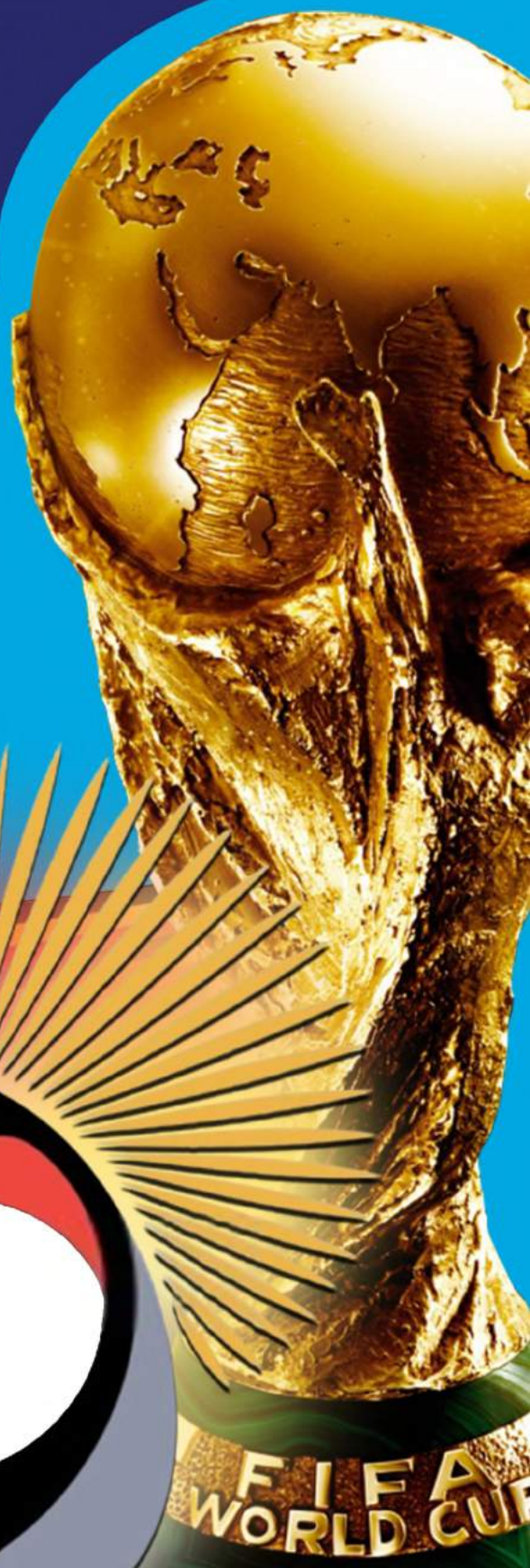




UGANDA
COMMUNICATIONS
COMMISSION

Market Performance Report

4Q22



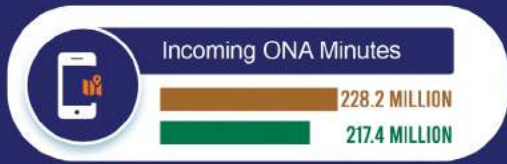
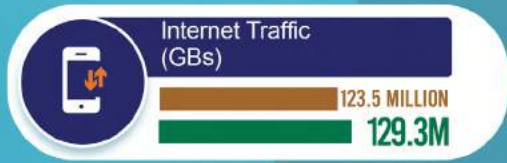
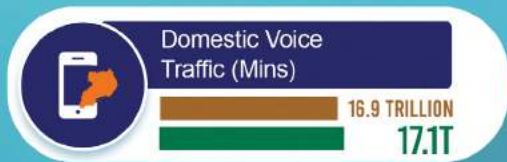
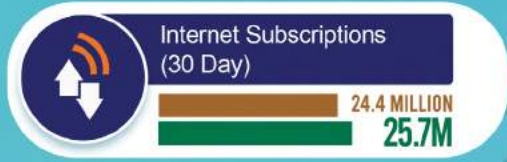
1.5B
WASHINGTON

VIEWS
SUMMIT



FIFA
WORLD CUP

Industry Snapshot December 2022



● 3Q22
● 4Q22

Uganda Mobile Money Activity Ratio **(53%)**

REGISTERED: 36.8 MILLION
ACTIVE: 19.6 MILLION

Global Mobile Money Activity Ratio **(25%)**

REGISTERED: 1.6 BILLION
ACTIVE: 401 MILLION

218 Radio Stations

98% Radio Coverage

TV Broadcasters

FTA	PayTV	Hybrid	Online
35	7	34	2

3.1M PayTV Subscriptions

43 Post and Courier Operators

4,855 Towers

29,947KM Fiber Distance

Telecom Financial Performance (UGX)

Telecom Revenues
YEAR 2021: 4.03 TRILLION
YEAR 2022: 4.23 TRILLION

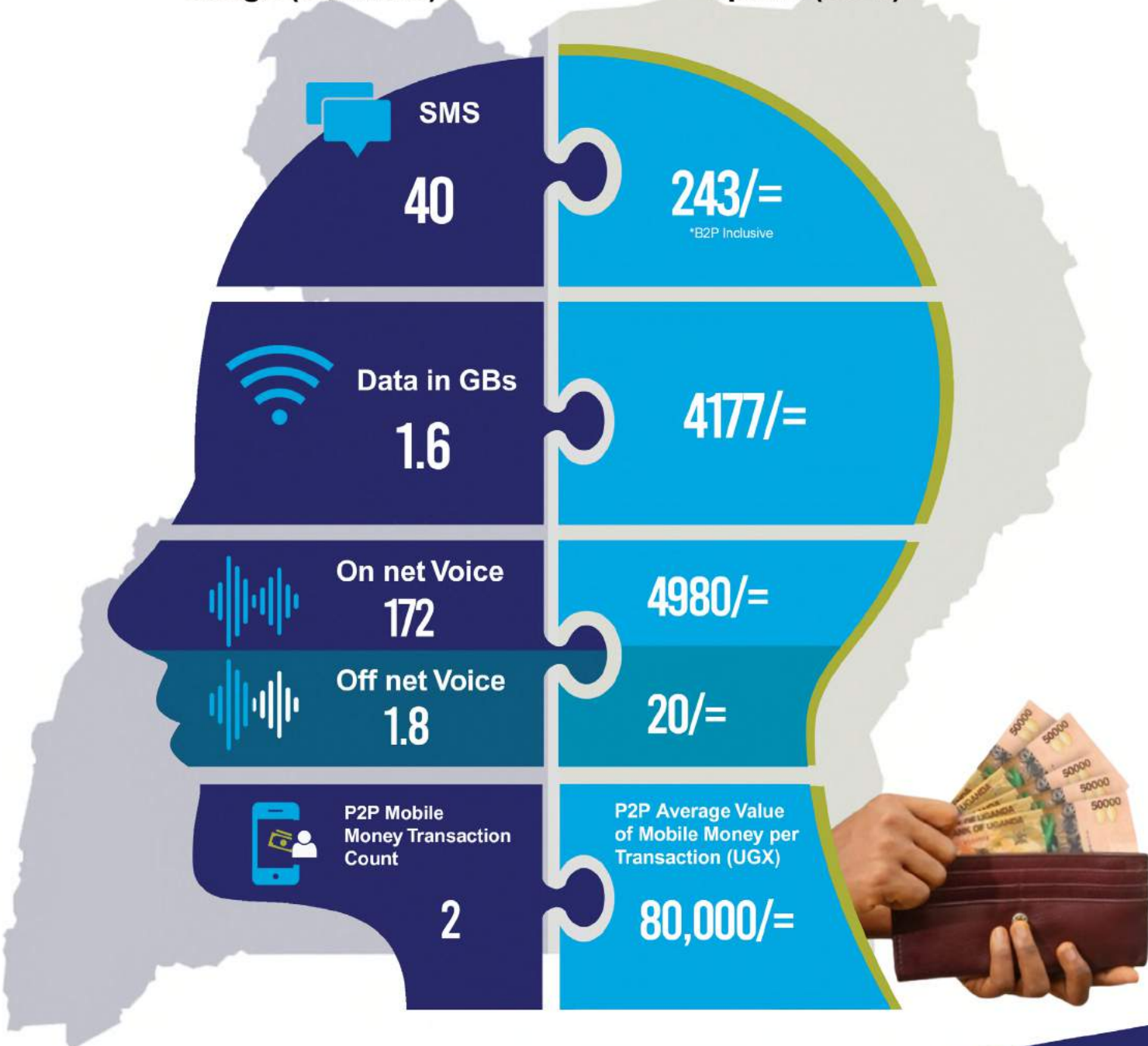
Telecom Investment
YEAR 2021: 776 BILLION
YEAR 2022: 1.1 TRILLION

Telecom Tax
YEAR 2021: 1.57 TRILLION
YEAR 2022: 1.49 TRILLION

4Q22 Average User Profile

Average Monthly Service Usage (Volumes)

Monthly Service Usage Spend (UGX)



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Legal Disclaimer

The information and figures contained herein were obtained from licensees' submissions to the Commission and other sources available to the Commission. It is intended to provide the communications market overview to:

1. The industry,
2. Prospective entrants,
3. Government,
4. Academia and other stakeholders.

UCC does not give any warranty and may not be liable for the interpretation arising from its use or misuse.



Crested Crane:

The Grey Crowned Crane is the National Bird of Uganda, scientifically known as the *Balearica regulorum gibbericeps*.

The Crested Crane has been Uganda's symbol for nearly 100 years.

Uganda shone bright on the international scene in 4Q22.

Introduction

This is a review of the industry performance, trends and key developments for the quarter starting October to December 2022. The report covers:

1. Domestic Highlights
2. Service Access and Subscriptions
3. Traffic and Usage
4. Financial Performance
5. Post and Courier Sector Highlights
6. Broadcast and Multimedia
7. Global Context

Domestic Highlights



1.1. Mobile World Congress Africa Sets Stage for ICT Growth on the Continent

In the fourth quarter of 2022, Africa witnessed a significant milestone in the development of its ICT policy with the conclusion of the Mobile World Congress (MWC) in Africa. The Congress, held in partnership with Real Smart Africa, brought together over 3,000 delegates in Kigali for the sixth meeting of the Council for Ministers of ICT.

During the event, Uganda's Minister for ICT and National Guidance, **Hon. Minister Dr. Chris Baryomunsi**, was elected as Vice Chair of the Council of African Information and Communications Technology Ministers. The Council, which typically participates in the MWC Africa edition, engages in discussions and deliberations on various issues concerning the ICT sector in Africa, including sharing insights on emerging technologies, discussing policy and regulatory issues, promoting investment opportunities in the sector, and collaborating with other stakeholders to advance the development of the ICT sector on the continent.



Hon. Minister Dr. Chris Baryomunsi, was elected as Vice Chair of the Council of African Information and Communications Technology Ministers at MWC 2022.

Courtesy: Ministry of ICT&NG

The MWC Africa serves as a crucial platform for the continent to showcase its innovation and the growing importance of its ICT industry on the global stage. With the world becoming increasingly digitized, the MWC Africa presents an opportunity for African countries to collaborate, learn and strategize on ways to harness the potential of ICT for economic growth and development.

1.2. UTCL's Billion-Shilling Acquisition of UTL Assets Sets Tone for Uganda's Telco Industry

In the largest news in Uganda's telecommunications industry, Uganda Telecommunications Corporation Limited (UTCL) acquired Uganda Telecom Limited (UTL) assets for UGX 316 billion, marking a significant move in the domestic market. With the acquisition, UTCL now holds a portfolio of over 400 tower sites and the existing customer base.



Courtesy: PML Daily

Ms. Ruth Sebatiindira (right), the Administrator of Uganda Telecom handing over the UTL assets to the Minister of State for Investment, Evelyne Anite (left).

The acquisition has also paved the way for UTCL to introduce a range of fixed and mobile voice and data services as new value propositions.

UTCL aims to capitalize on previous interconnect, access, and distribution agreements with UTL as they continue to expand their partnerships.

1.3. Uganda Launches First Satellite to the International Space Station

In a ground-breaking achievement, Uganda successfully launched its first satellite, **PearlAfricaSat-1**, to the International Space Station in the fourth quarter of 2022. The country's cube-type satellite was deployed into low earth orbit in December, marking a significant milestone for Uganda's space program.

The satellite's primary mission is to provide crucial research and observation data that will enable the development of solutions in weather forecasting, land and water bodies monitoring, mineral mapping, agriculture monitoring, disaster prevention, infrastructure planning, and border security. The launch of PearlAfricaSat-1 is expected to accelerate Uganda's technological advancements and open up new possibilities for scientific research and development in the country.

Members of the Joint Global Multi-Nation Birds Satellite project (Left to Right): Derick Tebusweke, Bonny Omara, and Edgar Mujuni pose for photo. The trio of space specialists and graduate engineers implemented the launch of PearlAfricaSat-1 in collaboration with the Kyushu Institute of Technology, Japan.



Courtesy: Dignited

1.4. Mobile Network Operators Undergo Quality of Service (QOS) Ratings

In the final quarter of 2022, the Uganda Communications Commission (The Commission) conducted benchmark measurements of mobile voice telephony and data services to evaluate the Quality Of Service (QOS) provided by the country's Mobile Network Operators (MNOs).

MNOs whose services were considered under this exercise were Uganda Telecom Limited (UTL), MTN Uganda Limited (MTN), Airtel Uganda Limited (Airtel), and Tangerine Limited t/a Lycamobile. The measurements were carried out from the end user perspective in twenty (23) towns (Kampala, Mukono, Entebbe, Mityana, Masaka, Mbarara, Ntungamo, Kabale, Masindi, Hoima, Fort Portal, Kasese, Gulu, Kitgum, Arua, Lira, Jinja, Tororo, Soroti and Mbale,).

The parameters for the tests conducted include the following:

- i). **Blocked Call Rate (BCR):** proportion of call attempts on the network that are blocked calls. (Allowable performance target threshold is $\leq 2\%$).



A blocked call means a call attempt that fails to achieve a connection to the destination party and therefore not receiving an alerting or ring tone, busy tone, answer signal or announcement. The tests conducted in the 20 towns showed that the respective MNOs met their targets in 11 of the 20 towns.

- ii). **Dropped Call Rate (DCR):** proportion of call attempts on the network that are dropped calls. (Allowable performance target threshold is $\leq 2\%$).



A dropped call means a call terminated by the network before it is ended by either party participating in the call. In 12 of the 20 towns where tests were conducted, MNOs met their QOS required target.

The Commission plans to expand the QOS assessments to other towns in the country to create a comprehensive score for the entire nation, indicating the degree to which MNOs fulfil their license terms and conditions.

Further details of the already conducted QOS assessments can be accessed at the link below, <https://www.ucc.co.ug/wp-content/uploads/2023/02/Qos-Report-for-December-2022.pdf>

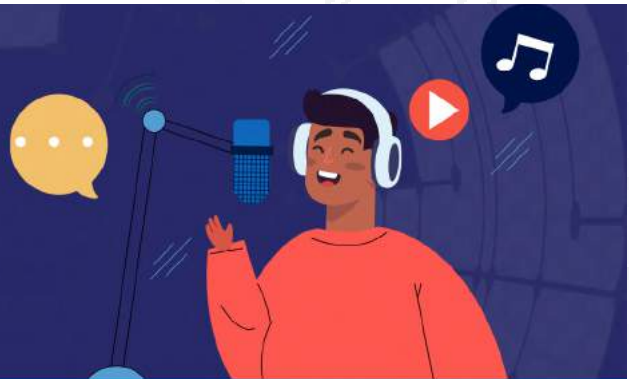


1.5. Regulating the Airwaves: A Look into the Conclusion of the Radio Licensing Process

The Radio Licensing Process is an essential component of the regulatory framework in the Broadcasting Space. With the **approval of 218 Radio Broadcasters** in the three months ending December 2022, the radio license renewal exercise was concluded to ensure efficient and effective use of the radio frequency spectrum, while also promoting compliance with broadcasting standards. The process involved meeting various requirements, including technical, financial, and legal compliance.

The list of approved radio broadcasters is now available on the UCC website.

Members of the public are welcome to acquaint themselves with the different radios broadcasting in their areas.



www.ucc.co.ug/list-of-approved-radio-broadcasters

1.6. Digital Finance Security Testing Lab Goes Live

Uganda's financial ecosystem has seen a significant growth in Digital Finance, with the rise of mobile banking and telecom applications that enable last mile financial service access. To ensure the security and reliability of these services, the Commission launched the Digital Financial Security Testing Lab in partnership with the International Telecommunications Union (ITU).

The lab provides a free-to-access environment for product pilots and security testing protocols, ensuring that applications undergo rigorous testing before they are rolled out into the market. This will not only enhance the security assurance for mobile network operators (MNOs) but also provide a safer platform for customers to manage mobile payment risks and threats.

The launch of Uganda's Digital Financial Service Hub is a significant milestone in the country's journey towards a digital economy. It is a step towards creating a secure and reliable financial ecosystem that is accessible to all respective of location, age and gender.



Some of the Digital Financial Service Hub security-testing Lab equipment.

1.7. UCUSAF Extends Device Access to Rural Households

The Commission through Uganda Communications Universal Services Access Fund (UCUSAF) implemented its second phase of the last-mile digital inclusion pilot premised on the provision of internet-connected solar-powered tablets to rural digitally excluded groups. A total of 4,000 households received solar-powered tablets in the second phase bringing the total number of households to 5,444 rural communities as of December 2022.

The 2nd phase of the project that kicked off in 2021 took place in the areas of Moyo, Lamwo, Pader, Kumi, Sironko, Namisindwa, Karenga, Katakwi, Amuria, Otuke, Alebtong, and Kagadi. Others are: Ntoroko, Bundibugyo, Butambala, Namayingo, Kibuku, Kaliro, Kalangala, Agago, Nwoya, Kaberamaido, Ngora, and Bukedea.

The initial phase of the project has yielded valuable insights, including:



- ✓ The importance of adoption and usage of Internet services through mobile devices.
- ✓ The existence of gender disparities that affect mobile handset ownership and usage.
- ✓ The need for digital skilling and literacy programs to bridge the digital divide.

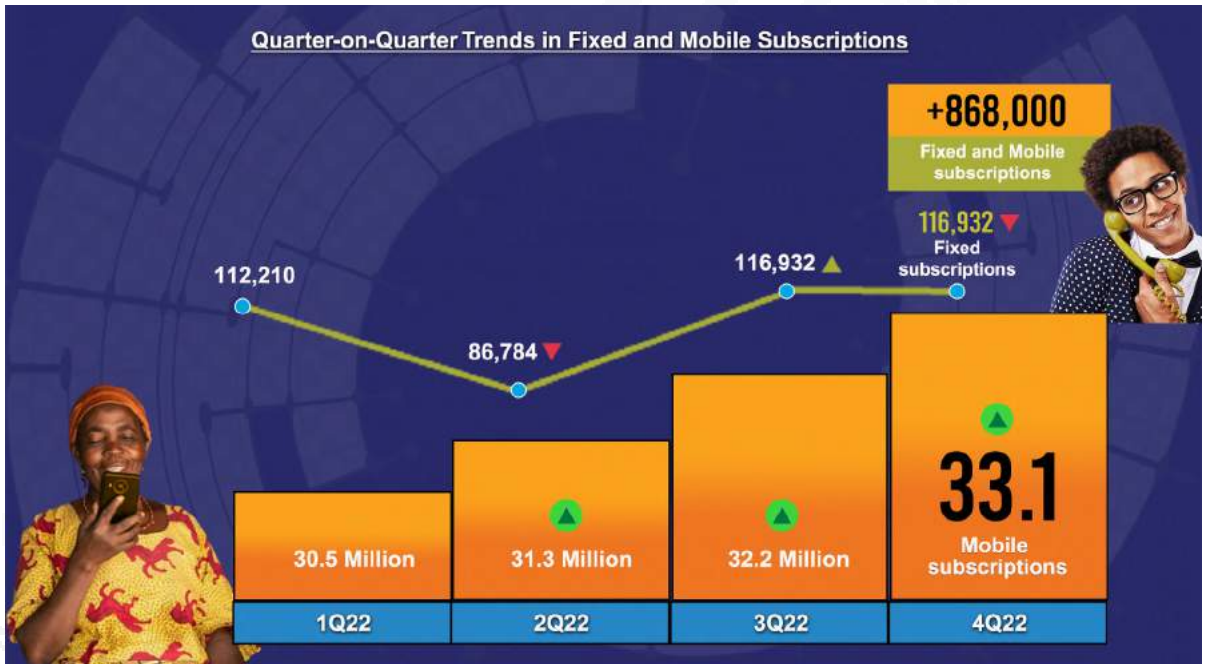
These learnings are crucial for the success of the project and its replication in other off-grid communities. The insights gained will enable the UCUSAF to develop tailored interventions that address the unique needs of rural communities, promote digital inclusion, and bridge the digital divide.

Service Access and Subscriptions



2.1. Fixed and Mobile Subscriptions

In terms of connectivity, 4Q22 witnessed a 3% surge in new fixed and mobile subscriptions, boosting the total count of connections to **33.2 million**. Of these, 33.1 million are mobile whereas 117,000 are fixed subscriptions. The organic growth is largely attributed to the seasonality variations associated with the December festivities.



4Q22 Teledensity:

77%



This trend suggests that 2022 ended on a positive note, with continuous increases in subscription numbers since the start of the year.

As a result, the national teledensity in mobile subscription terms stands at **77 lines out of every 100 Ugandans**, irrespective of age.

In the 12 months ending December 2022, the industry recorded a net addition of **2.9 million** new mobile subscriptions, representing a 10% increase.



2.2. Devices and Terminals

The fourth quarter of 2022 witnessed a rise in the number of network-connected devices, with over **900,000** terminals added to the tally. As of December 2022, 38.1 million devices were recorded on Ugandan networks.



Basic Mobile Phone
Can make calls and send text messages

Monthly Users

4Q22	2M
3Q22	2M
2Q22	3.7M
1Q22	3.6M



Feature Phones

Can make and receive calls, send text messages and provide some of the advanced features found on a smartphone such as social media access and browsing.

Monthly Users

4Q22	23.8M
3Q22	23.7M
2Q22	21.5M
1Q22	20.9M



Smartphones

A class of mobile phones and of multi-purpose mobile computing devices. They are distinguished from feature phones by their stronger hardware capabilities and extensive mobile operating systems, which facilitate wider software, internet (including web browsing over mobile broadband), and multimedia functionality (including music, video, cameras, and gaming), alongside core phone functions such as voice calls and text messaging.

Monthly Users

4Q22	12.2M
3Q22	11.4M
2Q22	10.9M
1Q22	10.5M

This growth is characterised by the rise in smartphone adoption with **770,000** new smart terminals across the network. Feature gadgets posted a 1% growth with a net addition of 140,000.



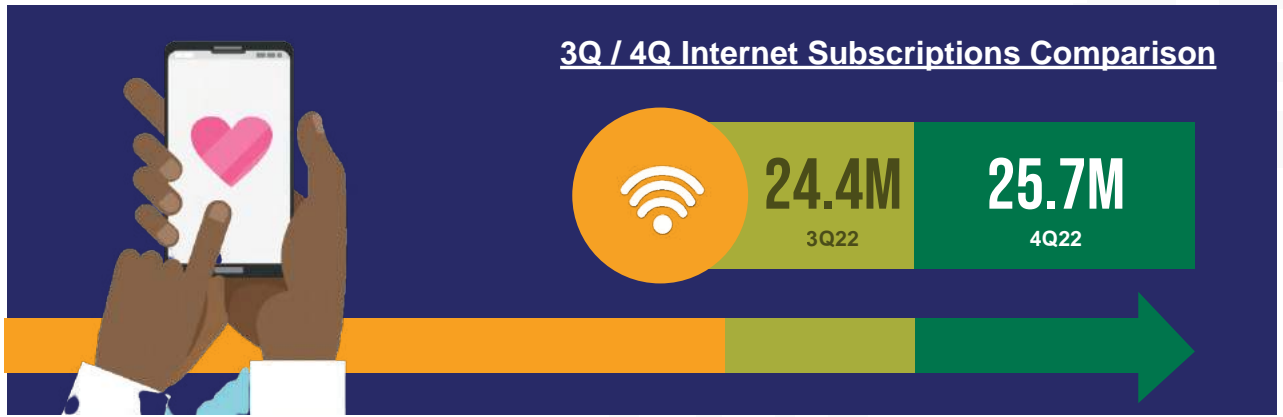
It is noteworthy that **95%** of the terminals in Uganda's Telecom industry are capable of accessing the internet.

This suggests a shift in consumer behaviour from using basic mobile devices to utilizing more advanced and feature-rich smartphones due to the advantages that internet connectivity offers.

At the end of December 2022, the share of internet enabled gadgets has grown by 18% compared to the basic gadgets that have dropped by 43% since December 2021.

2.3. Internet Subscriptions

In 4Q22, total internet subscriptions **crossed the 25 million mark**. This represents a net addition of 1.3 million internet subscriptions in the quarter, and the highest quarter-on-quarter addition in 2022.



The growth in internet subscriptions is precipitated by seasonality effects associated with different internet packages and value propositions offered by the various Internet Service Providers (ISPs) during the December festivities.

On a year-on-year comparison, the industry recorded a total of **1.8 million** new internet connections, resulting in a national penetration rate of 60%.

2.4. Registered Mobile Money Subscriptions

At the close of December 2022, registered mobile money subscriptions equalled **36.8 million**, indicating that Digital Financial Services continue to be the primary catalyst for financial inclusion in Uganda. This is a 4% growth in comparison to the preceding quarter.



Of the 36.8 million registered mobile money subscriptions, approximately **50%** transacted at least once in a month. The quarter on quarter growth reported an additional 1 million new mobile money registered subscriptions.

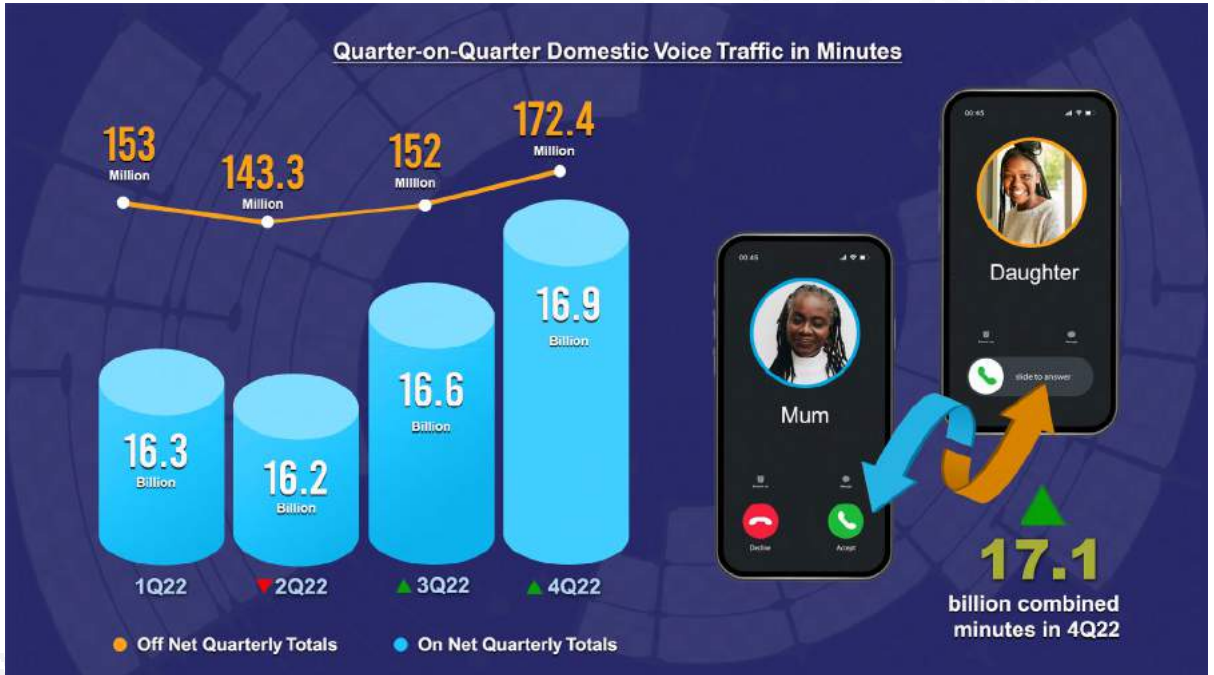
On a year-on-year comparison, the industry recorded a net addition to the base, by **4 million** mobile money subscriptions representing 12% growth.

Traffic and Usage



3.1 Domestic Voice Traffic

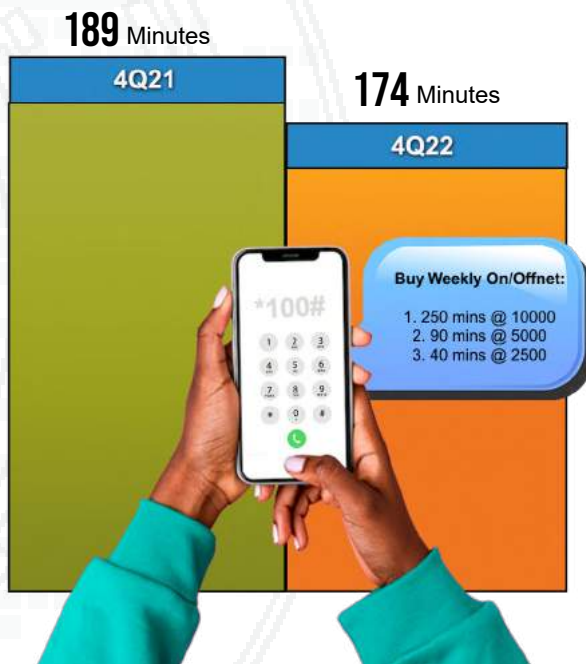
The number of minutes of domestic (on and off-net) traffic grew to **17.1 billion** minutes in the period October-December 2022. This is 336 million minutes more than domestic traffic volumes recorded in 3Q22.



In terms of domestic voice traffic distribution, on net traffic totalled **16.9 billion** minutes representing a 2% increase, whereas off net traffic recorded **172 million** minutes representing a 13% increase.

The growth in off net voice traffic i./s primarily due to the rising adoption of voice products that incorporate both on-net and off-net minutes.

4th Quarter Monthly Voice Traffic Comparison (Per Subscription)



Despite the growth in overall traffic volumes on an increasing subscriber base, the average usage per subscriber declined between 4Q21 and 4Q22 due to VoIP calling options available to the market.

3.2. International Voice Traffic

Uganda has continued to be a net receiver of international traffic.

In 4Q22, **20 million** minutes of international traffic were terminated into Uganda networks compared to **9.8 million** minutes that exited Ugandan networks to foreign destinations.



Quarter-on-Quarter International Traffic Comparison



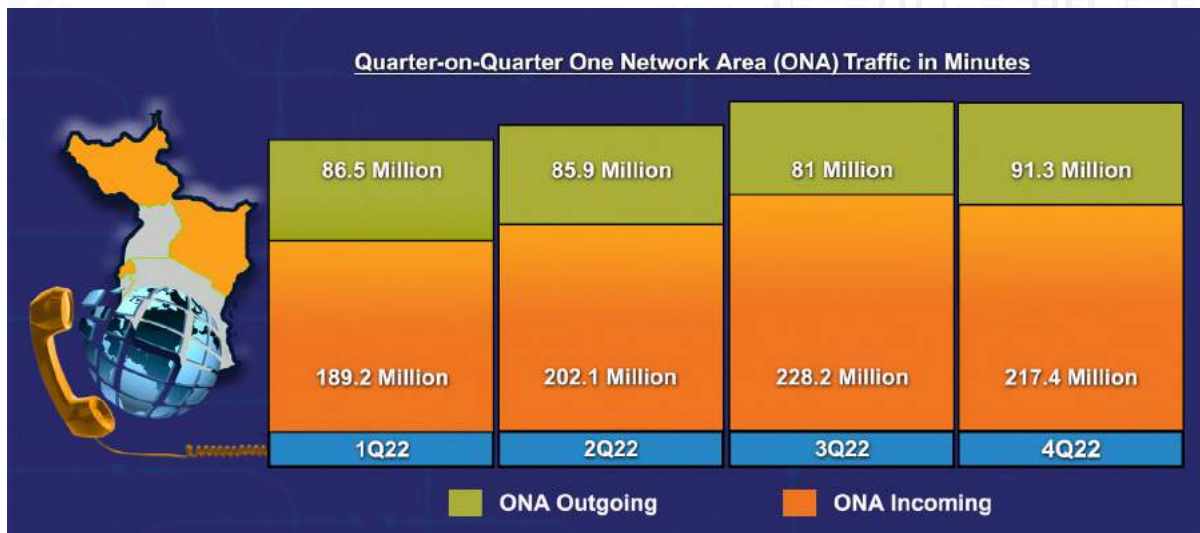
In the segment of international voice traffic, both incoming and outgoing minutes have remained consistent.

By the end of the 4Q22, the market observed consecutive volumes of **20 million minutes** for international incoming calls on TDM platforms.

3.3. One Network Area (ONA) Traffic

In terms of regional traffic distribution, Uganda received **217.4 million** ONA minutes compared to the **91.3 million** outgoing minutes to ONA member states in the quarter ending December 2022.

Uganda remains a net receiver of ONA voice traffic. As such the country maintains a positive Balance of Payments position in the ONA traffic segment.

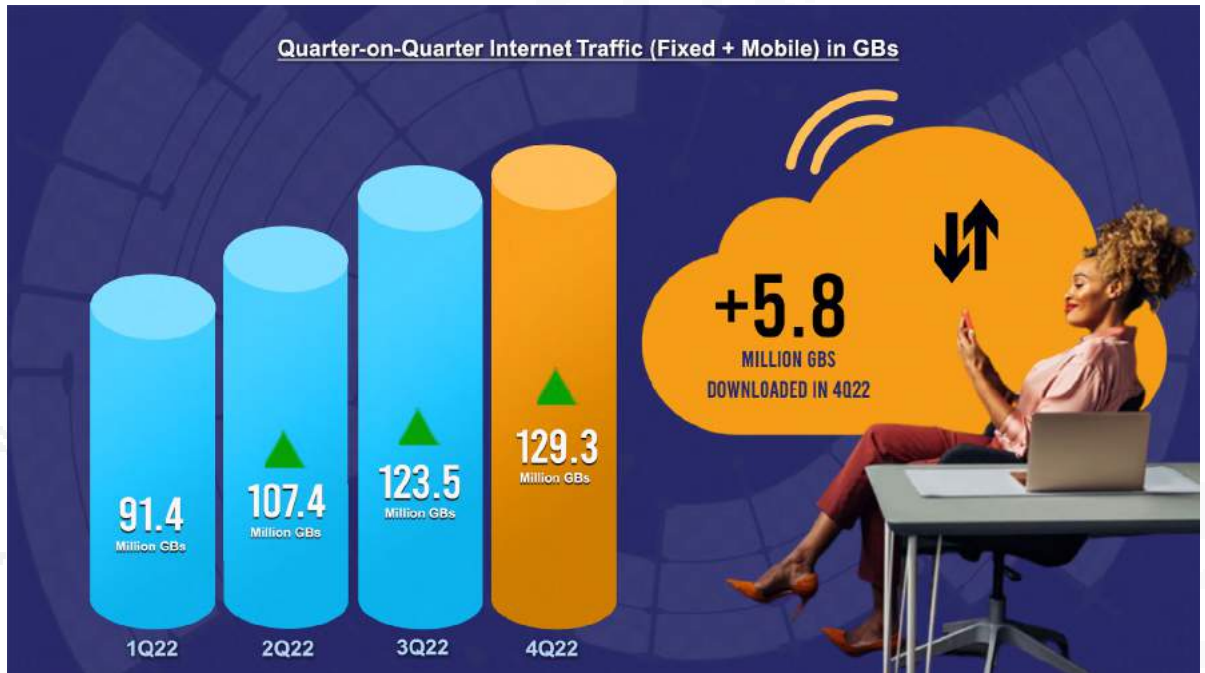


ONA Outgoing traffic recorded growth amidst the back-to-back dips observed in the first 3 quarters of 2022. In 4Q22, a positive net growth of 13% was observed in outgoing traffic terminating to ONA member states.

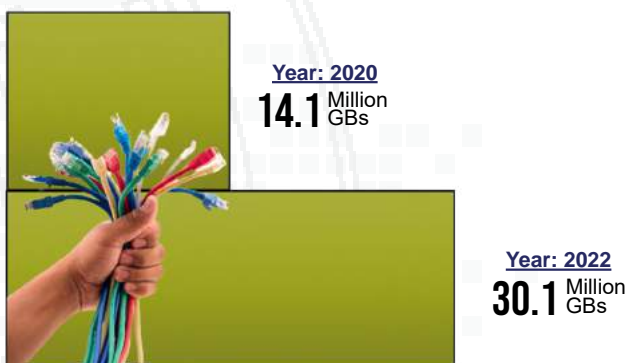
3.4. Internet Traffic

The Internet traffic segment ended the year with **129.3 Million GBs** in usage in 4Q22, surpassing the previous quarter by **5.8 Million GBs**.

This growth can be attributed to end-of-year pricing and product offers that were available during the festive season in both fixed and mobile internet service provisioning.



Year-on-Year Comparison of Fixed Internet Traffic



Internet traffic has doubled since 2020, with mobile data contributing to over 94% of total data traffic.

By the end of December 2022, a total of **30 million GBs** of data from fixed internet traffic had been recorded, compared to 14.1 million GBs at the end of December 2020.

Year-on-Year Comparison of Mobile Internet Traffic



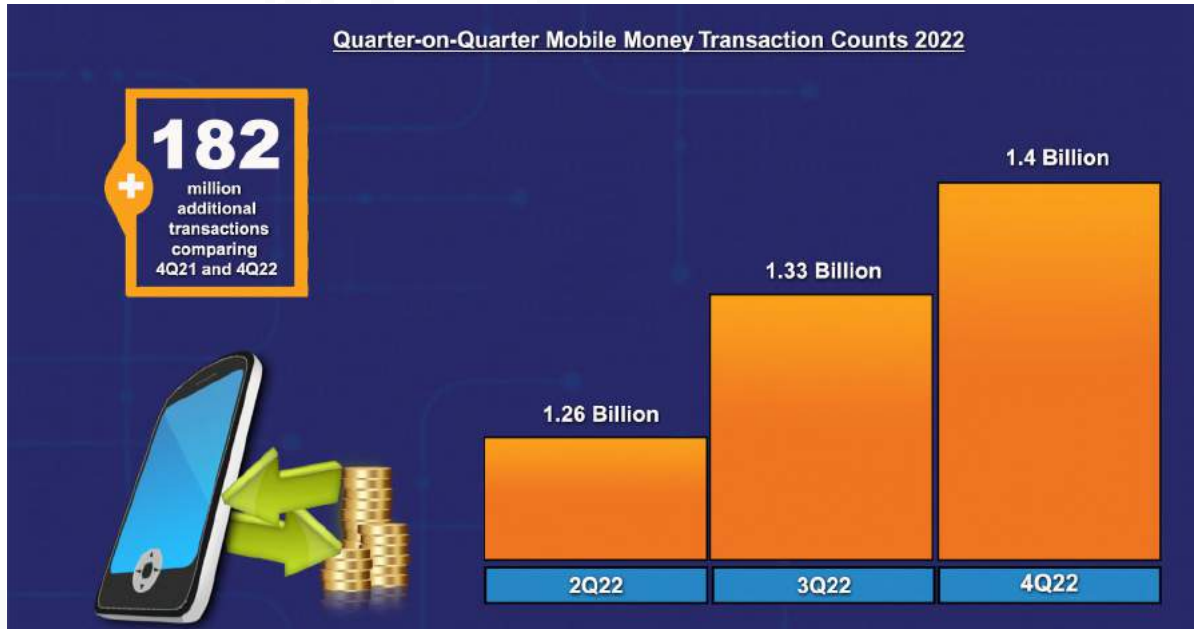
In mobile data terms, the industry recorded a total **421.5 Million GBs** in usage, in 2022, which is double the 217 Million GBs that were recorded in 2020.

This growth indicates that data is a key driver of the sector.

3.5. Mobile Money Transaction Counts

During 4Q22, the market recorded **1.4 billion** mobile money transaction counts, indicating a 4% growth. This trend is mainly due to the increase of P2B and P2P mobile money service usage. Customers continued to adopt cashless payment methods throughout the quarter.

In comparison to the quarter ending December 2021, the industry experienced a net growth of **182 million** transaction counts, indicating a 15% growth between 4Q21 and 4Q22.

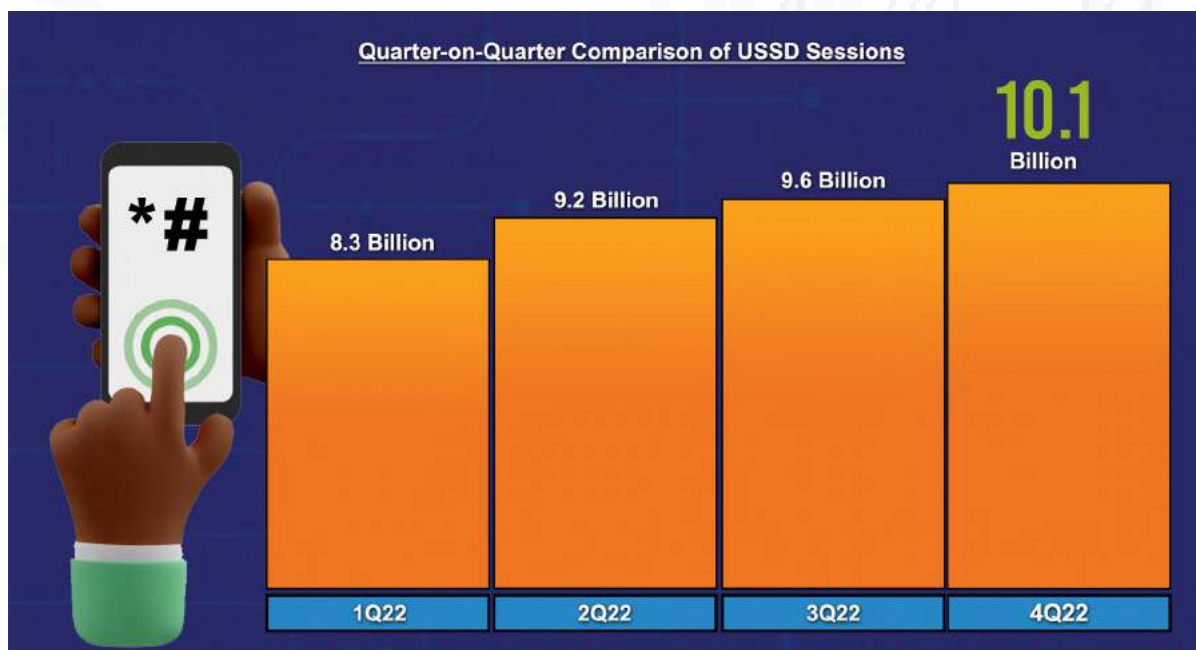


Source: Bank of Uganda (BOU)

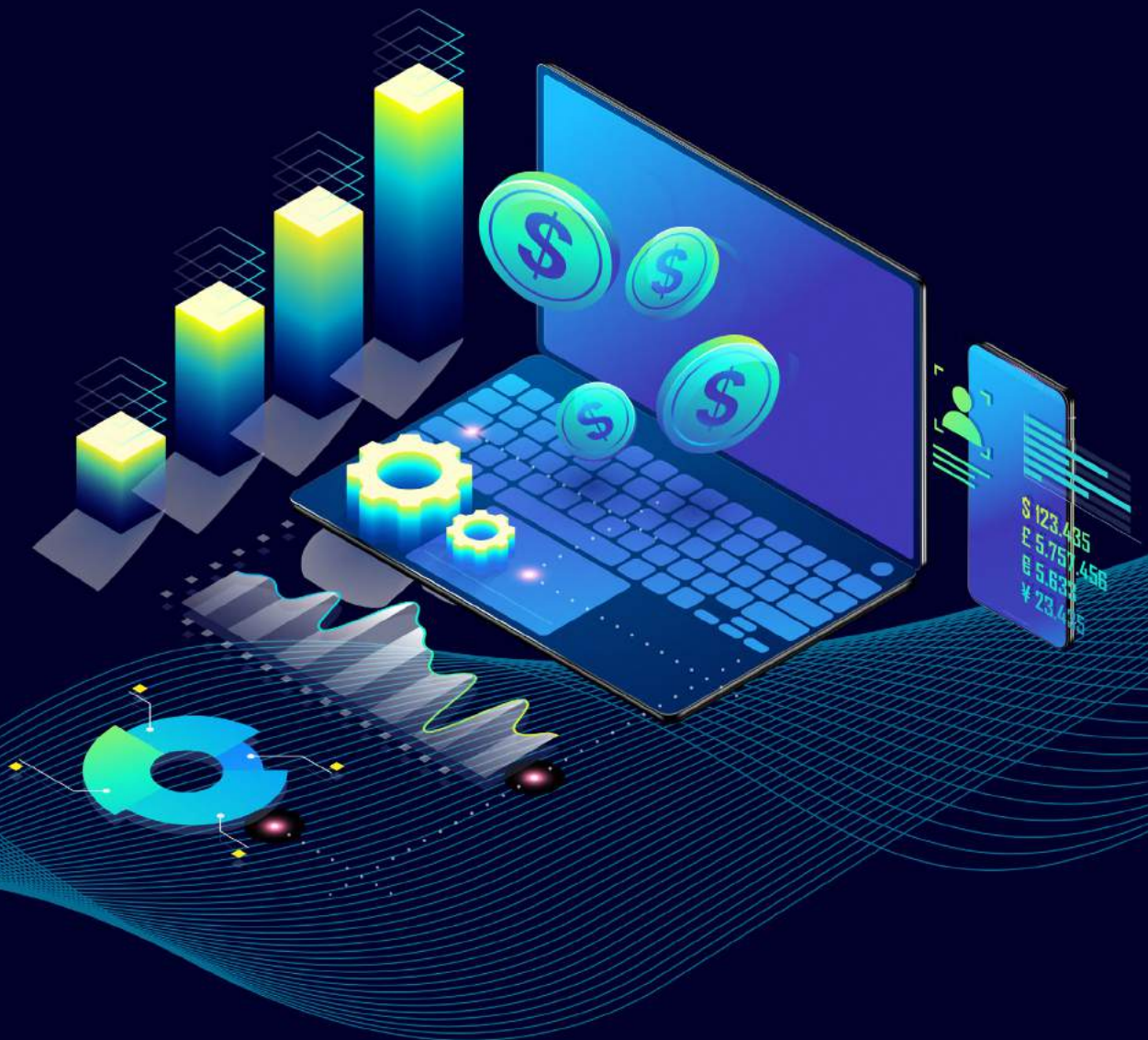
3.6. USSD Traffic

The adoption of cashless payment services has led to the increase in USSD sessions from 9.6 billion in 3Q22 to **10 billion USSD** sessions in 4Q22 representing a 4% quarter-on-quarter increase.

From a year-on-year position, we have observed an **11% increase** from the 9.1 billion USSD sessions of December 2021. This could largely be attributed to an increase in self service options on Mobile Money and online banking as people are becoming more independent in mobile service provisioning.



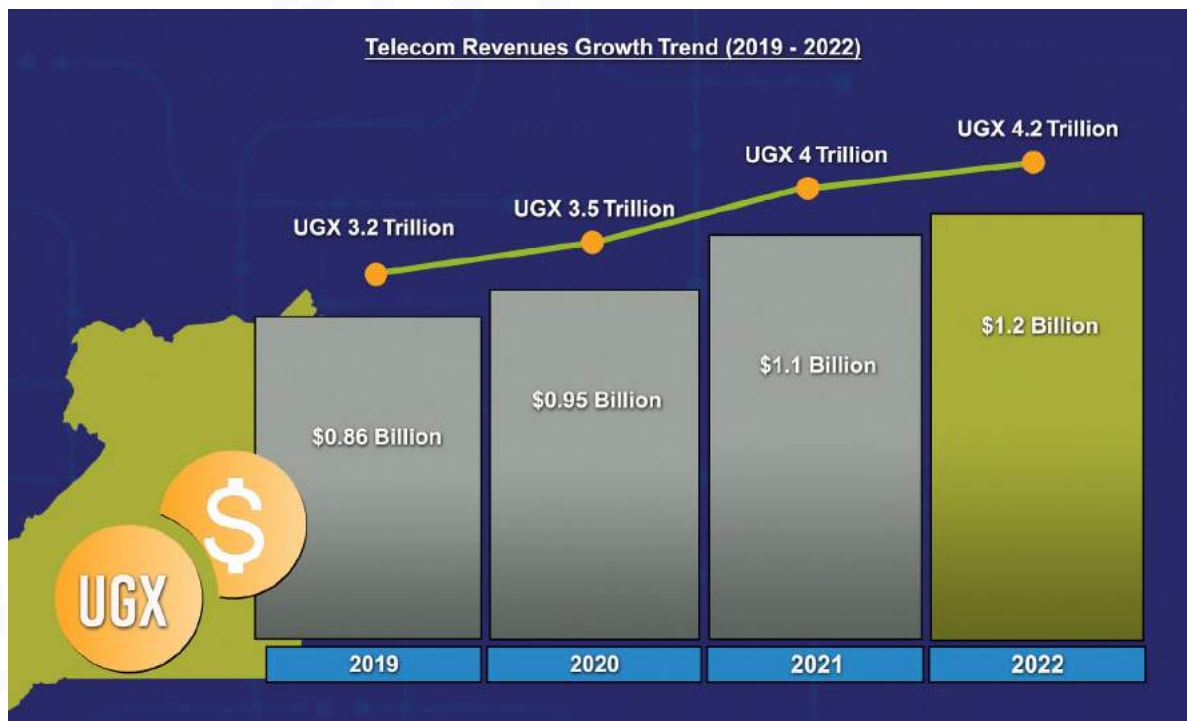
Financial Performance



4.1 Telecom Sector Revenue

In the three months ending December 2022, the Telecom industry posted a gross revenue performance of **UGX 1.1 trillion**. This valuation excludes revenues accrued from the Mobile Financial services.

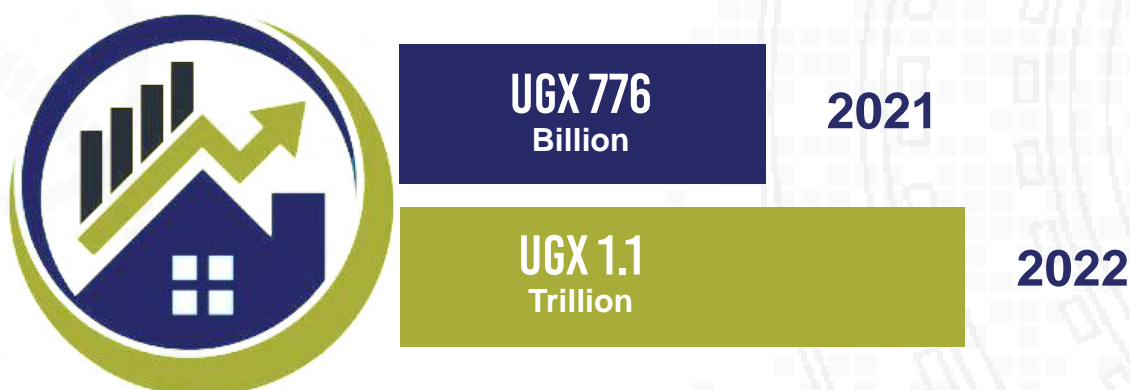
The industry has posted consecutive USD 1 billion valuations in 2021 and 2022 despite global economic shocks like the Covid-19 pandemic in 2020. As of December 2022, the sector revenues have increased by 8% compared to December 2021, reaching a valuation of **USD 1.2 billion** (UGX 4.2 trillion).



Data from licensee unaudited accounts,
USD - UGX Rate Conversion from Bank of Uganda

4.2 Telecom Sector Investment

The sector invested **UGX 776 Billion** and **UGX 1.1 Trillion** in 2021 and 2022 respectively. This translates into additional Capex of 41%. The increase in Capex Investment speaks to the growth in usage of services across all product/service options.



Post and Courier Sector Highlights



5.1. Developments in the Sector

During the quarter ending December 2022, the Commission introduced an online-based license application platform for post and courier operators.

The purpose of this platform is to simplify the license application process and provide clarity on the license verification process.

To date, the platform has received, assessed, and approved **more than 20** courier license applications. You can access the platform at:

<https://eservices.ucc.co.ug/>



5.2 Domestic Mail Volumes

In 4Q22, domestic mail volumes increased to **182,370 mails** from 172,863 mails in 3Q22, reflecting a 5% quarter-on-quarter growth. This growth can be attributed to new licensees entering the courier market, triggered by the increased demand for door-to-door delivery by domestic e-commerce businesses using courier operations for last mile delivery.

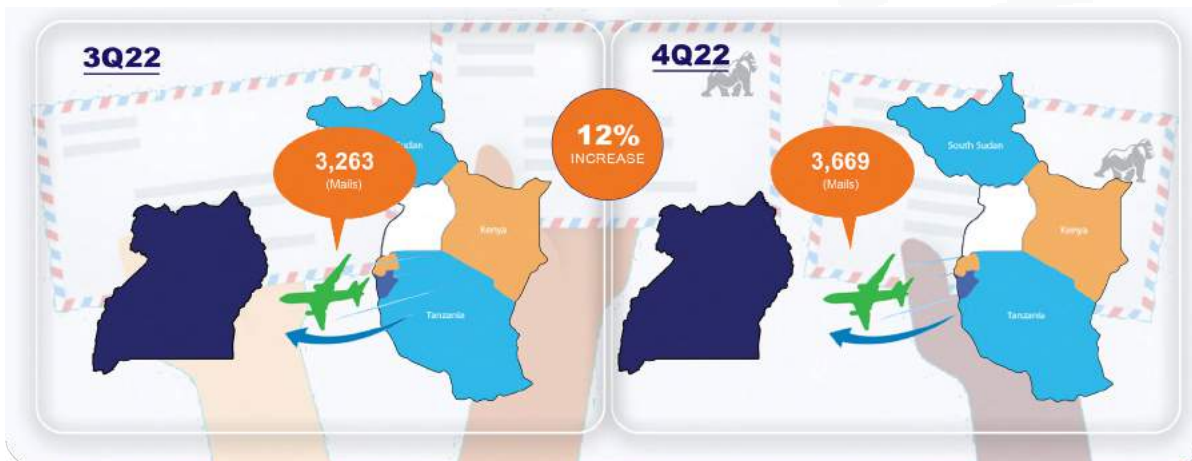


Compared to the same quarter the previous year (4Q21), domestic mail volumes have grown by over **40,000 mails**. This represents a 29% increase in domestic mail volumes year-on-year.

5.3 East Africa In-bound Mail Volumes

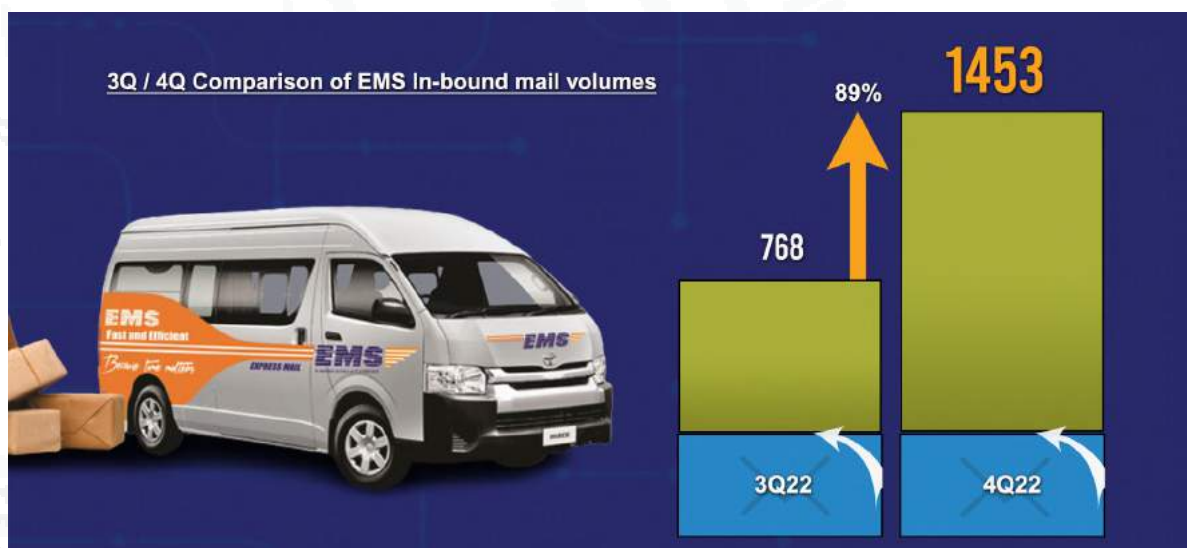
During the period under review, the post and courier market in Uganda continued to experience growth in mail volumes received from East African countries.

The East Africa inbound mail volumes increased to a total of **3,669 mails** in 4Q22, up from 3,263 mails in 3Q22, representing a 12% quarter-on-quarter growth.



5.4 Expedited Mail Service (EMS) In- bound mail volumes

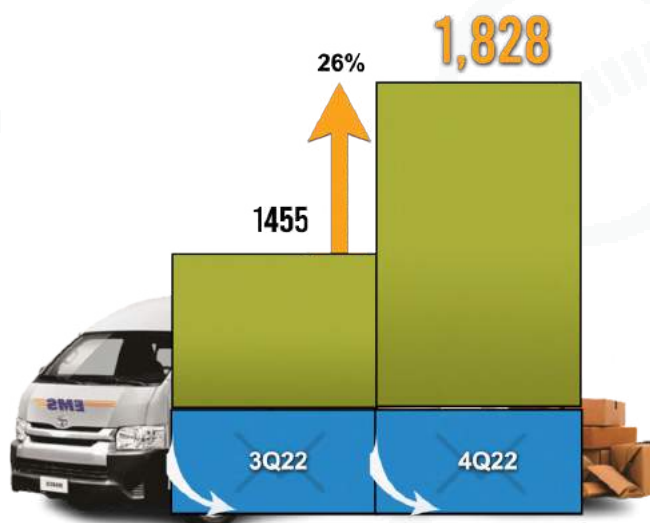
In 4Q22, EMS In-bound mail volumes grew to **1,453 mails** from 768 mails in 3Q22, translating into 89% quarter on quarter growth. This is due to seasonality effects.



5.5 EMS Out-bound mail volumes

Similarly, in the three months October to December 2022, the EMS Out-bound mail volumes grew to **1,828 mails** from 1,455 mails expedited from Uganda due to seasonality effects.

This translates into a **26%** quarter on quarter growth.

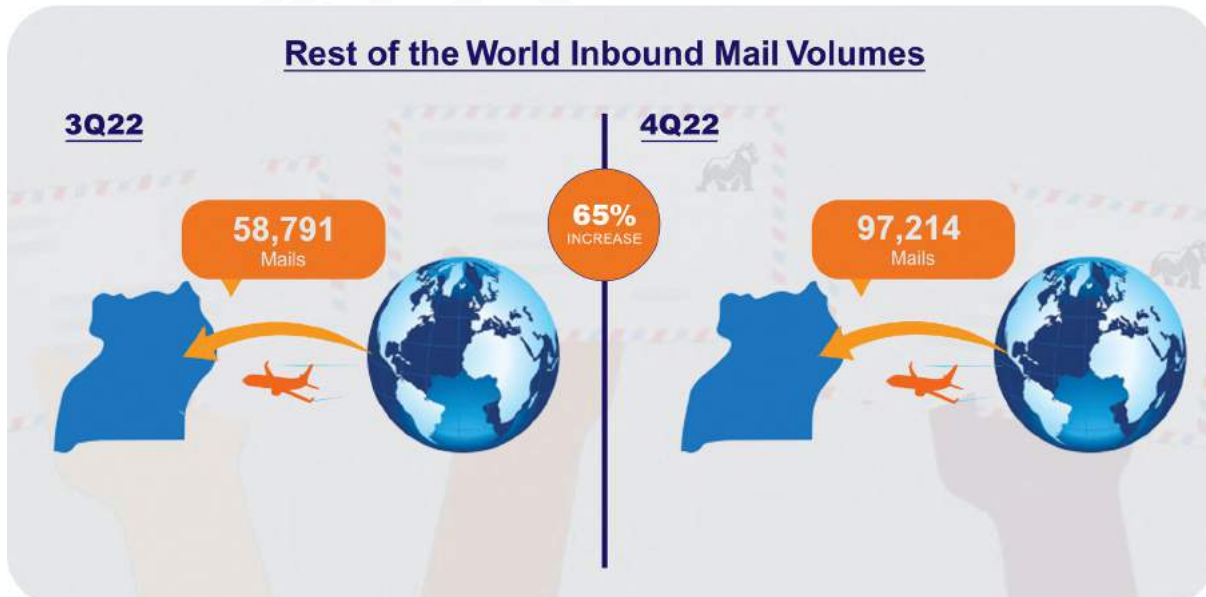


Expedited Mail Service (EMS) is unique to Posta Uganda and whereas it can deliver to both domestic and international destinations, it is monitored under the Universal Postal Union for purposes of meeting the Universal Service obligations.

5.6. Rest of the world In-bound mail volumes

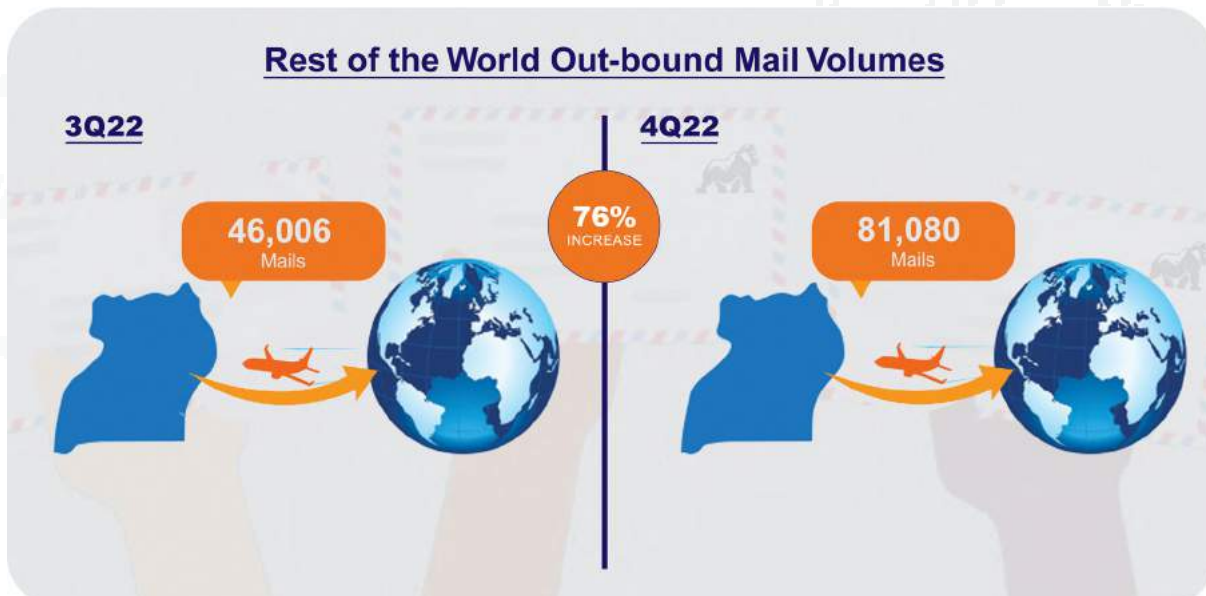
In the period October to December 2022, the sector recorded total of **97,214 mails** from the rest of the world to Uganda. This is a **38,000 mails** growth from the 10,000 mails delivered in 3Q22.

At the end of December 2022, the mails received in Uganda from other parts of the world **crossed the 90,000 mark**.



5.7. Rest of the world Out-bound mail volumes

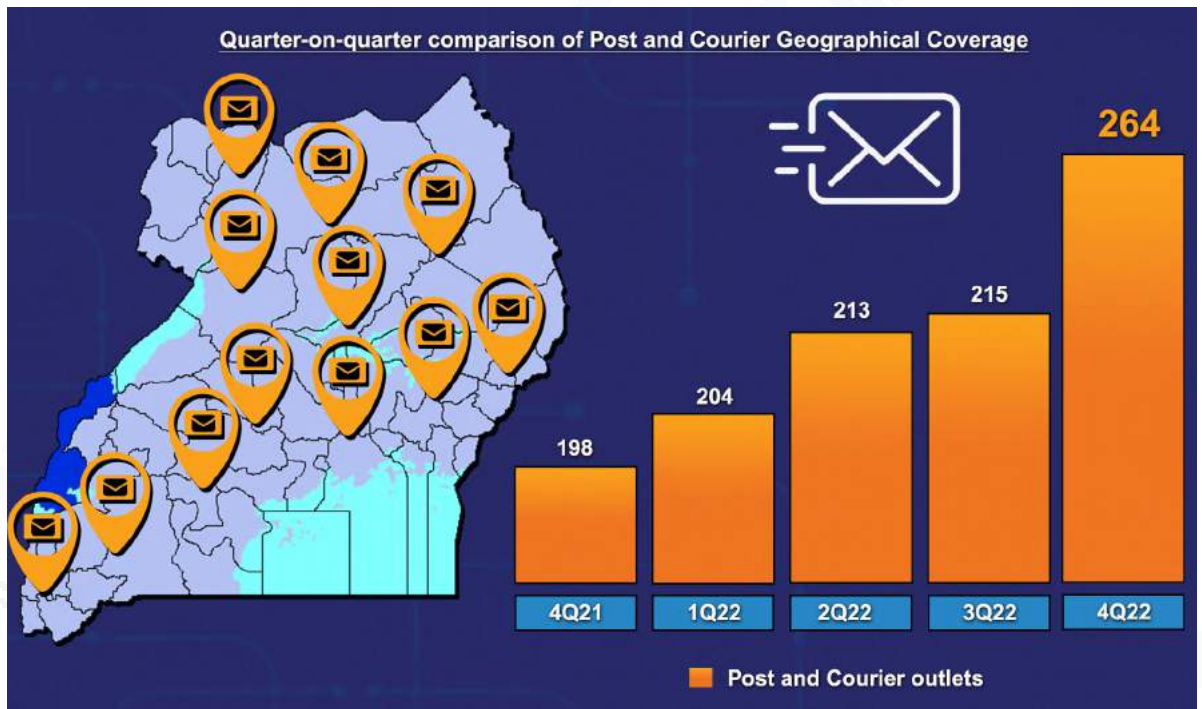
In the months October to December 2022, the mails sent from Uganda to other parts of the world grew by more than 35,000 mails, outperforming the 3Q22 quarter on quarter growth. This brings the total number of the mails sent from Uganda to other parts of the world to **81,080 mails** at the end of December 2022. This growth is largely due to seasonality effects and export promotion of small packages such as Christmas gifts during the quarter under review.



5.8. Post and Courier Geographical Coverage.

In the months October to December 2022, the sector recorded a total of 49 new pickup and drop off outlets. This brought the total number of accessible pickup and drop off points to 264 outlets.

The growth in new pickup and drop off points may be attributed to increased e-commerce operations in the sector and bringing courier services closer to the people.



Broadcast and Multimedia

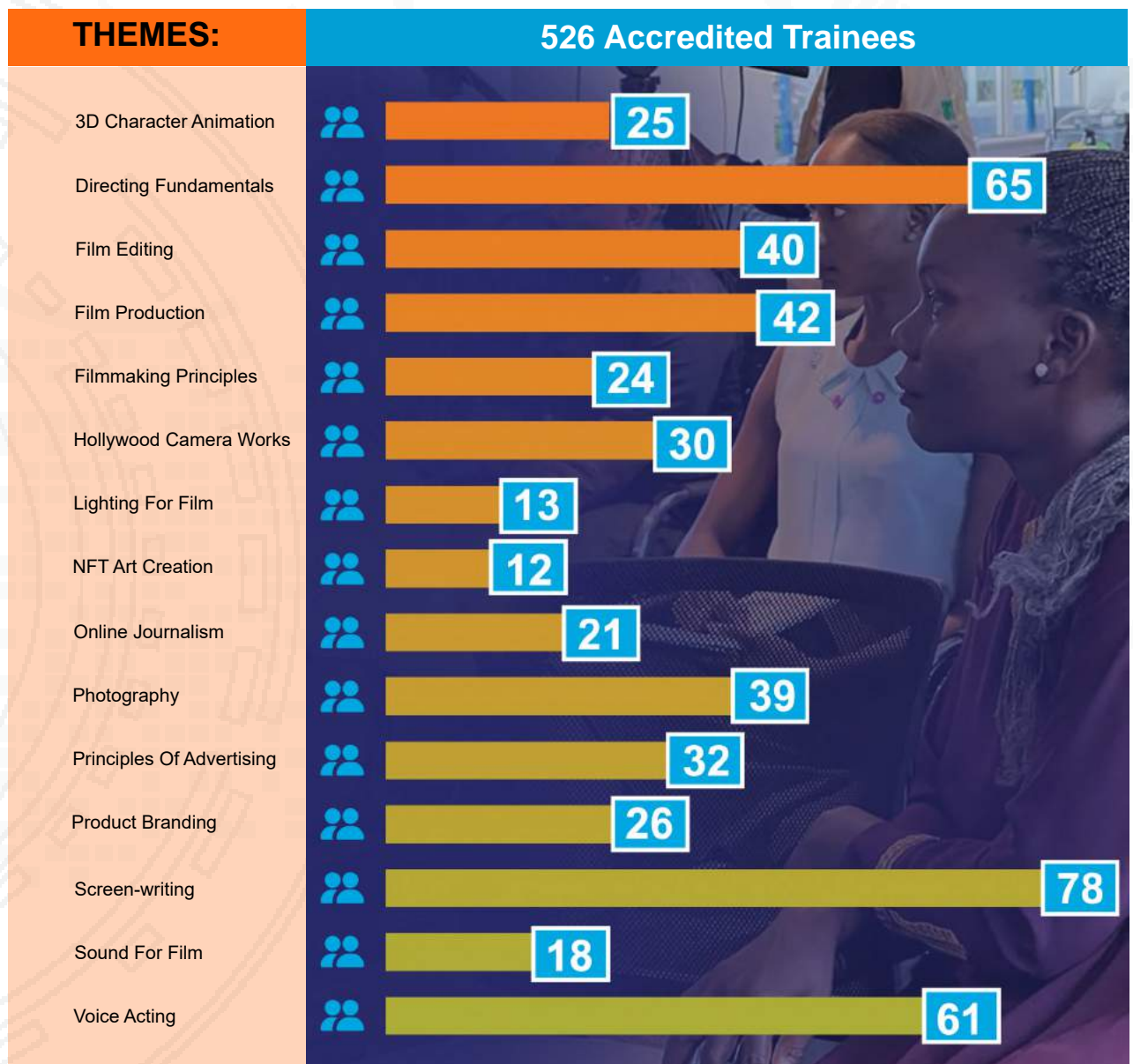


6.1. Capacity Building in the Content and Multimedia Industry

In the quarter that ended in December 2022, the Commission implemented capacity-building programs aimed at developing the skills of local filmmakers and content creators, empowering them to compete effectively in both national and international markets. The commission achieved this through partnerships with established professionals and institutions, such as the CineArts Academy in the film industry.

A total of **526 Ugandan film stakeholders** enrolled in 15 different courses, including Screenwriting, Directing Fundamentals, Film Production, Voice Acting, and Film Editing, among others.

Nov 15th: UCC E.D Eng. Irene Kaggwa Sewankambo (left), hands over hampers to 2 of the 16 participants that excelled in the 2022 CineArt trainings.



6.2. Bringing Uganda's Rich Culture to the World: Showcasing Local Films on International Platforms

In the quarter ending December 2022, a delegation of key film stakeholders represented Uganda at the 8th edition of the Mashariki Africa Film Festival held in Kigali, Rwanda. The delegation aimed to market Ugandan local films and content while also strengthening collaborations with international delegates who can invest in and support co-productions with Uganda's film stakeholders.

During the festival, a Ugandan film called "**Kafacoh**," directed by Doreen Mirembe, won the "Signis Best Feature Film" award. The jury awarded the film for its portrayal of justice, human rights, and international appeal.





Global Context

7.1. Digital Transformation with Africa: US Government Pledges USD 350 Million to Enhance Africa's Digital Ecosystem

The 4th Quarter of 2022 was marked by the 2nd US-Africa Leadership Summit held in Washington from December 13th - 15th 2022, which aimed at strengthening ties between the United States and African nations. The summit hosted 50 African states over three days, during which the US government announced a number of new initiatives to grow two-way trade and investment, bolster African health systems, engage the diaspora, and foster technological innovation in African countries. The US government plans to invest over **USD 55 billion** in Africa over the next three years.

Below: President Joe Biden hosted African leaders to Washington for the U.S.-Africa Leaders Summit held in Washington from December 13-15th 2022 where President Yoweri Museveni addressed the summit on partnering for sustainable health, cooperation and security. Bottom right: First Daughter Natasha Karugire, President Museveni at the White House with President Joe Biden and first lady Jill Biden



Courtesy: The Independent, Carnegie Endowment

The Digital Transformation with Africa (DTA) Initiative is a significant aspect of this partnership. The US has pledged over **USD 350 million** to enhance Africa's digital ecosystem, channeled towards targeted investment programs aimed at fostering partnerships between US private sector cyber firms and educational institutions in Africa, as well as the African diaspora. These funds will be directed towards initiatives that promote e-government service delivery, cyber research and development, and organizations that seek to promote the inclusion of marginalized groups, particularly women, in the digital ecosystem.

7.2. The 2022 FIFA World Cup: A Global Phenomenon and the Growing Challenges of Online Abuse

The 4th quarter of 2022 witnessed the most engaging World Cup Soccer Tournament ever in history. Globally, a tune of **5 billion people** was somewhat involved with the Qatari-hosted tournament which concluded in the month of December 2022. The Final alone achieved a global reach of close to **1.5 billion viewers**, with the opening match capturing over 550 million viewers. In the online content streaming space, the Qatar World Cup now holds the world record for TikTok viewerships with a 25 billion hits count on the #FIFAWorldCup tag.

On a negative note, the World Cup showed the re-emergence of incidents on online abuse and racial discrimination perpetuated through social media channels like Facebook, Twitter and Instagram. A tune of 14 million comments on the top 5 social media platforms were scanned for abusive and threatening content, with 18,000 incidents reported to the Social media protection services in Qatar.

The 2022 World Cup provided valuable lessons on the use of technology including the need for strict regulation to ensure new technologies do not undermine the integrity of sporting events, the importance of robust cybersecurity measures to protect against cyber threats, and the need for accessibility and inclusivity to ensure equal access to information and resources.

The Final of the 2022 World Cup achieved a global reach of close to 1.5 billion viewers, but also included incidents of online abuse and racial discrimination perpetuated through social media channels like Facebook, Twitter and Instagram.



Courtesy: Opta Analyst, FIFA

7.3. TSMC's USD 40 Billion Investment Signals Hope for Global Chip Shortage Crisis

In December 2022, TSMC, a leading global chip manufacturer, announced its intention to invest **USD 40 billion** in its US manufacturing plant. The investment will aid the construction of semiconductor fabrication plants in Arizona, which will produce essential components for smartphones and automobiles.

The ongoing chip shortage has significantly impacted automakers worldwide, resulting in an estimated loss of USD 200 billion in revenue in 2021. Similarly, major smartphone brands worldwide have suffered from a shortfall of over 67.3 million units as of December 2022. This move is expected to benefit smartphone brands, such as Apple, that have been facing supply chain disruptions, and provide relief for global markets in the auto industry.

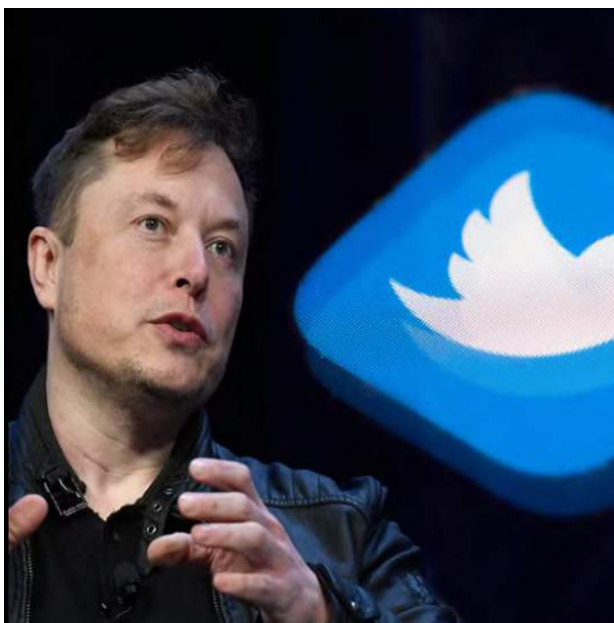
TSMC's investment demonstrates the importance of semiconductor manufacturing in the global economy and highlights the need for greater investment and development in the sector to mitigate future disruptions in the supply chain.

Company	4Q22 Shipments	4Q22 Market Share	4Q21 Shipments	4Q21 Market Share	Year-Over-Year Change
Apple	72.3	24.1%	85.0	23.1%	-14.9%
SAMSUNG	58.2	19.4%	69.0	18.8%	-15.6%
mi xiaomi	33.2	11.0%	45.0	12.2%	-26.3%
oppo	25.3	8.4%	30.0	8.2%	-15.9%
vivo	22.9	7.6%	28.3	7.7%	-18.9%
Others	88.3	29.4%	110.2	30.0%	-19.8%
Total	300.3	100.00%	367.6	100.0%	-18.3%

7.4. From Tweets to Ownership: Elon Musk's Latest Acquisition Sends Shockwaves

In a historic move, Elon Musk, the tech billionaire, and CEO of Tesla, finally acquired the social media giant Twitter for a whopping **USD 44 billion** in an all-cash transaction during the fourth quarter of 2022. This acquisition marks the second highest in the tech industry for the year, following Microsoft's acquisition of Activision Blizzard for USD 68.7 billion in the first quarter.

With a Twitter follower count of 134.7 million, Musk's acquisition was delayed by a series of engagements with former Twitter Executives on the allegation that spam/fake accounts overestimated the platform's subscription count of 450 million Daily Active Users (DAU). Relatedly, Musk pledged to advocate for free speech on the platform.



Courtesy: The Evening Standard



“The reason I acquired Twitter is because it is important to the future of civilization to have a common digital town square, where a wide range of beliefs can be debated in a healthy manner, without resorting to violence.”

~ Elon Musk



As part of his proposals to improve the platform, Musk plans to expand Twitter's features and introduce a subscription-based model called Twitter Blue, which will charge users USD 20 per month, up from the current USD 5. Twitter Blue will include features such as verified user identities.



Courtesy: The Los Angeles Times

7.5. Central Bank Digital Currency (CBDC) Goes Global

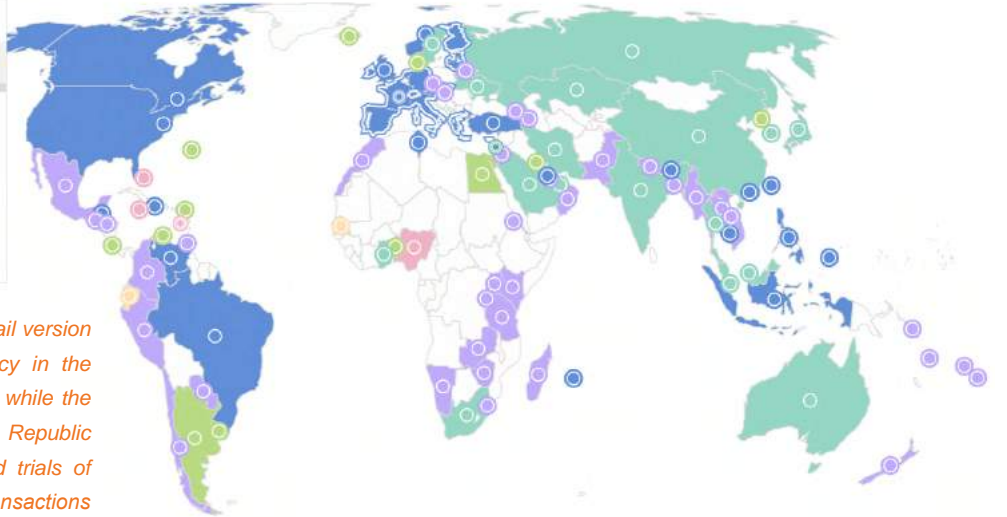
With the increasing need for digital finance, trials on Central Bank Digital Currency (CBDC) have been taking shape worldwide in the three months ending December 2022.

Currently, 114 countries, which represent over 95 percent of global GDP, are exploring the CBDC, as opposed to just 35 countries that were considering it in May 2020. Moreover, a new high of 60 countries are in the advanced phase of exploration (development, pilot, or launch), with G7 economies now moving into the development stage of a CBDC.

In the 4th quarter of 2022, India launched a retail version of its digital currency while the Central Bank of the Republic of Turkey concluded trials of its first payment transactions of the Digital Lira. The vast majority of CBDC events present learning experiences for regulators in terms of how digital currencies will affect telecommunications infrastructure as well as security and privacy implications in Digital Financial Services.



119 Countries / Currency Unions Tracked	
Click to filter	
Status	
11	Launched
18	Pilot
32	Development
39	Research
15	Inactive
2	Canceled



India launched a retail version of its digital currency in the 4th quarter of 2022, while the Central Bank of the Republic of Turkey concluded trials of its first payment transactions of the Digital Lira.

Courtesy: Techcabal

7.6. Breaking the Silence: Ofcom Fines Sepura for Anti-Trust Breaches

In the world of ICT antitrust policy, 4Q22 saw the conclusion and penalisation of antitrust abuses of in the ICT equipment and devices space.


Ofcom, the UK communications regulator, fined “mission-critical” comms provider Sepura **£1.5 million** (USD1.8 million) for a breach of competition law after the company exchanged commercially sensitive information with competitor Motorola about pricing during a government procurement process.



The fine followed an investigation into information exchanges between senior executives of Motorola and Sepura in 2018 relating to the police’s need for more Tetra devices triggered by a delay in the introduction of a new, 4G-based Emergency Services Network. The penalty formulates precedence for other regulators to follow, as they may use the details of the case to inform their own investigations and enforcement.



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