INDEPENDENT COMMUNICATIONS
AUTHORITY OF SOUTH AFRICA

The State of the ICT Sector Report in South Africa

2021

Independent Communications Authority of South Africa

350 Witch-Hazel Avenue, Eco Point Office Park
Eco Park, Centurion
Private Bag X10, Highveld Park 0169
Telephone number: (012) 568 3000/1

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This is the 6th annual State of Information Communication Technology (ICT) sector report produced by the Independent Communication Authority of South Africa (ICASA) since 2015.

COVID-19 has impacted a number of countries and is turning out to be even worse than the critical economic, strategic, and political clashes happening around the world. The pandemic had an impact on all industries, including the ICT sector.

Since the outbreak of the coronavirus (COVID-19) pandemic and subsequently the lockdown initiated by the South African Government in March 2020, there has been an impact on the three sectors that the Authority is regulating, with broadcasting and postal sectors being the most negatively affected. The report elaborates on some of the impact of COVID-19 on indicators such as the subscriptions, revenue, employment, etc.

The Authority recognises that the access to a comprehensive and timely set of ICT indicators is vital for a proper regulation of the sectors for which it is responsible, namely: the telecommunications, broadcasting and postal sectors. The intention is to use these indicators to benchmark values, inform sector policy analysis and ensure compatibility with global benchmarking and data compiled by other regulators. The data used to compile this report was collected over a 12-month period ending 30 September 2020. The data was collected from secondary sources (such as Statistics South Africa ("Stats SA") and OOKLA) as well as through a detailed questionnaire sent to relevant stakeholders by the Authority. The report also includes an international comparison of South Africa's internet speeds for fixed as well as mobile broadband (both download and upload speeds).

The Authority received a total of ninety-eight (98) responses from the Electronic Communication Services (ECS) and Electronic Communication Network Services (ECNS) licensees, twenty-eight (28) responses were from television and radio broadcasters and only six (6) responses were received from postal services licensees.

According to the 2019 Stats SA's general household survey (GHS) report, the proportion of households who have access to the Internet anywhere is at 63% nationally. Gauteng province is the highest at 74.2% and Limpopo province is the lowest at 43%. In 2019, 58.7% of households nationally had access to the Internet using mobile devices, with the majority living in metropolitan areas sitting at (67.8%) with internet access. Mobile devices are also the most used means of accessing the Internet by households in rural areas.

The total revenue reported for the three sectors (telecommunications, broadcasting and postal) increased by 2% from R238 billion in 2019 to 243 billion in 2020. The broadcasting services revenue decreased by 6.6% from R38 billion to R35 billion; however, postal services revenue has increased by 3.6% in 2020 and the telecommunication services revenue slightly increased by 2.4% from R194 billion in 2019 to R201 billion in 2020.

Total numbers for the three sectors employment slightly decreased by 0.3% in 2020. For the same period, employment changes in the specific sectors were as follows: telecommunications sector employment slightly increased by 1.6%, broadcasting sector employment decreased by 2.6% and the postal sector employment decreased by 5.1%. Over a 6-year period, the total sector employment slightly decreased by 0.6%. Telecommunications increased by 2.1%; broadcasting employment decreased by 4.5% and postal services employment still shows a decline in terms of growth as it decreased by 2.4% for the same period.

Prepaid revenue mobile voice decreased by 29.5% in 2020, whilst revenue from both prepaid mobile data and messaging increased by 80.2% and 35.8%, respectively in 2020. Over a 6-year period revenue from prepaid mobile voice and messaging decreased by 0.6% and 9.9% respectively. Revenue from prepaid mobile data increased by 17% for the same period.

National population coverage for 3G increased from 99.7% in 2019 to 99.8% in 2020. National population coverage for 4G/LTE increased from 92.8% in 2019 to 96.4% in 2020. 5G population coverage is at 0.7% in 2020.

Mobile cellular subscriptions in 2019 were 96 million and in 2020 was 94 million. Smartphone subscriptions were 53 million in 2019 and in 2020 was 60 million.

The global Speedtest ranking, South Africa was at number 90 in 2019 and went up to number 87 in 2020 for fixed broadband (download speed is at 38.25 Mbps and upload speed is at 26.3 Mbps). The mobile broadband ranking in 2019 was at number 60 and in 2020 was at number 55 (download speed is at 38.95 Mbps and upload speed is at 10.71 Mbps).

The number of set-top boxes increased by 21% from 15 million in 2019 to around 18 million in 2020. The number of Content Distributors decreased by 2.7% from 151 in 2019 to 147 in 2020. The number of Analogue Terrestrial Stations was 6 in 2019 and 5 in 2020.

Regarding postal services, the data shows that the total letter delivery services (Registered letters) decreased by 39.78%, domestic service and international outbound (Local Volumes) decreased by 39.10% and the domestic service and international outbound (International mail centre volume) also decreased by 69.78% in 2020.

1 INTRODUCTION

According to the International Telecommunication Union (ITU) recent study, the COVID-19 pandemic has led to revised growth forecasts for the global economy. Every aspect of our lives has been affected by the pandemic. Its impact on economic activity is extremely broad: from dramatically diminished consumer discretionary spending to a freeze on business activities including capital budgets, hiring, and a reduction in everything but essential operational expenses. Even so, it is clear that under the current conditions, some businesses may become more critical to our lives and could face an increase in demand, such as in the case of the ICT sector.

Aim

The report presents the performance and developments in the ICT sector, focusing on the three areas that are regulated by ICASA, namely: telecommunications, broadcasting and postal services.

The report aims to provide up to date information to enable interested parties to make informed decisions on the ICT sector.

ICASA Mandate

ICASA is a creature of statute and derives its mandate from the Independent Communications Authority of South Africa Act No.13 of 2000, the Broadcasting Act No.4 of 1999, the Electronic Communications Act No.36 of 2005 and the Postal Services Act No.124 of 1998. The Authority regulates electronic communications, postal services and broadcasting in the public interest.

Within this mandate, the Authority's responsibility includes the collection of information and statistics on the ICT sector to monitor, report and ensure that regulations are fact-based.

The Authority also has a responsibility to ensure that all South Africans have access to affordable services of high quality, as stipulated in the letter and spirit of the underlying statutes.

Methodology

ICASA has the authority to request data from licensees in terms of section 4(3)(g) of the ICASA Act. The Authority uses questionnaires customised for Electronic Communication Services (ECS) and Electronic Communication Network Services (ECNS), television and radio broadcasters and postal service licensees to collect data on ICT indicators. The questionnaires cover data over a 12-month period ending on the 30th of September each year, unless otherwise specified. For confidentiality reasons, the information gathered is aggregated to conceal stakeholder-specific information.

Data collected is then used by the Authority to produce the State of the ICT Sector report that is published on its website on an annual basis. The report also features data from secondary sources, such as Statistics South Africa (Stats SA) and OOKLA (Speeedtest intelligence).

Limitations

In terms of identified possible limitations to the report that should be borne in mind when interpreting the information collected is that:

- The response rate was low compared to 2019 due to the lockdown imposed by the government
- the unreserved postal sector always had a low response rate to the questionnaire; and
- the data contained in the report is self-reported by licensees, which therefore requires a more rigorous data-validation process.

Structure of the report

The report is structured as follows: Section 2 presents information as collected by Stats SA. Section 3 looks at information as collected by the Authority. The information is then broken down and presented per sector: Telecommunications

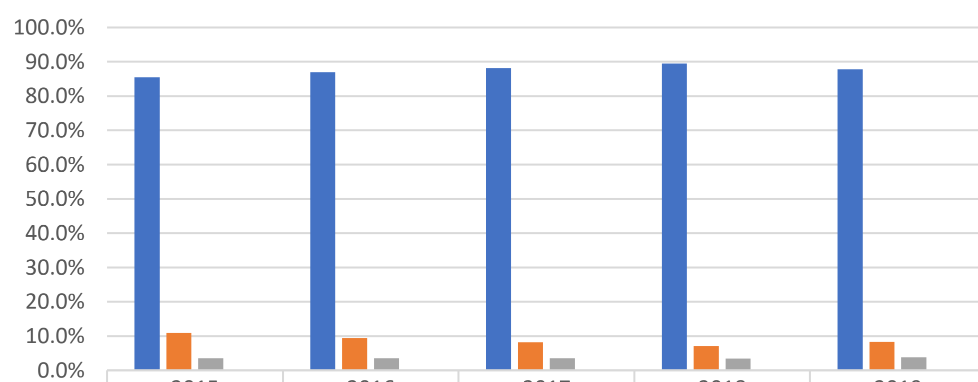
Sector (Section 4), Broadcasting Sector (Section 5), and Postal Services Sector (Section 6). Section 7 provides a conclusion.

2 INFORMATION ON THE ICT SECTOR AS REPORTED BY STATISTICS SOUTH AFRICA

The State of ICT sector report is usually published once a year ahead of Stats SA's *General Household Survey* ("GHS") on or by the 31st March annually in accordance with ICASA's Annual Performance Plan.

According to the GHS, the proportion of households who use only cellular phones as a means of communication decreased from 89.5% in 2018 to 87.8% in 2019. Households using both cellular phones and fixed (or landlines) increased from 7.1% in 2018 to 8.3% in 2019. A proportion of 0.1% was accounted for by households that use only landlines phones over the 5-year period. Households that have no access to neither a cellular nor a landline phone increased from 3.4% in 2018 to 3.8% in 2019, kindly note these figures are pre-Covid.

Graph 1: Proportion of households who have a functional landline and/or cellular telephone in the Republic of South Africa for 2015 to 2019

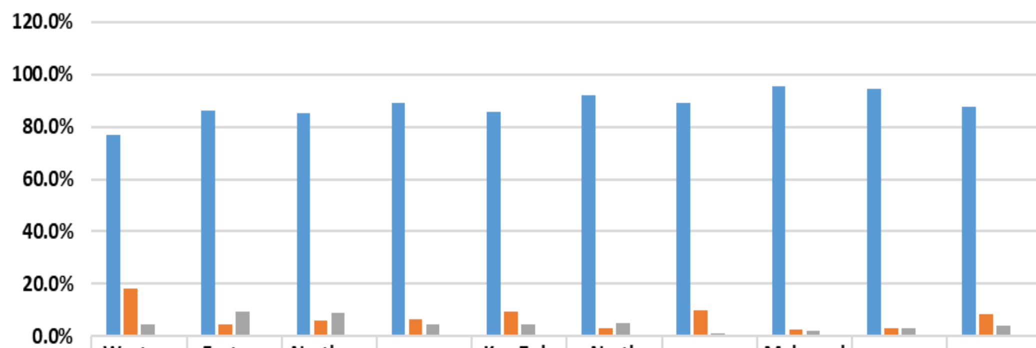


	2015	2016	2017	2018	2019
Only Cellular Phone	85.5%	87.0%	88.2%	89.5%	87.8%
Cellular and Landline Phone	10.9%	9.4%	8.2%	7.1%	8.3%
None	3.5%	3.5%	3.5%	3.4%	3.8%
Only Landline Phone	0.1%	0.1%	0.1%	0.1%	0.1%

Source: StatsSA GHS, 2015,2016,2017,2018 & 2019

According to the GHS report, at a provincial level the proportion of households with access to only cellular phones in 2019. In the same year, the province with the highest proportion of Households with both cellular and landline phones was Western Cape at 18.4% and the lowest was Mpumalanga at 2.7%. For Households with no access to neither a cellular phone nor a landline, the highest proportion was in Eastern Cape at 9.3% and the lowest in Gauteng at 1.1%. The highest Household with access only to landline phone was Northern Cape and Western Cape at 0.3% in 2019.

Graph 2: Percentage of Households who have functional landline and cellular telephone in their dwellings by province for 2019



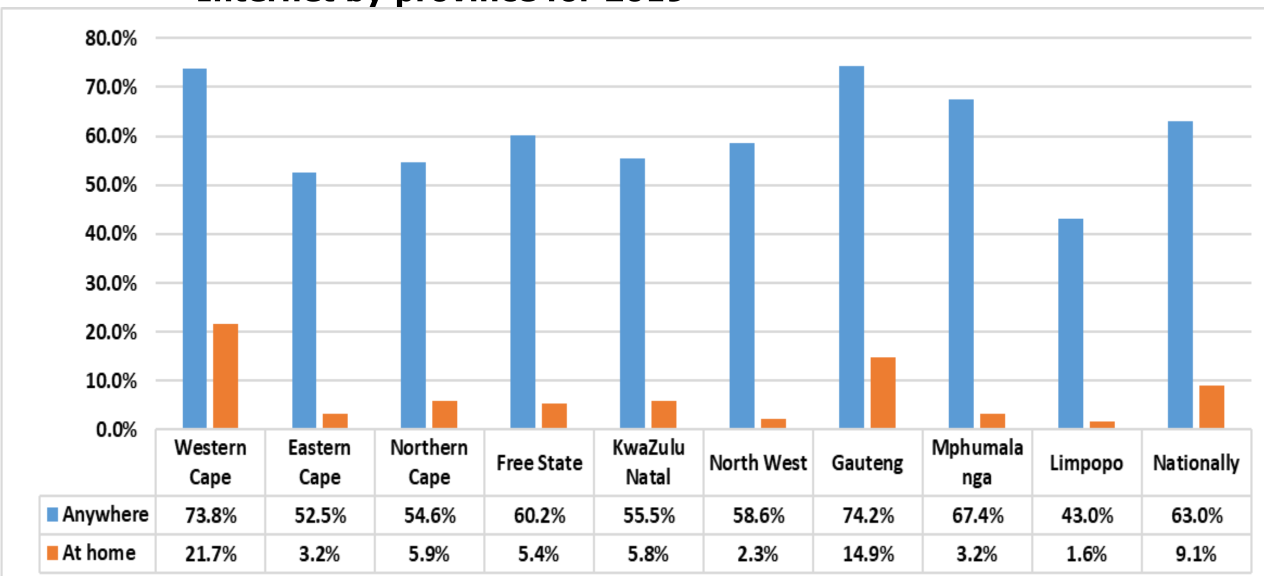
	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu Natal	North West	Gauteng	Mphumal anga	Limpopo	Nationally
Only Cellular Phone	76.7%	86.0%	85.1%	88.9%	85.8%	91.9%	88.9%	95.3%	94.4%	87.8%
Cellular and Landline Phone	18.4%	4.6%	5.9%	6.3%	9.6%	3.2%	9.9%	2.7%	2.9%	8.3%
None	4.7%	9.3%	8.7%	4.7%	4.6%	4.8%	1.2%	2.1%	2.8%	3.8%
Only Landline Phone	0.3%	0.1%	0.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%

Source: StatsSA GHS, 2019

The proportion of Households with access to Internet was at 63.0% on the national level in 2019, this high percentage is mainly because at least one member of household had access to internet and mainly through mobile device.

At the Provincial level, Gauteng was the Province with the highest proportion of households with access to the Internet at 74.2%, followed by the Western Cape at 73.8%. The Province with the lowest access to the Internet was Limpopo at 43.0%.

Graph 3: Percentage of Households with access to the Internet at home, or for which at least one member has access to or used the Internet by province for 2019



Source: StatsSA GHS, 2019

In Table 1 below Internet access is further broken down in terms of place of access such as metropolitan, urban or rural status at both Provincial and National levels. In 2019, 58.7% of households nationally had access to the Internet using mobile devices, with the majority of this access accounted for by Households living in metropolitan areas sitting at 67.8%. Mobile devices are also the most used means of accessing the Internet by Households in rural areas at 44%.

Table 1: Households' access to the Internet by place of access, urban/rural status and province, 2019

Place where Internet is	Rural/ Urban status	Province (per cent)									
		WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
At home	Metro	25.0	6.8	-	8.3	9.9	-	15.7	-	-	15.4
	Urban	16.1	3.5	5.8	4.3	6.5	3.9	9.4	6.2	5.6	7.2
	Rural	10.5	0.3	6.2	4.1	1.1	1.1	9.0	0.9	0.7	1.2
	Total	21.7	3.2	5.9	5.4	5.8	2.3	14.9	3.2	1.6	9.1
At work	Metro	28.1	24.9	-	15.3	28.7	-	29.1	-	-	28.0
	Urban	21.9	11.6	17.8	10.8	20.6	13.8	21.5	15.6	16.9	17.1
	Rural	9.8	5.1	10.4	7.1	4.7	4.8	5.5	5.2	5.0	5.2
	Total	25.4	13.4	15.7	11.7	17.7	8.8	28.0	9.7	7.2	18.6
Using mobile devices	Metro	72.3	65.8	-	67.8	58.2	-	69.4	-	-	67.8
	Urban	54.2	48.6	53.8	54.4	58.0	66.2	63.3	74.8	50.5	59.5
	Rural	34.5	39.0	42.3	47.8	41.3	50.2	29.4	60.1	37.6	44.0
	Total	65.2	50.3	50.5	57.7	51.7	57.2	68.4	66.4	40.0	58.7
At Internet Cafes or educational facilities	Metro	18.9	15.8	-	13.2	11.3	-	17.6	-	-	16.6
	Urban	8.6	5.8	5.8	9.9	10.8	11.3	12.9	6.5	4.3	9.1
	Rural	1.1	3.1	1.8	6.9	2.2	6.2	0.0	2.7	1.7	2.9
	Total	15.0	8.1	4.6	10.6	7.7	8.5	16.9	4.3	2.2	10.7

Source: StatsSA GHS, 2019

3 ICT DATA COLLECTED BY ICASA

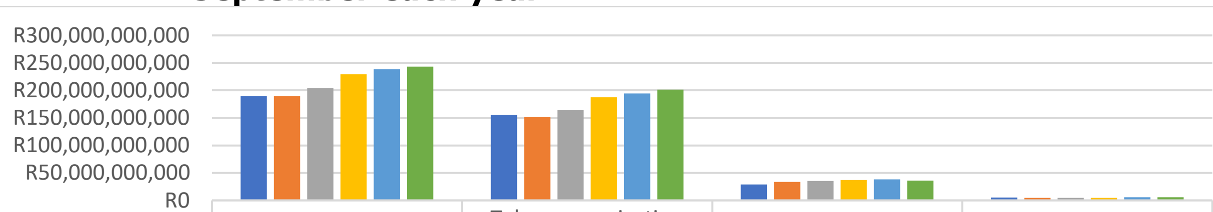
This section reports on the aggregated data that was received by ICASA through questionnaires sent to licensees in September 2020.

3.1 Revenue for the three sectors regulated by ICASA

The total sector revenue (telecommunications, broadcasting and postal) slightly increased by 2% form R238 billion in 2019 to 243 billion in 2020. The broadcasting services revenue decreased by 6.6% from R38 billion to R35 billion, however postal services revenue has increased by 3.6% in 2020 and Telecommunication services revenue slightly increased by 2.4% from R194 billion in 2019 to R201 billion in 2020.

The revenue for the three sectors increased by 5.1% for a period of 6 years. Over the same period, telecommunication services revenue increased by 5.3%, broadcasting services revenue increased by 4.5% and postal services revenue also increased by 2.3%.

Graph 4: Total revenue of the 3 sectors, for the 12 months ending 30th September each year



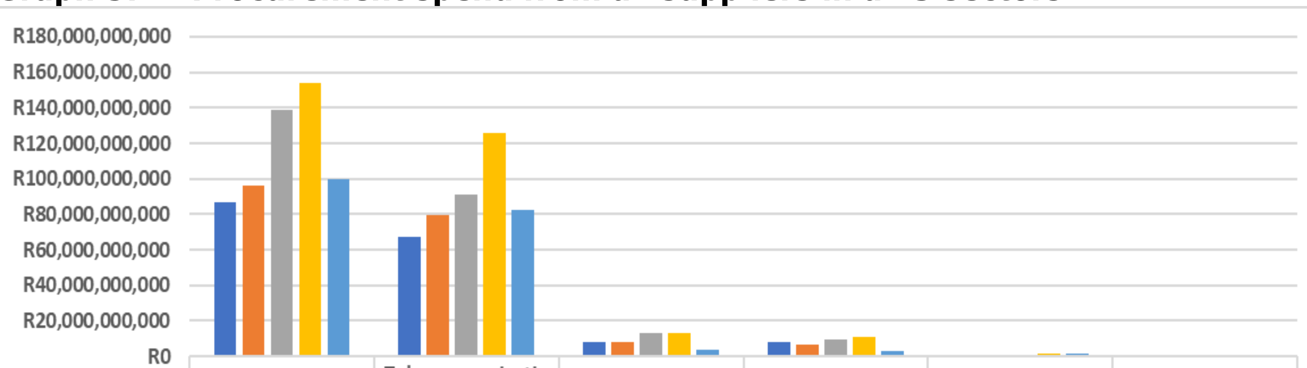
	Total sector revenue	Telecommunication revenue	Broadcasting revenue	Postal revenue
2015	R189,727,239,150	R155,731,039,861	R28,688,718,290	R5,307,481,000
2016	R190,044,525,308	R151,569,024,076	R33,655,415,072	R4,820,086,160
2017	R204,386,608,276	R163,987,306,320	R35,606,415,286	R4,792,886,670
2018	R229,296,293,291	R187,587,374,843	R36,921,489,746	R4,787,428,702
2019	R238,351,239,862	R194,284,132,172	R38,325,761,969	R5,741,345,721
2020	R243,019,264,975	R201,254,592,538	R35,814,897,915	R5,949,774,522

Source: ICASA Electronic Telecommunications, Broadcasting and Postal Questionnaire 2020

3.2 Procurement spend from all suppliers in all 3 sectors

Total combined telecommunication services procurement spend from all suppliers in 2019 was R153 billion, and in 2020 was R99 billion, with 83.1% of this amount was spent on suppliers on the basis of their B-BBEE rating level. Total combined broadcasting services procurement spend from all suppliers was R3.9 billion in 2020, with R2.8 billion (72.5%) of that spent on suppliers on the basis of their B-BBEE rating level. Total combined postal services procurement spend from all suppliers was R1.5 billion in 2020, with very little amount of R36 million (2.4%) of that spent on suppliers on the basis of their B-BBEE rating level.

Graph 5: Procurement spend from all suppliers in all 3 sectors



	Telecommunication Procument Spend from all supplliers	Telecommunication Procument Spend from all supplliers based on the B-BBEE Procument Recognition Levels	Broadcasting Procument Spend from all supplliers	Broadcasting Procument Spend from all supplliers based on the B-BBEE Procument Recognition Levels	Postal service Procument Spend from all supplliers	Postal service Procument Spend from all supplliers based on the B-BBEE Procument Recognition Levels
2016	R86,448,461,080	R67,548,274,263	R8,267,951,961	R8,018,052,763	R555,395,857	R555,395,857
2017	R95,898,396,437	R79,716,674,485	R8,133,329,927	R6,243,530,612	R817,935,346	R503,345,609
2018	R138,796,397,264	R91,387,499,397	R12,916,707,224	R9,164,201,658	R747,631,839	R8,523,706
2019	R153,709,327,406	R125,580,981,745	R12,966,834,308	R10,703,663,708	R1,212,745,251	R1,092,692,234
2020	R99,474,448,024	R82,629,651,919	R3,906,586,239	R2,831,135,359	R1,529,349,393	R36,767,989

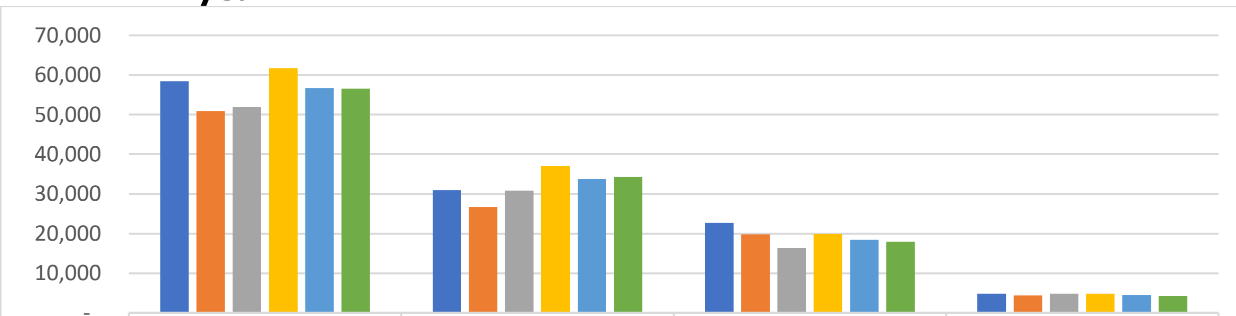
Source: ICASA Electronic Communications, Broadcasting and Postal Questionnaires, December 2020

3.3 Employment levels for the three sectors that ICASA regulates

Total numbers for the three sectors employment slightly decreased by 0.3% in 2020. For the same period, employment changes in the specific sectors were as follows: telecommunications sector employment slightly increased by 1.6%, broadcasting sector employment also decreased by 2.6% and postal sector employment decreased by 5.1%.

Over a 6-year period, the total sector employment slightly decreased by 0.6%. Telecommunications increased by 2.1%, broadcasting employment decreased by 4.5% and postal service employment still shows a decline in terms of growth as it decreased by 2.4% for the same period.

Graph 6: Total employment for the 3 sectors, as of 30th September each year



	Total Combined employment for 3 sector	Telecommunication employment	Postal employment	Broadcasting employment
2015	58,411	30,951	22,671	4,789
2016	50,899	26,669	19,801	4,429
2017	51,993	30,881	16,312	4,800
2018	61,757	37,063	19,881	4,813
2019	56,709	33,782	18,464	4,463
2020	56,550	34,329	17,984	4,237

Source: ICASA Electronic Communications, Broadcasting and Postal Questionnaires 2020

4 TELECOMMUNICATIONS SECTOR

During the global pandemic, digital technologies have become a critical enabler of connectivity facilitating the continuity of our regular lives and connecting people more than ever before. As cities and countries have been asking the population to stay at home, more people have turned to their computers and smartphones as a lifeline and tools to substitute their in-person activities online. Some of the habits may continue in the "new normal" - or at least until a long-term solution to the current challenges, such as a vaccine, is accessible to everyone. Hence, the need to access a reliable digital infrastructure has become increasingly important, and certain aspects of ICTs are critical in a period of isolation, such as increased ICT opportunities from telework, telemedicine, food delivery and logistics, online and contactless payments, remote learning and entertainment.

The telecommunications sector revenue has shown a slight increase, however indicators such as investment and fixed broadband subscriptions have significantly decreased.

The Authority continues to work on regulatory initiatives aimed at reducing the cost to communicate. To this effect, the Authority is conducting a market inquiry into the Broadband Service Market, the purpose of the inquiry is to assess the state of competition and determine whether or not there are markets or market segments within the mobile broadband services value chain which may warrant regulation in the context of a market review in terms of section 67(4) of the ECA.

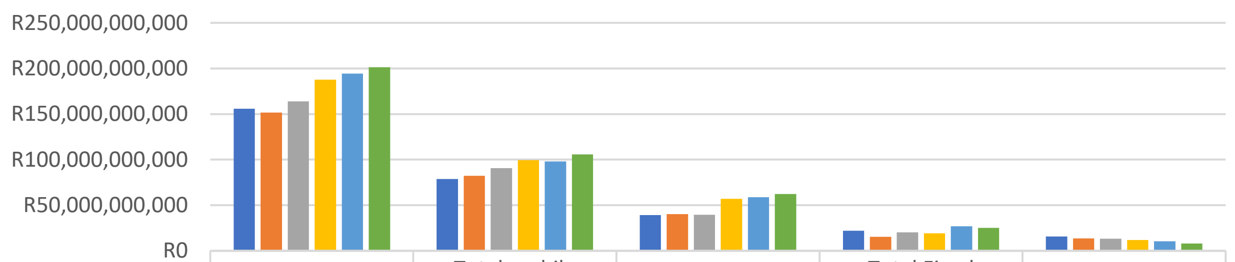
The Authority is also in the process of auctioning high demand spectrum following the Policy Directive from the Minister of Telecommunications and Digital Technologies in July 2019. the mock auction and the actual auction - will commence by 31 March 2021.

4.1 Telecommunications Sector Revenues

The total telecommunication revenue increased slightly by 3.6% in 2020. Total mobile services revenue increased by 7.8% in 2020. Total fixed internet and data revenue and total fixed line revenue decreased by 5.4% and 24.1%, respectively in 2020.

Over a period of 6 years the total telecommunication increased by 5.3%. The total mobile services revenue and total fixed internet and data revenue increased by 6% and 2.8%, respectively, however fixed line revenue decreased by 12.6% for the same period.

Graph 7: Telecommunications revenue, for the 12 months ending 30th September each year



	Total revenue	Total mobile services revenue(Rm)	Total of any other revenue	Total Fixed internet and data revenue	Total Fixed line revenue
2015	R155,731,039,861	R78,838,681,356	R39,059,280,775	R22,023,113,787	R15,809,963,943
2016	R151,569,024,076	R82,209,711,759	R40,295,245,779	R15,327,779,522	R13,736,287,016
2017	R163,987,306,320	R90,737,963,135	R39,400,714,280	R20,432,607,468	R13,416,021,437
2018	R187,587,374,843	R99,569,265,222	R57,011,037,623	R19,078,304,740	R11,928,767,258
2019	R194,284,132,172	R98,071,800,081	R58,768,274,771	R26,790,096,707	R10,653,960,614
2020	R201,254,592,538	R105,670,253,917	R62,165,693,130	R25,335,440,726	R8,083,204,765

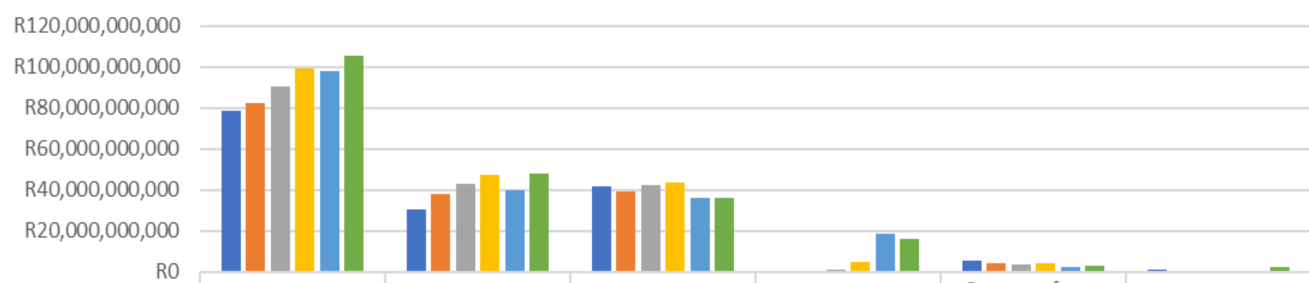
Source: ICASA Electronic Communications Questionnaire 2020
Note: Includes revenues from telecommunication services earned from retail fixed-telephone, mobile-cellular, internet and data services offered by telecommunication operators (both network and virtual, including resellers) and interconnection, equipment sales and any other revenue.

4.1.1 Total Mobile Services Revenue

The revenue form total mobile services and revenue from text and multimedia messaging services increased by 7.8% and 8.9%, respectively in 2020. The revenue from voice services slightly decreased by 0.3% in 2020.

For a period of 6 years, total mobile services revenue and revenue from mobile data services increased by 6% and 9.7%, respectively. Revenue from text and multimedia messaging services and revenue from voice services decreased by 11.8% and 3%, respectively.

Graph 8: Mobile services revenue for the 12 months, ending 30th September each year



	Total mobile services revenue (Rm)	Revenue from mobile data services	Revenue from voice services	Other mobile services revenue	Revenue from text and multimedia messaging services	Revenue from outbound roaming (R)
2015	R78,838,681,356	R30,216,263,601	R41,992,110,991	R546,158,563	R5,190,759,632	R893,388,568
2016	R82,209,711,759	R37,881,274,945	R39,498,579,909	R463,330,629	R3,910,993,637	R455,532,639
2017	R90,737,963,135	R43,190,853,863	R42,474,346,282	R1,198,304,773	R3,495,840,536	R378,617,682
2018	R99,569,265,222	R47,068,742,797	R43,756,195,020	R4,587,185,489	R3,957,858,068	R199,283,848
2019	R98,071,800,081	R40,124,141,859	R36,247,358,086	R18,506,714,023	R2,542,494,484	R651,091,629
2020	R105,670,253,917	R48,071,241,971	R36,143,659,167	R16,198,912,702	R2,767,430,165	R2,489,009,912

Source: ICASA Electronic Communications Questionnaire 2020

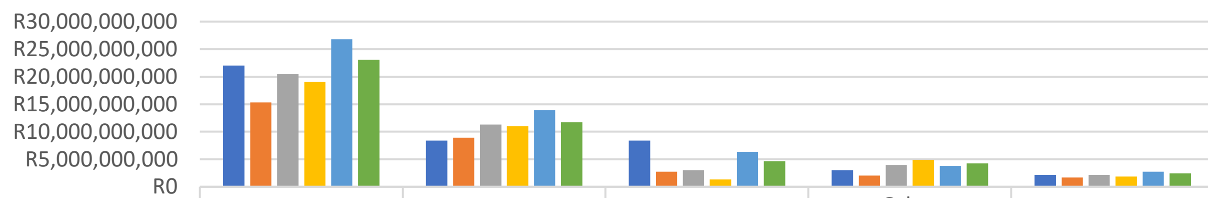
Note: This includes retail mobile revenue from the provision of voice services from national and international calls; outbound roaming abroad; mobile data; and text messaging and multimedia messaging (SMS and MMS) and any other mobile revenue. Excludes equipment revenue and termination (interconnection) revenue and any other revenue categories e.g. other wholesale services.

4.1.2 Total Fixed Internet and Data Revenues

Total fixed internet and data revenue decreased by 17.9 in 2020. Revenue from fixed (wired)-broadband services and fixed internet revenue decreased by 21.9% and 26.4%, respectively in 2020.

Over a 6-year period, total fixed internet and data revenues and fixed Internet revenue decreased by 0.03% and 11.1%, respectively. The revenue from fixed (wired)-broadband services increased by 5.3% for the same period.

Graph 9: Fixed internet and data revenue, 12 months ending 30th September each year



	Total Fixed Internet and data revenue	Revenue from fixed (wired)-broadband services	Fixed Internet revenue (R)	Other telecommunication services revenue, including leased lines revenue and fixed value-added telecommunication services	Other wireless-broadband services revenue
2015	R22,023,113,787	R8,393,442,800	R8,392,529,397	R3,055,425,191	R2,181,716,399
2016	R15,327,779,522	R8,888,078,923	R2,719,683,999	R2,025,882,253	R1,694,134,347
2017	R20,432,607,468	R11,306,993,289	R3,031,182,153	R3,943,395,318	R2,151,036,708
2018	R19,078,304,740	R11,003,085,498	R1,330,783,377	R4,875,143,271	R1,869,292,594
2019	R26,790,096,707	R13,918,376,242	R6,327,818,019	R3,791,726,468	R2,752,175,978
2020	R23,061,826,922	R11,703,445,499	R4,658,541,272	R4,246,451,137	R2,453,389,014

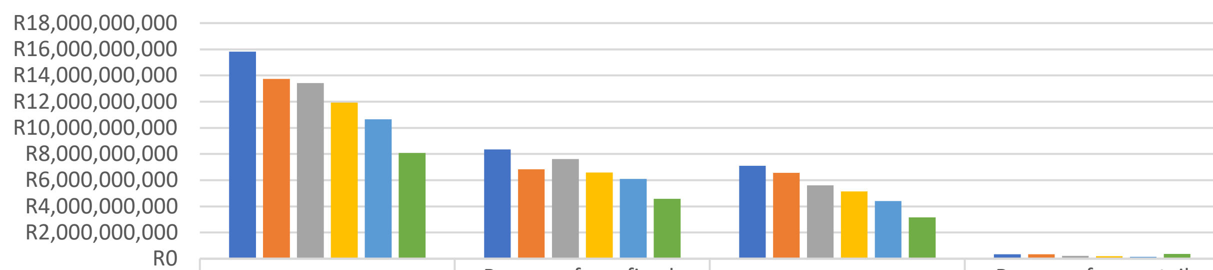
Source: ICASA Electronic Communications Questionnaire, December 2020

4.1.3 Total Fixed Line Revenue

The total fixed line revenue decreased by 24.1% from R10.6 billion in 2019 to R8 billion in 2020. Revenue from fixed-telephone subscription charges and revenue from fixed-telephone calls decreased by 25.1% and 28.6%, respectively in 2020.

For a period of 6 years, the total fixed line revenue decreased by 12.6%.

Graph 10: Total Fixed line revenue, 12 months ending 30th September each year



	Total fixed line revenue	Revenue from fixed-telephone subscription charges	Revenue from fixed-telephone calls	Revenue from retail fixed-telephone services
2015	R15,809,963,943	R8,354,835,988	R7,104,611,411	R350,516,544
2016	R13,736,287,016	R6,832,868,171	R6,559,636,420	R343,782,425
2017	R13,416,021,437	R7,615,313,709	R5,595,498,449	R205,209,279
2018	R11,928,767,258	R6,595,737,290	R5,140,231,624	R192,798,344
2019	R10,653,960,614	R6,103,435,777	R4,413,373,568	R137,151,269
2020	R8,083,204,765	R4,575,278,396	R3,150,430,268	R357,496,101

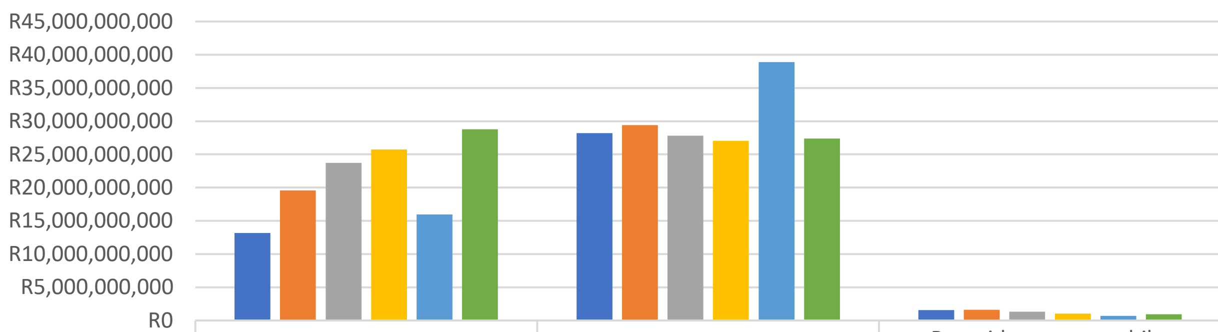
Source: ICASA Electronic Communications Questionnaire, December 2020

4.1.4 Prepaid Mobile Voice, Data and Messaging Revenue

prepaid revenue mobile voice decreased by 29.5% in 2020, whilst revenue from both prepaid mobile data and messaging increased by 80.2% and 35.8%, respectively in 2020.

Over a 6-year period revenue from prepaid mobile voice and messaging decreased by 0.6% and 9.9% respectively. Revenue from prepaid mobile data increased by 17% for the same period.

Graph 11: Prepaid mobile voice, data and messaging revenue for the 12 months ending on 30th September each year



	Prepaid revenue mobile data	Prepaid revenue mobile voice	Prepaid revenue mobile messaging
2015	R13,163,220,180	R28,214,729,224	R1,589,242,304
2016	R19,582,648,739	R29,404,161,623	R1,596,794,034
2017	R23,738,773,852	R27,821,766,556	R1,328,612,859
2018	R25,746,766,590	R27,025,173,332	R1,030,798,979
2019	R15,985,529,092	R38,889,588,361	R693,488,985
2020	R28,798,070,479	R27,404,561,055	R941,977,675

Source: ICASA Electronic Communications Questionnaire 2020

4.1.5 Prepaid data prices (month validity)

The Prepaid data bundle sizes range from 50 MB to 20480 MB for 2019 and 2020, with prices ranges as indicated in the table below. The data bundles are valid for a period of a month with an automatic roll-over for any unused data remaining after the expiry of the validity period.

Table 2: Prepaid data price (month validity)

Prepaid data Bundle prices				
Data Bundle (MB)	Price Range per MB			
	2020 prices		2021 prices	
	Lowest price	Highest price	Lowest price	Highest price
100(MB)	R29	R29.25	R20	R20
250 (MB)	R39.50	R63	R35	R35
500 (MB)	R69.60	R100	R69	R79
750 (MB)	R100	R120	R89	R89
1024 (MB)	R100	R149	R95	R99
1536 (MB)	R149	R189	R149	R149
2048 (MB)	R140	R249	R139	R199
3072 (MB)	R201	R299	R199	R279
5120 (MB)	R301	R405	R299	R349
6144 (MB)	R399	R399	R299	R399
6656 (MB)	R399	R399	R399	R399
10240 (MB)	R499	R605	R469	R499
20480 (MB)	R799	R1,010	R699	R899

Source: ICASA Electronic Communications Questionnaire for 2020 and 2021

4.1.6 Post-paid data prices (month validity)

The post-paid data bundle, as indicated in the table below, shows the price ranges per Gigabyte for 2019 and 2020.

Table 3: Post-paid data price (month validity)

Post-paid data Bundle prices				
Data Bundle (GB)	Price Range per GB			
	2020 prices		2021 prices	
	Lowest price	Highest price	Lowest price	Highest price
1 GB	R40	R79	R40	R79
2 GB	R60	R110	R60	R110
3 GB	R149	R171	R179	R179
4 GB	R100	R100	R100	R100
5 GB	R199	R221	R221	R221
6 GB	R129	R129	R129	R129
10 GB	R200	R332	R200	R332
14 GB	R259	R259	R259	R259
20 GB	R355	R504	R355	R539.38
30 GB	R605	R699	R645	R645
50 GB	R907	R999	R959	R959
100 GB	R1,210	R1,699	R1,699	R1,699
200 GB	R2,099	R2,099	R2,099	R2,099

Source: ICASA Electronic Communications Questionnaire for 2020 and 2021

4.1.7 Prepaid and Post-paid Voice and Messaging prices

The price range per minute, for prepaid voice is from R0.66 to R2 and for post-paid is from R0.91 to R1.31.

The local SMS's prices range for prepaid is between R0.15 and R0.52 and post-paid is R0.51.

The international SMS's price range for prepaid is from R1.61 to R2 and post-paid is R1.61.

Table 4: Prepaid and post-paid voice and SMS prices

Price range	Voice (Per minute)	SMS (Local)	SMS (International)
Prepaid	R0.66 to R2.00	R0.15 to R0.52	R1.61 to R2.00
Post-paid	R0.91 to R1.31	R0.51	R1.61

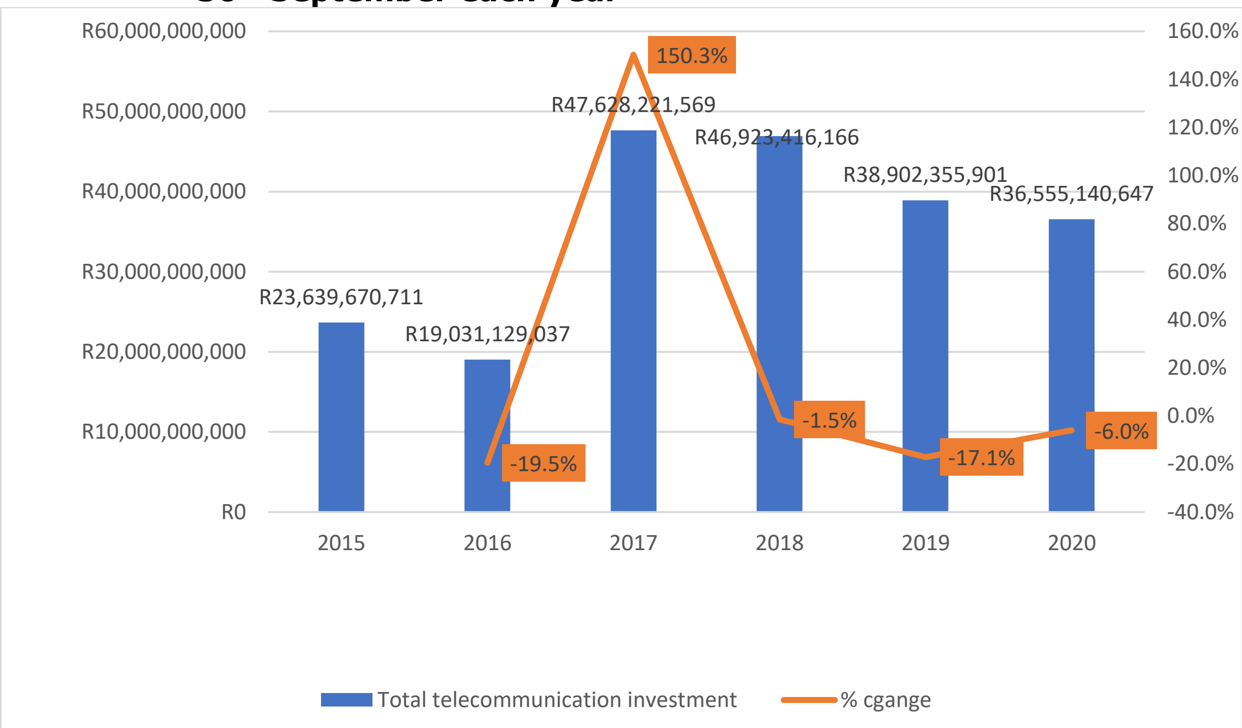
Source: ICASA Electronic Communications Questionnaire as at 2021

4.2 Total Telecommunication Investment

Total telecommunication investment continues to decrease as it shown on the graph below, in 2020 it decreased by 6%.

Over a 6-year period, total telecommunication investment increased by 9.1%.

Graph 12: Total telecommunication investment, for the 12 months ending 30th September each year



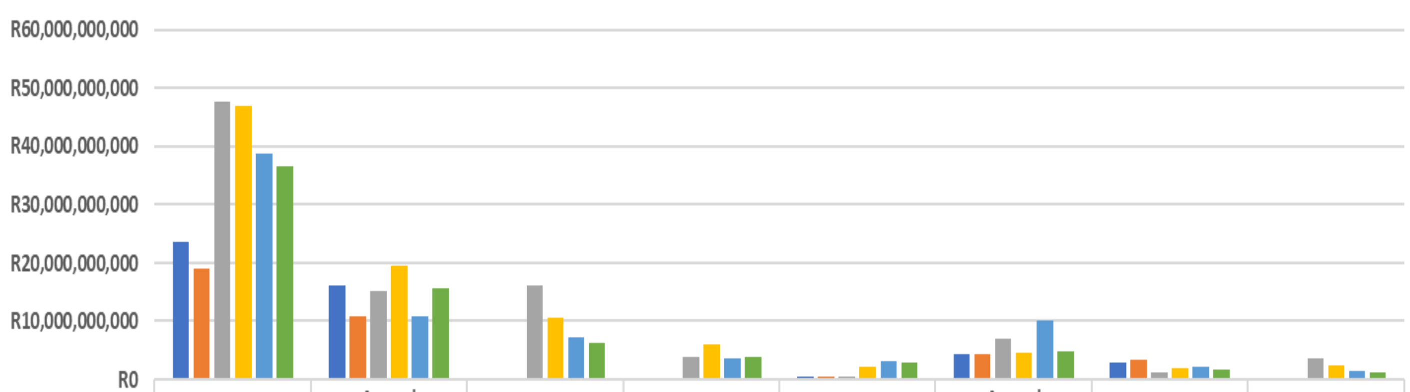
Source: ICASA Electronic Communications, Broadcasting and Postal Questionnaires 2020

4.2.1 Telecommunication Investment Breakdown

Telecommunication investment breakdown shows decrease in all categories as it shown on the table below in 2020.

Over a 6-year period the total telecommunication investment and annual investment in fixed-telephone services increased by 9.1% and 51.7%, respectively.

Graph 13: Telecommunication investment breakdown, for the 12 months ending 30th September each year



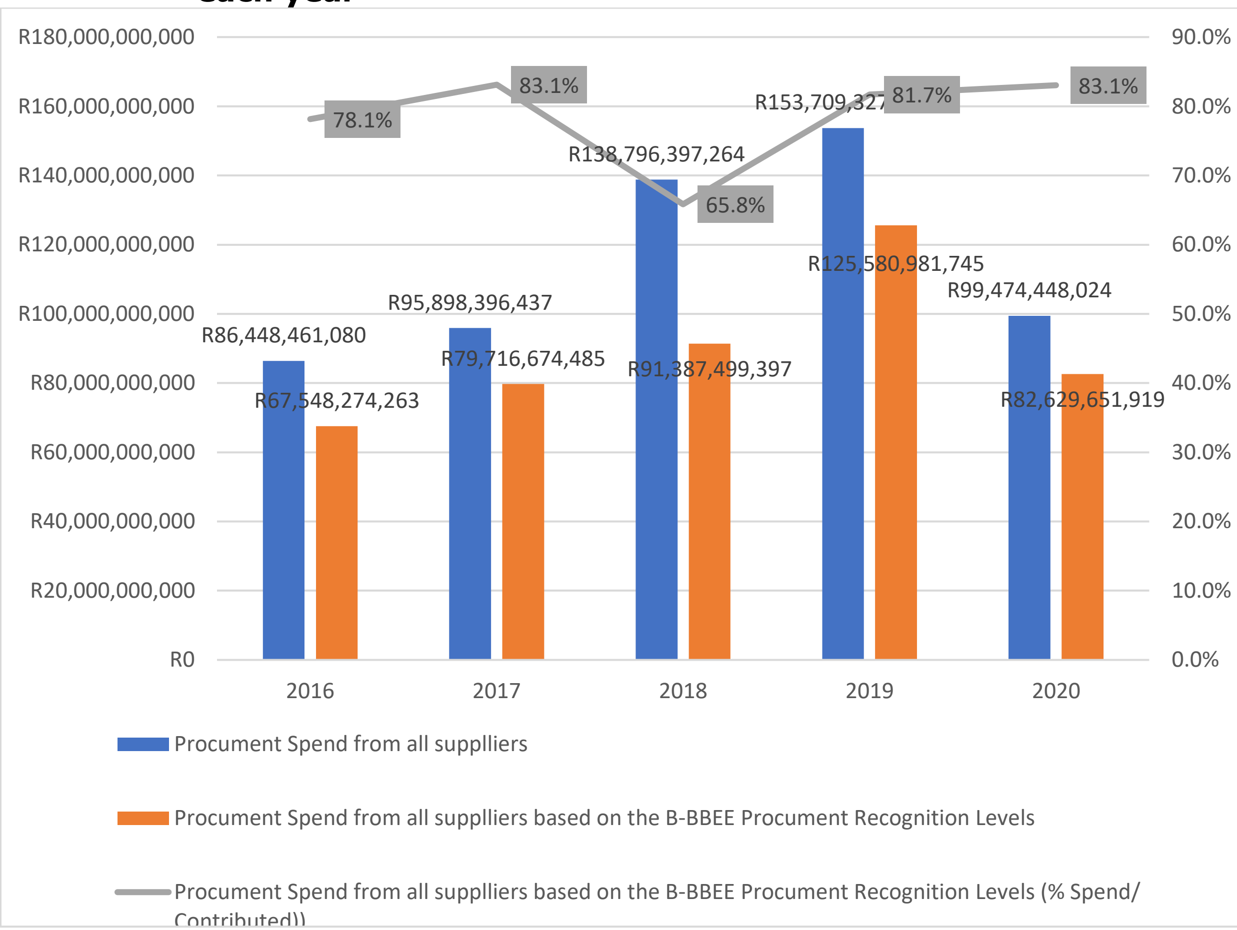
	Total telecommunication investment	Annual investment in mobile communication services	Expansion	Infrastructure	Annual investment in fixed-telephone services	Annual investment in fixed (wired)-broadband services	Other annual investment in telecommunication services	Maintenance
2015	R23,639,670,711	R16,023,808,303	R0	R0	R362,678,821	R4,271,046,025	R2,982,137,563	R0
2016	R19,031,129,037	R10,773,379,404	R0	R0	R430,713,855	R4,348,617,012	R3,478,418,766	R0
2017	R47,628,221,569	R15,237,727,593	R16,176,231,342	R3,770,800,407	R480,671,041	R7,002,587,357	R1,285,335,724	R3,674,868,105
2018	R46,923,416,166	R19,584,646,672	R10,482,529,163	R5,916,132,762	R2,226,456,703	R4,559,607,770	R1,812,969,770	R2,341,073,325
2019	R38,902,355,901	R10,922,347,986	R7,265,057,850	R3,729,768,720	R3,110,456,996	R10,221,560,045	R2,113,372,650	R1,539,791,654
2020	R36,555,140,647	R15,609,753,461	R6,380,976,746	R3,894,797,426	R2,912,024,038	R4,830,520,473	R1,747,952,845	R1,179,115,659

Source: ICASA Electronic Communications Questionnaire 2020

4.3 Telecommunication Procurement Spend from All Suppliers Based on B-BBEE Ranking.

The proportion of telecommunication procurement spend from all suppliers based on the B-BBEE ranking levels was 83.1% in 2020.

Graph 14: Telecommunication procurement spend from all suppliers based on the B-BBEE, for the 12-month period ending 30th September each year



Source: ICASA Electronic Communications Questionnaire 2020

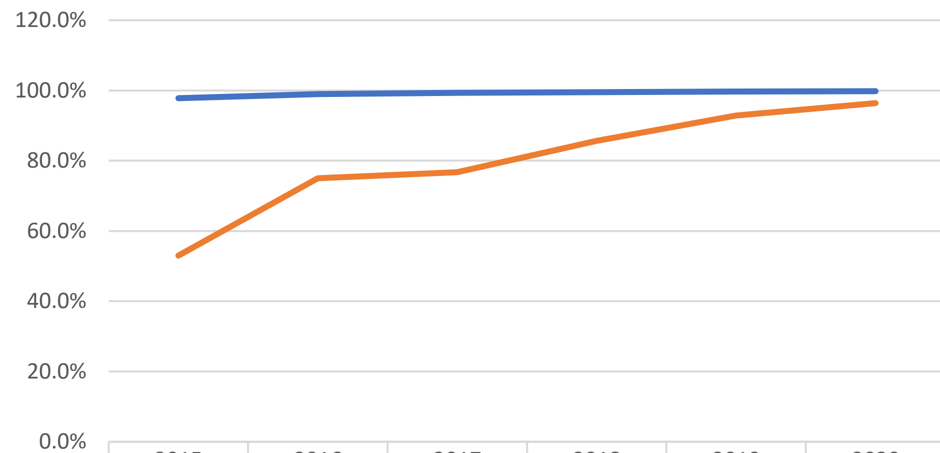
4.4 National Population Coverage

National population coverage for 3G increased from 99.7% in 2019 to 99.8% in 2020.

National population coverage for 4G/LTE increased from 92.8% in 2019 to 96.4% in 2020.

5G population coverage is at 0.7% in 2020.

Graph 15: National population coverage for 3G, 4G/LTE and 5G



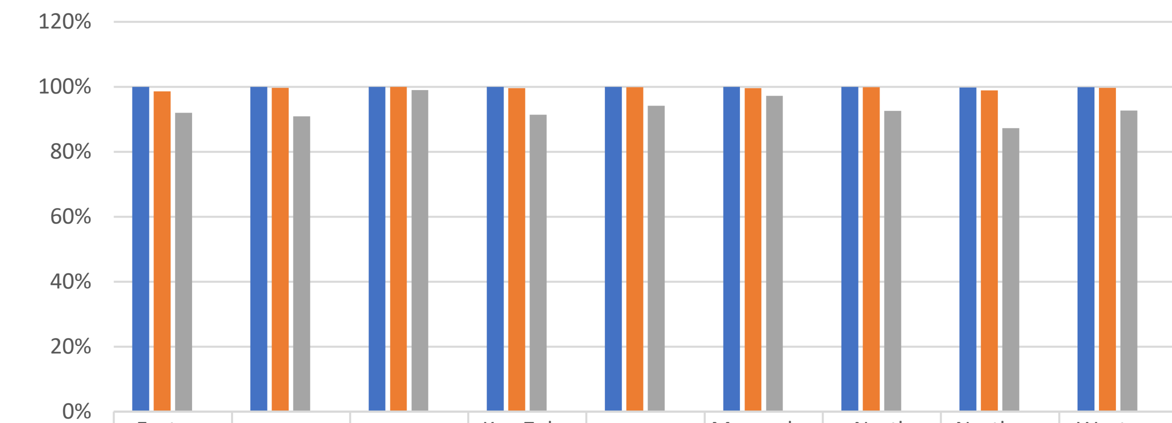
	2015	2016	2017	2018	2019	2020
3G Population Coverage	97.8%	99.0%	99.3%	99.5%	99.7%	99.8%
4G/LTE Population Coverage	53.0%	75.0%	76.7%	85.7%	92.8%	96.4%
5G						0.7%

Source: ICASA Electronic Communications Questionnaire 2020

4.4.1 Rural Population Coverage

2G and 3G, all provinces are at (99 to 100) coverage in 2020.Northern Cape had the lowest coverage LTE sitting at 87% in 2020. 5G is still a challenge as there is no province with a coverage in 2020.

Graph 16: Rural Population Covered per province in 2020



	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape
2G	100%	100%	100%	100%	100%	100%	100%	100%	100%
3G	99%	100%	100%	100%	100%	100%	100%	99%	100%
4G/LTE	92%	91%	99%	91%	94%	97%	93%	87%	93%
5G	0%	0%	0%	0%	0%	0%	0%	0%	0%

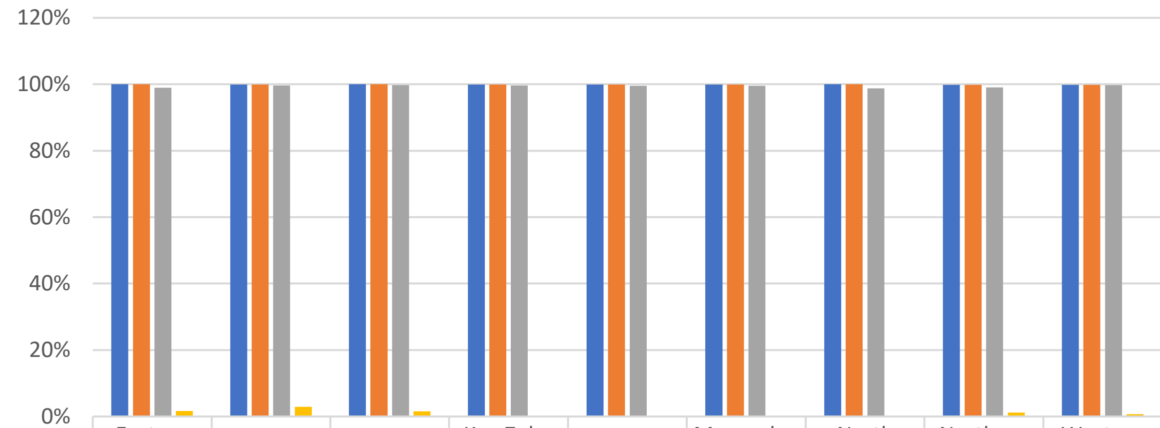
Source: ICASA Electronic Communications Questionnaire 2020

4.4.2 Urban Population Coverage

2G, 3G, LTE and 5G all provinces are at (99 to 100) coverage in 2020.

Eastern Cape, Free State, Gauteng, Northern Cape and Western Cape already have the 5G coverage as it shown on the graph below in 2020.

Graph 17: Urban Population Covered per province in 2020



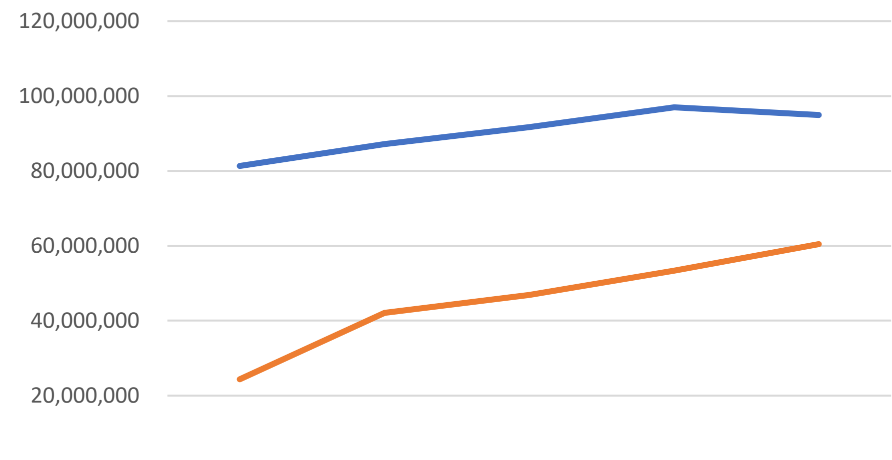
	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape
2G	100%	100%	100%	100%	100%	100%	100%	100%	100%
3G	100%	100%	100%	100%	100%	100%	100%	100%	100%
4G/LTE	99%	100%	100%	100%	100%	100%	99%	99%	100%
5G	2%	3%	2%	0%	0%	0%	0%	1%	1%

Source: ICASA Electronic Communications Questionnaire 2020

4.5 Mobile Cellular and Smartphone Subscriptions

Mobile cellular subscriptions in 2019 was 96 million and in 2020 was 94 million. Smartphone[1] subscriptions was 53 million in 2019 and in 2020 was 60 million.

Graph 18: Mobile Cellular and Smartphone Subscriptions, as at 30th September each year



	2016	2017	2018	2019	2020
Mobile cellular subscriptions	81,314,463	87,153,108	91,707,731	96,972,459	94,952,509
Smartphone subscriptions	24,340,341	42,094,018	46,904,835	53,380,748	60,438,901

Source: ICASA Electronic Communications Questionnaire.2020

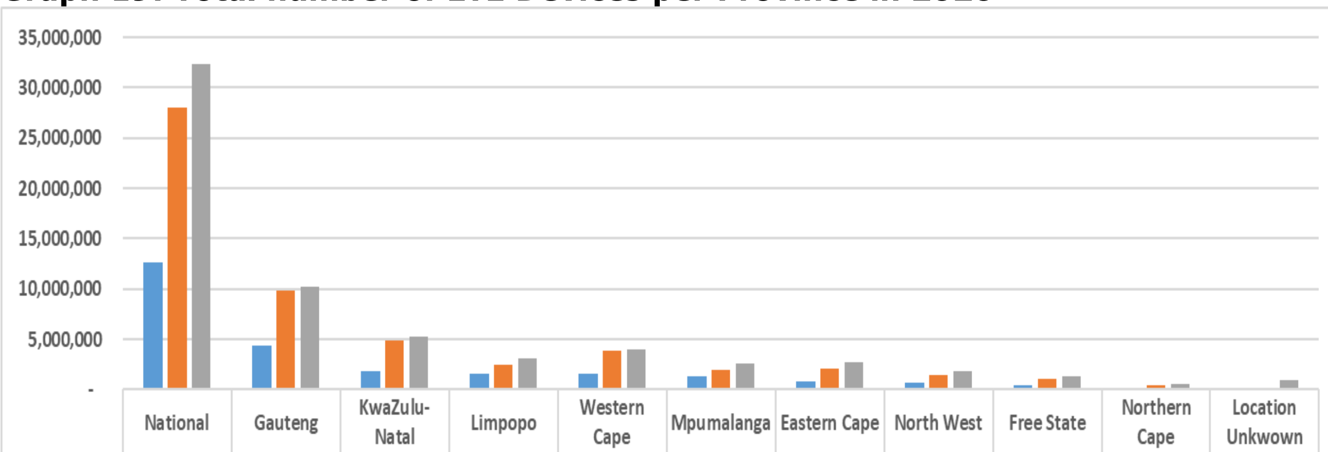
[1] *A smartphone is a mobile phone with advanced features: it has Wi-Fi connectivity, web browsing capabilities, a high-resolution touchscreen display and the ability to use apps. The majority use one of the following mobile operating systems: Android, Symbian, iOS, BlackBerry OS and Windows Mobile*

4.5.1 Total Number of LTE Devices

The total number of LTE devices increased by 15.7% in 2020.

The total number of 974,010 devices recorded with unknown location in the country.

Graph 19: Total number of LTE Devices per Province in 2020



	National	Gauteng	KwaZulu-Natal	Limpopo	Western Cape	Mpumalanga	Eastern Cape	North West	Free State	Northern Cape	Location Unkwown
2018	12,644,364	4,304,758	1,859,095	1,532,666	1,562,239	1,310,633	745,272	664,362	444,639	220,700	-
2019	27,999,204	9,859,467	4,817,530	2,472,480	3,805,656	2,001,832	2,016,068	1,465,909	1,088,195	472,067	-
2020	32,387,272	10,197,878	5,239,206	3,062,458	3,948,032	2,545,216	2,672,498	1,872,566	1,290,287	585,121	974,010

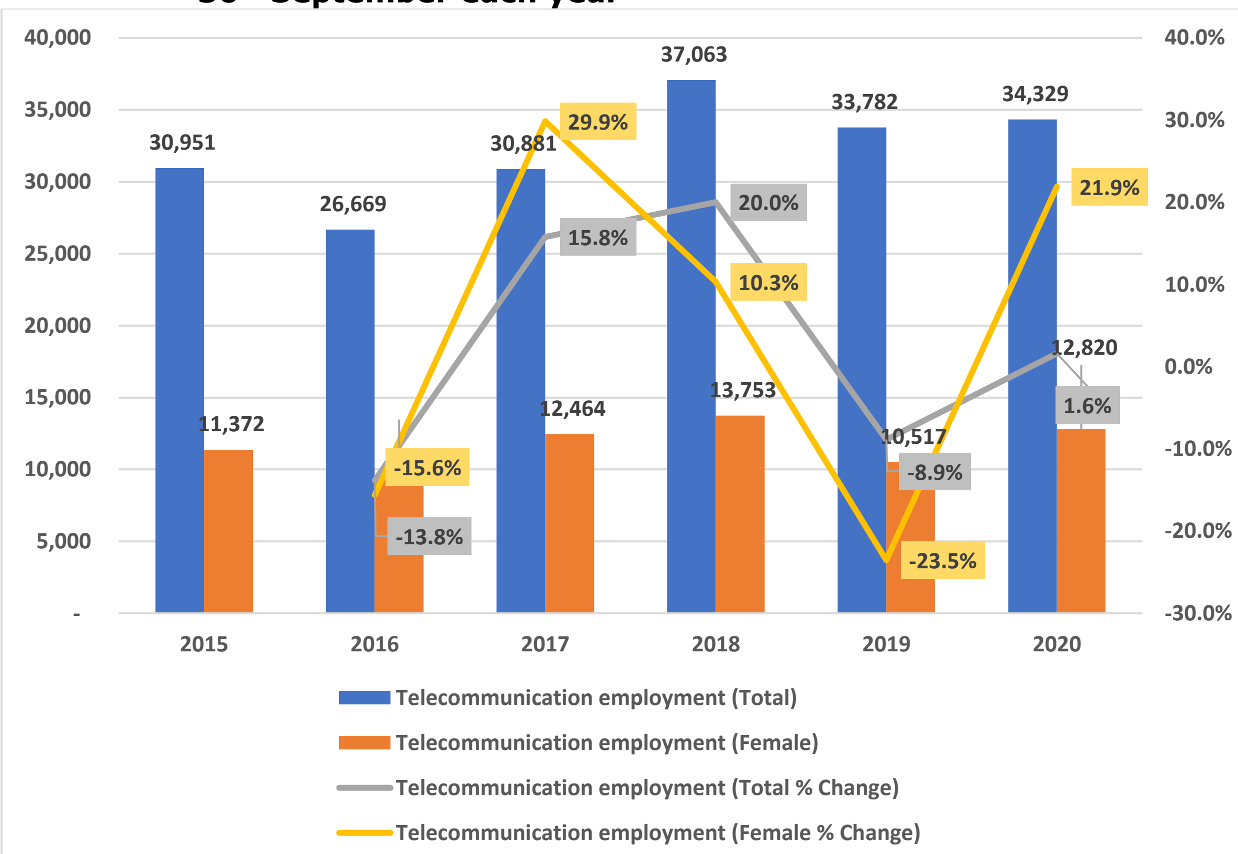
Source: ICASA Electronic Communications Questionnaire 2020

4.6 Persons Employed in the Telecommunications Sector

Total employment in the telecommunication sector increased by 1.6% in 2020. Female employees as a proportion of the total employment increased by 21.9% form 10,517 in 2019 to 12,820 in 2020.

Over a 6-year period, telecommunications sector total employment and female employment increased by 2.1% and 2.4%.

Graph 20: Persons employed in the telecommunications sector, as of the 30th September each year

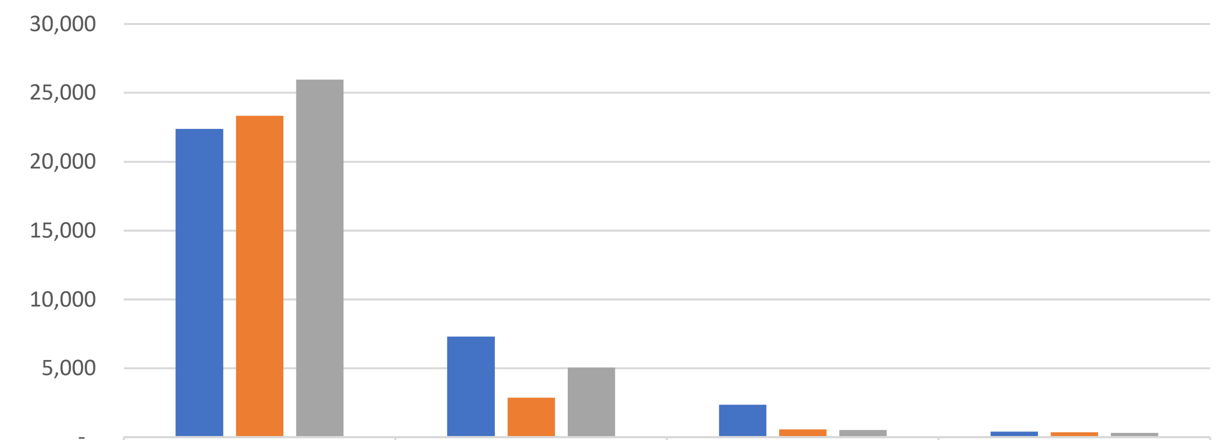


Source: ICASA Electronic Communications Questionnaire 2020

4.7 Persons employed in the telecommunications sector breakdown

Telecommunication employment, skilled and semi-skilled increased by 11.2% and 76.4%, respectively in 2020. Unskilled and disabled employment decreased by 5.6% and 12.2%, respectively in 2020.

Graph 21: Persons employed in the telecommunications sector breakdown from 2018 to 2020



	Total emplyment (Skilled)	Total emplyment (Semi-skilled)	Total emplyment (Unskilled)	Total emplyment (Disabled)
2018	22,392	7,293	2,352	414
2019	23,334	2,863	558	354
2020	25,951	5,050	527	311

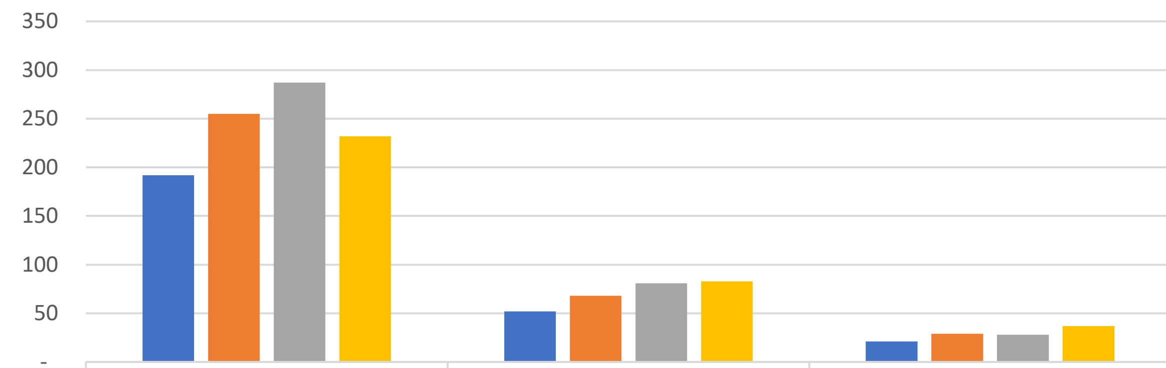
Source: ICASA Electronic Communications Questionnaire 2020

4.8 Black Economic Empowerment Employment Measures

Black Top Female Management (EXCO Members) and Top Black Management (EXCO Members) increased by 32.1% and 2.5%, respectively in 2020. Top Management (EXCO Members) decreased by 19.2% in 2020.

Over a 4-year period, Top Management (EXCO Members) increased by 6.5%.

Graph 22: Telecommunication Black Economic Empowerment Measures, for the 12-month period ending 30th September each year



	Telecommunication employment-Top Management (EXCO Members)	Telecommunication employment-Black Top Management (EXCO Members)	Telecommunication employment-Black Top Female Management (EXCO Members)
2017	192	52	21
2018	255	68	29
2019	287	81	28
2020	232	83	37

Source: ICASA Electronic Communications Questionnaire 2020

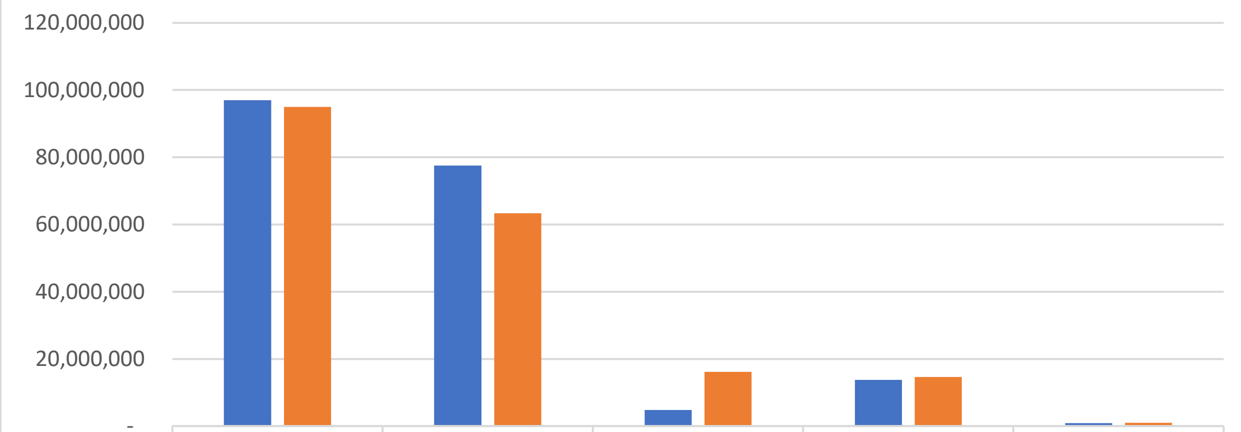
4.9 Telecommunications Subscriptions

4.9.1 Mobile Cellular (Prepaid and Post-paid mobile Cellular Phone Voice) Subscriptions for rural and urban area

Total mobile cellular phone voice subscriptions decreased by 2.1% from 96.9 million in 2019 to 94.9 million in 2020. Post-paid mobile cellular telephone subscriptions for urban and rural area increased by 5.9% and 7.8%, respectively in 2020.

Over a 6-year period, the total mobile cellular phone voice subscriptions increased by 1.9%.

Graph 23: Prepaid and post-paid mobile cellular voice subscriptions, as at 30th September each year



	Total Mobile cellular subscriptions	Prepaid mobile-cellular telephone subscriptions (Urban area)	Prepaid mobile-cellular telephone subscriptions (Rural area)	Postpaid mobile-cellular telephone subscriptions (Urban area)	Postpaid mobile-cellular telephone subscriptions (Rural area)
2019	96,972,459	77,562,306	4,761,548	13,763,219	885,386
2020	94,952,509	63,319,518	16,099,916	14,578,698	954,377

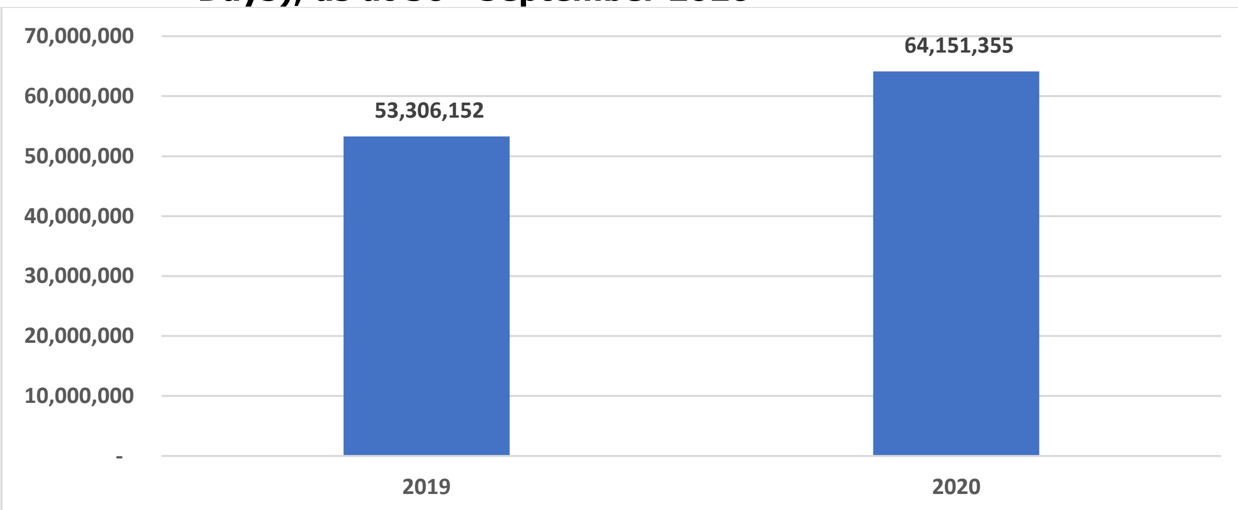
Source: ICASA Electronic Communications Questionnaire 2020

Note: The definition of prepaid subscribers is adopted from the ITU definition of 3-month active subscribers. Some South African operators do not have this metric available but rather count SIMs that have not been disconnected within a 90-day window implying that the number may be overstated according to the strict definition. Top up bundles and machine-to-machine subscriptions were included in post-paid mobile cellular subscriptions.

4.9.2 Mobile Cellular Active Subscriptions (Active for more than 90 Days)

Mobile Cellular active subscriptions increased by 20.4% form 53 million in 2019 to 64 million in 2020.

Graph 24: Mobile Cellular Active Subscriptions (Active for more than 90 Days), as at 30th September 2020



Source: ICASA Electronic Communications Questionnaire 2020

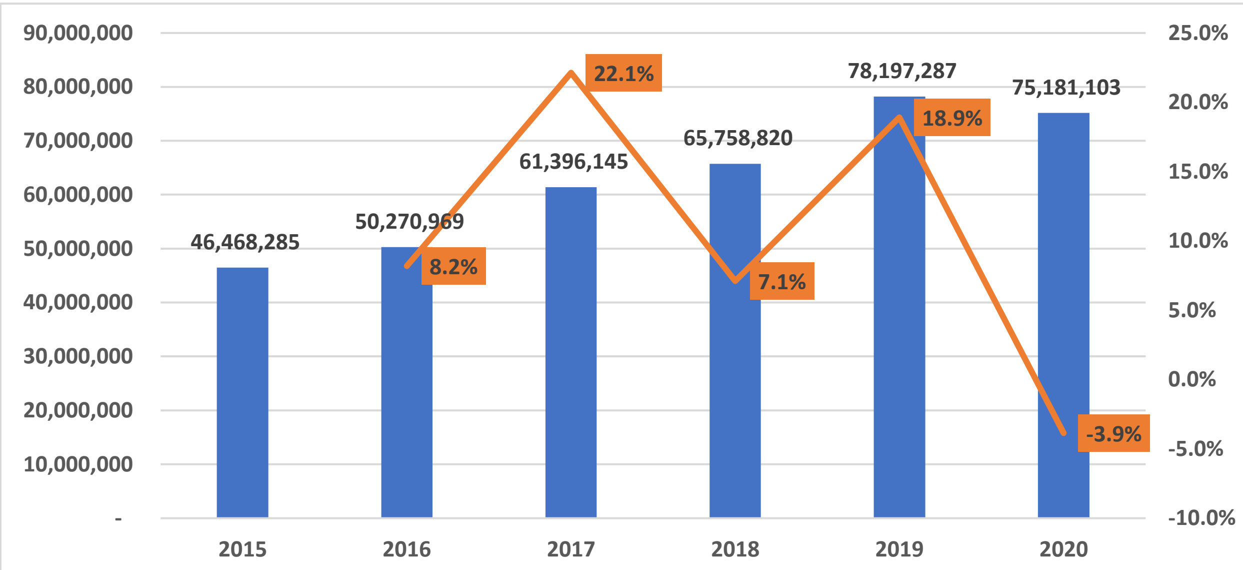
Note: The definition of prepaid subscribers is adopted from the ITU definition of 3-month active subscribers. Some South African operators do not have this metric available but rather count SIMs that have not been disconnected within a 90-day window implying that the number may be overstated according to the strict definition. Top up bundles and machine-to-machine subscriptions were included in post-paid mobile cellular subscriptions.

4.9.3 Mobile Cellular Phone Data users

Mobile cellular data users decreased by 3.9% from 78 million in 2019 to 75 million in 2020.

Over a 6-year period, mobile data users increased by 10.1%.

Graph 25: Mobile cellular phone data subscriptions, as at 30th September each year



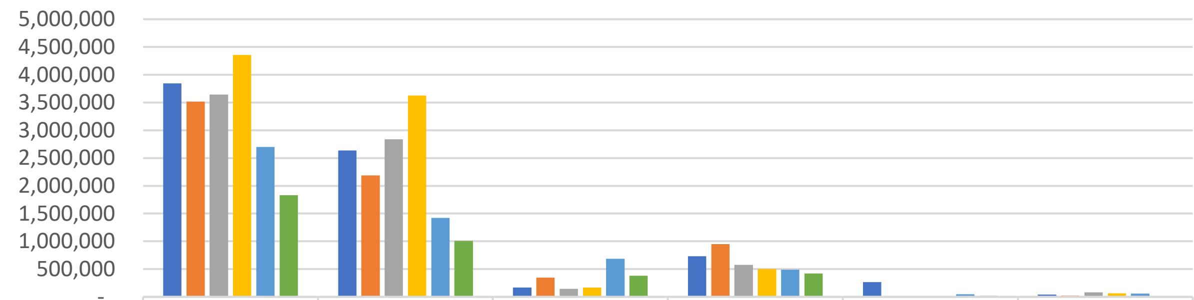
Source: ICASA Electronic Communications Questionnaire 2020
Note: All LTE connections are included in 'mobile'. There is room for the definition of 'mobile broadband subscriptions' to be improved in subsequent reports, noting that it was not possible to accurately distinguish between handset data usage and mobile data usage on other devices, or alternatively to distinguish SIMs used for both voice and data from SIMs dedicated to data usage. It was also necessary to count total internet subscriptions rather than 'broadband' subscriptions, as it was not possible to accurately break out 'narrowband' internet, albeit this is now a small minority of total internet subscriptions. 'Wireless broadband' number may be incomplete in respect of some players, especially those operating in unlicensed spectrum bands.

4.9.4 Fixed Line Voice Subscriptions

Fixed line voice subscriptions decrease in all category in 2020 as it shows on the table below.

Over a 6-year period, Fixed line subscriptions keeps on decrease as it shown on the table below.

Graph 26: Fixed line subscriptions, as at 30th September each year



	Fixed line subscriptions	Analogue fixed-telephone lines	VoIP subscriptions	ISDN voice-channel equivalents	Fixed wireless local loop subscriptions	Fixed public payphone
2015	3,846,332	2,637,753	165,425	731,034	268,454	43,666
2016	3,515,607	2,185,750	344,208	949,264	9,961	26,424
2017	3,645,837	2,840,096	142,224	575,476	4,507	83,534
2018	4,355,309	3,623,941	166,111	500,256	3,262	61,739
2019	2,698,989	1,419,506	683,347	490,459	44,552	61,125
2020	1,829,043	1,009,653	380,530	421,012	15,682	2,166

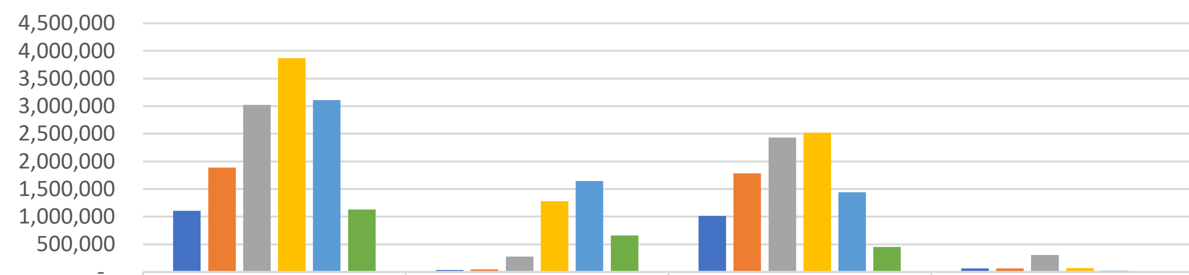
Source: ICASA Electronic Communications Questionnaire, December 2020

4.9.5 Fixed Line Broadband Subscriptions

Total fixed broadband subscriptions decreased in all categories in 2020 as it shown on the graph below.

For a period of 6-years, fixed broadband subscriptions increased by 6.1%.

Graph 27: Fixed broadband subscriptions, as at 30th September each year



	Total Fixed broadband subscriptions	Fibre-to-the-home/building Internet subscriptions	DSL Internet subscriptions	Other fixed (wired)-broadband subscriptions
2015	1,109,055	31,843	1,012,996	64,216
2016	1,890,832	44,895	1,781,519	64,418
2017	3,023,349	280,097	2,434,555	308,697
2018	3,869,934	1,278,728	2,521,013	70,193
2019	3,112,717	1,647,419	1,441,292	24,006
2020	1,126,590	660,441	453,771	12,378

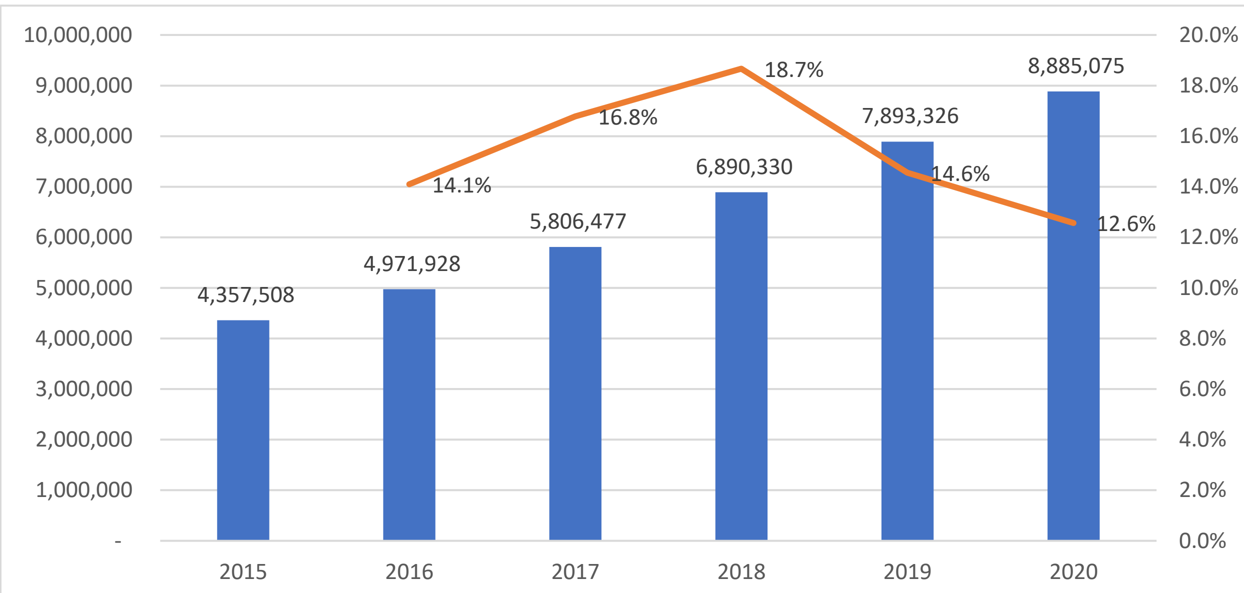
Source: ICASA Electronic Communications Questionnaire 2020

4.9.6 Machine-to-Machine (M2M) Mobile Subscriptions

M2M mobile-network subscriptions increased by 12.6% from 7.8 million in 2019 to 8.8 million in 2020.

For over a period of 6 years, M2M mobile-network subscriptions increased by 15.3%.

Graph 28: M2M mobile-network subscriptions, as at 30th September each year

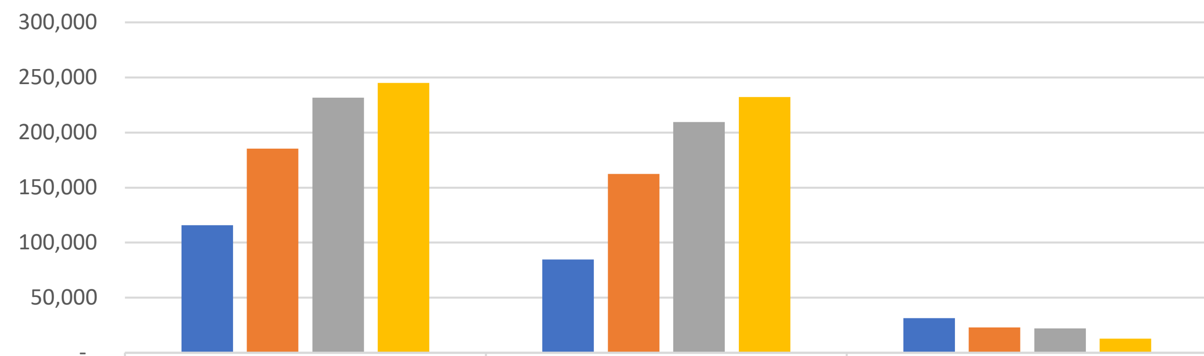


Source: ICASA Electronic Communications Questionnaire 2020

4.9.7 Wireless-broadband subscriptions

Total wireless-broadband subscriptions increased by 5.7% from 231,687 in 2019 to 244,876 in 2020. Satellite subscriptions significantly decreased by 42.2% and terrestrial fixed broadband subscriptions increased by 10.7% for the same period.

Graph 29: Wireless-broadband subscriptions, as at 30th September each year



	Total wireless-broadband subscriptions	Terrestrial fixed wireless broadband subscriptions	Satellite broadband subscriptions
2017	115,951	84,588	31,363
2018	185,327	162,319	23,008
2019	231,687	209,594	22,093
2020	244,876	232,108	12,768

Source: ICASA Electronic Communications Questionnaire 2020

4.10 Network Traffic

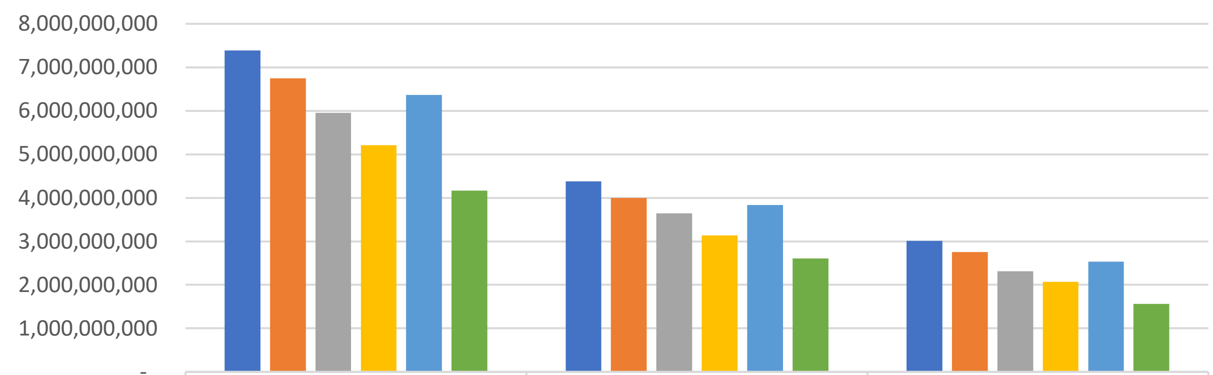
This section highlights the usage of operator networks in terms of traffic volumes in minutes.

4.10.1 Fixed Line Traffic

Total fixed line traffic decreased by 34.5% from 6.3 billion minutes in 2019 to 4.1 billion in 2020. Fixed-to-fixed telephone traffic, in minutes for local and long-distance decreased by 32% and 38.4%, respectively in 2020.

For a period of 6-year, total fixed line traffic decreased by 10.8%.

Graph 30: Fixed line traffic, in minutes, for the 12-month period ending 30th September each year



	Total Fixed line traffic	Local fixed-to-fixed telephone traffic, in minutes	Long-distance fixed-to-fixed telephone traffic, in minutes
2015	7,389,784,202	4,378,174,575	3,011,609,627
2016	6,751,540,678	3,994,718,204	2,756,822,474
2017	5,954,515,149	3,644,927,197	2,309,587,952
2018	5,208,521,164	3,139,633,506	2,068,887,658
2019	6,365,441,002	3,833,825,566	2,531,615,436
2020	4,167,973,810	2,607,594,305	1,560,379,505

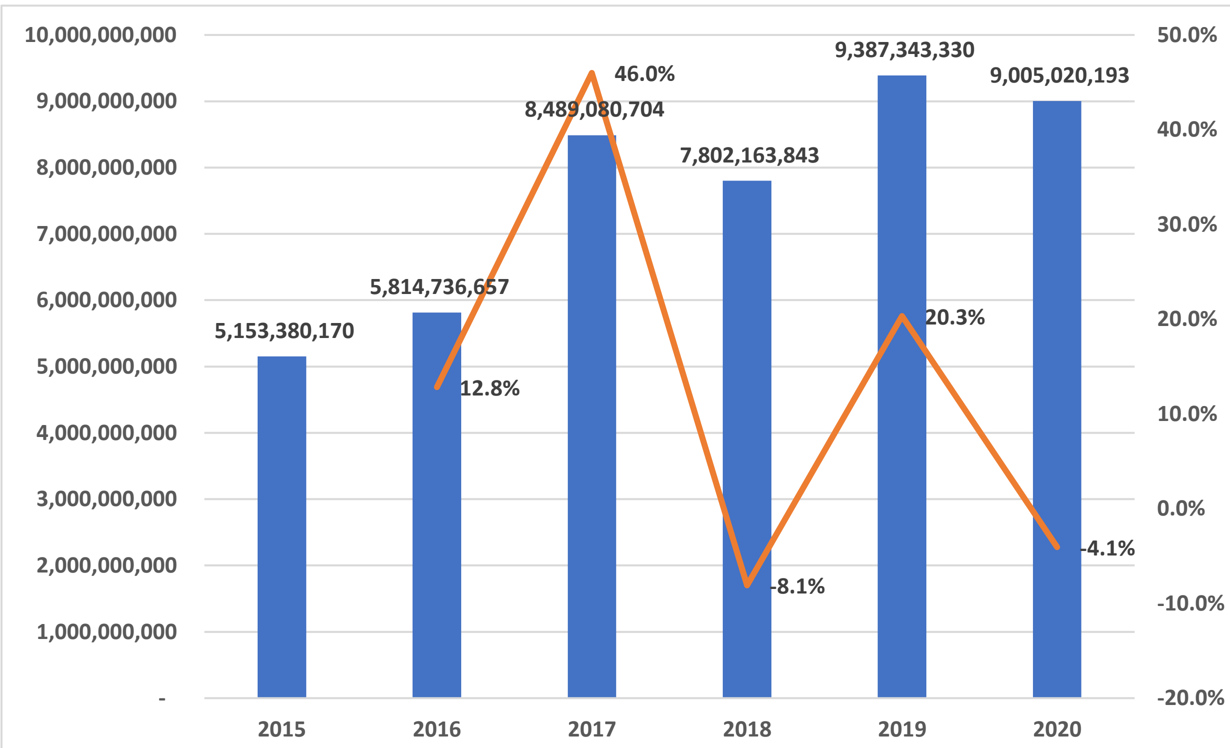
Source: ICASA Electronic Communications Questionnaire 2020

4.10.2 Fixed-to-Mobile Telephone Traffic

Fixed-to-mobile telephone call traffic decreased by 4.1% from 9.3 billion in 2019 to 9 billion in 2020.

Over a period of 6 years, fixed-to-mobile telephone call traffic increased by 11.8%.

Graph 31: Fixed-to-mobile telephone traffic minutes, for the 12-month period ending 30th September each year



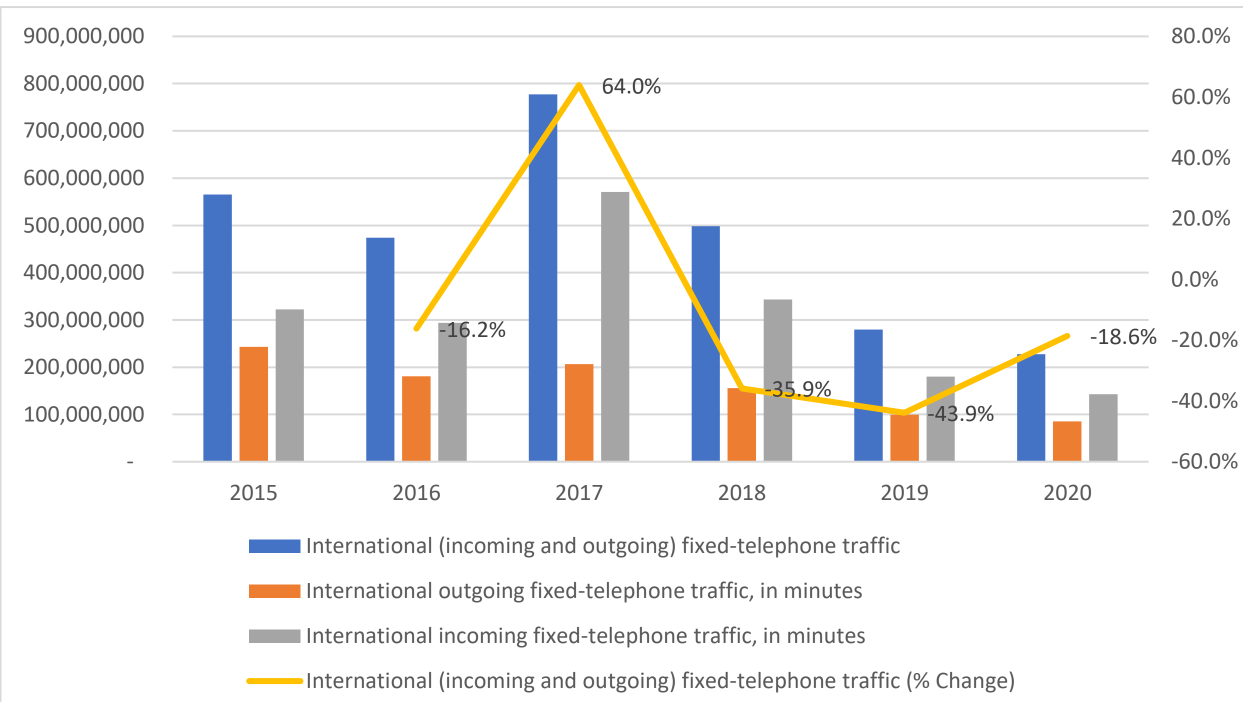
Source: ICASA Electronic Communications Questionnaire 2020

4.10.3 International (Incoming and Outgoing) Fixed Telephone Traffic

International (incoming and outgoing) fixed-telephone call traffic decreased by 18.6% from 279 million minutes in 2019 to 227 million in 2020. International incoming fixed-telephone calls decreased by 21% and outgoing calls decreased by 14.2%, respectively in 2020.

Over a period of 6 years the international (incoming and outgoing) fixed-telephone traffic has decreased by 16.6%.

Graph 32: International fixed line traffic in minutes (million) for the 12-month period ending 30th September each year



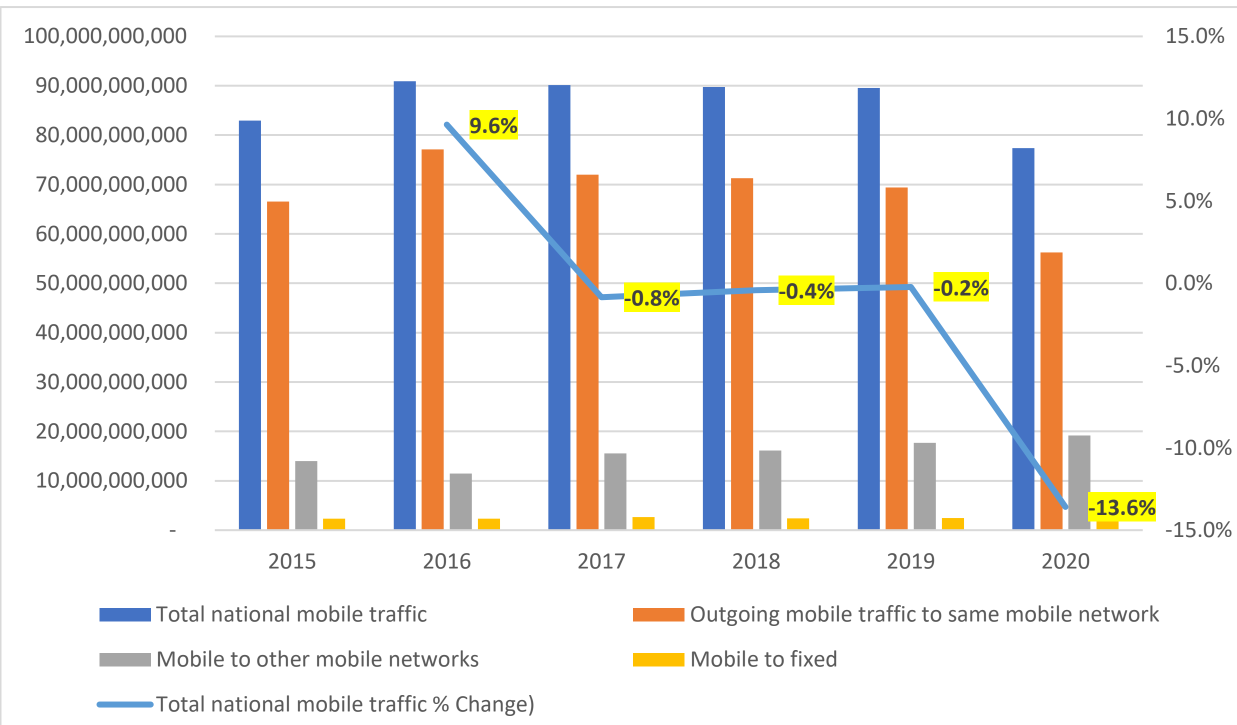
Source: ICASA Electronic Communications Questionnaire 2020

4.10.4 Total national mobile traffic (Minutes)

The total national mobile traffic in minutes slightly decreased by 0.2% in 2020. Mobile to other mobile networks and Mobile to fixed increased by 9.6% and 4.6%, respectively, however the outgoing mobile traffic to same mobile network decreased by 2.6% for the same period.

For a period of 6 years, total national mobile traffic in minutes slightly decreased by 1.4%.

Graph 33: Mobile voice traffic in minutes for the 12-month period ending 30th September each year



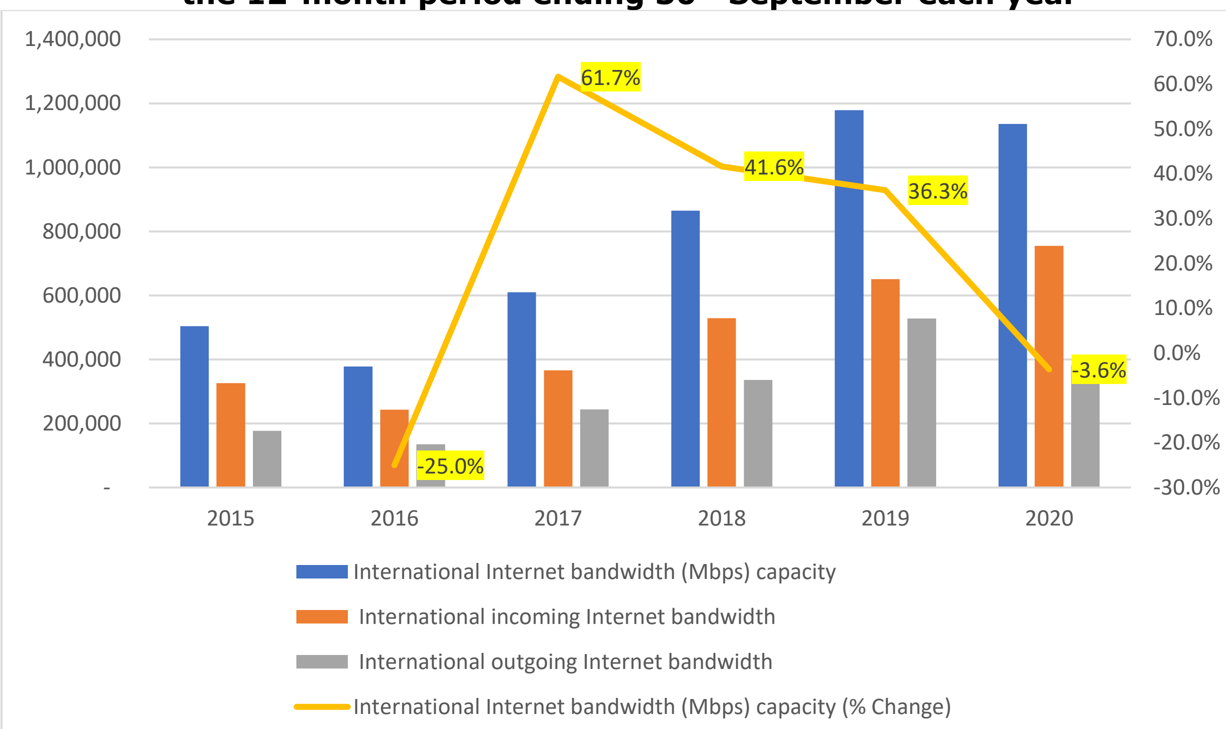
Source: ICASA Electronic Communications Questionnaire 2020

4.11 International Internet Bandwidth Capacity in Megabits per second (Mbps)

Total international internet bandwidth (Mbps) capacity decreased by 3.6% in 2020. Bandwidth for international outgoing decreased by 27.7% in 2020 and incoming bandwidth for internet increased by 15.9% in 2020.

For a 6-year period, the total international internet bandwidth capacity increased by 17.7%. Bandwidth for international outgoing and incoming internet increased by 16.5% and 18.3%, respectively for the same period.

Graph 34: International internet bandwidth Megabits per second (Mbps) for the 12-month period ending 30th September each year



Source: ICASA Electronic Communications Questionnaire 2020

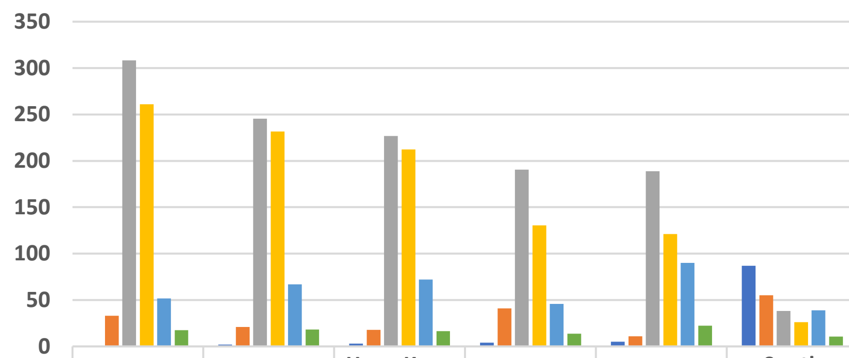
4.12 International Comparison of South Africa's Internet Speeds

Speedtest for fixed broadband and mobile (download and upload speed) for South Africa was compared to other countries to have a better understanding of its growth and how it is performing internationally.

4.12.1 International speedtest benchmarks

The global Speedtest ranking for South Africa was at 90 in 2019 and went up to 87 in 2020 for fixed broadband. The mobile broadband in 2019 was 60 and in 2020 was at 55.

Graph 35: Speedtest benchmark in 2020



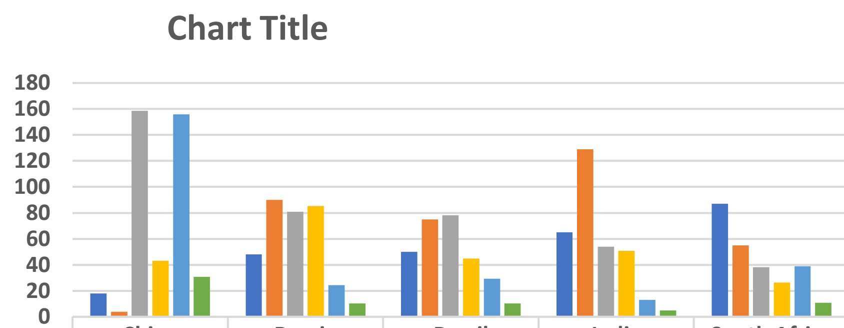
	Thailand	Singapore	Hong Kong (SAR)	Romania	Switzerland	South Africa
Fixed Broadband speed (rank)	1	2	3	4	5	87
Mobile speed (rank)	33	21	18	41	11	55
Fixed Broadband speed Download speed (Mbps)	308.35	245.31	226.8	190.6	188.88	38.25
Fixed Broadband speed Upload speed (Mbps)	260.86	231.58	212.26	130.43	121.1	26.3
Mobile Download speed (Mbps)	51.75	66.82	72.13	45.93	89.89	38.95
Mobile Upload speed (Mbps)	17.47	18.27	16.54	13.78	22.37	10.71

Source: OOKLA, Speeedtest intelligence 2020

4.12.2 Speedtest benchmark with BRICS countries

When benchmarking with the BRICS countries, South Africa's speedtest ranking for fixed broadband was at 87 (which is the lowest ranking in the grouping). South Africa's speedtest ranking for mobile broadband was the second best in the BRICS grouping at 55, only exceeded by China with a ranking of 4 in 2020.

Graph 36: Speedtest benchmark BRICS countries in 2020



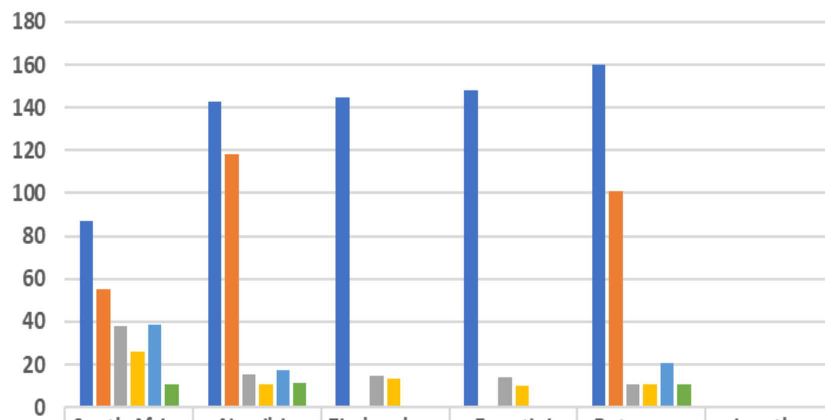
	China	Russia	Brazil	India	South Africa
Fixed Broadband speed (rank)	18	48	50	65	87
Mobile speed (rank)	4	90	75	129	55
Fixed Broadband speed Download speed (Mbps)	158.66	80.86	78.1	53.9	38.25
Fixed Broadband speed Upload speed (Mbps)	43.12	85.29	44.86	50.75	26.3
Mobile Download speed (Mbps)	155.89	24.24	29.26	12.91	38.95
Mobile Upload speed (Mbps)	30.67	10.41	10.38	4.97	10.71

Source: OOKLA, Speeedtest intelligence 2020

4.12.3 Speedtest benchmark with neighbouring countries

South Africa's speedtest ranking for fixed broadband was at 87, which is the highest when compared to other neighbouring countries. Likewise, South Africa is the highest ranked country amongst its neighbours for mobile broadband with a ranking of 55 in 2020.

Graph 37: Speedtest benchmark neighbouring countries in 2020



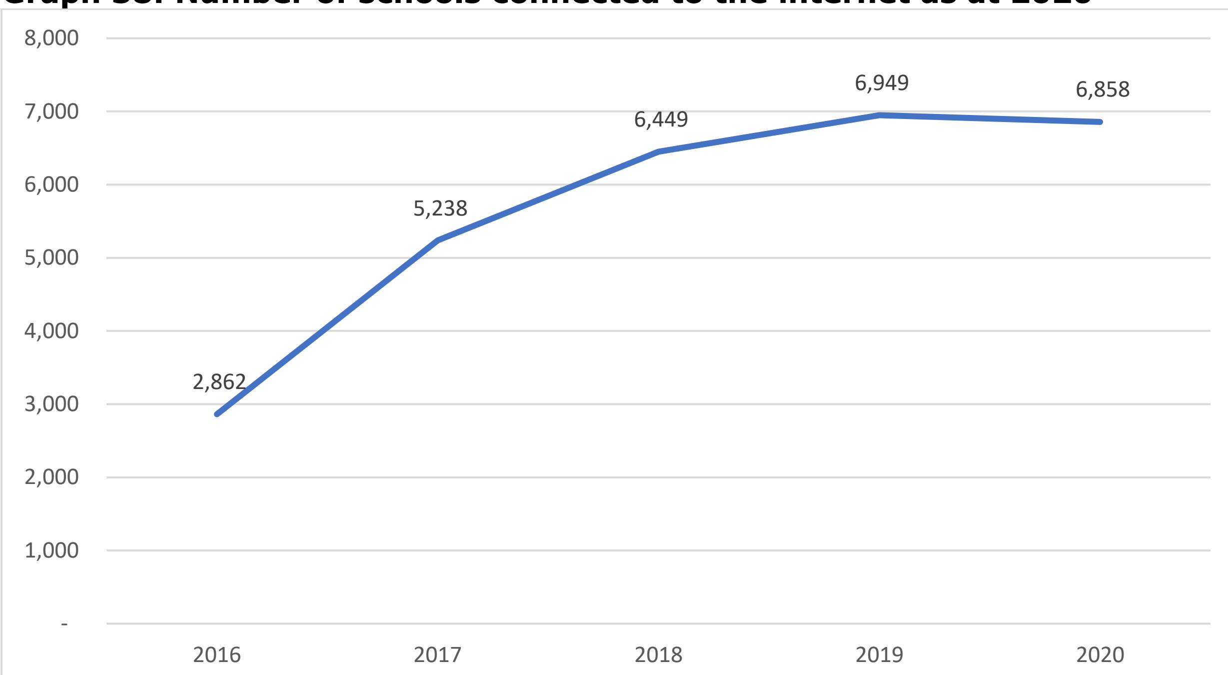
	South Africa	Namibia	Zimbambwe	Eswatini	Botswana	Lesetho
Fixed Broadband speed (rank)	87	143	145	148	160	-
Mobile speed (rank)	55	118	-	-	101	-
Fixed Broadband speed Download speed (Mbps)	38.25	15.27	14.7	13.9	10.95	-
Fixed Broadband speed Upload speed (Mbps)	26.3	10.77	13.71	10.2	10.97	-
Mobile Download speed (Mbps)	38.95	17.62	-	-	20.79	-
Mobile Upload speed (Mbps)	10.71	11.27	-	-	10.96	-

Source: OOKLA, Speeedtest intelligence 2020

4.13 Number of Schools Connected to the Internet Based on Obligations Imposed by ICASA

The total number of schools connected to the internet based on universal service obligations imposed by ICASA was 6,858 as at 2020.

Graph 38: Number of schools connected to the internet as at 2020



Source: ICASA Electronic Communications Questionnaire 2020

5 BROADCASTING SECTOR

The outbreak of the COVID-19 has acted as a significant restraint on some of the TV and radio broadcasting markets in 2020 as businesses were disrupted due to lockdowns imposed by government.

Among the three sectors that the Authority is regulating, the Broadcasting sector has been mostly affected, we have seen a significant decrease in revenue, however during the lockdown period, broadcasters kept on updating the nation through TV and radio. The broadcasters carried out this task successfully regardless of the challenges faced during this period.

The Authority amended the 2010 Sports Broadcasting Services regulations. The regulations were amended in terms of section 60(1) read with section 4(1) of the ECA.

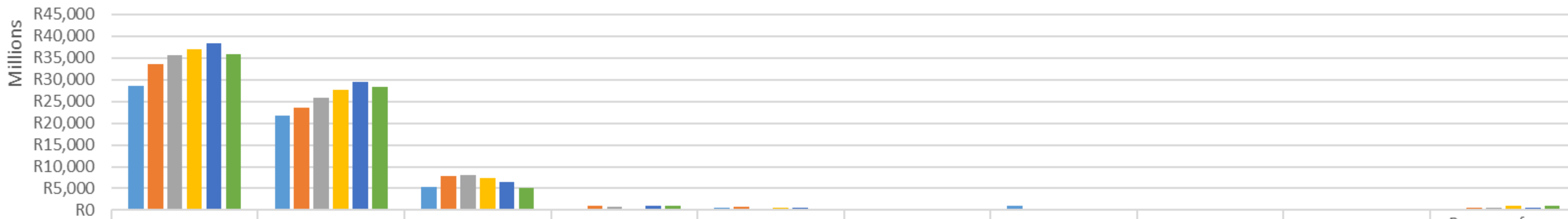
The purpose of the amended regulations is to ensure that South Africans continue to access sports of national interest. Section 60(1) prohibits subscription broadcasting services from acquiring sporting events on National interest on exclusive basis. The amended regulations provide a list of all the sporting events deemed to be of National interest.

5.1 Broadcasting Revenue

Total broadcasting services revenue decreased by 6.6% from R38.3 billion in 2019 to 35.8 billion in 2020. Revenue from subscriptions decreased by 4.2%, advertising revenue decrease by 23.3% and informational increased by 1% in 2020.

Over the 6-year period total revenue from broadcasting services increased by 4.5%. Revenue from advertising slightly decreased by 1.5% and from revenue from infomercials increased by 54.3% for the same period.

Graph 39: TV and Radio broadcasting revenues for the 12-month period



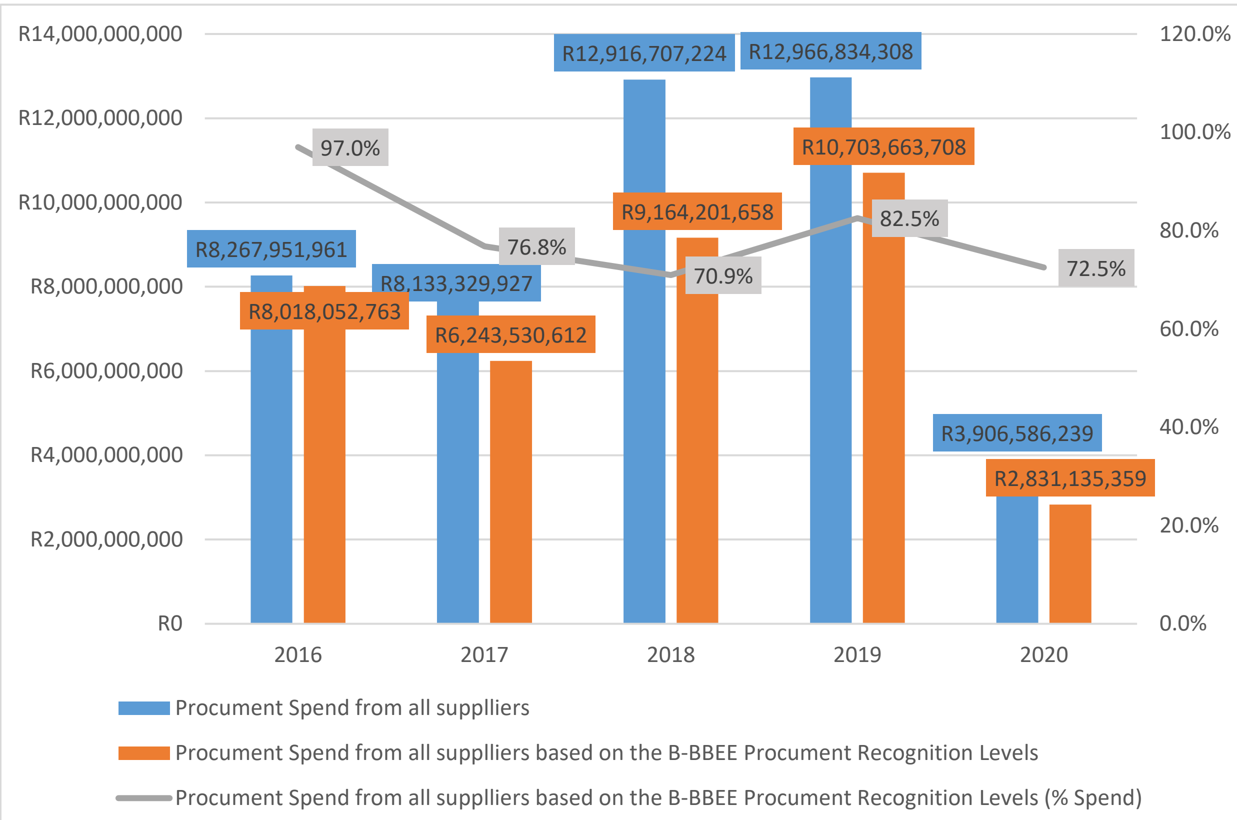
	Total revenue	Broadcasting Subscriptions Revenue	Broadcasting Advertising Revenue	Total of any other revenue	Revenue from sponsorhips	Revenue from Government or State grant	Revenue from membership fees	Revenue from infomercials	Revenue from donations	Revenue from Broadcasting Promotions (with flighting code).
2015	R28,688,718,290	R21,788,645,350	R5,384,344,985	R735,530	R531,363,207	R59,843,068	R919,417,900	R1,988,000	R2,164,250	R216,000
2016	R33,655,415,072	R23,584,825,897	R7,860,473,603	R917,747,350	R680,926,353	R6,557,651	R10,000	R69,854,929	R3,746	R535,015,544
2017	R35,606,415,286	R25,773,619,194	R8,020,046,840	R829,053,088	R272,913,790	R23,351,477	R4,600	R16,434,074	R10,783,817	R660,208,406
2018	R36,921,489,746	R27,622,475,742	R7,364,895,390	R282,568,469	R525,969,858	R101,264,960	R2,678,215	R22,002,230	R7,052,479	R992,582,404
2019	R38,325,761,969	R29,552,474,837	R6,526,380,420	R1,092,957,907	R538,833,271	R92,217,049	R2,557,677	R17,211,421	R9,579,462	R493,549,925
2020	R35,814,897,915	R28,300,604,807	R5,003,077,915	R940,257,248	R397,527,711	R108,798,175	R17,958,093	R17,377,974	R8,097,574	R1,021,198,419

*Source: ICASA Broadcasters Questionnaire, December 2020 (*data includes TV & radio broadcasting*)*

5.2 Broadcasting Black Economic Empowerment Measures

The proportion of procurement spend from suppliers based on their B-BBEE ranking as a percentage of total spend from all suppliers was 82.5% in 2019 and 72.5% in 2020.

Graph 40: Broadcasting sector procurement spend from all suppliers based on B-BBEE, for the 12-month period ending 30th September

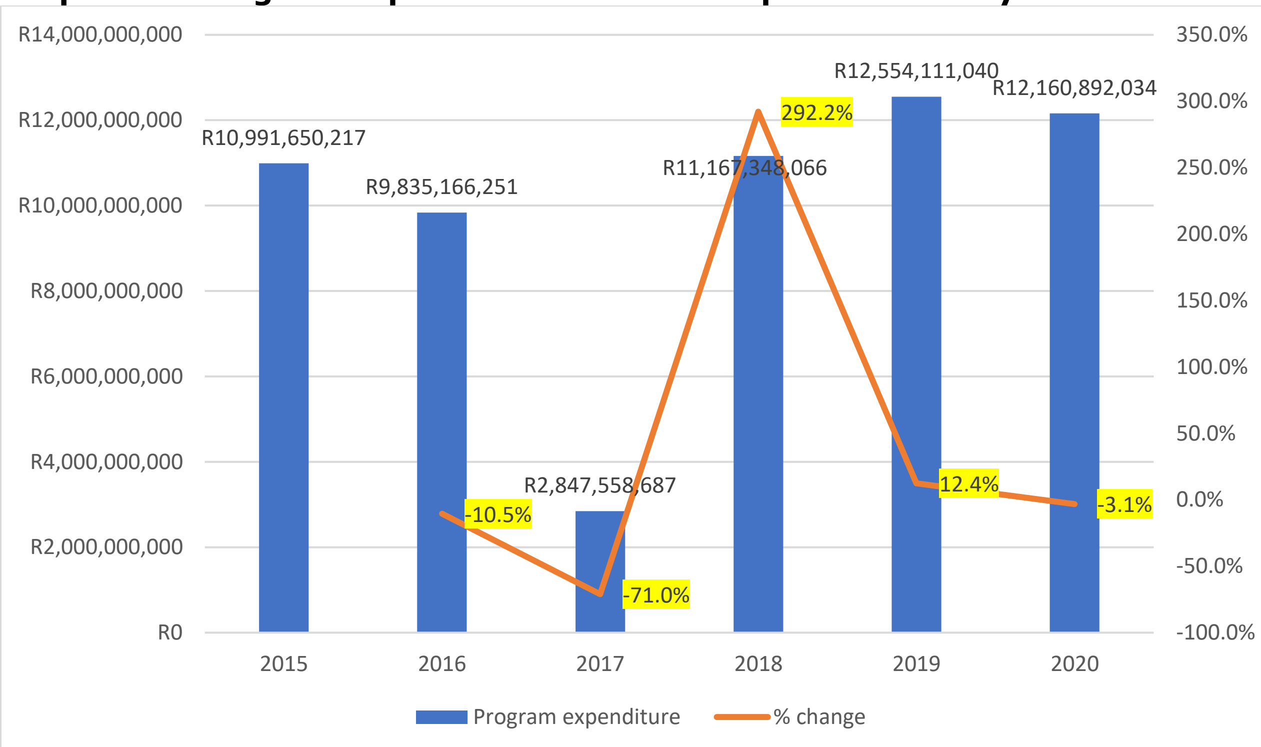


Source: ICASA Broadcasters Questionnaire, December 2020

5.3 Program expenditure

Programme expenditure decreased by 3.1% in 2020. For a period of 6 years it increased by 2%.

Graph 41: Program expenditure as of 30th September each year

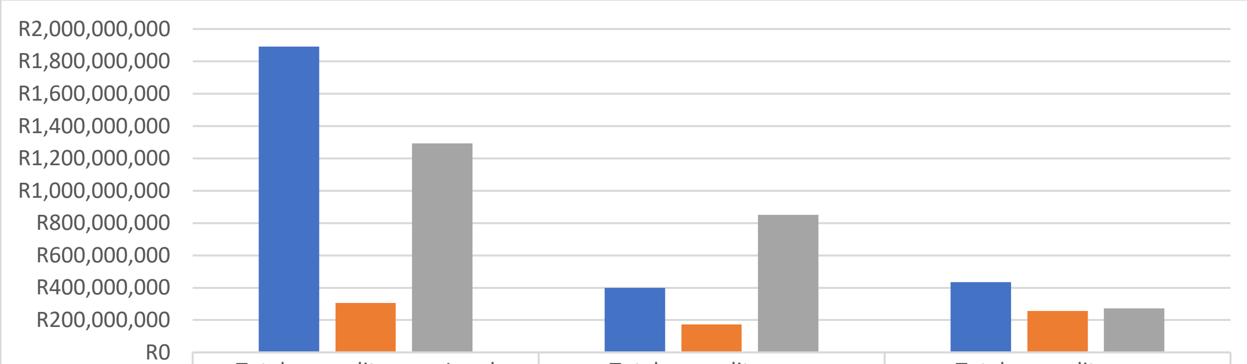


Source: ICASA Broadcasters Questionnaire, December 2020

5.4 Broadcasting productions expenditure

Expenditure on local independent productions was 305 million in 2019 and in 2020 was 1.2 billion. Expenditure on broadcaster production was 257 million and it went up to 272 million in 2020.

Graph 42: Broadcasting productions expenditure as of 30th September each year



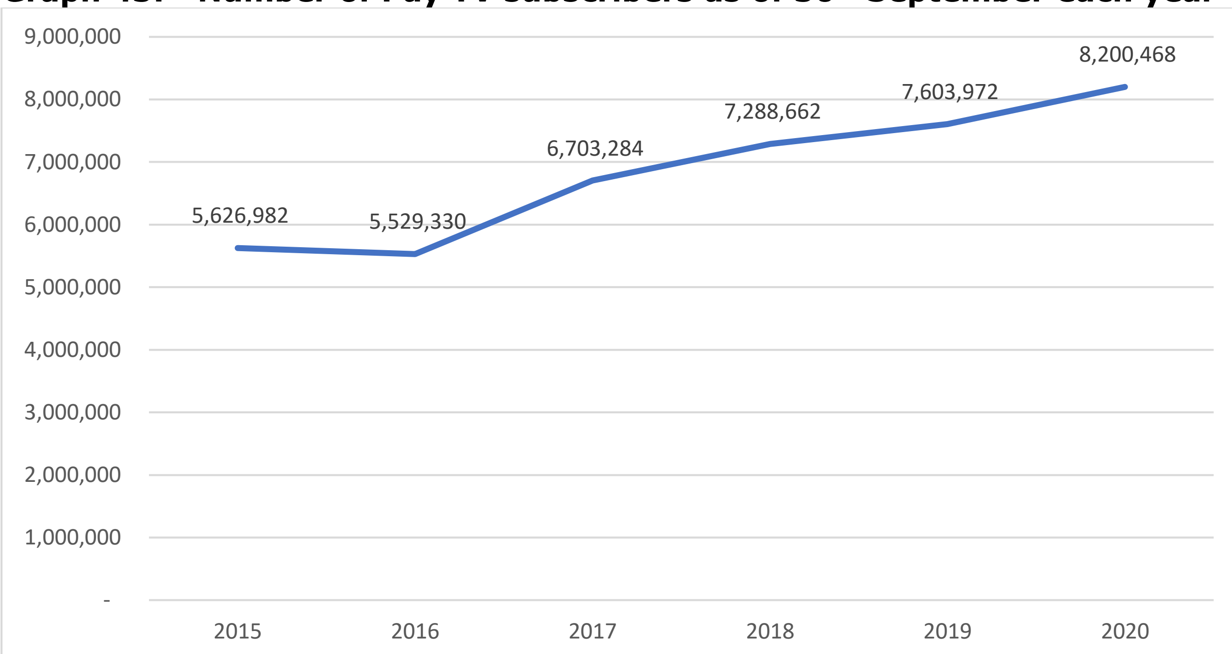
	Total expenditure on Local independent productions (In Rand)	Total expenditure on international Indipended productions (In Rand)	Total expenditure on broadcaster productions (In Rand)
2018	R1,891,070,271	R399,350,900	R433,756,200
2019	R305,655,109	R173,874,673	R257,081,452
2020	R1,293,447,658	R850,286,338	R272,299,436

Source: ICASA Broadcasters Questionnaire, December 2020

5.5 Number of Pay TV Subscribers

The total number of Pay TV subscriptions increased by 7.8% in 2020. For a period of 6 years it increased by 7.8%.

Graph 43: Number of Pay TV subscribers as of 30th September each year



Source: ICASA Broadcasters Questionnaire, December 2020

5.6 Total Number of Television Stations and Distributors

The Number of set-top boxes increased by 21% from 15 million in 2019 to around 18 million in 2020. The Number of Content Distributors decreased by 2.7% from 151 in 2019 to 147 in 2020. The Number of Analogue Terrestrial Stations was 6 in 2019 and 5 in 2020.

Graph 44: Total Number of Television Stations and Distributors as of 30th September each year

	Number of set-top boxes	Number of Content Distributors	Number of Digital Terrestrial Stations	Number of Digital Satelite Stations	Number of Signal Distributors	Number of Analogue Terrestrial Stations
2017	10,068,326	86	6	30	9	27
2018	14,047,221	138	89	53	14	7
2019	15,388,609	151	91	50	19	6
2020	18,623,287	147	90	52	11	5

Source: ICASA Broadcasters Questionnaire, December 2020

*Note: *One of the operators did not submit the Analogue terrestrial station in 2020**

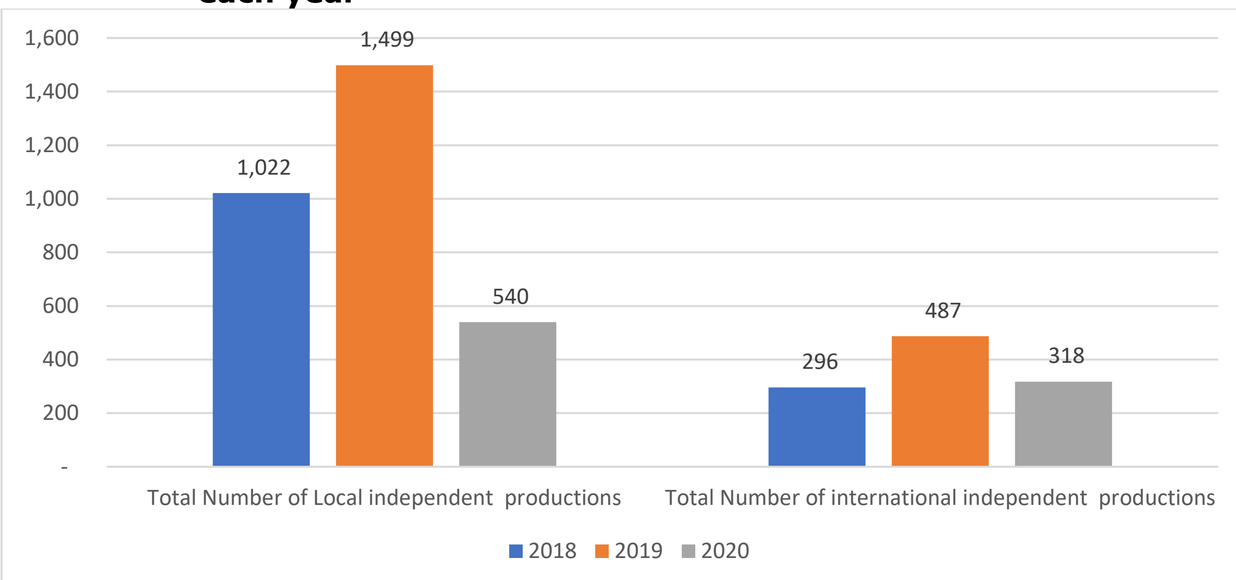
some of the operators did not have the content distributors in 2020

**Government subsidies set-top boxes are not included **

5.7 Total Number of broadcasting productions

Local independent productions and international independent productions decrease as it shown on the graph below in 2020.

Graph 45: Total Number of broadcasting productions as of 30th September each year



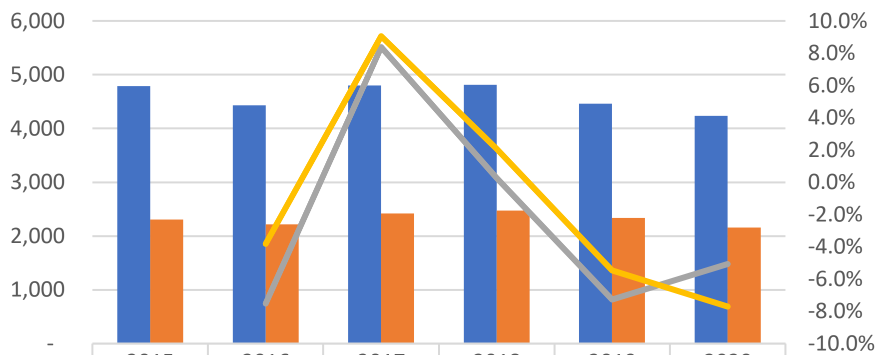
Source: ICASA Broadcasters Questionnaire, December 2020

5.8 Broadcasting Sector Employment

The total number of people employed in the broadcasting sector decreased by 5.1%. Female employees decreased by 7.7% in 2020.

Over a 6-year period, the total employment decreased by 2.4% and the female employment increased by 1.4%.

Graph 46: People employed in the broadcasting sector, as at the 30th September each year



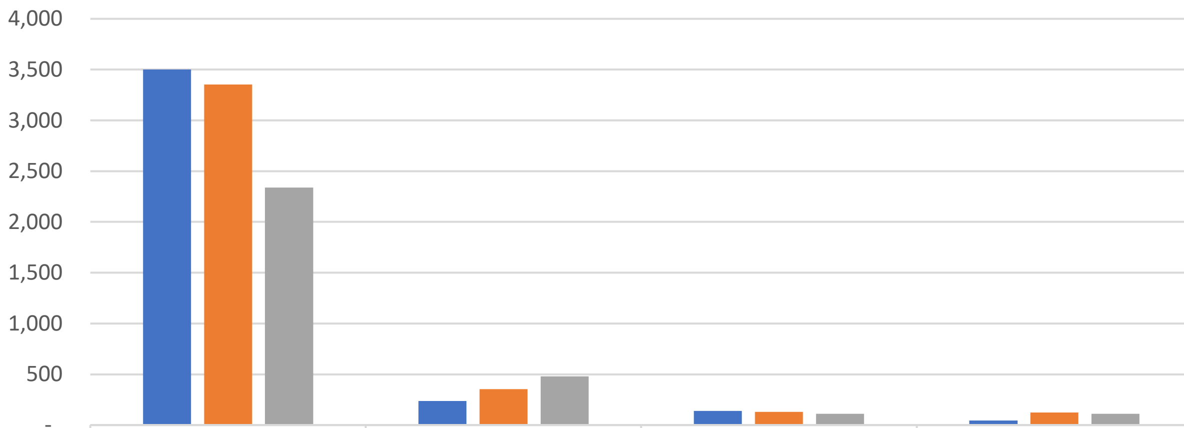
	2015	2016	2017	2018	2019	2020
Broadcasting employment- Total	4,789	4,429	4,800	4,813	4,463	4,237
Broadcasting employment- Female	2,308	2,220	2,421	2,471	2,336	2,156
Broadcasting employment- Total (% Change)		-7.5%	8.4%	0.3%	-7.3%	-5.1%
Broadcasting employment- Female (% Change)		-3.8%	9.1%	2.1%	-5.5%	-7.7%

Source: ICASA Broadcasters Questionnaire, December 2020

5.8.1 Persons employed in the broadcasting sector breakdown

The broadcasting employment for skilled decreased by 30.2%, for unskilled decreased by 10.4% and for disabled decreased by 14.5% in 2020, however semiskilled increased by 35.5% for the same period.

Graph 47: Persons employed in the broadcasting sector breakdown in 2019



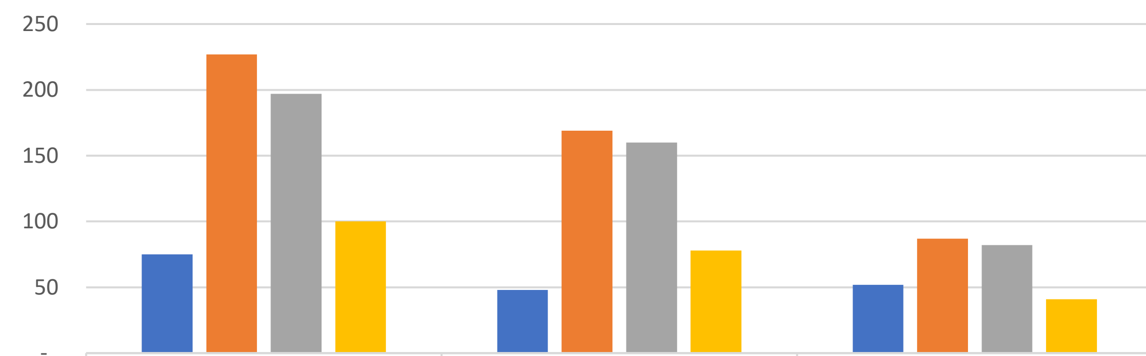
	Broadcasting employment- skilled	Broadcasting employment- Semi skilled	Broadcasting employment- Disabled	Broadcasting employment- Unskilled
2018	3,502	238	141	46
2019	3,353	355	131	125
2020	2,340	481	112	112

Source: ICASA Broadcasters Questionnaire, December 2020

5.8.2 Proportion of Black People in Top Management in the Broadcasting Sector

Top management (EXCO) employee decreased by 49.2%, Black top management decreased by 51.2% and black top female employee decreased by 50% in 2020.

Graph 48: Broadcasting Black Economic Empowerment Measures, for the 12-month period ending 30th September each year



	Broadcasting employment- Top Management (EXCO members)	Broadcasting employment- Black Top Management (EXCO members)	Broadcasting employment- Black Top Female Management (EXCO members)
2017	75	48	52
2018	227	169	87
2019	197	160	82
2020	100	78	41

Source: ICASA Broadcasters Questionnaire, December 2020

6 POSTAL SERVICES SECTOR

In the specific case of the postal sector, a first immediate and striking consequence of COVID-19 has been widespread disruption to international supply chains, resulting from constraints imposed on international transport.

The Postal sector has seen the highest percentage increase in revenue among the three sectors that the Authority is regulating.

The Authority is amending the Customer Care Standards for the Postal Services Licensee Regulations (2012) under section 4(3)(j) of ICASA Act of 2000 read together with section 2 (h) and (l) of the PSA.

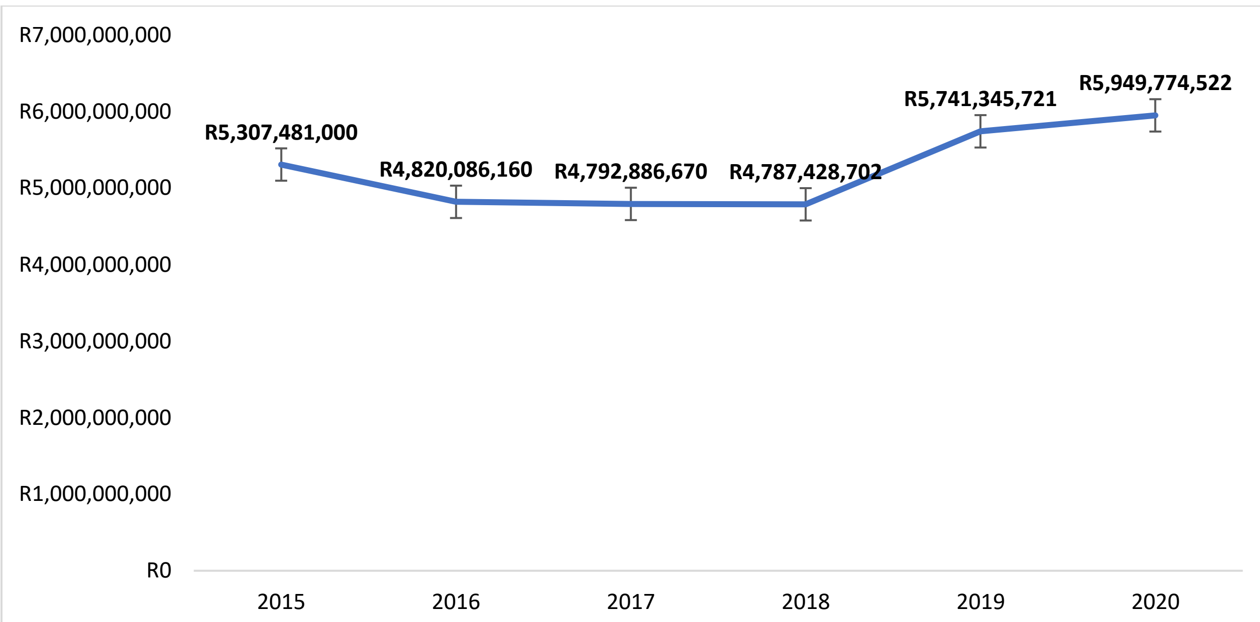
The proposed amendments objectives are to strengthen the provision of quality for postal services through setting out minimum standards to protect and promote the interests of customers; align regulations to the related customer protection legislation and current practices (i.e. clarifying process and procedures for customer complaints resolutions); and to enable the Authority to monitor and enforce compliance with the customer care standards provided.

6.1 Postal Sector Revenue

The postal sector revenue increased by 3.6%, from R5.7 billion in 2019 to R5.9 billion in 2020.

For a period of 6 years the postal revenue increased by 2.3%.

Graph 49: Postal sector revenue, 12-month period ending 30th September each year

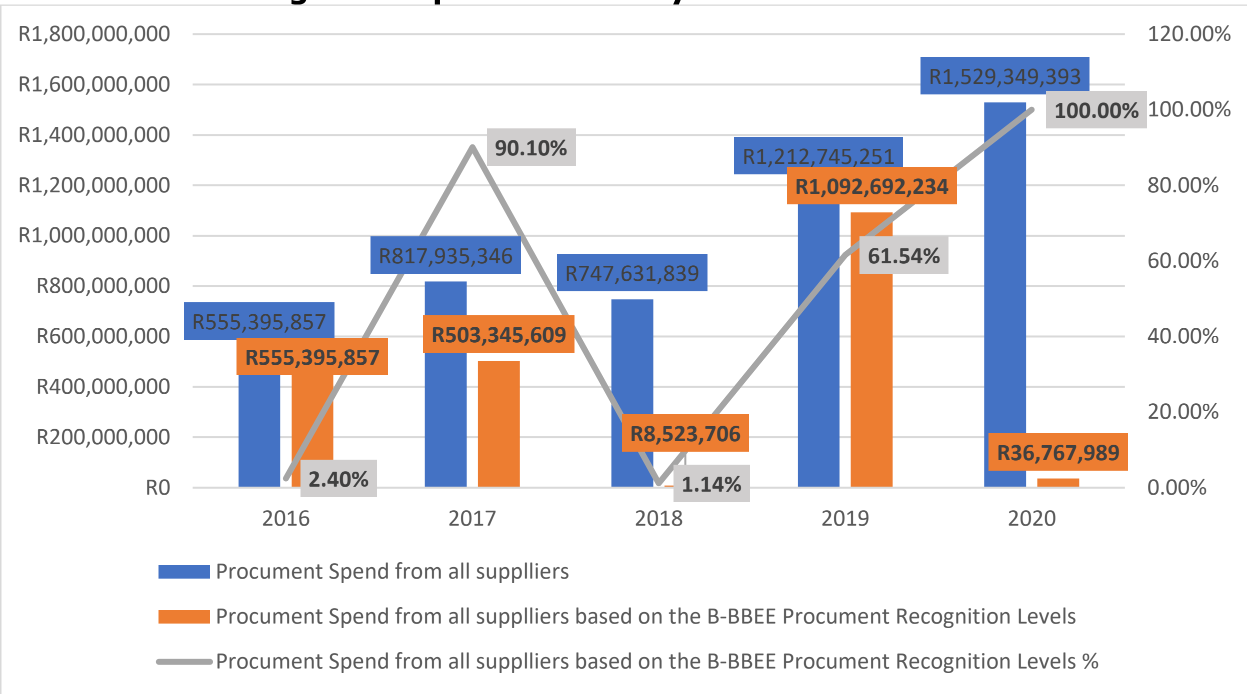


Source: ICASA Postal Questionnaire, December 2020
we had low response rate from unreserved postal sector

6.2 Postal Sector Black Economic Empowerment Measures

The proportion of the postal sector procurement spend based on suppliers' B-BBEE ranking as a percentage of overall spend from all suppliers represented 2.4% in 2020.

Graph 50: Postal sector procurement spend from suppliers based on the B-BBEE Procurement Recognition Levels, for the 12-month period ending 30th September each year

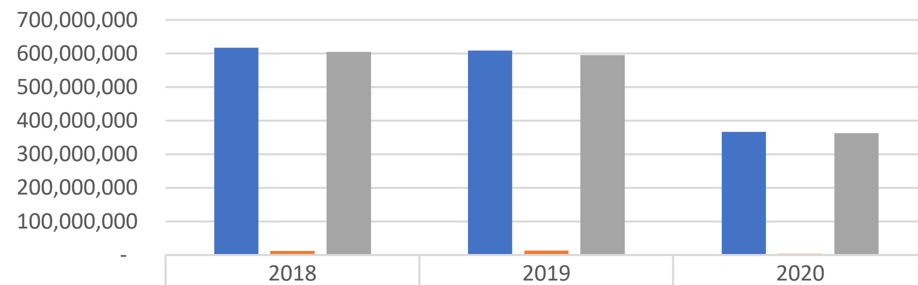


Source: ICASA Postal Questionnaire, December 2020
*Note: *we had low response rate from unreserved postal sector**

6.3 Total Letter delivery services (Registered letters)

Total letter delivery services (Registered letters) decreased by 39.8%, domestic service and international outbound (Local Volumes) decreased by 39.1% and the domestic service and international outbound (International mail centre volume) also decreased by 69.8% in 2020.

Graph 51: Total number of letter delivery services (registered letters), as of 30th September each year



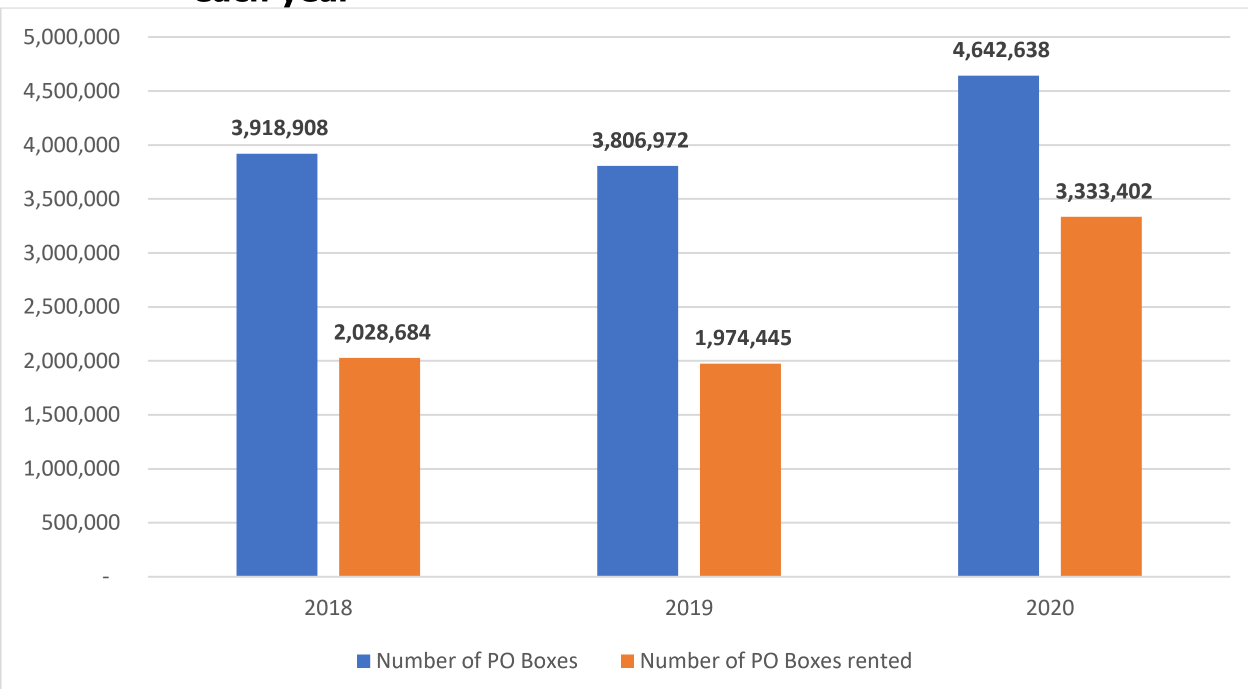
	2018	2019	2020
Total Letter delivery services (Registered letters)	616,866,994	609,171,863	366,857,996
Letters: Domestic service and international outbound (International Mail Centre Volumes)	12,050,444	13,464,770	4,069,167
Letters: Domestic service and international outbound (Local Volumes)	604,816,550	595,707,093	362,788,829

Source: ICASA Postal Questionnaire, December 2020
*Note: *we had low response rate from unreserved postal sector**

6.4 Number of PO Boxes and PO Boxes rented

Number of PO Boxes and Number of PO Boxes rented increased by 22% (from 3.8 million to 4.6 million) and 68.8% (from 1.9 million to 3.3 million), respectively in 2020.

Graph 52: Number of PO Boxes and PO Boxes rented, as of 30th September each year

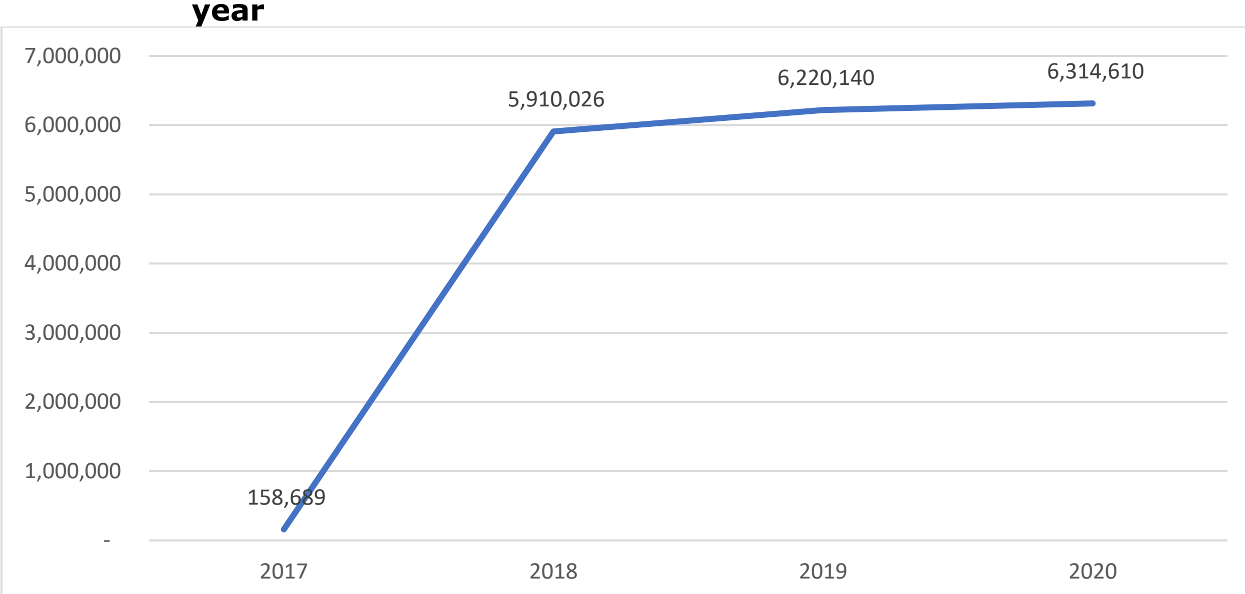


Source: ICASA Postal Questionnaire, December 2020
*Note: *we had low response rate from unreserved postal sector**

6.5 Total number of Postbank holders

The total number of Postbank holders increased by 1.5% in 2020.

Graph 53: Total number of Virtual post users, as of 30th September each year

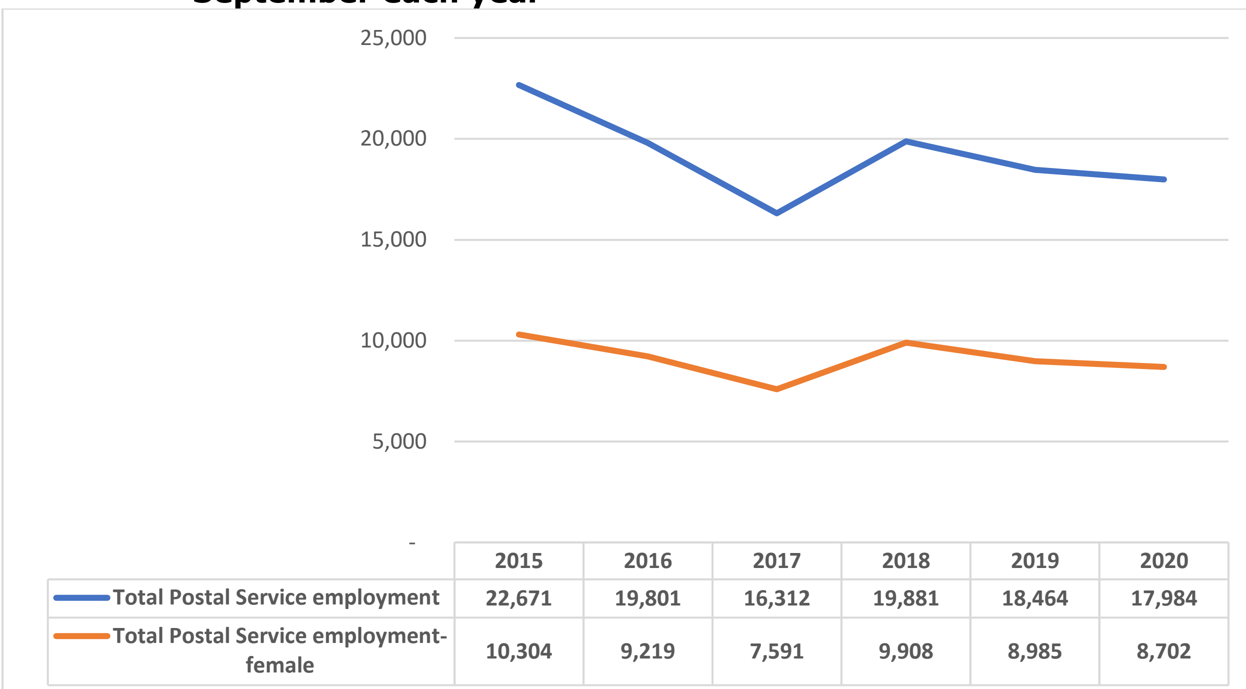


Source: ICASA Postal Questionnaire, December 2020
*Note: *we had low response rate from unreserved postal sector**

6.6 Postal Service Sector Employment

Total employment in the postal sector decreased by 2.6% in 2020. Female employment decreased by 3.2% in 2020.

Graph 54: Persons employed in Post Service Sector, by gender, as of 30th September each year



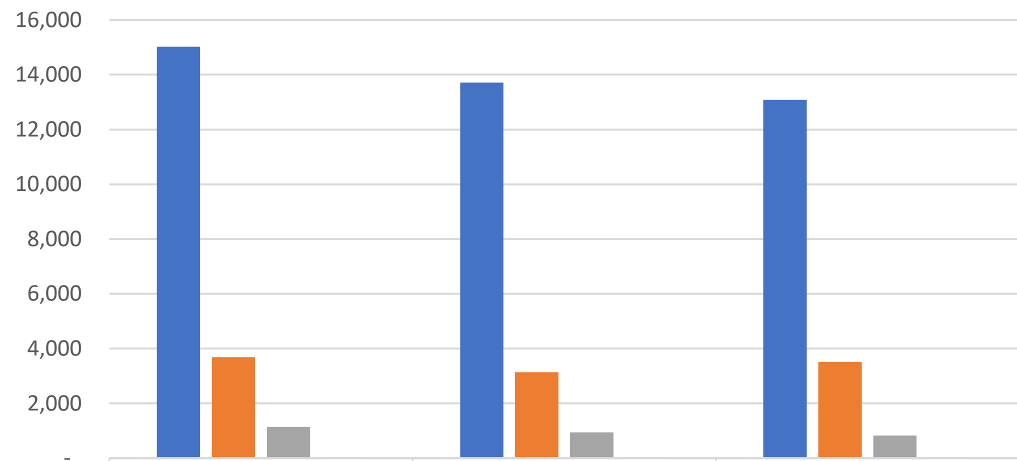
	2015	2016	2017	2018	2019	2020
Total Postal Service employment	22,671	19,801	16,312	19,881	18,464	17,984
Total Postal Service employment-female	10,304	9,219	7,591	9,908	8,985	8,702

Source: ICASA Postal Questionnaire, December 2020
*Note: *we had low response rate from unreserved postal sector**

6.7 Persons employed in the postal sector breakdown

The postal sector employment continues to decrease in 2020, with semi-skilled employees decreasing by 4.6%, unskilled employees decreasing by 13% and disabled employees decreasing by 8.7%. However, the number of employees with skilled increased by 11.9%.

Graph 55: Persons employed in the postal sector breakdown, for the 12-month period ending 30th September each year



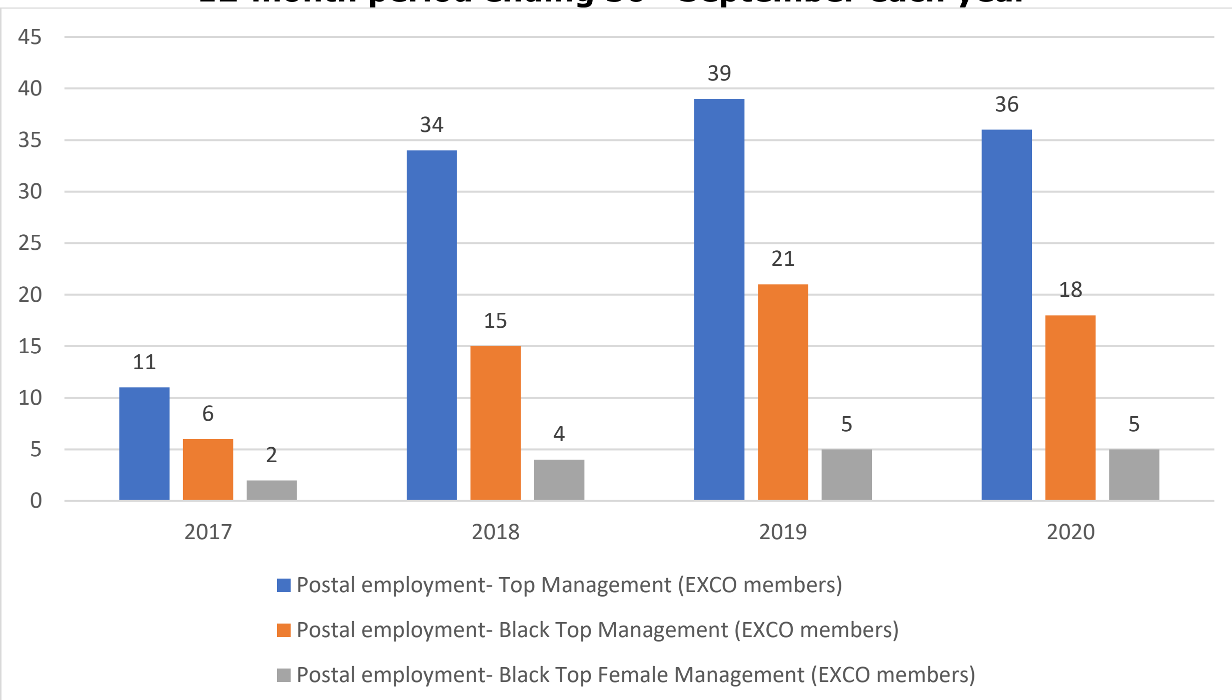
	2018	2019	2020
Postal employment- Semi skilled	15,018	13,715	13,079
Postal employment- skilled	3,693	3,138	3,512
Postal employment- Unskilled	1,138	946	823
Postal employment- Disabled	46	46	42

Source: ICASA Postal Questionnaire, December 2020

6.8 Postal service sector Black Economic Empowerment Measures

The top management (EXCO members) decreased by 7.7% and top black management decreased by 14.3% in 2020, however the top black female management did not change for the same period.

Graph 56: Postal sector Black Economic Empowerment Measures, for the 12-month period ending 30th September each year



Source: ICASA Postal Questionnaire, December 2020
*Note: *we had low response rate from unreserved postal sector**

7 CONCLUSION

The following highlights are worth noting for three sectors (telecommunications, broadcasting and postal services)

- The total sector revenue (telecommunications, broadcasting and postal) increased by 2% form R238 billion in 2019 to 243 billion in 2020. The broadcasting services revenue decreased by 6.6% from R38 billion to R35 billion, however postal services revenue has increased by 3.6% in 2020 and the Telecommunication services revenue slightly increased by 2.4% from R194 billion in 2019 to R201 billion in 2020.

- Total numbers for the three sectors employment slightly decreased by 0.3% in 2020. For the same period, employment changes in the specific sectors were as follows: telecommunications sector employment slightly increased by 1.6%, broadcasting sector employment also decreased by 2.6% and postal sector employment decreased by 5.1%.

The following highlights are worth noting for the telecommunications sector

- Total telecommunication investment decreased by 6% in 2020.

- The proportion of telecommunication procurement spend from all suppliers based on the B-BBEE ranking levels was 83.1% in 2020.

- 5G population coverage is at 0.7% in 2020.

- Total mobile cellular phone voice subscriptions decreased by 2.1% from 96.9 million in 2019 to 94.9 million in 2020. Post-paid mobile cellular telephone subscriptions for urban and rural area increased by 5.9% and 7.8%, respectively in 2020.

The following highlights are worth noting for the broadcasting sector

- The proportion of procurement spend from suppliers based on their B-BBEE ranking as a percentage of total spend from all suppliers was 82.5% in 2019 and 72.5% in 2020.

- Expenditure on local independent productions was 305 million in 2019 and in 2020 was 1.2 billion. Expenditure on broadcaster production was 257 million and it went up to 272 million in 2020.

- The total number of Pay TV subscriptions increased by 7.8% in 2020. For a period of 6 years it increased by 7.8%.

The following highlights are worth noting for the postal services sector

- The postal sector revenue increased by 3.6%, from R5.7 billion in 2019 to R5.9 billion in 2020.

- The proportion of the postal sector procurement spend based on suppliers' B-BBEE ranking as a percentage of overall spend from all suppliers represented 2.4% in 2020.

- Total letter delivery services (Registered letters) decreased by 39.8%, domestic service and international outbound (Local Volumes) decreased by 39.1% and the domestic service and international outbound (International mail centre volume) also decreased by 69.8% in 2020.

APPENDICES

Appendix 1: ICASA questionnaire respondents, December 2020

ICASA questionnaire respondents, December, 2020	
Telecommunication's Licensees	
1	Afrihost SP (Pty) Ltd
2	Airband High Speed Internet (Pty) Ltd
3	Arc International Telecoms (Pty) Ltd
4	ASK Internet Technologies CC
5	AT&T South Africa (Proprietary) Limited
6	Atcomm (Pty) Ltd t/a Ntelecom
7	Axxess DSL (Pty) LTD
8	Bethnet cc
9	BITCO TELECOMS
10	BIZVOIP (PTY) LTD
11	Border Internet (Pty) Ltd
12	Borwood Communications (Pty)Ltd
13	Breedenet (Pty) Ltd
14	BSS Digital
15	Bundu Networx (Pty) Ltd
16	Cell C Limited
17	CENTURY CITY CONNECT (PTY) LTD
18	China Telecom South Africa (Pty) Ltd
19	CipherWave Storage Solutions Africa
20	Cloud Connect Networks (Pty) Ltd
21	Cloud Karoo
22	Compatel
23	Comput8 IT (Pty) Ltd t/a COMPUTATE
24	Comsol Networks
25	CRAZYWEB TECH
26	Cutman Bush net
27	CWNET
28	Cybersmart (Pty) Ltd
29	Dimension Data
30	Dube TradePort Corporation
31	Edelnet

32	**Equation Business Solutions Pty Ltd**
33	**Fibre To The Apartment PTY LTD**
34	**FRANCOIS O'KENNEDY W.O.R.X (PTY) LTD**
35	**FUSION VOICE & DATA**
36	**Fusion Wireless (Pty) Ltd**
37	**Future Perfect Corporation CC T/A Vanilla**
38	**Heinrich Heunis**
39	**Hi-Tech Wireless (Pty) Ltd**
40	**HX Systems (Pty) Ltd**
41	**ICTGlobe Management**
42	**Imply IT (Pty) Ltd**
43	**InterActive Systems Designs (Pty) Ltd**
44	**Interexcel World Connection (Pty) Ltd**
45	**Internet Generations (Pty) Ltd**
46	**Internet Service Provider (Pty) Ltd**
47	**Internet Solutions Digital Pty Ltd**
48	**Internet Uncapped CC**
49	**Kibo Connect (Pty) Ltd**
50	**kliq Holdings**
51	**Koshcom Communication Services (Pty) Ltd**
52	**La Rochelle IT Solutions (Pty) Ltd**
53	**Lasernet Pty Ltd**
54	**LCOM (Pty) Ltd**
55	**Letaba Wireless internet**
56	**LINK AFRICA (PTY) LTD**
57	**Linux Based Systems Design SA (Pty) Ltd**
58	**LIQUID TELECOMMUNICATIONS SOUTH AFRICA (PTY) LTD**
59	**Metro Fibre Networx Proprietary Limited**
60	**Mobile Telephone Networks (PTY) LTD**
61	**NCW (Pty) Ltd T/A Netcom Wireless**
62	**Netwide Internet**
63	**Nexus Net Wired and Wireless CC t/a Nexus.Net**
64	**Nuwcom Wireless**
65	**Orange Business Services South Africa Pty Ltd**
66	**Platoon Trade and Invest 149 (PTY) LTD TA Wanatel PTY) LTD**

67	PURPLE PEBBLE PRODUCTIONS CC T/A PURPLE TURTLE COMMUNICATIONS
68	Rain Networks (Pty) Ltd
69	Safricom
70	SCAN RF Projects (Pty) Ltd
71	Seagle Telecom (PTY) LTD
72	Simigenix (Pty) Ltd
73	Skyber Wifi Enterprises
74	Skynology
75	SMS PORTAL (PTY) LTD
76	Snowball Effect (Pty) Ltd & Wish Networks (Pty) Ltd
77	Sonic Computers & WiFi CC
78	Spiderink Bookkeeping Services
79	STUART VINCENT BODILL
80	Switch Telecom
81	Telkom SA SOC Limited
82	Telviva (Pty) Ltd - formerly Connection Telecom (Pty) Ltd
83	Tribal Zone Telecommunications (Pty) Ltd T/A Radio Active
84	TT CONNECT (PTY) LTD
85	UNDERBERG COMPUTER SERVICES CC
86	Vangibuzz Pty Ltd t/a True
87	VERBISOURCE (PTY) LTD
88	Vodacom (Pty) Ltd
89	VOX TELECOMMUNICATIONS (PTY) LTD
90	Voys Telecom SA
91	Vumacam (Pty) Ltd
92	Vumatel (Pty) Ltd
93	WIOCC SOUTH AFRICA (PTY) LTD
94	Wireless Associate Service Providers CC
95	XLink Communications (Pty) Ltd
96	XPRESS LIMPOPO - GLORIFICO (PTY) LTD
97	XPRESS WIRELESS MAPUMALANGA - CARMENTA (PTY) LTD
98	XPRESS WIRELESS NORTH WEST – XPRESS WIRELESS (PTY) LTD
Broadcasting Licensees	
1	Bokone Bophirima FM
2	Bush Radio 89.5FM

3	CHRISTELIKE RADIODIENSTE t/a RADIO TYGERBERG
4	Deukom (Pty) Ltd
5	E Tv
6	Faith Broadcasting Terrestrial
7	Groot FM
8	Impact Radio
9	Lekoa FM
10	Life Broadcasting
11	LINK FM TRUST
12	Modiri FM
13	MultiChoice (Pty) Ltd
14	Ngqushwa FM
15	No name
16	On Digital Media (Pty) Ltd
17	PERRON FM
18	Pretoria FM
19	Primedia Broadcasting
20	Rocasat NPC t/a 100.5FM Radio Laeveld
21	SABC (TV)
22	SABC (Radio)
23	TSHEPO FM
24	Umoya Communications (Pty) Ltd
25	Univen Community Radio
26	vuwani community radio
27	Wild Coast FM
28	Witzenberg Radio
Postal Services Licensees	
1	Fast ways Couriers
2	PATHTEQ QPL LOGISTICS
3	Post Office Pty Ldt
4	PostNet SA
5	Royal International
6	The Courier Guy

Appendix 2: Definitions of Telecommunications categories

Definitions of Telecommunications categories	
ICT	Information Communication Technology
Stats SA	Statistics South Africa
ECS	Electronic Communication Services
ECNS	Electronic Communication Network Services
GHS	General household survey
ISP's	Internet Service Providers

Telecommunications sector
The telecommunications sector comprises fixed and mobile telecommunications services as well as the provision of Internet access.
Total telecommunication investment
Total annual investment in telecommunication services, also referred to as annual capital expenditure, refers to the investment during the financial year in telecommunication services (including fixed, mobile and Internet services) for acquiring or upgrading property and networks. Property includes tangible assets such as plant, intellectual and non-tangible assets such as computer software. The indicator is a measure of investment in telecommunication infrastructure in the country and includes expenditure on initial installations and additions to existing installations where the usage is expected to be over an extended period of time. It excludes expenditure on research and development (R&D), annual fees for operating licences and the use of radio spectrum, and investment in telecommunication software or equipment for internal use.
Annual investment in fixed-telephone services
Refers to investment in fixed-telephone services for acquiring and upgrading property and networks within the country. This refers to annual investment in assets related to fixed-telephone networks and the provision of services.
Annual investment in fixed (wired) broadband services
Refers to investment in fixed (wired)-broadband services for acquiring and upgrading property and networks within the country. This refers to annual investment in assets related to fixed (wired)-broadband networks and the provision of services.
Annual investment in mobile communication services

Refers to investment in mobile services for acquiring and upgrading property and networks within the country. It should include investments made for mobile-broadband services. This refers to annual investment in assets related to mobile communication networks and the provision of services. It should include investment in mobile-broadband networks.
Other annual investment in telecommunication services
Refers to investment in other telecommunication services, such as fixed wireless-broadband, satellite and leased lines.
Total telecommunications revenue
The aggregated revenue includes the total telecommunications services revenue and any other revenue.
Total telecommunication services revenue
The sum of revenue from all telecommunication services (in local currency at current prices). Revenue from all telecommunication services refers to revenue earned from retail fixed-telephone, mobile-cellular, Internet and data services offered by telecommunication operators (both network and virtual, including resellers) offering services within the country during the financial year under review. It includes retail revenues earned from the transmission of TV signals but excludes revenues from TV content creation. Exclude: (i) wholesale revenues (e.g. termination rates), (ii) revenues from device sales and rents, (iii) VAT and excise taxes. Any deviation from the definition should be specified in a note, including clarifications on what TV revenues are included/excluded (e.g. IPTV, cable TV, pay satellite and free-to-air TV).
Total fixed line services revenue
This aggregate value is defined as the sum of Fixed line voice revenue, fixed (wired) internet revenue, Other fixed (wireless) broadband revenue and Other fixed telecommunications services revenue as defined below.
Total fixed line voice revenue
Sum of revenue from retail fixed-telephone services refers to revenue received for the connection (installation) of fixed-telephone services, revenue from recurring charges for subscription to the PSTN and revenue from fixed-telephone calls.
Revenue from fixed-telephone connection charges

Revenue from fixed-telephone connection charges refers to retail revenue received for connection (installation) of fixed- telephone services. This may include charges for transfer or cessation of services.
Revenue from fixed-telephone subscription charges
Revenue from fixed-telephone subscription charges refers to revenue from recurring charges for subscriptions to the PSTN, including Internet access if it cannot be separated from fixed-telephone.
Revenue from fixed-telephone calls
Revenue from fixed-telephone calls refers to retail fixed-telephone revenue received from charges for local, national long-distance and international calls.
Fixed (wired) internet revenue
Revenue from fixed (wired) Internet services refers to retail revenue received from the provision of fixed (wired) Internet services such as subscriptions, traffic and data communication. It excludes the provision of access lines used to connect to fixed (wired) Internet (such as fixed-telephone lines used to access DSL connections). This includes revenue from fixed (wired)-broadband services (previously a separate indicator under ITU code i7311_fb, but for reporting purposes here counted together with any small residual narrowband internet revenue in a single indicator, viz. fixed wired internet).
Other (wireless) broadband services revenue
Revenue from other wireless-broadband services refers to the retail revenue received from the provision of high-speed (at least 256 Kbit/s) data connectivity and related services over a wireless infrastructure other than mobile cellular, such as satellite or terrestrial fixed wireless broadband infrastructures.
Other fixed telecommunication services revenue, including leased lines revenue and fixed value-added telecommunication services
Revenue from leased lines refers to retail revenue received from the provision of leased lines.
Revenue from fixed value-added telecommunication services refers to the retail revenue generated by the telecommunication service sector for fixed value-added

telecommunication services, such as call forwarding, itemized billing, conference calls and voice-message services.
Value-added means additional services beyond the basic telephone service line rental and calls
Other telecommunication revenue refers to any other retail telecommunication services revenue received but not accounted for elsewhere.
Total mobile services revenue (retail)
Revenue from mobile networks refers to retail revenue earned from the provision of mobile-cellular communication services, including all voice, SMS and data (narrowband and broadband) services offered by mobile operators offering services within the country during the financial year under review. Revenues from value added services (e.g. premium SMS) should be included. Data reported should exclude: (i) wholesale revenues (e.g. termination rates), (ii) revenues from device sales and rents, (iii) VAT and excise taxes.
Revenue from mobile voice services
Refers to all mobile-cellular retail revenue from the provision of voice services. It includes voice revenues from national and international calls but excludes revenues from roaming services.
Revenue from outbound mobile cellular roaming
Refers to all mobile-cellular retail roaming revenue from own subscribers roaming abroad. It does not cover foreign mobile subscribers roaming into the country and international calls originating or terminating on the country's mobile networks.
Revenue from mobile data services
Refers to revenue from the provision of non-voice services including messaging (other than SME and MMs), data and Internet services, including M2M/telemetry. It excludes other mobile-cellular services and wireless Internet access services not relating to mobile networks (e.g. satellite or terrestrial fixed wireless technologies).
Revenue from text and multimedia messaging services
Refers to revenue from text messaging and multimedia messaging (SMS and MMS). Some countries may account for this in different ways. For example, some mobile plans include free SMS or MMS that are liable to be classified as voice revenue rather

than mobile-messaging revenue. The treatment of premium messages – where users pay an additional amount over the regular messaging rate – can vary among operators, since they typically share the revenue with a premium-service provider. Operators may also include revenue from international messaging in other categories. The preference is to include all revenue earned by the operator from the provision of messaging services to retail customers.
Other mobile services revenue
Any other mobile revenue, like banking
Total of any other revenue
Sum of interconnection revenue, equipment sale revenue and any other revenue
Interconnection revenues
Revenues from terminating voice and messaging traffic coming from outside the operator's own network
Equipment revenue
Revenues from equipment sales
Any other revenue
Any other revenue which could include wholesale revenues, excluding voice termination (interconnection); IT type services; revenue of a capital nature. E.g. sale of assets or a business.
Telecommunications employment
Persons employed in full-time equivalents
Persons employed in full-time equivalents refers to the total number of persons, in full-time equivalent (FTE) units, employed by telecommunication operators in the country for the provision of telecommunication services, including fixed-telephone, mobile-cellular, Internet and data services. This indicator excludes staff working in broadcasting businesses that offer only traditional broadcasting services. Part-time staff should be expressed in terms of full-time staff equivalents (FTE).
Telecoms employment- female
Persons employed by all telecommunication operators, female should be expressed in terms of full-time staff equivalents.
Telecommunication Subscriptions

Fixed-telephone subscriptions
Fixed-telephone subscriptions refers to the sum of active analogue fixed- telephone lines, voice-over-IP (VoIP) subscriptions, fixed wireless local loop (WLL) subscriptions, ISDN voice-channel equivalents and fixed public payphones. This indicator was previously called Main telephone lines in operation.
Analogue fixed-telephone lines
Analogue fixed-telephone lines refer to the number of active lines connecting subscribers' terminal equipment to the PSTN and which have a dedicated port in the telephone-exchange equipment. It includes all post-paid lines and those prepaid lines that have registered an activity in the past three months. This term is synonymous with the terms 'main station' and 'direct exchange line' (DEL) that are commonly used in telecommunication documents.
VoIP subscriptions
VoIP subscriptions refers to the number of voice-over-Internet protocol (VoIP) fixed-line subscriptions. It is also known as voice over broadband (VoB), and includes VoIP subscriptions through fixed wireless, DSL, cable, fibre optic and other fixed-broadband Internet platforms that provide fixed telephony using IP. It excludes software-based VoIP applications (e.g. VoIP with Skype using computer-to-computer or computer-to-telephone). Those VoIP subscriptions that do not imply a recurrent monthly fee should only be counted if they have generated inbound or outbound traffic within the past three months.
Fixed wireless local loop subscriptions
Fixed wireless local loop (WLL) subscriptions refers to subscriptions provided by licensed fixed-line telephone operators that provide 'last-mile' access to the subscriber using radio technology and where the subscriber's terminal equipment is either stationary or limited in its range of use.
ISDN voice-channel equivalents
ISDN voice-channel equivalents refers to the sum of basic-rate and primary-rate voice-channel equivalents (B-channel equivalents). Basic-rate voice-channel equivalents is the number of basic-rate ISDN subscriptions multiplied by 2, and

primary-rate voice-channel equivalents is the number of primary-rate ISDN subscriptions multiplied by 23 or 30, depending on the standard implemented.
Fixed public payphones
Fixed public payphones refers to payphones that are available to the public using the fixed network.
Mobile cellular subscriptions
Mobile-cellular telephone subscriptions, by post-paid and prepaid Mobile-cellular telephone subscriptions refers to the number of subscriptions to a public mobile-telephone service that provide access to the PSTN using cellular technology.
Prepaid mobile-cellular telephone subscriptions
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. Although the definition of prepaid subscribers from the ITU definition is 3 month active subscribers (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), some South African operators do not have this metric available but rather count SIMs that have not been disconnected within a 90 day window, reporting, implying that the number may be overstated according to the strict definition. The indicator applies to all mobile-cellular subscriptions that offer voice communications. It excludes subscriptions via data cards or USB modems, subscriptions to public mobile data services, private trunked mobile radio, telepoint, radio paging and telemetry services.
Post-paid mobile-cellular telephone subscriptions
Refers to the total number of mobile-cellular subscriptions, including top up bundles, where subscribers are billed after their use of mobile services, at the end of each month. The post-paid 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. M2M mobile-network subscriptions are included in post-paid subscriptions
M2M mobile-network subscriptions
M2M subscriptions is a subset of post-paid mobile cellular subscriptions and refers to the number of mobile-cellular machine- to-machine subscriptions that are assigned for use in machines and devices (cars, smart meters, consumer electronics) for the exchange of data between networked devices and are not part of a consumer subscription. For instance, SIM-cards in personal navigation devices, smart meters, trains and automobiles should be included. Mobile dongles and tablet subscriptions should be excluded.
Internet and data subscriptions
Fixed broadband subscriptions
Fixed-broadband subscriptions refers to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or greater than, 256 Kbit/s. This includes cable modem, DSL, fibre-to-the- home/building, other fixed (wired)-broadband subscriptions, satellite broadband and terrestrial fixed wireless broadband. This total is measured irrespective of the method of payment. It excludes subscriptions that have access to data communications (including the Internet) via mobile-cellular networks. It should include fixed WiMAX and any other fixed wireless technologies. It includes both residential subscriptions and subscriptions for organizations.
DSL Internet subscriptions
Refers to the number of Internet subscriptions using digital subscriber line (DSL) services to access the Internet, at downstream speeds greater than or equal to 256 Kbit/s. DSL is a technology for bringing high-bandwidth information to homes and small businesses over ordinary copper telephone lines. It should exclude very high-speed digital subscriber line (VDSL) subscriptions if these are provided using fibre directly to the premises.
Fibre-to-the-home/building Internet subscriptions
Refers to the number of Internet subscriptions using fibre-to-the-home or fibre-to-the-building, at downstream speeds equal to, or greater than, 256 Kbit/s. This should

include subscriptions where fibre goes directly to the subscriber's premises or fibre-to-the-building subscriptions that terminate no more than 2 metres from an external wall of the building. Fibre-to-the-cabinet and fibre-to-the-node are excluded.
Other fixed (wired) broadband subscriptions
Refers to Internet subscriptions using other fixed (wired) broadband technologies to access the Internet (other than DSL, cable modem, and fibre), at downstream speeds equal to, or greater than, 256 Kbit/s. This includes technologies such as ethernet LAN, and broadband-over-powerline (BPL) communications. Ethernet LAN subscriptions refer to subscriptions using IEEE 802.3 technology. BPL subscriptions refer to subscriptions using broadband-over-powerline services. Users of temporary broadband access (e.g. roaming between PWLAN hotspots), users of WiMAX and those with Internet access via mobile-cellular networks are excluded.
Wireless broadband subscriptions
Wireless-broadband subscriptions refers to the sum of satellite broadband, terrestrial fixed wireless broadband and active mobile-broadband subscriptions to the public Internet. The indicator does not cover fixed (wired) broadband or Wi-Fi subscriptions.
Satellite broadband subscriptions
Satellite broadband subscriptions refers to the number of satellite Internet subscriptions with an advertised download speed of at least 256 Kbit/s. It refers to the retail subscription technology and not the backbone technology.
Terrestrial fixed wireless broadband subscriptions
Terrestrial fixed wireless broadband subscriptions refer to the number of terrestrial fixed wireless Internet subscriptions with an advertised download speed of at least 256 Kbit/s. This includes fixed WiMAX and fixed wireless subscriptions but excludes occasional users at hotspots and Wi-Fi hotspot subscribers. It also excludes mobile-broadband subscriptions where users can access a service throughout the country wherever coverage is available."
Mobile data subscriptions
Number of prepaid and post-paid mobile subscriptions that were used to access the Internet the last 3 months, regardless of speed.

Traffic
Fixed line voice traffic
This aggregated value is the sum of Fixed line traffic (i.e. fixed-to-fixed) and all other fixed line originated traffic (Fixed to mobile and International outgoing).
Fixed line traffic
Refers to domestic fixed-to-fixed telephone traffic, in minutes. Domestic fixed-to-fixed telephone traffic refers to completed local and domestic long-distance fixed-telephone voice traffic. The indicator should be reported as the number of minutes of traffic during the reference quarter. This exclude minutes used for dial-up Internet access.
Local fixed-to-fixed telephone traffic, in minutes
Refers to effective (completed) fixed-telephone line voice traffic exchanged within the local charging area in which the calling station is situated. This is the area within which one subscriber can call another on payment of the local charge (if applicable). This is reported in the number of minutes, which should exclude minutes used for dial-up Internet access.
Long-distance fixed-to-fixed telephone traffic, in minutes
Refers to effective (completed) fixed national long-distance telephone voice traffic exchanged with a station outside the local charging area in which the calling station is situated. This is reported as the number of minutes of traffic. It excludes local calls, calls to mobile networks, calls abroad, and calls to special service numbers such as ISPs for Internet dial-up.
Fixed-to-mobile telephone traffic
Refers to total traffic from all fixed-telephone networks to all mobile-cellular networks within the country.
International incoming and outgoing fixed-telephone traffic
Refers to the sum of international incoming and outgoing fixed-telephone voice traffic.
International outgoing fixed-telephone traffic, in minutes
Refers to effective (completed) fixed-telephone voice traffic originating in a given country to destinations outside that country. This should include traffic to mobile

phones outside the country. This is reported in number of minutes of traffic. It excludes calls originating in other countries. It should include VoIP traffic.
International incoming fixed-telephone traffic, in minutes
Refers to effective (completed) fixed-telephone voice traffic originating outside the country with a destination inside the country, irrespective of whether the call was from a fixed or mobile subscriber. It excludes minutes of calls terminating in other countries, but includes VoIP traffic
Mobile voice traffic
This aggregated value is the sum of Total national mobile traffic, as defined below, and International outgoing from mobile.
Total national mobile traffic
Domestic mobile-telephone traffic refers to the total number of minutes of calls made by mobile subscribers within a country (including minutes to fixed-telephone and minutes to mobile-phone subscribers).
Outgoing mobile traffic to same mobile network
Refers to the number of minutes of calls made by mobile subscribers to the same mobile network (within the country). This refers to the number of minutes originating on mobile networks and terminating on the same mobile network (on-net). It does not cover minutes of calls from mobile to fixed or mobile to other mobile networks.
Mobile to other mobile networks
Outgoing mobile traffic to other mobile networks, in minutes refers to the number of minutes of calls made by mobile subscribers to other mobile networks (within the country). The indicator refers to the number of minutes originating on mobile networks and terminating on different domestic mobile networks (off-net). It does not cover minutes of calls from mobile to fixed or mobile to the same mobile networks.
Outgoing mobile traffic to fixed networks
Refers to the number of minutes of calls made from mobile-cellular networks to fixed-line telephone networks within the country. The indicator refers to the number of minutes originating on mobile networks and terminating on fixed-line telephone networks within the country.
International outgoing from mobile

Outgoing mobile traffic to international refers to the number of mobile minutes originating in a country to any destinations outside that country.
Incoming international traffic to mobile network
Refers to the number of incoming minutes (fixed and mobile) received by mobile networks originating in another country.
Mobile data traffic
Mobile data traffic (within the country) refers to data traffic originated within the country from mobile networks. Download and upload traffic should be added up and reported together. Traffic should be measured at the end-user access point. Wholesale and walled-garden traffic should be excluded. The traffic should be reported in terabytes.
SMS traffic
SMS sent refers to the total number of mobile short-message service (SMS) messages sent, both to national and international destinations. This should exclude messages sent from computers to mobile handsets or to other computers.
SMS international traffic
SMS international refers to the total number of mobile short-message service (SMS) messages sent to international destinations. This should exclude messages sent from computers to mobile handsets or to other computers.
Population coverage
3G population coverage
Percentage of the population covered by at a 3G mobile network refers to the percentage of inhabitants that are within range of a 3G mobile-cellular signal, irrespective of whether or not they are subscribers. This is calculated by dividing the number of inhabitants that are covered by a 3G mobile-cellular signal by the total population and multiplying by 100.
4G/LTE etc. population coverage
Percentage of the population covered by a 4G/LTE mobile network refers to the percentage of inhabitants that are within range of a 4G/LTE mobile-cellular signal, irrespective of whether or not they are subscribers. This is calculated by dividing the

number of inhabitants that are covered by a 4G/LTE mobile-cellular signal by the total population and multiplying by 100. Note that all LTE variants are included.
Internet bandwidth
International Internet bandwidth
International outgoing Internet bandwidth
Refers to the total outgoing used capacity of international Internet bandwidth, in Mbit/s. This is measured as the sum of outgoing (uplink) capacity of all Internet exchanges offering international bandwidth.
International incoming Internet bandwidth
Refers to the total incoming used capacity of international Internet bandwidth, in Mbit/s. This is measured as the sum of incoming (downlink) capacity of all Internet exchanges offering international bandwidth.
Smartphone subscriptions
A smartphone is a mobile phone with advanced features: it has Wi-Fi connectivity, web browsing, capabilities, a high-resolution touchscreen display and the ability to use apps. The majority use one of the following mobile operating systems: Android, Symbian, iOS, Blackberry OS and Windows Mobile.
Fixed post-paid local telephone services prices
Installation fee for residential telephone service
Installation fee for residential telephone service refers to the one-off charge involved in applying for a basic residential post-paid fixed-telephone service. Taxes should be included. If not included, it should be specified in a note including the applicable tax rate.
Monthly subscription for residential telephone service
Monthly subscription for residential telephone service refers to the recurring fixed charge for subscribing to a residential post-paid fixed-telephone service. The charge should cover the rental of the line but not the rental of the terminal (e.g. telephone set). If the rental charge includes any allowance for free or reduced rate call units, this should be indicated in the note. Taxes should be included. If not included, it should be specified in a note including the applicable tax rate.
Price of a three-minute local call to a fixed-telephone line, peak rate

Price of a three-minute local call (peak-rate) to a fixed-telephone line refers to the price of a three-minute peak local call from a residential fixed-telephone line, including any call set-up charges, within the same exchange area using the subscriber's own terminal (i.e. not from a public telephone). Taxes should be included. If not included, it should be specified in a note including the applicable tax rate.
Price of a three-minute local call to a fixed-telephone line, off-peak rate
Price of a three-minute local call to a fixed-telephone line refers to the price of a three-minute off-peak local call from a residential fixed-telephone line, including any call set-up charges, within the same exchange area using the subscriber's own terminal (i.e. not from a public telephone). Taxes should be included. If not included, it should be specified in a note including the applicable tax rate.
Mobile-cellular prepaid prices
Mobile-cellular prepaid-price of a one-minute local call (peak, on-net)
Refers to the price per minute of a peak prepaid call from a mobile-cellular telephone with a prepaid subscription to another subscriber in the same network. Taxes should be included. If not included, it should be specified in a note including the applicable tax rate.
Mobile-cellular prepaid-price of a one-minute local call (off-peak, on-net)
Refers to the price per minute of a prepaid call from a mobile-cellular telephone with a prepaid subscription made to the same mobile-cellular network during off-peak time. Off-peak refers to the cheapest rate before mid-night. If the only off-peak period is after mid-night, the peak price should be used. Taxes should be included. If not included, it should be specified in a note including the applicable tax rate.
Mobile-cellular prepaid-price of SMS (on-net)
Mobile-cellular prepaid – price of SMS refers to the price of sending a short-message service (SMS) message from a mobile-cellular telephone with a prepaid subscription to a mobile-cellular number of the same network (on-net). Taxes should be included. If not included, it should be specified in a note including the applicable tax rate.
ICT Sector Black Economic Empowerment Measures
Telecoms employment -Black Top Management

Persons employed by all telecommunication operators, Black Top Management, should be expressed in terms of full-time staff equivalents. This should include Exco and other Executives.
Procurement Spend from all suppliers
Total spend on all goods and services procured by an Entity.
Procurement Spend from all suppliers based on the B-BBEE Procurement Recognition Levels
Total spend on all goods and services procured by an Entity based on the B-BBEE Procurement Recognition Levels.
Number of Schools connected based on obligations imposed by ICASA
Total number of Schools connected based on obligations imposed by ICASA to operators.

Total fixed line voice revenue
Sum of revenue from retail fixed-telephone services refers to revenue received for the connection (installation) of fixed-telephone services, revenue from recurring charges for subscription to the PSTN and revenue from fixed-telephone calls.
Revenue from fixed-telephone connection charges
Revenue from fixed-telephone connection charges refers to retail revenue received for connection (installation) of fixed- telephone services. This may include charges for transfer or cessation of services.
Revenue from fixed-telephone subscription charges
Revenue from fixed-telephone subscription charges refers to revenue from recurring charges for subscriptions to the PSTN, including Internet access if it cannot be separated from fixed-telephone.
Revenue from fixed-telephone calls
Revenue from fixed-telephone calls refers to retail fixed-telephone revenue received from charges for local, national long-distance and international calls.
Fixed (wired) internet revenue
Revenue from fixed (wired) Internet services refers to retail revenue received from the provision of fixed (wired) Internet services such as subscriptions, traffic and data

communication. It excludes the provision of access lines used to connect to fixed (wired) Internet (such as fixed-telephone lines used to access DSL connections). This includes revenue from fixed (wired)-broadband services (previously a separate indicator under ITU code i7311_fb, but for reporting purposes here counted together with any small residual narrowband internet revenue in a single indicator, viz. fixed wired internet).
Other (wireless) broadband services revenue
Revenue from other wireless-broadband services refers to the retail revenue received from the provision of high-speed (at least 256 Kbit/s) data connectivity and related services over a wireless infrastructure other than mobile cellular, such as satellite or terrestrial fixed wireless broadband infrastructures.
Other fixed telecommunication services revenue, including leased lines revenue and fixed value-added telecommunication services
Revenue from leased lines refers to retail revenue received from the provision of leased lines.
Revenue from fixed value-added telecommunication services refers to the retail revenue generated by the telecommunication service sector for fixed value-added telecommunication services, such as call forwarding, itemized billing, conference calls and voice-message services.
Value-added means additional services beyond the basic telephone service line rental and calls
Other telecommunication revenue refers to any other retail telecommunication services revenue received but not accounted for elsewhere.
Total mobile services revenue (retail)
Revenue from mobile networks refers to retail revenue earned from the provision of mobile-cellular communication services, including all voice, SMS and data (narrowband and broadband) services offered by mobile operators offering services within the country during the financial year under review. Revenues from value added services (e.g. premium SMS) should be included. Data reported should exclude: (i) wholesale revenues (e.g. termination rates), (ii) revenues from device sales and rents, (iii) VAT and excise taxes.

Revenue from mobile voice services
Refers to all mobile-cellular retail revenue from the provision of voice services. It includes voice revenues from national and international calls but excludes revenues from roaming services.

Revenue from outbound mobile cellular roaming
Refers to all mobile-cellular retail roaming revenue from own subscribers roaming abroad. It does not cover foreign mobile subscribers roaming into the country and international calls originating or terminating on the country's mobile networks.
Revenue from mobile data services
Refers to revenue from the provision of non-voice services including messaging (other than SME and MMs), data and Internet services, including M2M/telemetry. It excludes other mobile-cellular services and wireless Internet access services not relating to mobile networks (e.g. satellite or terrestrial fixed wireless technologies).
Revenue from text and multimedia messaging services
Refers to revenue from text messaging and multimedia messaging (SMS and MMS). Some countries may account for this in different ways. For example, some mobile plans include free SMS or MMS that are liable to be classified as voice revenue rather than mobile-messaging revenue. The treatment of premium messages – where users pay an additional amount over the regular messaging rate – can vary among operators, since they typically share the revenue with a premium-service provider. Operators may also include revenue from international messaging in other categories. The preference is to include all revenue earned by the operator from the provision of messaging services to retail customers.
Other mobile services revenue
Any other mobile revenue, like banking
Total of any other revenue
Sum of interconnection revenue, equipment sale revenue and any other revenue
Interconnection revenues
Revenues from terminating voice and messaging traffic coming from outside the operator's own network

Equipment revenue
Revenues from equipment sales
Any other revenue
Any other revenue which could include wholesale revenues, excluding voice termination (interconnection); IT type services; revenue of a capital nature. E.g. sale of assets or a business.
Telecommunications employment
Persons employed in full-time equivalents
Persons employed in full-time equivalents refers to the total number of persons, in full-time equivalent (FTE) units, employed by telecommunication operators in the country for the provision of telecommunication services, including fixed-telephone, mobile-cellular, Internet and data services. This indicator excludes staff working in broadcasting businesses that offer only traditional broadcasting services. Part-time staff should be expressed in terms of full-time staff equivalents (FTE).
Telecoms employment- female
Persons employed by all telecommunication operators, female should be expressed in terms of full-time staff equivalents.
Telecommunication Subscriptions
Fixed-telephone subscriptions
Fixed-telephone subscriptions refers to the sum of active analogue fixed- telephone lines, voice-over-IP (VoIP) subscriptions, fixed wireless local loop (WLL) subscriptions, ISDN voice-channel equivalents and fixed public payphones. This indicator was previously called Main telephone lines in operation.
Analogue fixed-telephone lines
Analogue fixed-telephone lines refer to the number of active lines connecting subscribers' terminal equipment to the PSTN and which have a dedicated port in the telephone-exchange equipment. It includes all post-paid lines and those prepaid lines that have registered an activity in the past three months. This term is synonymous with the terms 'main station' and 'direct exchange line' (DEL) that are commonly used in telecommunication documents.
VoIP subscriptions

VoIP subscriptions refers to the number of voice-over-Internet protocol (VoIP) fixed-line subscriptions. It is also known as voice over broadband (VoB), and includes VoIP subscriptions through fixed wireless, DSL, cable, fibre optic and other fixed-broadband Internet platforms that provide fixed telephony using IP. It excludes software-based VoIP applications (e.g. VoIP with Skype using computer-to-computer or computer-to-telephone). Those VoIP subscriptions that do not imply a recurrent monthly fee should only be counted if they have generated inbound or outbound traffic within the past three months.
Fixed wireless local loop subscriptions
Fixed wireless local loop (WLL) subscriptions refers to subscriptions provided by licensed fixed-line telephone operators that provide 'last-mile' access to the subscriber using radio technology and where the subscriber's terminal equipment is either stationary or limited in its range of use.
ISDN voice-channel equivalents
ISDN voice-channel equivalents refers to the sum of basic-rate and primary-rate voice-channel equivalents (B-channel equivalents). Basic-rate voice-channel equivalents is the number of basic-rate ISDN subscriptions multiplied by 2, and primary-rate voice-channel equivalents is the number of primary-rate ISDN subscriptions multiplied by 23 or 30, depending on the standard implemented.
Fixed public payphones
Fixed public payphones refers to payphones that are available to the public using the fixed network.
Mobile cellular subscriptions
Mobile-cellular telephone subscriptions, by post-paid and prepaid Mobile-cellular telephone subscriptions refers to the number of subscriptions to a public mobile-telephone service that provide access to the PSTN using cellular technology.
Prepaid mobile-cellular telephone subscriptions
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. Although the definition of prepaid subscribers from the ITU definition is 3 month active subscribers (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), some South African operators do not have this metric available but rather count SIMs that have not been disconnected within a 90 day window, reporting, implying that the number may be overstated according to the strict definition. The indicator applies to all mobile-cellular subscriptions that offer voice communications. It excludes subscriptions via data cards or USB modems, subscriptions to public mobile data services, private trunked mobile radio, telepoint, radio paging and telemetry services.
Post-paid mobile-cellular telephone subscriptions
Refers to the total number of mobile-cellular subscriptions, including top up bundles, where subscribers are billed after their use of mobile services, at the end of each month. The post-paid 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. M2M mobile-network subscriptions are included in post-paid subscriptions
M2M mobile-network subscriptions
M2M subscriptions is a subset of post-paid mobile cellular subscriptions and refers to the number of mobile-cellular machine- to-machine subscriptions that are assigned for use in machines and devices (cars, smart meters, consumer electronics) for the exchange of data between networked devices and are not part of a consumer subscription. For instance, SIM-cards in personal navigation devices, smart meters, trains and automobiles should be included. Mobile dongles and tablet subscriptions should be excluded.
Internet and data subscriptions
Fixed broadband subscriptions
Fixed-broadband subscriptions refers to fixed subscriptions to high-speed access to the public Internet (a TCP/IP connection), at downstream speeds equal to, or

greater than, 256 Kbit/s. This includes cable modem, DSL, fibre-to-the-home/building, other fixed (wired)-broadband subscriptions, satellite broadband and terrestrial fixed wireless broadband. This total is measured irrespective of the method of payment. It excludes subscriptions that have access to data communications (including the Internet) via mobile-cellular networks. It should include fixed WiMAX and any other fixed wireless technologies. It includes both residential subscriptions and subscriptions for organizations.
DSL Internet subscriptions
Refers to the number of Internet subscriptions using digital subscriber line (DSL) services to access the Internet, at downstream speeds greater than or equal to 256 Kbit/s. DSL is a technology for bringing high-bandwidth information to homes and small businesses over ordinary copper telephone lines. It should exclude very high-speed digital subscriber line (VDSL) subscriptions if these are provided using fibre directly to the premises.
Fibre-to-the-home/building Internet subscriptions
Refers to the number of Internet subscriptions using fibre-to-the-home or fibre-to-the-building, at downstream speeds equal to, or greater than, 256 Kbit/s. This should include subscriptions where fibre goes directly to the subscriber's premises or fibre-to-the-building subscriptions that terminate no more than 2 metres from an external wall of the building. Fibre-to-the-cabinet and fibre-to-the-node are excluded.
Other fixed (wired) broadband subscriptions
Refers to Internet subscriptions using other fixed (wired) broadband technologies to access the Internet (other than DSL, cable modem, and fibre), at downstream speeds equal to, or greater than, 256 Kbit/s. This includes technologies such as ethernet LAN, and broadband-over-powerline (BPL) communications. Ethernet LAN subscriptions refer to subscriptions using IEEE 802.3 technology. BPL subscriptions refer to subscriptions using broadband-over-powerline services. Users of temporary broadband access (e.g. roaming between PWLAN hotspots), users of WiMAX and those with Internet access via mobile-cellular networks are excluded.
Wireless broadband subscriptions

Wireless-broadband subscriptions refers to the sum of satellite broadband, terrestrial fixed wireless broadband and active mobile-broadband subscriptions to the public Internet. The indicator does not cover fixed (wired) broadband or Wi-Fi subscriptions.
Satellite broadband subscriptions
Satellite broadband subscriptions refers to the number of satellite Internet subscriptions with an advertised download speed of at least 256 Kbit/s. It refers to the retail subscription technology and not the backbone technology.
Terrestrial fixed wireless broadband subscriptions
Terrestrial fixed wireless broadband subscriptions refer to the number of terrestrial fixed wireless Internet subscriptions with an advertised download speed of at least 256 Kbit/s. This includes fixed WiMAX and fixed wireless subscriptions but excludes occasional users at hotspots and Wi-Fi hotspot subscribers. It also excludes mobile-broadband subscriptions where users can access a service throughout the country wherever coverage is available."
Mobile data subscriptions
Number of prepaid and post-paid mobile subscriptions that were used to access the Internet the last 3 months, regardless of speed.

Traffic
Fixed line voice traffic
This aggregated value is the sum of Fixed line traffic (i.e. fixed-to-fixed) and all other fixed line originated traffic (Fixed to mobile and International outgoing).
Fixed line traffic
Refers to domestic fixed-to-fixed telephone traffic, in minutes. Domestic fixed-to-fixed telephone traffic refers to completed local and domestic long-distance fixed-telephone voice traffic. The indicator should be reported as the number of minutes of traffic during the reference quarter. This exclude minutes used for dial-up Internet access.
Local fixed-to-fixed telephone traffic, in minutes

Refers to effective (completed) fixed-telephone line voice traffic exchanged within the local charging area in which the calling station is situated. This is the area within which one subscriber can call another on payment of the local charge (if applicable). This is reported in the number of minutes, which should exclude minutes used for dial-up Internet access.
Long-distance fixed-to-fixed telephone traffic, in minutes
Refers to effective (completed) fixed national long-distance telephone voice traffic exchanged with a station outside the local charging area in which the calling station is situated. This is reported as the number of minutes of traffic. It excludes local calls, calls to mobile networks, calls abroad, and calls to special service numbers such as ISPs for Internet dial-up.
Fixed-to-mobile telephone traffic
Refers to total traffic from all fixed-telephone networks to all mobile-cellular networks within the country.
International incoming and outgoing fixed-telephone traffic
Refers to the sum of international incoming and outgoing fixed-telephone voice traffic.
International outgoing fixed-telephone traffic, in minutes
Refers to effective (completed) fixed-telephone voice traffic originating in a given country to destinations outside that country. This should include traffic to mobile phones outside the country. This is reported in number of minutes of traffic. It excludes calls originating in other countries. It should include VoIP traffic.
International incoming fixed-telephone traffic, in minutes
Refers to effective (completed) fixed-telephone voice traffic originating outside the country with a destination inside the country, irrespective of whether the call was from a fixed or mobile subscriber. It excludes minutes of calls terminating in other countries, but includes VoIP traffic
Mobile voice traffic
This aggregated value is the sum of Total national mobile traffic, as defined below, and International outgoing from mobile.
Total national mobile traffic

Domestic mobile-telephone traffic refers to the total number of minutes of calls made by mobile subscribers within a country (including minutes to fixed-telephone and minutes to mobile-phone subscribers).
Outgoing mobile traffic to same mobile network
Refers to the number of minutes of calls made by mobile subscribers to the same mobile network (within the country). This refers to the number of minutes originating on mobile networks and terminating on the same mobile network (on-net). It does not cover minutes of calls from mobile to fixed or mobile to other mobile networks.
Mobile to other mobile networks
Outgoing mobile traffic to other mobile networks, in minutes refers to the number of minutes of calls made by mobile subscribers to other mobile networks (within the country). The indicator refers to the number of minutes originating on mobile networks and terminating on different domestic mobile networks (off-net). It does not cover minutes of calls from mobile to fixed or mobile to the same mobile networks.
Outgoing mobile traffic to fixed networks
Refers to the number of minutes of calls made from mobile-cellular networks to fixed-line telephone networks within the country. The indicator refers to the number of minutes originating on mobile networks and terminating on fixed-line telephone networks within the country.
International outgoing from mobile
Outgoing mobile traffic to international refers to the number of mobile minutes originating in a country to any destinations outside that country.
Incoming international traffic to mobile network
Refers to the number of incoming minutes (fixed and mobile) received by mobile networks originating in another country.
Mobile data traffic
Mobile data traffic (within the country) refers to data traffic originated within the country from mobile networks. Download and upload traffic should be added up and reported together. Traffic should be measured at the end-user access point.

Wholesale and walled-garden traffic should be excluded. The traffic should be reported in terabytes.
Population coverage
3G population coverage
Percentage of the population covered by at a 3G mobile network refers to the percentage of inhabitants that are within range of a 3G mobile-cellular signal, irrespective of whether or not they are subscribers. This is calculated by dividing the number of inhabitants that are covered by a 3G mobile-cellular signal by the total population and multiplying by 100.
4G/LTE etc. population coverage
Percentage of the population covered by a 4G/LTE mobile network refers to the percentage of inhabitants that are within range of a 4G/LTE mobile-cellular signal, irrespective of whether or not they are subscribers. This is calculated by dividing the number of inhabitants that are covered by a 4G/LTE mobile-cellular signal by the total population and multiplying by 100. Note that all LTE variants are included.
Internet bandwidth
International Internet bandwidth
International outgoing Internet bandwidth
Refers to the total outgoing used capacity of international Internet bandwidth, in Mbit/s. This is measured as the sum of outgoing (uplink) capacity of all Internet exchanges offering international bandwidth.
International incoming Internet bandwidth
Refers to the total incoming used capacity of international Internet bandwidth, in Mbit/s. This is measured as the sum of incoming (downlink) capacity of all Internet exchanges offering international bandwidth.
BRICS
the acronym coined for an association of five major emerging national economies: Brazil, Russia, India, China and South Africa
Vitual post users

Is a digital mailbox post service that you access via any computer, tablet, or smartphone. Receive, forward, pick up, shred, or discard mail and packages. It allows you to manage your postal mail and packages with our smartphone app or online anytime, from anywhere

Appendix 3: Aggregated data from ICASA questionnaires

The table below lists the aggregated figures from the three ICASA questionnaires to the electronic communications licensees, the TV broadcasting licensees and the SA Post Office, for the period of 1 October 2019 -30th September 2020. For definitions please refer to the Appendix 2 above, and for more clarification please refer to the notes accompanying the associated figures in the report.

TELECOMMUNICATION SECTOR 2020	
Total revenue	**R201,254,592,538**
Total fixed line revenue	**R8,083,204,765**
Revenue from retail fixed-telephone services	R357,496,101
Revenue from fixed-telephone subscription charges	R4,575,278,396
Revenue from fixed-telephone calls	R3,150,430,268
Total Fixed Internet and data revenue	**R25,335,440,726**
Fixed Internet revenue (R)	R5,087,844,013
Revenue from fixed (wired)-broadband services	R13,540,003,128
Other wireless-broadband services revenue	R2,453,389,014
Other telecommunication services revenue, including leased lines revenue and fixed value-added telecommunication services	R4,254,204,570
Total mobile services revenue (Rm)	**R105,670,253,917**
Revenue from voice services	R36,143,659,167
Revenue from outbound roaming (R)	R2,489,009,912
Revenue from mobile data services	R48,071,241,971
Revenue from text and multimedia messaging services	R2,767,430,165
Prepaid revenue mobile voice	R27,404,561,055
Prepaid revenue mobile data	R28,798,070,479
Prepaid revenue mobile messaging	R941,977,675
Other mobile services revenue	R16,198,912,702
Total of any other revenue	**R62,165,693,130**
Interconnection revenues	R5,712,813,843
Equipment revenue	R26,880,902,531
Any other revenue	R29,571,976,755
Total telecommunication investment	**R36,555,140,647**

Annual investment in fixed-telephone services	R2,912,024,038
Annual investment in fixed (wired)-broadband services	R4,830,520,473
Annual investment in mobile communication services	R15,609,753,461
Infrastructure	R3,894,797,426
Expansion	R6,380,976,746
Maintenance	R1,179,115,659
Other annual investment in telecommunication services	R1,747,952,845
Fixed line subscriptions	**1,829,043**
Analogue fixed-telephone lines	1,009,653
VoIP subscriptions	380,530
Fixed wireless local loop subscriptions	15,682
ISDN voice-channel equivalents	421,012
Fixed public payphone	2,166
Mobile cellular subscriptions	**94,952,509**
Prepaid mobile-cellular telephone subscriptions	**79,419,434**
Prepaid mobile-cellular telephone subscriptions (Urban area)	63,319,518
Prepaid mobile-cellular telephone subscriptions (Rural area)	16,099,916
Postpaid mobile-cellular telephone subscriptions	**15,533,075**
Postpaid mobile-cellular telephone subscriptions (Urban area)	14,578,698
Postpaid mobile-cellular telephone subscriptions (Rural area)	954,377
Mobile Cellular Active Subscriptions (Active for more than 90 Days)	64,151,355
M2M mobile-network subscriptions	8,885,075
Fixed broadband subscriptions	**1,492,151**
DSL Internet subscriptions	453,771
Fibre-to-the-home/building Internet subscriptions	1,026,002
Other fixed (wired)-broadband subscriptions	12,378

Wireless-broadband subscriptions	**244,876**
Satellite broadband subscriptions	12,768
Terrestrial fixed wireless broadband subscriptions	232,108
Active mobile broadband subscriptions	**76,029,456**
Standard mobile-broadband subscriptions	52,373,702
Dedicated mobile-broadband subscriptions	23,655,754
Mobile data users	75,181,103
Fixed line traffic	**4,167,973,810**
Local fixed-to-fixed telephone traffic, in minutes	2,607,594,305
Long-distance fixed-to-fixed telephone traffic, in minutes	1,560,379,505
Fixed-to-mobile telephone traffic	9,005,020,193
International incoming and outgoing fixed-telephone traffic	**227,899,487**
International outgoing fixed-telephone traffic, in minutes	85,348,326
International incoming fixed-telephone traffic, in minutes	142,551,161
Total national mobile traffic	**77,388,103,359**
Outgoing mobile traffic to same mobile network	56,217,841,888
Mobile to other mobile networks	19,160,056,423
Mobile to fixed	2,010,205,049
International outgoing from mobile	344,307,235
International incoming to mobile	307,470,913
SMS traffic	23,805,087,533
SMS international traffic	199,649,708
Mobile data traffic	1,606,726

International Internet bandwidth (Mbps) capacity	**1,136,017**
International outgoing Internet bandwidth	381,319
International incoming Internet bandwidth	754,698
Smartphone subscriptions	60,438,901
ICT Sector Black Economic Empowerment Measures	
Telecommunication employment -Total	34,329
Telecommunication employment- female	12,820
Telecommunication employment- Disabled	311
Telecommunication employment- Unskilled	527
Telecommunication employment- Semi skilled	5,050
Telecommunication employment- skilled	25,951
Telecoms employment- Top Management (EXCO Members)	232
Telecoms employment- Black Top Management (EXCO Members)	83
Telecoms employment- Black Top Female Management (EXCO Members)	37
Procument Spend from all supplliers	R99,474,448,024
Procument Spend from all supplliers based on the B-BBEE Procument Recognition Levels	R82,629,651,919
Number of Schools connected based on obligations imposed by ICASA	6,858

BROADCASTING SECTOR 2020	
Total revenue	**R35,814,897,915**
Broadcasting Advertising Revenue	**R5,003,077,915**
Broadcasting Subscriptions Revenue	**R28,300,604,807**
Revenue from Broadcasting Promotions (with flighting code).	**R1,021,198,419**
Revenue from sponsorhips	**R397,527,711**
Revenue from Government or State grant	**R108,798,175**
Revenue from donations	**R8,097,574**
Revenue from infomercials	**R17,377,974**
Revenue from membership fees	**R17,958,093**

Total of any other revenue	**R940,257,248**
Program expenditure	**R12,160,892,034**
Number of Pay TV subscribers	8,200,468
ICT Sector Economic Empowerment Measures	
Broadcasting employment -Total	4,237
Broadcasting employment- female	2,156
Broadcasting employment- Disabled	112
Broadcasting employment- Unskilled	112
Broadcasting employment- Semi skilled	481
Broadcasting employment- skilled	2,340
Broadcasting employment- Top Management (EXCO members)	100
Broadcasting employment- Black Top Management (EXCO members)	78
Broadcasting employment- Black Top Female Management (EXCO members)	41
Procument Spend from all supplliers	**R3,906,586,239**
Procument Spend from all supplliers based on the B-BBEE Procument Recognition Levels	**R2,831,135,359**
Total Number of Television (stations and distributors)	18,623,592
Number of Digital Satelite Stations	52
Number of Digital Terrestrial Stations	90
Number of Analogue Terrestrial Stations	5
Number of Signal Distributors	11
Number of set-top boxes	18,623,287
Number of Content Distributors	147
Investment	**R40,189,395**
Infrastructure	**R23,183,716**
Expansion	**R612,300**
Maintenance	**R2,015,303**
Others	**R14,378,076**
Total Number of Local independent productions	540
Total Number of international independent productions	318
Total Number of productions by the broadcasters	7,352

POSTAL SERVICE SECTOR 2020	
Total SAPO revenue	**R5,949,774,522**
Postbank revenue	**R1,645,706**
Postbank interest revenue	**R554,605**
Retail products revenue	**R3,373,000**

Services rendered – Postal	**R2,826,765,000**
Services rendered - Agency and money transfer	**R1,216,458,000**
Services rendered – Courier	**R1,166,621,511**
Total of any other revenue	**R734,356,700**
Postal employment -Total	17,984
Postal employment- female	8,702
Postal employment- Disabled	42
Postal employment- Unskilled	823
Postal employment- Semi skilled	13,079
Postal employment- skilled	3,512
Postal employment- Top Management (EXCO members)	36
Postal employment- Black Top Management (EXCO members)	18
Postal employment- Black Top Female Management (EXCO members)	5
Procument Spend from all supplliers	**R1,529,349,393**
Procument Spend from all supplliers based on the B-BBEE Procument Recognition Levels	**R36,767,989**
Letter delivery services (Registered letters)	**366,857,996**
Letters: Domestic service and international outbound (International Mail Centre Volumes)	4,069,167
Letters: Domestic service and international outbound (Local Volumes)	362,788,829
Parcel delivery services	**8,427,395**
Parcel: Domestic service and international outbound (International Mail Centre Volumes)	55,014
Parcel: Domestic service and international outbound (Local Volumes)	8,372,381
Express delivery services (EMS)	**4,258,771**
Express: Domestic service and international outbound (International Mail Centre Volumes)	10,079
Express: Domestic service and international outbound (Local Volumes)	4,248,692
Number of PO Boxes	4,642,638
Number of PO Boxes rented	3,333,402
Number of PO Boxes/ Capita	
Postal Service Products	**6,791,849**
Total number of International product users	760
Total number of Vitual post users	476,479
Total number of postbank holders	6,314,610
Others	
Investment	**R319,161,315**
Infrastructure	**R92,502,369**
Expansion	**R0**
Maintenance	**R224,158,946**
Others	**R2,500,000**

Source: ICASA Telecommunications, TV Broadcasting and Postal Questionnaires, December 2020