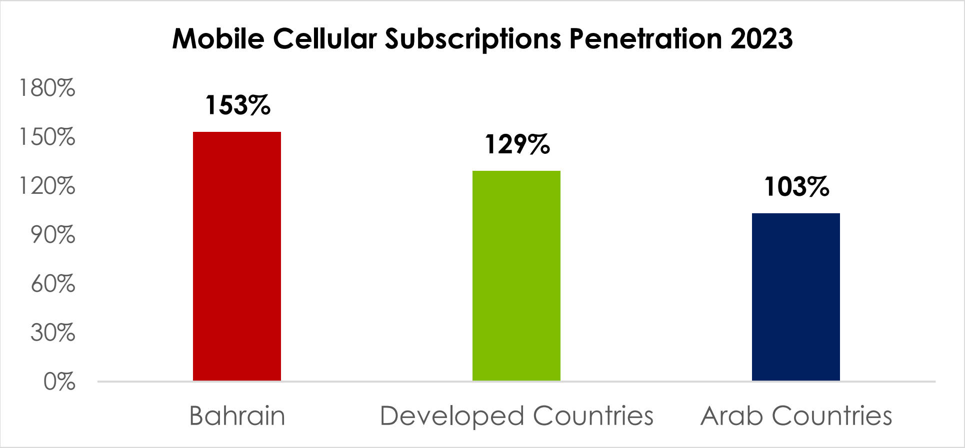


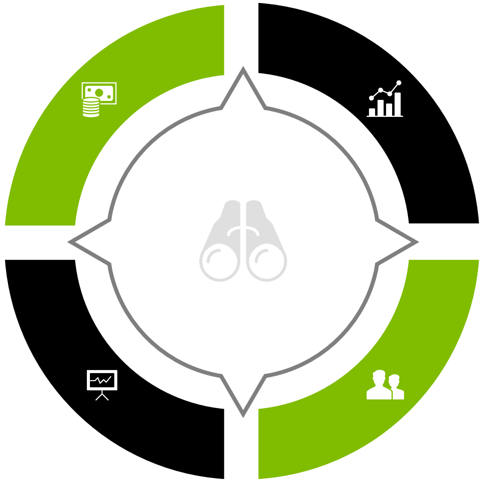
- M2M subscriptions have grown by around 200 thousand subscriptions in the last 3 years. All in all, by 2023, M2M subscriptions increased fourfold relative to 2018.
- M2M subscriptions include banking services, vehicle tracking, Point of Sales, Smart meters among other services.

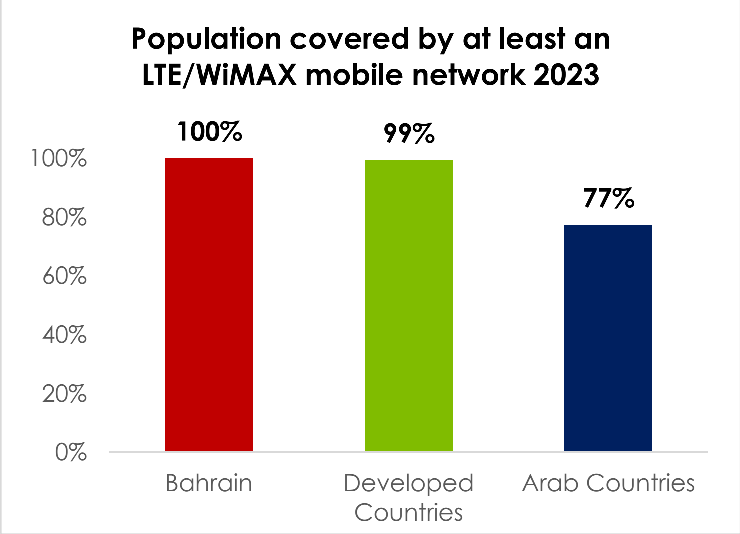
Benchmarking of telecom service penetration rates with Arab countries

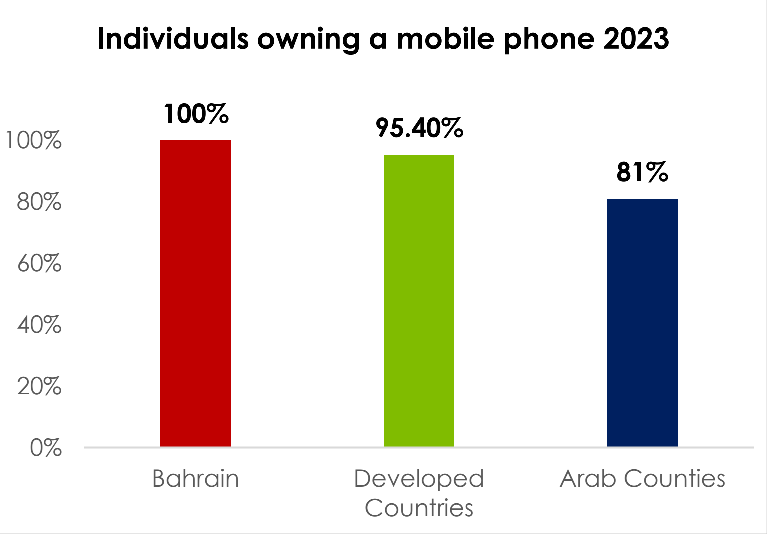
- Bahrain compares very well with other Arab Countries and with Developed (high-income) countries** in terms of telecoms services penetration. Specifically in Mobile penetration and Percentage of Individuals using the internet.

** 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

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

هيئة تنظيم الاتصالات
TELECOMMUNICATIONS REGULATORY AUTHORITY
Kingdom of Bahrain - مملكة البحرين

Thank you

Annex A

Retail services	2020	2021	2022	2023
Fixed line services	10,231,244	12,365,078	10,400,022	9,807,622
Mobile services (Excluding International Mobile IDD)	137,982,859	132,918,723	142,749,349	151,849,550
International calls - Mobile IDD	12,418,631	11,013,005	9,890,396	8,436,935
International calls - Fixed IDD	1,512,744	1,251,678	1,071,804	870,485
International calls - Other	647,196	357,711	255,750	199,874
International calls services	**13,931,374**	**12,264,449**	**10,962,199**	**9,307,419**
Internet services	62,844,699	69,168,428	69,153,388	70,529,755
Leased line services	80,927,119	84,576,580	65,345,373	66,055,499
Total	**305,917,296**	**309,423,525**	**298,610,331**	**307,549,845**

Wholesale services		2020	2021	2023
Termination	2,931,529	2,797,238	2,646,132	2,281,435
Origination	124,505	110,117	45,743	57,201
WSIDD	934,526	1,211,175	1,327,363	385,439
Incoming calls				
Wholesale domestic leased lines	1,462,133	1,172,720	1,402,379	1,741,931
Wholesale international leased lines	1,792,328	1,879,297	2,662,819	1,932,183
Bitstream and WSDSL	22,804	21,332	2,855	-
Termination on your network of SMS	2,787,762	4,208,133	4,696,389	6,242,455
Termination on your network of MMS	6,006	5,790	5,122	1,958
Transit for calls				
International incoming calls	3,617,255	2,582,294	2,828,388	2,158,932
Directory Assistance (DQ) (Only Batelco)	75,399	51,088	34,371	22,733
Duct	N/A	N/A	N/A	N/A
Total	**13,754,247**	**14,039,184**	**15,651,562**	**14,824,267**

	2020	2021	2022	2023
Retail Services Revenue	305,917,296	309,423,525	298,791,994	307,549,845
Wholesale Services Revenue	13,754,247	14,039,184	15,679,555	14,824,267
Other Revenue	139,264,366	164,311,553	199,321,851	220,296,094
Total	**458,935,908**	**487,774,262**	**513,793,400***	**542,670,206**

* 2019-2022 revenue amended.