



# OPERATIONAL OVERVIEW BY BUSINESS SEGMENT

MOBILE	CONSUMER	ENTERPRISE	WHOLESALE & INTERNATIONAL BUSINESS	OTHERS
<ul style="list-style-type: none"> <li>Provides high-speed connectivity for Telkomsel's customers by utilizing mobile voice, SMS, mobile data services, and mobile digital services.</li> <li>It is the largest cellular network operator in Indonesia with national coverage that reaches more than 96% population and is supported by 251,116 total BTS.</li> </ul>	<ul style="list-style-type: none"> <li>Provides services of fixed voice, fixed broadband, IP-TV, and digital for customers with high-speed connectivity.</li> <li>As of December 31, 2021, it had 8.6 million IndiHome subscribers, increased by 7.3% from the previous year.</li> </ul>	<ul style="list-style-type: none"> <li>Provides enterprise connectivity, satellite, and digital platform system services for corporate, institutional and business customers.</li> <li>As of December 31, 2021, became the market leaders who have served clients of 1,517 companies, 358,001 MSME and 930 Government institutions.</li> </ul>	<ul style="list-style-type: none"> <li>Provides domestic and international services for wholesale traffic, network, digital platform &amp; service, tower, and managed infrastructure &amp; network.</li> <li>Services in 11 countries with 1 headquarter in Indonesia and 10 global offices of Telin operating overseas.</li> </ul>	<ul style="list-style-type: none"> <li>Provides services related to digital payment solutions, big data &amp; smart platforms, digital advertising, music, gaming, and e-commerce.</li> <li>Operates venture capital funds through MDI to invest in digital startups.</li> </ul>
		<p>PT Graha Sarana Duta (Telkom Property) performs asset leverage and increase the income with the services of property developer, leasing, facility, and management.</p>		

## SEGMENT PERFORMANCE HIGHLIGHTS

Since the COVID-19 pandemic, TelkomGroup has adapted business development to the needs of customers and the society for digitalization and telecommunications systems, especially broadband services. The restrictions that occurred during the pandemic have encouraged the digitalization transformation that continues today. It is an opportunity for TelkomGroup's business to be able to meet society's needs, as well as to improve operational and financial performance.

Financial performance during 2021 showed positive results, as it was influenced by the great demand for digital services and digital connectivity from personal and residential customers. In general, all business segments had a good performance, but the most significant contribution to the Company's revenue is still dominated by the Mobile segment at 46.2%.

The Mobile segment contributed the highest revenue to TelkomGroup of Rp87,364 billion. Meanwhile, the Enterprise segment contributed the second-highest revenue of 22.0% or Rp41,536 billion, followed by the Wholesale and International Business (WIB) segment with 17.1% or Rp32,327 billion, and the Consumer segment with 13.3% or Rp25,115 billion. The Others segment was the lowest contribution of 1.4% or Rp2600 billion.

Telkom's Results of Operation by Segment	Growth		Years ended December 31,		
	2021-2020	2021	2020	2019	
	(%)	(Rp billion)	(US\$ million)	(Rp billion)	(Rp billion)
<b>Mobile</b>					
Revenues					
External revenues	0.7	84,267	5,913	83,720	87,897
Inter-segment revenues	(6.1)	3,097	217	3,297	3,163
Total segment revenues	0.4	87,364	6,130	87,017	91,060
Total segment expenses	(2.1)	(52,929)	(3,714)	(54,051)	(56,864)
Segment results	4.5	34,435	2,416	32,966	34,196
<b>Consumer</b>					
Revenues					
External revenues	19.0	24,930	1,749	20,957	17,706
Inter-segment revenues	(83.7)	187	13	1,148	786
Total segment revenues	13.6	25,117	1,762	22,105	18,492
Total segment expenses	9.6	(19,223)	(1,349)	(17,544)	(15,904)
Segment results	29.2	5,894	413	4,561	2,588
<b>Enterprise</b>					
Revenues					
External revenues	8.0	19,141	1,343	17,729	18,701
Inter-segment revenues	20.5	22,395	1,571	18,591	16,834
Total segment revenues	14.4	41,536	2,914	36,320	35,535
Total segment expenses	13.5	(41,843)	(2,936)	(36,864)	(36,768)
Segment results	43.6	(307)	(22)	(544)	(1,233)



Telkom's Results of Operation by Segment	Growth				
	Years ended December 31,				
	2021-2020	2021	2020	2019	
	(%)	(Rp billion)	(US\$ million)	(Rp billion)	
<b>WIB</b>					
Revenues					
External revenues	5.6	14,255	1,000	13,501	10,609
Inter-segment revenues	12.0	18,072	1,268	16,139	16,265
Total segment revenues	9.1	32,327	2,268	29,640	26,874
Total segment expenses	(0.0)	(23,135)	(1,623)	(23,143)	(21,111)
Segment results	41.5	9,192	645	6,497	5,763
<b>Others</b>					
Revenues					
External Revenues	(6.4)	205	14	219	197
Inter-segment revenues	54.5	2,395	168	1,550	1,289
Total segment revenues	47.0	2,600	182	1,769	1,486
Total segment expenses	44.5	(2,401)	(168)	(1,662)	(1,546)
Segment results	(86.0)	199	14	107	(60)



## OPERATIONAL HIGHLIGHT

		Year Ended on December, 31		
	Unit	2021	2020	2019
<b>SUBSCRIBERS</b>				
Cellular Subscribers <sup>1)</sup>	(000) subscribers	175,977	169,542	171,105
Telkomsel Halo	(000) subscribers	7,201	6,496	6,376
Telkomsel Prepaid	(000) subscribers	168,776	163,046	164,729
Broadband Subscribers	(000) subscribers	129,117	123,954	117,256
Fixed broadband IndiHome <sup>2)</sup>	(000) subscribers	8,601	8,016	7,003
Mobile broadband <sup>3)</sup>	(000) subscribers	120,516	115,938	110,253
Fixed Line Subscribers	(000) subscribers	8,999	9,119	9,369
Fixed wireline (POTS)	(000) subscribers	8,999	9,119	9,369
<b>INFRASTRUCTURE</b>				
Satellite Capacity <sup>4)</sup>	TPE	109	133	133
Point of Presence	PoP	120	117	119
Domestic	PoP	62	59	56
International	PoP	58	58	63
BTS	unit	251,116	231,172	212,235
BTS 2G	unit	50,241	50,252	50,297
BTS 3G	unit	63,149	73,397	82,104
BTS 4G	unit	137,613	107,523	79,834
BTS 5G	unit	113	n/a	n/a
Tower	unit	36,761	35,822	33,892
Fiber Optic Backbone Network	km	170,885	167,935	164,769
Domestic	km	106,185	103,235	100,069
International	km	64,700	64,700	64,700
Wi-Fi Services	access point	390,976	386,856	386,420



		Year Ended on December, 31		
	Unit	2021	2020	2019
<b>CUSTOMER SERVICE</b>				
PlasaTelkom <sup>5)</sup>	location	387	408	422
Plasa Telkom Digital	location	22	16	10
GraPARI	location	414	431	436
International	location	18	19	5
Domestic	location	396	412	431
GraPARI	location	387	403	422
GraPARI TelkomGroup	location	9	9	9
GraPARI Mobile	unit	174	365	324
IndiHome Sales Car	unit	750	896	1,078
<b>EMPLOYEES</b>	people	<b>23,756</b>	<b>25,348</b>	<b>24,272</b>

Remarks:

- 1) Since June 2021, the cellular brand has changed to Telkomsel Halo for postpaid and Telkomsel Prabayar for prepaid services.
- 2) IndiHome fixed broadband is a product that allows customers to choose one or more Consumer segments portfolios such as fixed telephone, fixed broadband, and IPTV services, including digital consumer services.
- 3) Mobile broadband includes Flash users, Blackberry users, PAYU, and Home LTE.
- 4) Telkom operates two satellites, namely Telkom-3S and Merah Putih Satellite, after the Telkom-2 satellite de-orbited since May 2021.
- 5) PlasaTelkom outlet is a face-to-face service consisting of GraPARI TelkomGroup, Plasa Telkom Digital, and other Plasa across Indonesia.

In 2021, Telkom's operational performance still experienced significant growth. The number of cellular subscribers increased from 169.5 million subscribers in 2020 to 176.0 million subscribers in 2021 or growing 3.8%, while the number of broadband subscribers grew 4.2% from 123.9 million subscribers in 2020 to 129.1 million subscribers in 2021. Meanwhile, fixed wireline subscribers have decreased from 9.1 million subscribers in 2020 to 9.0 million subscribers in 2021. The changes were influenced by the shifting in customer behavior from previously using traditional telecommunications to broadband-based digital telecommunications.

In 2021, Telkom continued in developing infrastructure, although the COVID-19 pandemic still hampers it. Telkom built a Wi-Fi Corner (WiCo) in several areas and inaugurated the neuCentriX data center in Banjarmasin. The addition of a Wi-Fi Corner (WiCo) will make it easier for the public to access Wi-Fi Service during the pandemic.



## MOBILE SEGMENT



Data traffic 2021 increased by 43.3% to 13.8 million TB



251,116 total BTS with 50,241 2G BTS, 63,149 3G BTS, 137,613 4G BTS, and 113 5G BTS, increased 19,944 BTS of total BTS.

TelkomGroup continues its transformation to strengthen telecommunication services and takes the initiative to synergize with external and internal parties. In addition, through the development of 5G technology, Telkom continues to increase opportunities from digital business in all sectors, both business-to-business (B2B) and business-to-consumer (B2C).

TelkomGroup's products and services in the Mobile segment consist of mobile voice and SMS, mobile data services, and mobile digital services. In cellular services, TelkomGroup through its subsidiary Telkomsel carries GSM, 3G, 4G/LTE, and 5G technology which was officially launched in May 26, 2021. Currently, Telkomsel's 5G services are spread over 21 points in Indonesia, namely: West Bandung Regency, Bandung City, Bandung Regency, Balikpapan City, Batam City, West Jakarta City, North Jakarta City, Surakarta City, Badung Regency, Jayapura City, South Tangerang City, Denpasar City, Central Jakarta City, South Jakarta City, West Manggarai Regency, Medan City, West Lombok Regency, Surabaya City, Sumedang Regency, Mimika Regency, and Tangerang City.

The following are Telkomsel's products and services available to the public:

1. **Telkomsel PraBayar** is a new brand from the merging of Telkomsel PraBayar services consisting of the simPATI, Kartu As, and LOOP brands since June 2021. Telkomsel PraBayar is a new identity as a symbol of change, including integrating products and services that provide more convenience and comfort for the customer experience.

2. **by.U**, is an end-to-end digital prepaid product and service for all telecommunications needs for Gen Z segment users who carry out their daily lives with a digital lifestyle. An end-to-end digital experience that is presented through the digital by.U application that is installed on a smartphone covers the entire process of using services, ranging from the selection of delivery options, by.U telephone numbers, internet quota, additional quota (topping) to payment.
3. **Telkomsel Halo**, previously KartuHalo, is a postpaid cellular telecommunications product and service for subscribers who prioritize excellence in the network and product quality, communication experience, and entertainment. Telkomsel Halo comes in a variety of comprehensive package with exclusive excellences.

### Mobile Segment Capacity and Development

Cellular subscribers of TelkomGroup as of the end of 2021 were 176.0 million subscribers; it increased by 3.8% compared to the previous year. It was 95.9% of prepaid subscribers and 4.1% of postpaid subscribers. The registered prepaid subscriber was 168.8 million subscribers increased 3.5%, while postpaid subscriber was 7.2 million subscribers increased 10.9%. The increase prepaid subscriber in 2021 was due to product simplification and price optimization to maintain market relevance and lead the industry towards healthier behavior while protecting its position in the market. It includes a monolithic brand approach by integrating prepaid products into Telkomsel Prepaid. TelkomGroup continues to build reliable network capacity to remain the customer's choice.



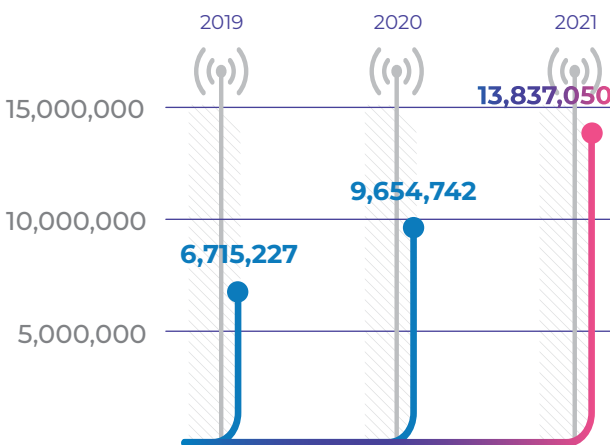
In May 26, 2021, Telkomsel officially launched 5G services temporarily offered in 21 cities in Indonesia. Telkomsel will maximize the 5G usage that can change lives and implement its advantages to encourage further growth of digital connectivity, digital platforms, and digital services in Indonesia as well as the development of future technology solutions such as artificial intelligence, cloud computing, and the Internet of Things. These will be achieved with the settled investments in the roadmap plan and will be implemented in stages based on several considerations, including the maturity of the connectivity ecosystem.

In mobile broadband services, TelkomGroup recorded a 3.9% increase in subscribers, or became 120.5 million subscribers in 2021, while the data usage increased 43.3% to 13.8 million TB. This increase resulted from the Company's efforts to expand its digital service portfolio, including adopting a digital lifestyle to complement connectivity while seeking growth opportunities through the latest digital initiatives. On the other hand, Telkomsel Orbit, a fixed wireless access service with a 4G network, had a good performance in the first year since its launch in 2020. Orbit has attracted as many as 340 thousand of subscribers.

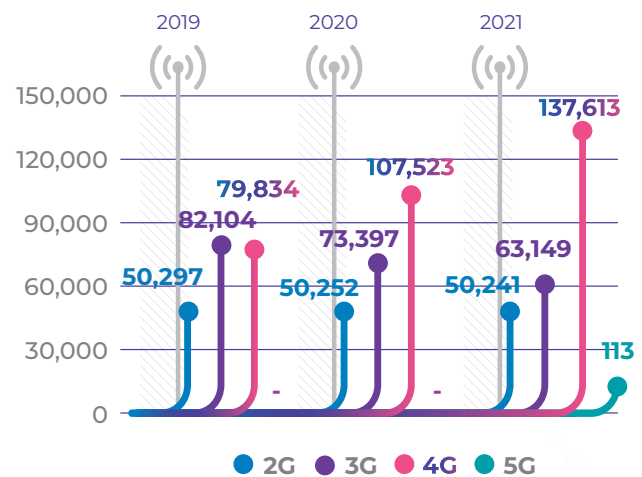
Along with the acceleration of digitalization due to the COVID-19 pandemic, Telkom is developing opportunities in the new digital initiatives to improve network connectivity and other customer needs. Mobile digital services have added various video content, music, games, and fintech. Telkom has also strengthened MAXstream's position in the video streaming industry with HBO Go and Disney+ to complement video content. Telkom provides streaming services for LangitMusik and Telkomsel Dunia Games for music and game lovers, which combine media content, distribution, payment facilities, e-sports, and game publishing. For game lovers, we launched online games to expand the customer experience.

To strengthen Telkom's position as a leading network provider in Indonesia, 19.9 thousand new BTS have been built in 2021. The BTS construction aims to support 4G/LTE services in various cities and successfully acquire 4.6 million additional mobile broadband subscribers. As of December 2021, Telkom has a total of 137,613 4G BTS covering more than 96% across Indonesia.

Cellular Traffic Data (TB) in 2019-2021



Total TelkomGroup BTS (Units) in 2019-2021



## Mobile Segment Financial Performance

In 2021, revenue from the Mobile segment was still the main contributor to TelkomGroup's consolidated revenue of Rp84,267 billion. The following table provides information on the performance of the Mobile segment over the last three years.

MOBILE SEGMENT					
Description	2021-2020	2021		2020	2019
	(%)	(Rp billion)	(US\$ million)	(Rp billion)	(Rp billion)
Revenues	0.4	87,364	6,130	87,017	91,060
Expenses	(2.1)	(52,929)	(3,174)	(54,051)	(56,864)
<b>Result</b>	<b>4.5</b>	<b>34,435</b>	<b>2,416</b>	<b>32,966</b>	<b>34,196</b>

The Mobile segment revenue from subsidiary Telkomsel was Rp87,364 billion, increased by 0.4% or Rp347 billion compared to the last year of Rp87,017 billion while operating expenses in this segment was Rp52,929 billion decreased by 2.1% or Rp1,122 billion. The increase in revenue was due to customer behavior transition from voice to data services and the higher OTT services usage had a significant impact on the profitability of the Mobile segment.

On the other hand, internet and cellular data revenues increased 8.4% or become Rp64,500 billion in 2021. This achievement shows that marketing strategies of attractive data package programs and competitive prices have increased people's purchasing power over the COVID-19 pandemic. Overall, the Mobile segment still made a profit of Rp34,435 billion.





## CONSUMER SEGMENT



The Consumer segment consists of fixed voice, fixed broadband, IP-TV, and digital services under the IndiHome brand. IndiHome becomes one of the needs of people who worked from home during the COVID-19 pandemic so that it had a positive impact on TelkomGroup's overall operational performance. IndiHome subscribers in 2021 increased 7.3% compared to last year, from 8.0 million to 8.6 million subscribers. Meanwhile, ARPU reached 270 thousand, it increased from the previous year of 249 thousand. It was due to the higher subscriber upgrade caused by the increase of bandwidth demand during the pandemic. The increasing needs of entertainment while at home also in line with the increasing of content sales and other addons.

### Consumer Segment Capacity and Development

IndiHome development had carried out strategically in 2021. Several previous development programs continued to retain subscribers, including the bundling program of broadband internet, IP-TV, and fixed telephone; sales through digital channels; and attractive promotions every year. Telkom launched a package specifically designed to help people who still have to study from home or are involved in online learning activities ("Special Package for Students, Teachers, and Journalists"). Telkom has also provided special packages for worship places to support their online activities during the COVID-19 pandemic.

IndiHome cooperates and collaborates with several local video-on-demand (VOD) of Vision+ and the millennial creative content creator of CXO Media for the millennials. It aims to provide a variety of programs and unique content for the younger generation of Indonesia in particular, one of which is the K-Pop program. Various programs and content will be available with this collaboration, such as K-Pop festivals, talk shows, concerts, etcetera. IndiHome commits to providing quality digital entertainment and services to deliver the best digital experience for subscribers to have unlimited activities with IndiHome.

In addition, IndiHome maintains its position as the largest and most comprehensive provider of TV channels in Indonesia with HD quality and several channels with Dolby audio. In collaboration with various leading OTT video streaming providers, IndiHome provides diverse video content. Subscribers can choose from multiple minipacks that can be easily activated to be tailored to their preferences and affordability.

IndiHome TV is still developing as one of the IPTV services. Telkom's IPTV services include linear TV channels, TV-on-demand, video-on-demand (VOD), and extensions to OTT services with the UseeTV Go application and the UseeTV.com website to enjoy a multi-screen and TV content anywhere. Fulfilling subscribers' expectations in getting the sensation of watching a cinema at home, Telkom is still enriching IndiHome TV channels variety in Standard Definition, High Definition to High Definition with Dolby Support, i.e., HITS, HITS Movies, TLC, Paramount, Techstorm, Horizon Sports, My Cinema, My Cinema Asia, My Family, and in-house TV channels of IndiKids, one of 8 in-house IndiHomeTV channels, with premium programs such as Liga 1, BWF, Coppa Italia, and Intimate Concert. IndiHome TV Channel broadcasts 233 channels (149 SD channels, 79 HD channels, and 5 channels with Dolby).

Although all Pay TV in Southeast Asia was affected by the discontinuation of Disney Group channels, IndiHome maintains the service quality by providing Disney content with the OTT Disney+ Hotstar application on all screens, including the IndiHome Android TV Set Top Box. In addition, we offered new premium OTT applications such as Lionsgate Play, a leading production studio and Hollywood movie provider; Viu, the leading OTT provider for Asian content; and Vision+, a leading content provider particularly in local dramas. Along with current OTT services such as Catchplay+, Mola, Vidio, WeTV Iflix & UseeTV Go, IndiHome TV presents 9 OTT services while enriching IndiHome as the "Jendela Hiburan".

The development of IndiHome is also by releasing a new VOD and GameQoo cloud game service for IndiBox users. Telkom also offers wifi.id service to IndiHome subscribers to enjoy unlimited high-speed internet access at all wifi.id access points in Indonesia.

The challenge to maintain IndiHome services quality was still there in 2021. We strived to provide the best subscriber experience and ensured our subscribers to feel convenient and pleasant when using IndiHome products. The strategy we used was continuously updating the myIndiHome application with the latest version. It offers various solutions and conveniences for subscribers to manage IndiHome services anywhere and anytime using a smartphone. The newest version of the myIndiHome application presented the new exciting concept. Various excellent features make subscribers have their transactions in one application. They can conveniently manage the technician schedules at their request. The technician's work progress can also be monitored anywhere with the application which make the subscribers feel ease and safe. With the latest myIndiHome, subscribers can also get the IndiHome new installation and repairment easier.

The innovation and improvisation of the myIndiHome application was inspired by subscriber input, followed by internal business process improvement, and we developed it using the latest digital technology for the best digital experience for subscribers. In the future, the application will be equipped with biometric features with artificial intelligence (AI) technology so that subscribers can quickly access applications with facial recognition without access codes and passwords.

The other challenges were increasing the average revenue per user (ARPU) and reducing the churn. Network infrastructure reliability is one of the keys to the success of managing these challenges. As of 2021, Telkom has 14.1 million optical ports with fiberoptic-based for fixed broadband access networks. The optical fiber (T-Cloud) used in 2021 was 1,128 T-Cloud. Strengthening the Mean Time To Install (MTTI) and Mean Time To Repair (MTTR) continued by increasing the technicians' capacity and improving business processes. Telkom Akses, a subsidiary of Telkom, could manage access networks through the Telkom Akses Command Center which digitally integrated. This facility can also detect potential disturbances fast in an area to be repaired immediately.

## Consumer Segment Financial Performance

The financial performance of the Consumer segment has contributed 13.3% to TelkomGroup's consolidated revenue. The following table shows the performance of the Consumer segment for the last three years.

CONSUMER SEGMENT					
Description	2021-2020	2021		2020	2019
	(%)	(Rp billion)	(US\$ million)	(Rp billion)	(Rp billion)
Revenues	13.6	25,117	1,762	22,105	18,492
Expenses	9.6	(19,223)	(1,349)	(17,544)	(15,904)
<b>Result</b>	<b>29.2</b>	<b>5,894</b>	<b>413</b>	<b>4,561</b>	<b>2,588</b>

The increase in the number of IndiHome subscribers has improved the Consumer segment revenue. Revenue from this segment in 2021 was Rp25,117 billion, increased by 13.6% or Rp3,012 billion compared to last year of Rp22,105 billion. Expenses on the Consumer segment was Rp19,223 billion, increased by 9.6% or Rp1,679 billion compared to the previous year. Thus, the Consumer segment had a profit of Rp5,894 billion. IndiHome's profitability was better, with EBITDA margin reaching 46.7%.



## ENTERPRISE SEGMENT



**1,517 corporate customers, 358,001 MSME customers, and 930 government institution customers**



**2 satellites with 109 TPE capacity**



**3 data centers with a specification of tier 3 and 4 (domestic)**

Telkom provides TIC services and platform services in the Enterprise segment consisting of enterprise-grade connectivity services, satellite, data center & cloud, digital IT services, business process outsourcing, and device & other adjacent services to provide end-to-end solutions and information technology ecosystem. The markets for this segment are corporate, micro, small, and medium enterprises (MSMEs), and government institutions.

The Enterprise segment is still under pressure from the impact of the COVID-19 pandemic until now. Some loyal customers whose businesses have been affected by COVID-19 need to improve operations and adjust to recover in 2021. TelkomGroup identified this challenge and continues to make fundamental improvements and increase consultative selling. In 2021, we focused on the B2B IT service business with product development based on industrial vertical solutions and horizontal platform solutions. The prioritized vertical industries in this solution are logistics, health, education, government services, and finance. In general, Enterprise segment revenue has grown in 2021.

### Enterprise Segment Capacity and Development

The performance of the Enterprise segment is always maintained following the strategy and policy to focus on the higher profitability and recurring business lines, especially on enterprise solutions such as enterprise connectivity, data center, and cloud. We are also selectively reducing and starting to de-prioritize business solutions with relatively low margins and non-recurring.

Connectivity services in the Enterprise segment are fixed broadband, Wi-Fi, ethernet, and data communication, including leased channels such as metro ethernet, VPN-IP, and high-capacity data network solutions. It provides

point-to-point connections, as well as fixed voice services. In 2021, TelkomGroup provided a total bandwidth in service of 3,050 Gbps, with 1,467 Gbps for corporate internet and 1,582 Gbps for data communication customers. It was higher 1.7% from the previous year.

To support connectivity services, Telkom, with its subsidiary Telkomsat has integrated satellite services with a transponder capacity of 109 TPE and leased to third parties with around 43.11 TPE. Customers can rent satellite transponder capacity with this satellite service for broadcasting and VSAT operators, cellular telephones, ISPs, and get up-link and down-link satellite earth station services. In the future, Telkom plans to launch High Throughput Satellite (HTS), which is considered suitable for satellite broadband subscribers.

Telkom continues improving various data center facilities and cloud services to improve services to the Enterprise segment customers. Telkom's subsidiary, Telkomsigma, currently has 3 data centers in Indonesia, with around 80% of its used capacity. The launch of the FLOU cloud service in 2020 successfully met the customers' hybrid cloud needs for the MSME/SME segment, startups, and enterprises with a flexible package.

The rapid IT developments during the COVID-19 pandemic has encouraged MSME to transform to digital immediately. To support MSMEs in developing their business by optimizing digitalization, Telkom has launched the mysooltan application, a Digital Touch Point specially designed to help their needs build readiness and speed of digital transformation. mysooltan presents a reliable solution to MSMEs in their business operation, such as internet service sooltanNet, business application sooltanPay, sooltanKasir, and sooltanToko. Currently, mysooltan can be accessed at <https://mysooltan.co.id/> or downloaded via the Google Play Store. In the future, we

will still develop mysooltan to make it easier for MSMEs to run their business. Therefore, users' feedbacks will be beneficial as a learning source for the development to keep up with the MSMEs' needs.

TelkomGroup continues improving IT capabilities and digitizing to meet future needs. TelkomGroup provides business process management, business process as-a-service, and customer relationship management for system integration and IT service management. We also have developed a digital advertising agency in media placement and integrated digital media, such as mobile advertising, online advertising, and digital printing. We have developed a platform to support these activities that provides insight into consumer behavior analysis and creates marketing campaigns based on big data and data analytics.

TelkomGroup provides various adjacent services related to hardware & software sales, including IT support services. TelkomGroup also delivers Internet of Things (IoT) solutions for buildings, develops IoT applications for smart energy monitoring management, fleet management, IT security services, unified communication, and collaboration services.

The wide-coverage fiber optic-based infrastructure network is the service excellence in the Enterprise segment, which we are consistently strengthening and improving. Along with customers' increasing needs in this segment, TelkomGroup will innovate and manage various products and services to provide total solutions to customers. As of 2021, the Enterprise segment had 360,448 customers consisted of 1,517 corporate customers, 358,001 MSME customers, and 930 Government institutions.

## Enterprise Segment Financial Performance

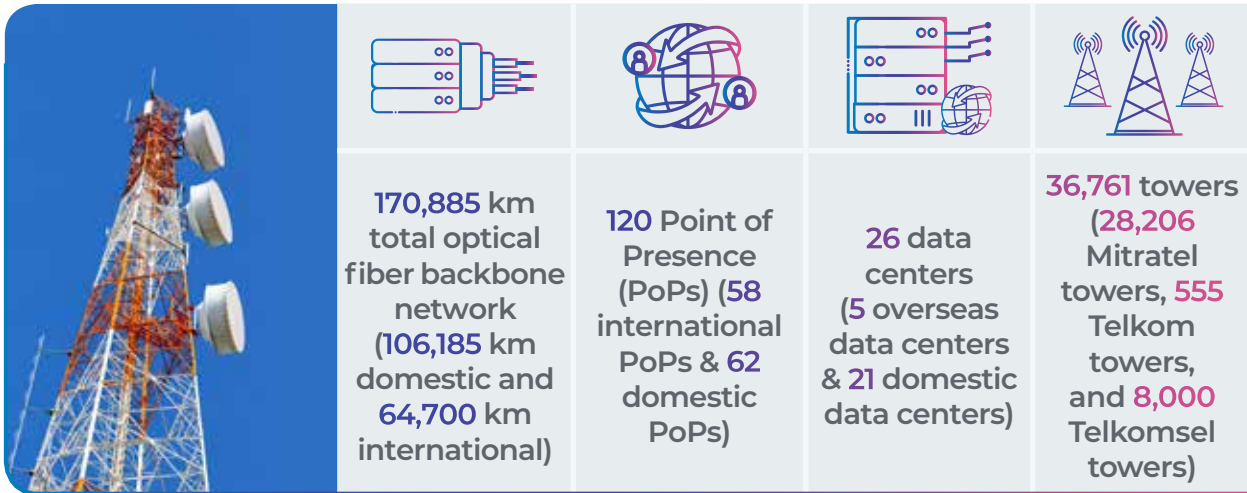
Enterprise segment revenue contributed 13.4% of the total consolidated revenue in 2021. The performance of Enterprise segment for the past three years can be seen in the following table:

ENTERPRISE SEGMENT					
Description	2021-2020	2021		2020	2019
	(%)	(Rp billion)	(US\$ million)	(Rp billion)	(Rp billion)
Revenues	14.4	41,536	2,914	36,320	35,535
Expenses	13.5	(41,843)	(2,936)	(36,864)	(36,768)
<b>Result</b>	<b>43.6</b>	<b>(307)</b>	<b>(22)</b>	<b>(544)</b>	<b>(1,233)</b>

Enterprise segment revenue increased by 14.4% or Rp5,216 billion in 2021 and recorded at Rp41,536 billion. The increase compared to the previous period was due to the increase in other information technology services revenues which grew by 70% or Rp657 billion, network revenues which grew by 41.9% or Rp321 billion, manage service and terminal revenue which grew by 58.6% or Rp756 billion, and call center service revenue which grew by 30.6% or Rp237 billion. These increases were compensated by the decrease in short messaging services (SMS) revenue, while expenses were Rp41,843 billion, which increased by 13.5% or Rp4,979 billion compared to last year. Thus, the Enterprise segment recorded a loss of Rp307 billion at the end of 2021.



## WHOLESALE AND INTERNATIONAL BUSSINESS (WIB) SEGMENT



The Wholesale and International Business (WIB) segment has several business lines namely domestic and international services for wholesale traffic, network, digital platform & service, tower and managed infrastructure & network. In this segment, TelkomGroup provides services for Other Licensed Operators (OLO), Service Provider, and Digital Player domestic and overseas. In 2021, the performance of the Wholesale & International Business segment was relatively stable. However, TelkomGroup is still striving to prepare new business innovations and initiatives for maintaining its profitability.

### Wholesale and International Business (WIB) Segment Capacity and Development

#### 1. Carrier Service

The wholesale traffic & network business line provides network, data and internet services, and interconnection services. TelkomGroup also offers value-added services, signaling, voice hubbing, data centers, platforms, and solutions to enhance this service. Wholesale traffic & network service grew positively in 2021, contributed by Domestic & International Network, A2P SMS and Data Center.

The Enabler Digital Ecosystem initiative for carrier service development continued in 2021. SEA-ME-WE 5 and SEA-US submarine cables have been installed and support the delivery of direct broadband connectivity between Europe, Asia, and America. This development has become the main gateway for digital connectivity bridging domestic traffic to global, global traffic to domestic, and between countries (hubbing), both voice and A2P (application-to-person) SMS.

Due to customers' consumption habits transition during the COVID-19, with the most services were application-based, the service utilization remarkably helped customers with digital activities from home, such as working or studying from home by accessing specific applications that need authentication and broadcast information, which it increased the SMS A2P demand in 2021.

Currently, TelkomGroup has 18 neuCentriX data centers in 13 cities. PT Telekomunikasi Indonesia International (Telin) has 5 overseas data centers located in Singapore (Telin-1, Telin-2 and Telin-3), Timor Leste (1 location), and Hong Kong (1 location). In 2021 the average occupancy rate for the neuCentriX data center was 50.83% of its total capacity, while the average data center occupancy overseas was around 78%.

To provide maximum service and complement the existing data centers, TelkomGroup built the Telkom HyperScale Data Center tiers 3 and 4. The Telkom HyperScale Data Center development intends to support Indonesia's digital transformation and support the G20 implementation. In supporting the G20 activities, Telkom has provided the backbone infrastructure for the Marine Cable Communication System (SKKL) and the Fiber Optic Communication System (SKSO) with an integrated backup system.

On the other hand, TelkomGroup has 120 Points of Presence (PoP), consisting of 58 Global PoPs in 28 countries and 62 Domestic PoPs in 48 cities. In 2021, Telkom added 3 Domestic PoPs. Another service in this line is the Content Delivery Networks (CDN) operation with a capacity of 12,215 Gbps, which increased by 15.8% compared to last year.

## 2. Tower Service

TelkomGroup serves the procurement and installation of telecommunication devices for other operators with a leasing system. In managing this service, TelkomGroup through Mitratel will make offers for co-location and the operator's tower reseller business. Currently, Mitratel manages 42,594 tenants and 2,816 reseller towers. As of 2021, TelkomGroup managed around 36,761 towers, with 28,206 towers of Mitratel, 555 towers of Telkom, and 8,000 towers of Telkomsel.

Mitratel, as a subsidiary of Telkom, has a significant role in supporting the increase in tower leasing revenue. To improve business development, Mitratel had an initial public offering (IPO) on November 22, 2021. This corporate action was part of TelkomGroup's transformation commitment as it implemented the company's tower strategy of unlocking business value. TelkomGroup expects Mitratel to support the national digitalization acceleration to experience the upcoming 5G era and achieve the nation's objective: to become one of the countries with the most prominent digital economy, especially in the Asia Pacific by 2025.

## 3. Infrastructure Services and Network Management

In this line, TelkomGroup provides and manages network infrastructure and services. It includes the construction and maintenance of networks, consisting of the installation and maintenance of submarine cables and the energy solutions provider.

TelkomGroup already has a fiberoptic backbone network of 170,885 km, consisting of 64,700 km of the international network and 106,185 km of the domestic network with a total capacity of 169,600 Gbps. TelkomGroup has a connection network for Europe, Asia, and America through the submarine cable infrastructure. Telkom also operates and owns the license of fiberoptic backbone network with a total of 134,040 km under a permanent telecommunications lease agreement with other global submarine cable operators/consortiums.

In 2021, TelkomGroup was honorably to support digitalization in the Mandalika area, regarding the appointment of Mandalika as the host of the World Superbike in November 2021 and MotoGP in March

2022. Telkom is an ICT infrastructure provider and a supporter of MSMEs and the ecosystem in the nearby area. TelkomGroup performed network deployments for ICT infrastructure, including backbone expansion, fiber optic deployments at the event locations and supporting ecosystems, and Telkomsel's Node B Combat addition for ICT needs of 7.22 Gbps. It is available in the MASIV (Media, Accommodation, Security, International Airport, and Venue) area with View, Internet, and Phone (VIP) services.

For submarine cable's deployment and maintenance, Telkom through its subsidiary of Telkominfra still improves its capability by collaborating with the vessel's provider of submarine cable or its procurement preparation as TelkomGroup's asset.

Telkom, with its subsidiary of Telkominfra, cooperates with State-Owned Enterprises (SOEs) to maintain diesel engines until 2021 regarding the energy solutions. It started with the diesel power plant construction for telecommunications networks in 2017 located in Kalimantan and Sulawesi.

## 4. International Business

Its subsidiary, PT Telekomunikasi Indonesia International (Telin), manages and develops its business activities in Singapore, Hong Kong, Timor Leste, Australia, Myanmar, Malaysia, Taiwan, United States of America, and New Zealand. Telkom regularly analyzes and assesses overseas operations for profitability, prospects, and position to optimize the portfolio structure as a consideration in making future investment decisions. Telin provides wholesale services, cloud and connectivity, data center and managed services, retail mobile services (MVNO), IP transit, and business process outsourcing services in this business line.

Telin still uses the new neuCentriX data center capacity and develops the NeuAPIX cloud-based CPaaS service with omnichannel communication features (bots and live chat, real-time voice capabilities, SMS, emails, video calls, and messaging service). In addition, the NeuTrafiX launch, a web-based public exchange platform, has helped connect buyers and sellers efficiently and transparently regarding wholesale voice, SMS, and virtual numbers trading.



## Wholesale and International Business Segment Financial Performance

In 2021, the WIB segment contributed 17.1% to the total consolidated revenue, with the WIB revenue of Rp32,327 billion. WIB has a significant role in TelkomGroup, an enabler, and catalyst for other business segments to create value. Most of WIB's income was from providing various services, i.e., network, interconnection, internet, submarine cable, data center, tower, and infrastructure throughout the year.

WIB SEGMENT					
Description	2021-2020	2021		2020	2019
	(%)	(Rp billion)	(US\$ million)	(Rp billion)	(Rp billion)
Revenues	9.1	32,327	2,268	29,640	26,874
Expenses	(0.03)	(23,135)	(1,623)	(23,143)	(21,111)
<b>Result</b>	<b>(41.5)</b>	<b>9,192</b>	<b>645</b>	<b>6,497</b>	<b>5,763</b>

WIB segment revenue in 2021 was Rp32,327 billion increased by 9.1% or Rp2,687 billion compared to the previous year. This increase was due to the revenue growth from internet, data communication and information technology services by 29.6% or Rp681 billion and interconnection revenue by 2% or Rp143 billion. The expenses incurred for the WIB segment were Rp23,135 billion, decreased by 0.03% or Rp8 billion compared to last year. WIB segment recorded a profit of Rp9,192 billion in 2021.



## OTHERS SEGMENT



In this segment, Telkom offers a variety of digital products and services based on big data, smart platforms, digital advertising, digital entertainment (music & games), and e-commerce. In addition, Telkom also manages venture capital funds through PT Metra Digital Innovation (known as MDI Ventures). In 2021, Telkom invested in several digital startups that have growth potential in the future and invested in companies that can enhance TelkomGroup's business performance.

### Others Segment Capacity and Development

Telkom offers big data and smart platforms services of BigBox and an Internet of Things (IoT) platform of Antares for Enterprise segment customers. Through Bigbox, developers and startup companies can experience big data platforms with various services, such as analytics, data & business solutions, and API provider platforms to help grow their business.

Telkom launched the One Data Management Platform in 2020 to support the government. Telkom works on projects regarding the IoT smart platform that can increase people's life productivity and quality, such as Smart Manufacturing projects, Air Pollution Monitoring, Smart Electricity, Waste Management, and others.

Telkom manages digital advertising and provides advertising media solutions to support marketing activities with the UZone.id news portal and an ad exchange platform of UAds to connect publishers, advertisers, and agencies. Therefore, it expects digital advertising activities could be more effective and efficient.

Telkom manages digital entertainment through its subsidiary, PT Melon Indonesia, which provides digital music services with ringback tones of Nada Sambung Pribadi (NSP) and music streaming of Langit Musik. Moreover, it also includes game services with UPoint. Digital music services in 2021 had 50 million active users (31 million users from music streaming and 19 million users from NSP) with 188 million transactions (65 million users from music streaming and 123 million users from NSP). Meanwhile, Melon Indonesia has launched more than 20 games that have been distributed, with the digital games paid services users around 27 million paid users.

We launched several digital platforms and digital services to support people's connectivity, namely, Pasar Digital (PaDi) for MSMEs, Xooply for the non-SOEs Enterprise segment, Agree (agricultural and fisheries ecosystem), LOGEE (logistics ecosystem), wonderin.id (tourism ecosystem), Pijar (educational ecosystem), gameQoo (games), and others. In addition, Telkomsel is collaborating with Gojek to strengthen strategic partnership initiatives for providing new benefits to users and also helping accelerate the MSMEs digitization. The initiatives are:

1. Collaborate to increase Telkomsel users in the Gojek ecosystem.
2. Easy onboarding for Gojek's MSME partners to become Telkomsel reseller partners.
3. Easy access to Telkomsel outlets and resellers via GoShop.
4. Improve customer experience in Gojek services with the Number Masking feature from Telkomsel's Enterprise solution.
5. Forming a new GoTo entity as a synergy initiative to expand to Tokopedia.





On the other hand, MDI Ventures serves as corporate venture capital with its investing, synergy, portfolio management, value creation, and fundraising activities. After making financial investments, MDI Ventures combines the Venture Capital model by providing synergy access in TelkomGroup to startups. MDI Ventures investments focus on high growth business verticals to enhance the digital experience and provide the best services to improve customer experiences, such as logistics, financial technology, cloud computing, agritech/food, deep tech, digital life, healthtech, new retail, and Internet of Things. In 2021, MDI Ventures invested in 20 new startups, bringing the cumulative total to 50 startups across 12 countries. MDI Ventures funding consists of three types, namely:

- Telkomsel Mitra Inovasi (TMI) Fund focuses on funding startups that provide synergy value for Telkomsel.
- Centauri Fund, in collaboration with KB Financial Group (Kook Min Bank) from South Korea, focuses on growth-stage startups. The goal is to support Indonesian and regional startups, especially in technology startups, including financial technology, e-commerce infrastructure, Software as a Service (SaaS), and big data.
- Arise Fund, launched in 2020 where MDI collaborates with Finch Capital Netherlands, focuses primarily on early-stage startups for Indonesian technology startups.

## Others Segment Financial Performance

Others segment revenue in 2021 contributed 0.1% of TelkomGroup's total revenue. The performance of Others segment for the last three years can be seen in the following table:

OTHERS SEGMENT					
Description	2021-2020	2021		2020	2019
	(%)	(Rp billion)	(US\$ million)	(Rp billion)	(Rp billion)
Revenues	47.0	2,600	182	1,769	1,486
Expenses	44.5	(2,401)	(168)	(1,662)	(1,546)
<b>Result</b>	<b>(86.0)</b>	<b>199</b>	<b>14</b>	<b>107</b>	<b>(60)</b>

In 2021, revenue for the Others segment was recorded at Rp2,600 billion, increased by 47.0% or Rp831 billion from the previous year. In terms of expenses, it recorded at Rp2,401 billion, it increased by 44.5% or Rp739 billion. Overall, the Others segment recorded a profit of Rp199 billion.