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The Swedish Telecommunications Market 2023

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Contents

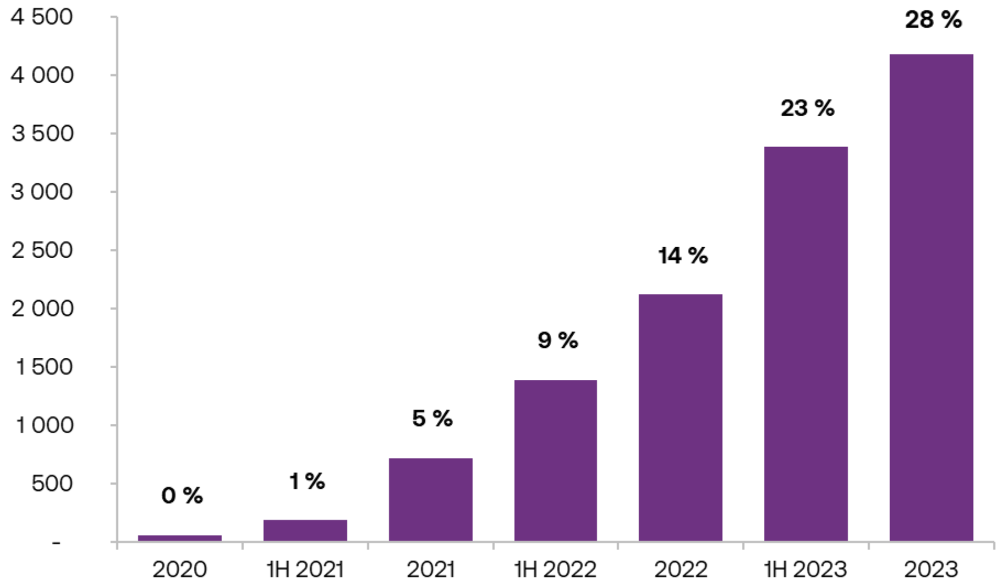
A selection of results

The development of the electronic communications market during 2023 is presented in chapters 1 through 6. Below is a selection of the results that are specifically highlighted for 2023.

5G

28 percent of mobile subscriptions have used services in 5G networks during 2023. The corresponding proportion in 2022 was 14 percent.

Figure 1 Number of mobile subscriptions that used services in 5G networks 2020–2023 (share of all mobile subscriptions)

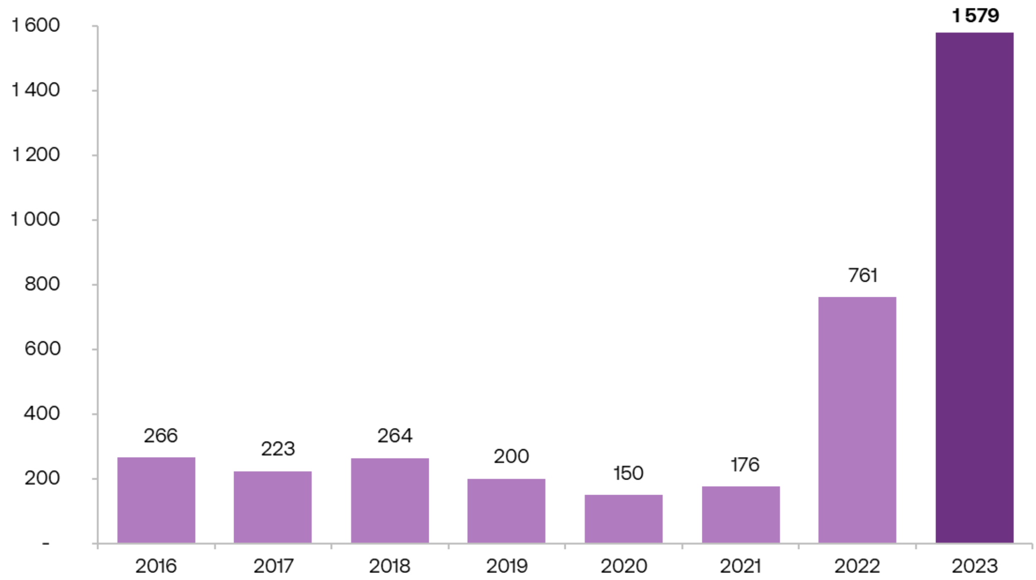


The 5G rollout in Sweden is becoming more evident in the collected statistics. By the end of 2022 had around 4.2 million subscribers used 5G networks. This corresponds to about 28 percent out of all mobile subscriptions. It is almost twice as much as 2022 when 2.2 million subscribers had used 5G networks. So far 5G has only been used for data transfers, no voice calls over 5G have been reported. Mobile data traffic using 5G increased to 260,176 Tbyte (+697 percent), which represents 7 percent of all mobile data traffic during 2023.

Satellite broadband

Satellite broadband technology has evolved in recent years, as the number of low-flying satellites used for broadband has increased. Previously, only geostationary satellites were used to provide broadband.[1]

Figure 2 Number of satellite broadband subscriptions 2016–2023



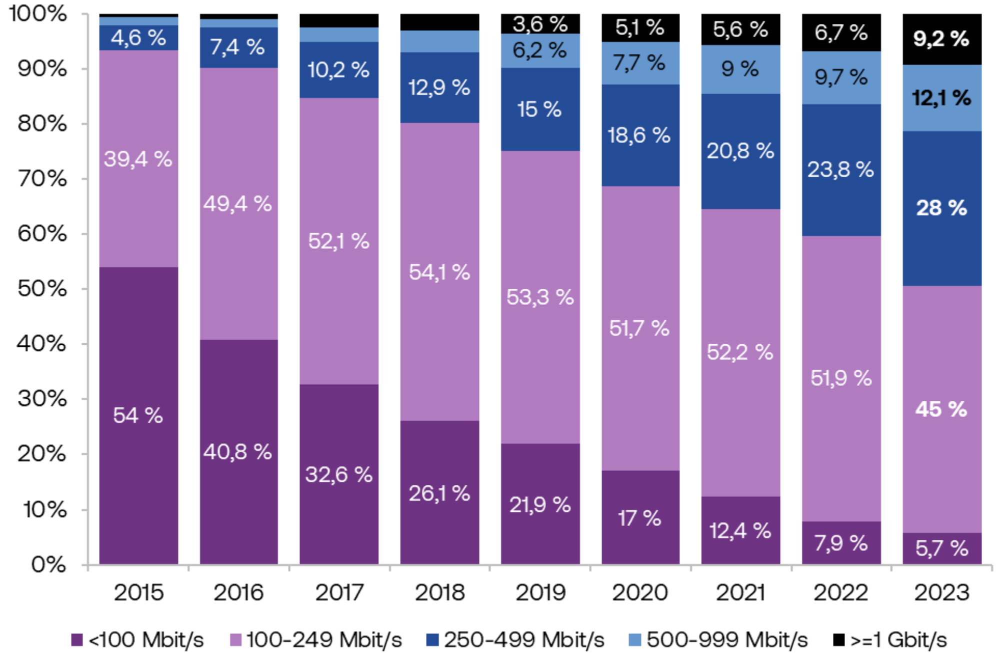
While satellite broadband accounted for a very small share of broadband subscriptions in 2023, it is worth noting the increase in number of subscriptions. Between 2022 and 2023 the number of subscriptions more than doubled. By the end of 2023 there where 1,579 subscriptions, an increase of about 800 subscriptions compared to 2022. According to the operators' reports, a majority of subscriptions have at least 100 Mbit/s down speed and 10 Mbit/s up speed.

[1] PTS (2022). *Satellit: en möjlighet till snabbt bredband 2025*. [Satellite: an opportunity for fast broadband in 2025].

Fixed broadband with higher speeds

Broadband subscriptions with down speed of 250 Mbit/s or more constituted half os all fixed broadband subscriptions in 2023.

Figure 3 Share of subscriptions by down speed 2015–2023 (percent of all fixed broadband subscriptions)



There is a transition of fixed broadband subscriptions towards faster down speed. It is noteworthy that subscriptions with 250 Mbit/s or more in down speed now constitutes half of all fixed subscriptions. Subscriptions with 1Gbit/s or more down speed made up about 9 percent of all subscriptions 2023. Demand for 1 Gbit/s increased more than previous years but on the whole demand for 1 Gbit/s is still relatively low. Demand for subscriptions with down speed of 250 Mbit/s or more increased the most since 2022. Subscriptions with 250–499 Mbit/s constituted 1.2 million, or 28 percent in 2023. Within the interval of 500–999 Mbit/s there where 520,000 subscriptions in 2023, which corresponds to 12 percent.

There is also a transition towards subscriptions with faster up speed, albeit not as prominent as down speed. The statistic show that it is still normal to have faster down speed than up speed (see the section about Fixed broadband).

About the Swedish Telecommunications Market 2023

The Swedish Post and Telecom Authority (PTS) has been tasked with monitoring service developments in the market for electronic communication, promoting competition within the market and providing information aimed at consumers. As a part of this assignment, PTS annually collects and publishes market data in a report entitled The Swedish Telecommunications Market.

The Swedish Telecommunications Market (STM) is a descriptive report, without analysis. However, the statistics from the report are used in PTS's analyses conducted within the context of the agency's areas of responsibility. The statistics are also used by, among others, the Government Offices, various public authorities, Swedish industry, investigators, researchers, media, trade associations, individual companies and organisations, as well as the general public.

STM is one of Sweden's most important operator surveys on subscriptions, revenues and data traffic in the fields of broadband (fixed and mobile), voice services (fixed-line and mobile) and traditional TV services. The survey also covers digital capacity services, dark fibre connections and more.

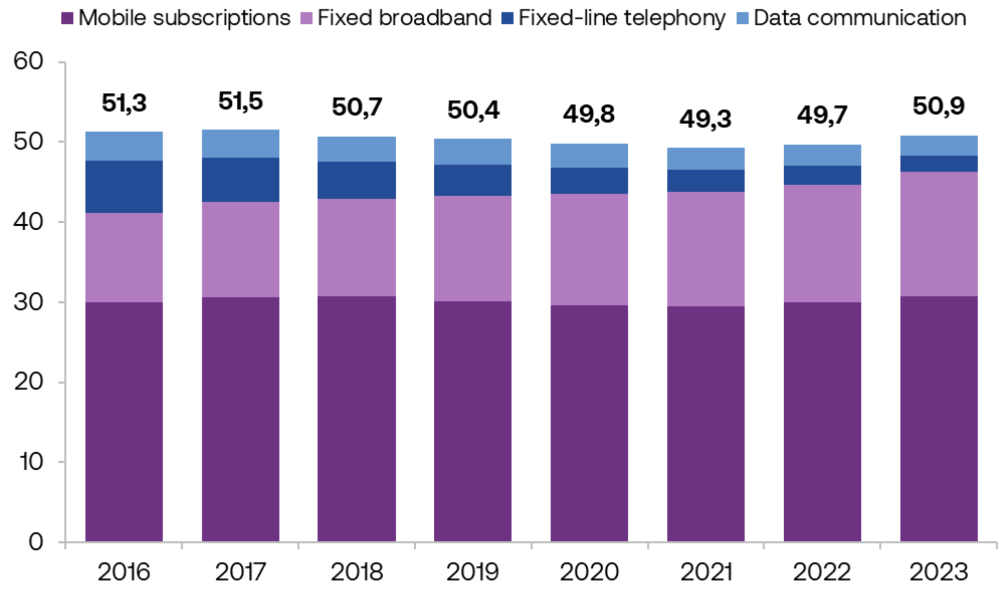
The survey is carried out twice a year, the full year is presented in this report and the half year data can be found on PTS statistics portal. Data have been collected with the aid of a web survey. The selection for the STM is based on the selection of organisations in previous years and on organisations of which PTS has been notified according to the Act (2022:482) regarding electronic communication (LEK).

The survey was sent out to 657 organisations (operators, municipalities and other organisations). 633 of these responded. This represents a response rate of 96 percent, which is the same level as the previous year. All figures refer to the situation on 31 December 2023, and comparisons are made with the same date the previous year, unless otherwise stated. Revenue is expressed in nominal terms. For further information about the survey, please refer to the Quality Declaration (Kvalitetsdeklarationen).

On PTS statistics portal (http://statistik.pts.se/), you can find statistics in the different areas. Data quantities and market shares for the individual operators are also available there.

1. Revenues

Figure 4 End user revenues 2016–2023 (SEK billion)



For the purposes of this report, “electronic communications” comprise mobile voice and data services, fixed internet services, fixed-line voice services and data communications services provided to end users. Revenues from e.g. TV subscriptions, roaming, apps, dark fibre and cloud services are not included here, nor are revenues from wholesale services. Throughout the report revenues are presented nominally as they were reported during that year’s collection, without adjusting for inflation.

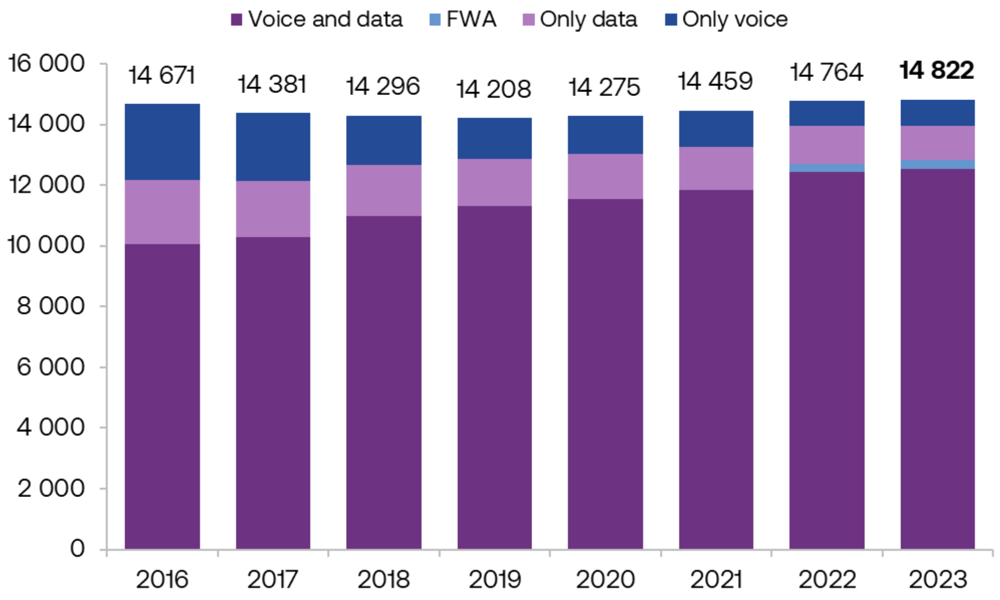
In 2023, telecommunications revenues from end customers totalled SEK 50.9 billion, which is 2 percent higher than the previous year. The average revenue generated per household per month was SEK 610[2], which is 13 SEK higher than 2022. The average revenue per month includes fixed-line voice services, SEK 12, mobile voice and data services, SEK 378, and internet services (excluding mobile data), SEK 220.

[2] Calculated by dividing end user revenues in the respective 3 categories, fixed-line voice services, mobile voice and data services and internet services, with all of Sweden’s households (4,931,974 in 2023).

2. Mobile

2.1 Subscriptions

Figure 5 Number of voice and data subscriptions 2016–2023 (thousands of subscriptions)



There was a total of 14.8 million subscriptions in Sweden as of 31st December 2023, which is about the same as one year earlier. There were 12.5 million subscriptions with both voice and data (smartphones) in 2023, and increase of 1 percent compared to previous year. Subscriptions with only voice increased with 6 percent to 850,000. Subscriptions with only data instead decreased with 6 percent to 1.4 million. The only-data category includes 288,000 subscriptions with FWA technology.

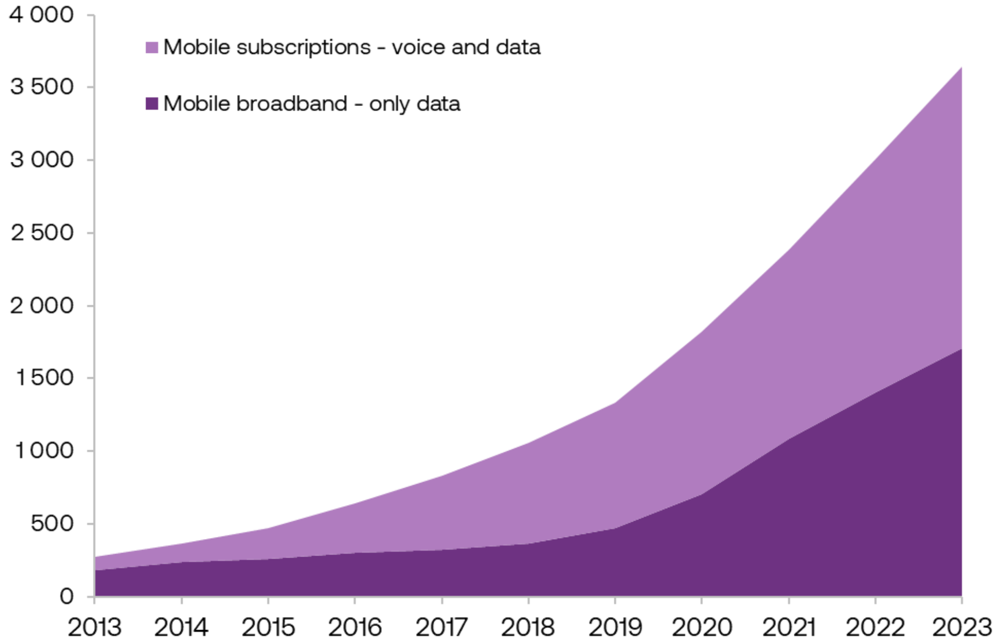
Out of all subscriptions, where 84 percent contract based and 16 percent pay-as-you-go (cash cards). The average number of private mobile subscriptions per person has been one subscription per person during previous years, and this also holds true during 2023.

2.2 Mobile data

Data traffic in mobile networks increased to 3,642 Pbyte during 2023, an increase of 21 percent. Subscriptions for voice and data generated on average 13 Gbyte per month and per subscription (compared to 11 Gbyte in 2022). Subscriptions with data-only generated on average 100 Gbyte (77 Gbyte in 2022). FWA subscriptions are included in the data-only subscriptions. When FWA is reported separately the average monthly usage per subscriptions is 45 Gbyte for data-only and 316 Gbyte for FWA subscriptions.

The number of subscriptions that used data in 4G networks continued to increase to 13.4 million, which corresponds to 91 percent of all mobile subscriptions. Mobile data traffic in 5G networks increased with around 700 percent, but constituted only 7 percent of the total mobile data traffic during 2023 (see the section about 5G).

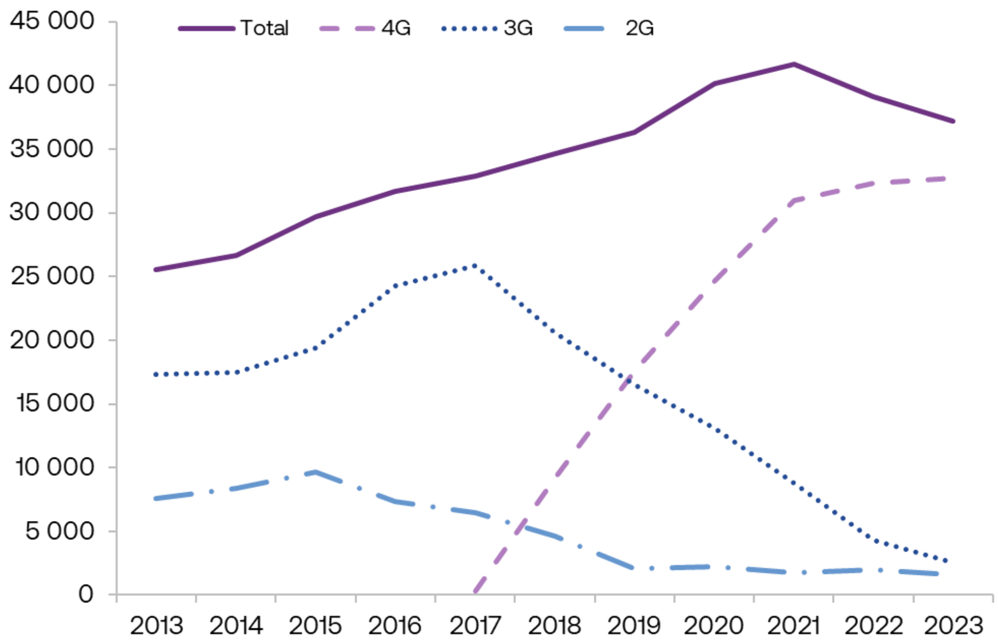
Figure 6 Data usage in mobile networks 2013–2023, by type of subscription (Pbyte)



Subscriptions for voice and data made up 1,938 Pbyte of the total data usage in 2023. Subscriptions with only data made up 1,704 Pbyte – of which 1,094 Pbyte came from FWA subscriptions.

2.3 Traffic minutes

Figure 7 Number of traffic minutes 2013–2023, traffic volume by access technology (million minutes)



The number of outgoing voice traffic minutes from mobile subscriptions amounted to 37 billion during 2023. This is a decrease of 5 percent compared to previous year. During the last two years the number of traffic minutes have been decreasing. This break in the trend could be explained by the increased usage of voice communication apps that use mobile data instead of voice traffic.

The number of traffic minutes in 4G networks (VoLTE) totalled 32.7 billion, which corresponds to 88 percent of all mobile voice traffic minutes. Voice traffic in 3G networks (UMTS) decreased by 88 percent, since operators are in the process of closing down this network. Traffic in 2G networks (GSM) decreased with 20 percent and this network is also in the process of closing down. No operator has so far reported voice traffic in 5G networks.

The number of text messages (SMS) sent between individuals decreased by 2 percent during 2023, and was 7.6 billion. Auto-generated messages (application to person) have been increasing steadily during recent years, and amounted to 5.9 billion during 2023, an increase of 13 percent. The number of MMS decreased with 4 percent, to 572 million during 2023. A large part of the traffic for text and media messages has moved to other platforms and social media, which uses mobile data or WIFI instead.

2.4 Revenues

Out of all mobile revenues, 90 percent were fixed charges (subscription charges), and the rest were variable charges. Revenues from fixed charges totalled SEK 27.6 billion, an increase of 4 percent. Variable charges decreased with 7 percent, to SEK 3.2 billion. Revenues from both private and business markets increased to SEK 22.4 and 8.4 billion respectively. A private subscription generated, on average, a monthly revenue of SEK 178 during 2023, an increase with SEK 6. For business subscriptions the corresponding revenue was SEK 162, a decrease of SEK 1 compared to last year.

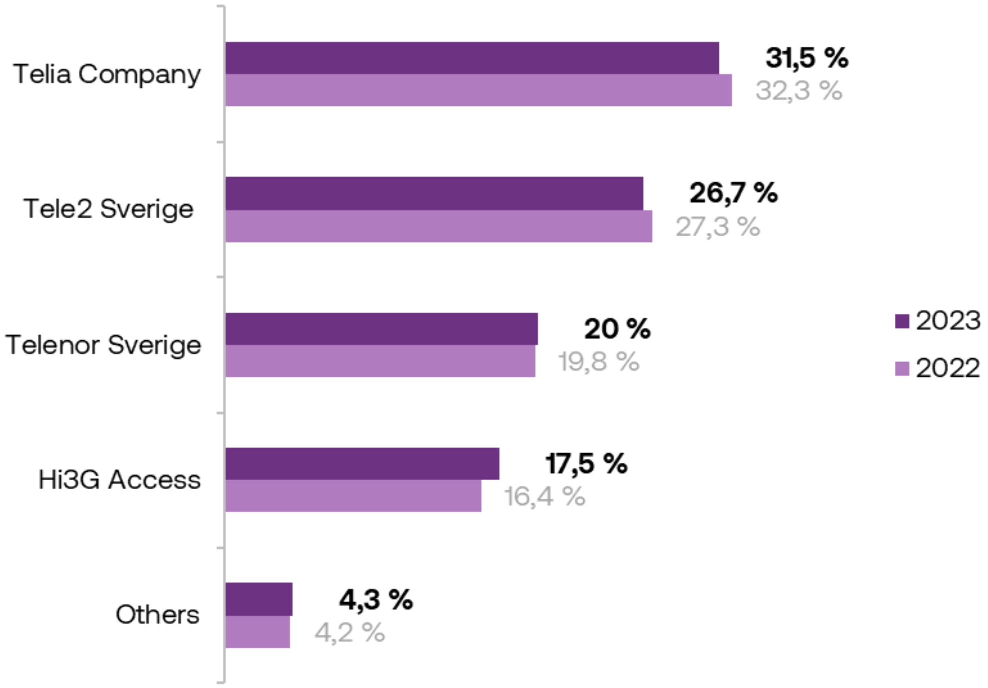
Table 1 Revenues for mobile services, by fixed and variable charges 2020–2023 (SEK million)

	2020	2021	2022	2023
Fixed charges	26 692	25 953	26 566	27 622
Variable charges	2 880	3 486	3 386	3 160
Total revenues	**29 572**	**29 439**	**29 953**	**30 782**

2.5 Market share

Market share for mobile subscriptions includes mobile subscriptions for voice and data, voice-only mobile subscriptions, and data-only mobile broadband. The four largest operators, Telia, Tele2, Telenor and Hi3G (Tre) had a combined market share of 96 percent, which is the same as previous year.

Figure 8 Market share for mobile subscriptions, by operator 2022–2023 (percent)



2.6 M2M

There were 26.7 million SIM cards for M2M and IoT[3] during 2023, which is an increase of 15 percent. Revenues for M2M services increased to SEK 2 billion, or by 17 percent. Out of the 26.7 million SIM cards 7 million were used in Sweden and the rest outside of Sweden. Revenues from M2M SIM cards used in Sweden was 649 million during 2023. The largest M2M operator in Sweden, Telenor Connexion, reported 1.6 million M2M SIM cards, which is similar to the previous year.

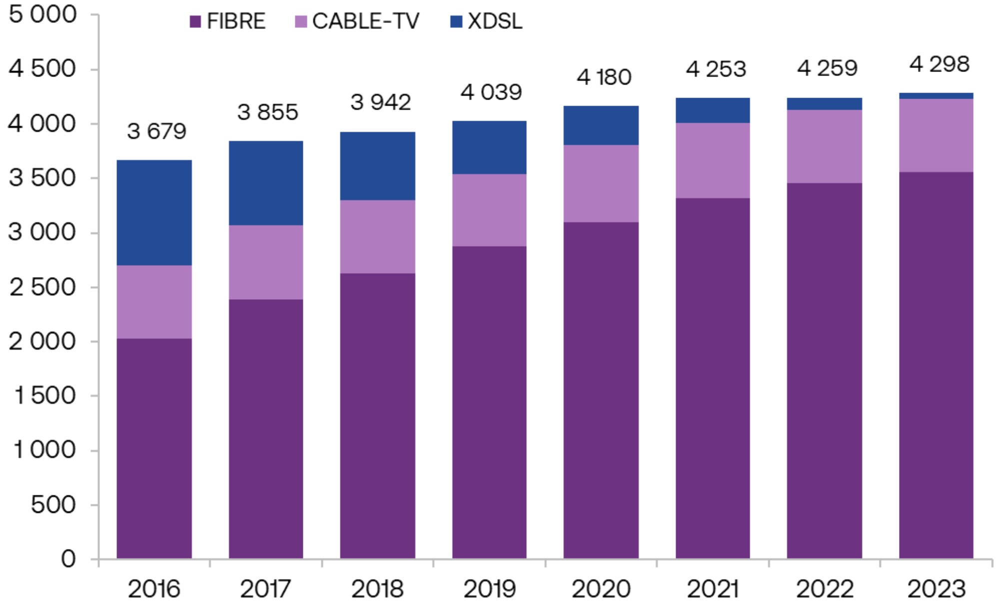
[3] Machine-to-machine (M2M) communication and the Internet of Things (IoT) are closely related, yet different. However, they are often used synonymously. M2M and IoT are data sharing technologies and data links that drive data transmission, but they are also different: IoT is a network of devices connected to the internet, while M2M is an automated communication process between two or more electronic systems (or machines/devices).

3. Fixed broadband

3.1 Subscriptions

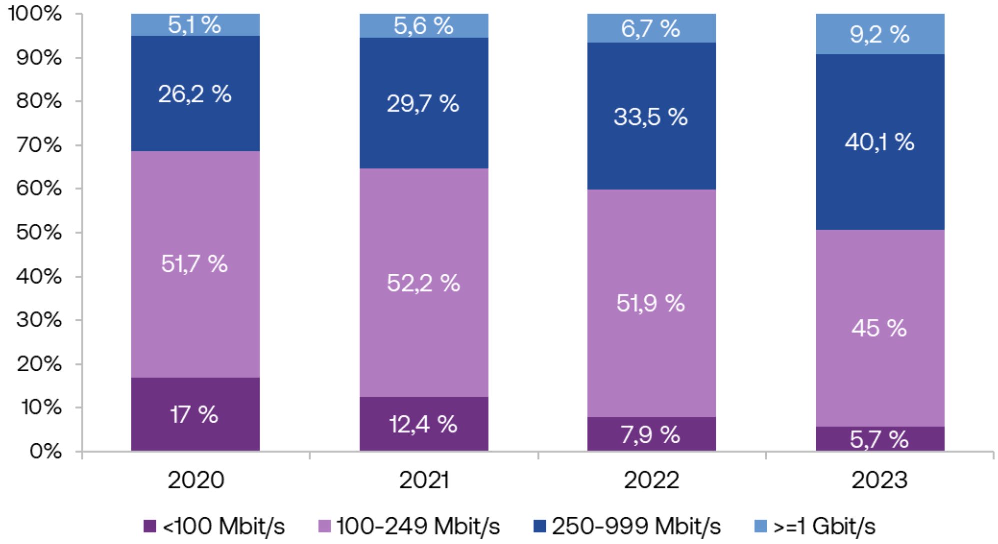
By the end of 2023, there were around 4.3 million fixed broadband subscriptions. Compared to the previous year this is almost unchanged. Looking at the different broadband technologies, the development has gone in different directions. Broadband via fibre increased by 3 per cent to 3.6 million subscriptions, which means that four out of five fixed broadband subscriptions are fibre. Cable TV was in essence unchanged and amounted to 672,000 subscriptions. The number of subscriptions via xDSL dropped by half, amounting to 53,000 at the end of 2023. The downward trend for xDSL is explained by the fact that the copper network is being phased out and replaced by other broadband technologies. In addition to the above-mentioned technologies, there were around 16,000 subscriptions via fixed radio, satellite and other access technologies.

Figure 9 Number of fixed broadband subscriptions 2015–2022 (thousands of subscriptions)



3.2 Speeds

Figure 10 Proportion of broadband subscriptions by download speed 2019–2022 (in percent)



There were 4.1 million subscriptions with download speeds of 100 Mbit/s or more, an increase of 3 percent. Out of all subscriptions in Sweden, 94 percent had a down speed of 100 Mbit/s or more in 2023, an increase from 92 percent in 2022. The number of subscriptions with 1 Gbit/s or more has also increased. These subscriptions were 38 percent more than previous year, totalling 397,000. Demand of 1 Gbit/s subscriptions increased more than previous years but on the whole demand for 1 Gbit/s is relatively low. Demand of subscriptions with 250 Mbit/s or more continues to grow.

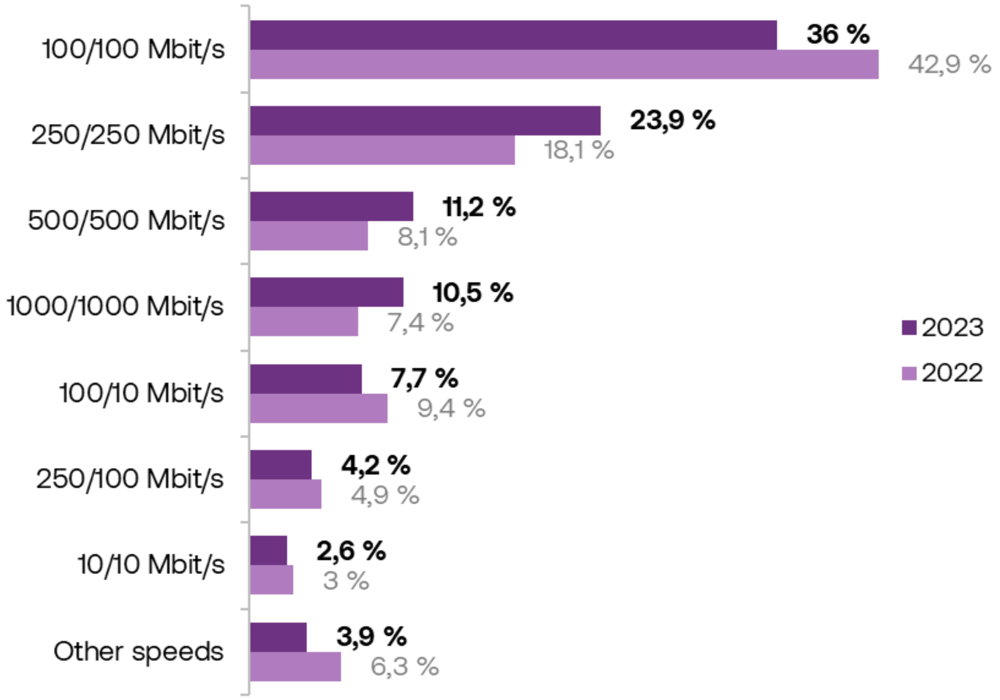
The number of households with a subscription of 100 Mbit/s or more reached 82 percent during 2023. The share of households with a subscription speed of 1 Gbit/s or more was 8 percent, compared to 6 percent the previous year. Subscriptions with a speed between 250–999 Mbit/s have increased quite much. In 2023 there were 1.7 million subscriptions in that interval, which corresponds to 40 percent of all fixed broadband subscriptions.

The number of fibre subscriptions with a download speed of 100 Mbit/s or more was 4.3 million, an increase of 3 percent. The number of subscriptions in the cable tv network with the same speed was 627,000, an increase of 3 percent compared to last year.

Upload speeds are also increasing for fixed broadband subscriptions. The number of fixed broadband subscriptions with an upload speed of 100 Mbit/s or more increased by 7 percent to 3.2 million subscriptions, representing three out of four fixed broadband subscriptions.

A breakdown at the subscription level for fibre shows that 100/100 (symmetrical speed) was the most common subscription in 2023. There were 1.5 million subscriptions in this category, representing 36 percent of fibre subscriptions.

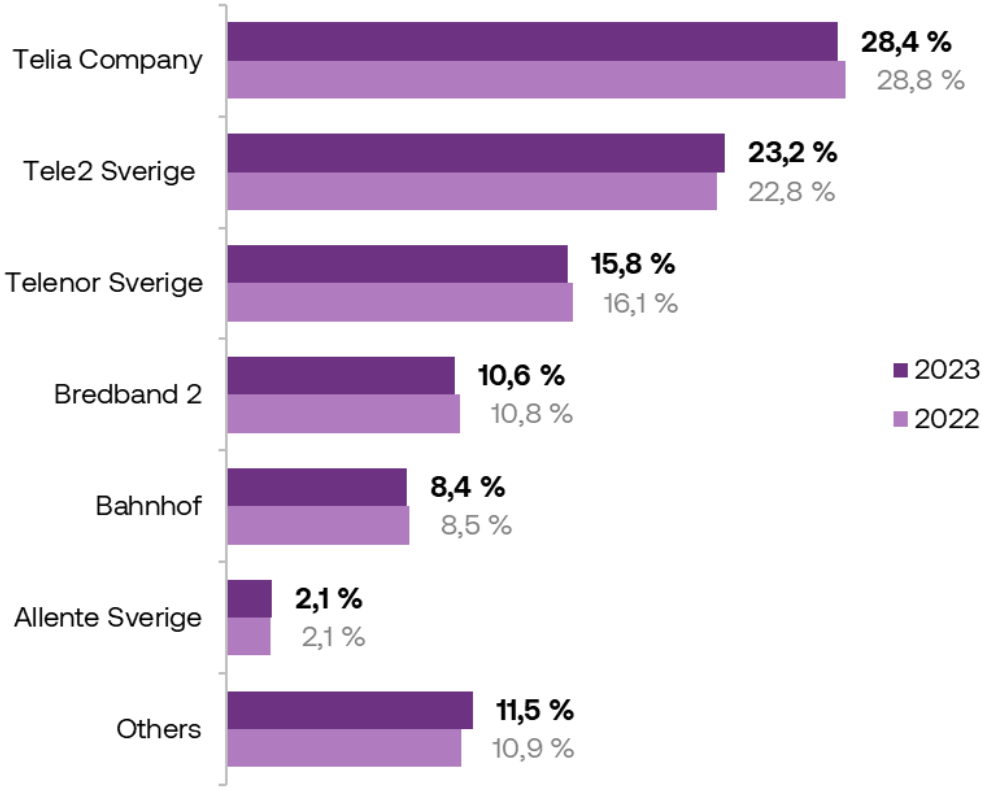
Figure 11 The most common subscriptions of fibre broadband, 2022–2023 (percent of all fibre subscriptions)



3.3 Market share

The market share of fixed broadband subscriptions includes subscriptions to xDSL, cable TV, fibre, as well as technologies such as satellite and fixed radio/radio links. The six largest operators, Telia, Telenor, Tele2, Bredband2, Bahnhof and Allente, accounted between them for 89 percent of fixed broadband subscriptions. The group Other, which includes about 200 operators, accounted for 10.9 percent.

Figure 12 Market share of fixed broadband per operator 2022–2023 (percent)



3.4 Revenues

Revenues for fixed broadband subscriptions totalled SEK 15.5 billion in 2023. This is 5 percent more than the previous year. Revenues from fibre subscriptions increased by 10 per cent, to SEK 12.8 billion. Revenues from broadband subscriptions via cable TV was 1.8 billion, which is about the same as last year, and revenues from xDSL subscriptions fell by 48 percent to SEK 506 million. Revenues from subscriptions via other access technologies totalled SEK 326 million.

Table 2 Revenues from fixed broadband 2020–2023, by technology (SEK million)

	2020	2021	2022	2023
FIBRE	9 591	10 608	11 637	12 848
CABLE TV	2 099	1 939	1 819	1 813
XDSL	1 954	1 482	979	506
Other access technologies	331	303	309	326
Total revenues	**13 976**	**14 333**	**14 744**	**15 494**

3.5 Collective connections

Approximately 1.2 million broadband subscriptions were reported to be collective connections, which is an increase of 6 percent. Collective connections are private internet subscriptions negotiated between an operator and e.g. landlords, tenant-owners' associations, housing associations or local residents' associations instead of directly with the end customer. Of the total number of private fibre subscriptions, 30 percent were collective connections

4. Fixed-line telephony

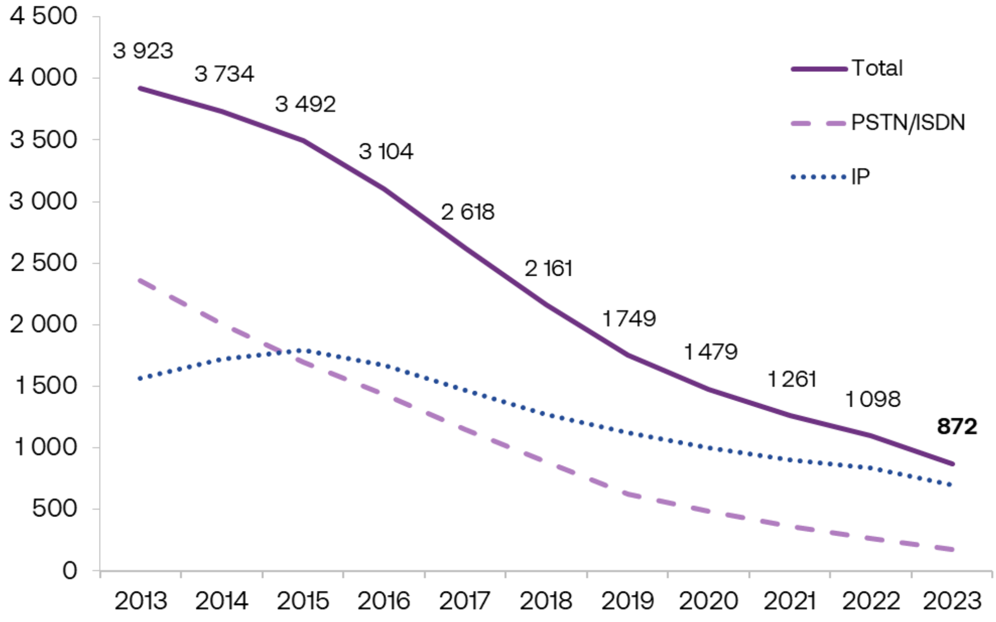
4.1 Subscriptions

The number of fixed- line telephony subscriptions continues to decrease and was 872,000 in 2023. This is a decrease of 26 percent compared to the previous year. Of fixed-line subscriptions 80 percent used IP-based access technology, that is fixed-line telephony by xDSL, cable television, fibre or other IP-based technology.

The division between private and business customers has historically been relatively uneven, where private customers made up the majority. However, during the last five years the share of private subscriptions decreased from 70 percent to 53 percent in the year 2023.

The share of households that has a subscription to fixed-line telephony was 9 percent 2023, compared to 12 percent in 2022. The share of households that has a subscription to fixed-line telephony using the copper network (PSTN/ISDN) was 2 percent in 2023.

Figure 13 Number of fixed-line telephony subscriptions 2013–2023, by technology (thousands of subscriptions)

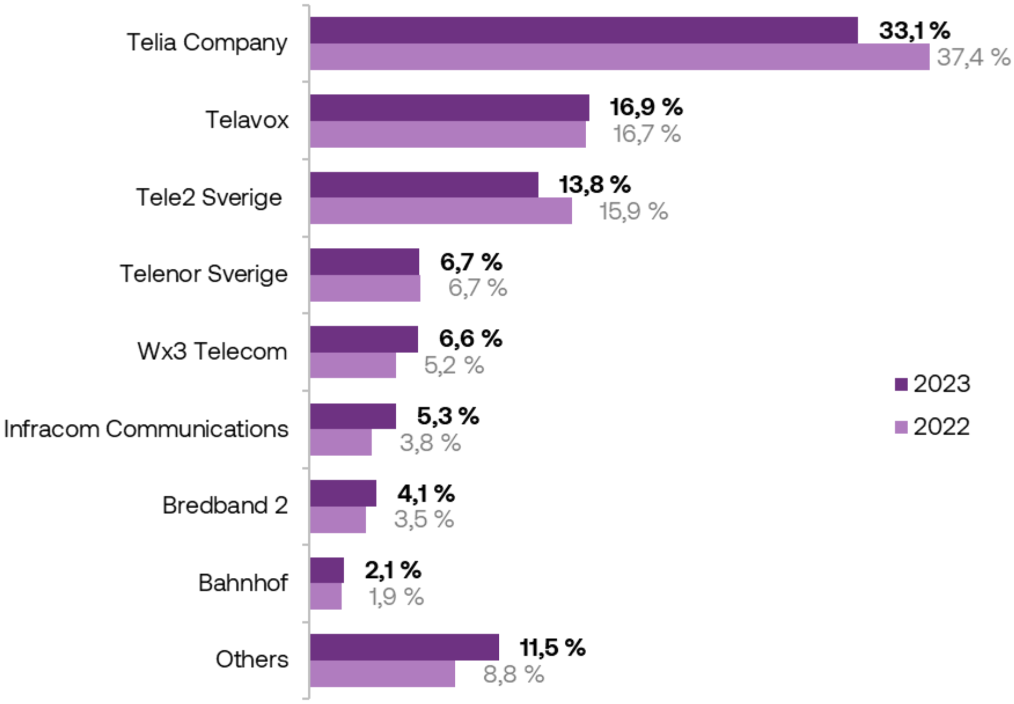


The number of fixed-line traffic minutes decreased with 7 percent, to 2.7 billion between 2022 and 2023. The majority of traffic minutes comes from business customers, where the number of traffic minutes decreased by 4 percent, to 2.4 billion. The number of traffic minutes for private customers decreased with 35 percent, to 313 million between 2022 and 2023.

4.2 Market share

Telia had the largest market share in terms of fixed-line telephony subscriptions, 33.1 percent. The next largest was Telavox with 16.9 percent, followed by Tele2 and Telenor, with 13.8 and 6.7 percent, respectively. Other operators with a market share over 1 percent were WX3 Telecom (6.6 percent), Infracom Communications (5.3 percent), Bredband2 (4.1 percent) and Bahnhof (2.1 percent). The group Other, which consists of almost 100 operators, totalled 11.5 per cent.

Figure 14 Market share in fixed-line telephony 2022–2023 (percent)



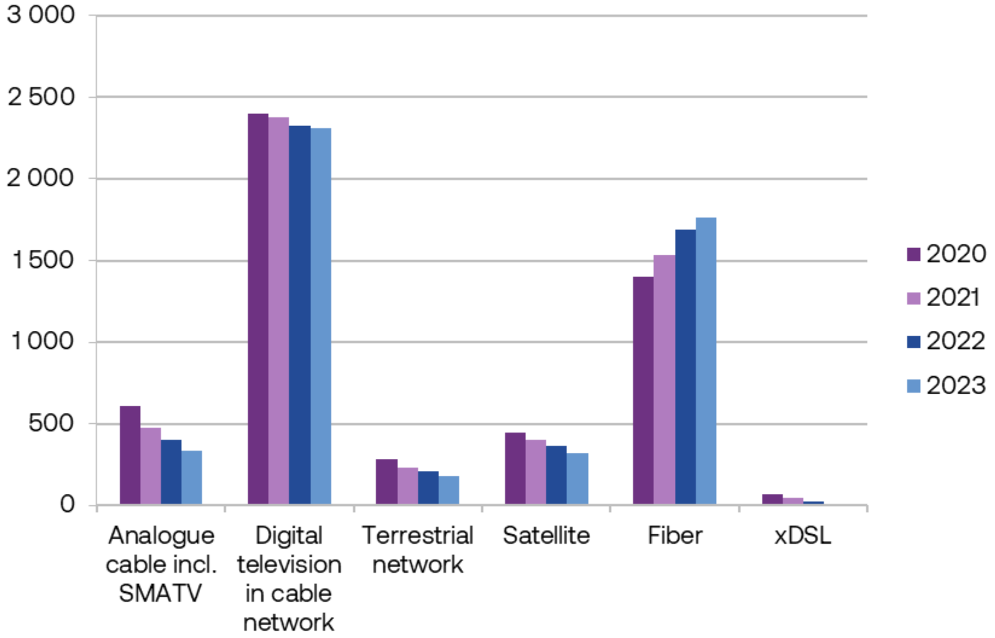
4.3 Revenues

Revenues for fixed-line telephony decreased with 18 percent, to SEK 2 billion during 2023. Revenues per subscription increased from SEK 2,150 to SEK 2,222 between 2022 and 2023. Revenues from private customers was SEK 1,603 per subscription and revenues from business customers was SEK 2,863 per subscription.

5. TV

5.1 Subscriptions

Figure 15 Number of pay-TV subscriptions 2020–2023 (thousands)



There were 4.2 million digital pay-TV subscriptions (via cable TV networks, satellite, terrestrial networks or broadband), the same as the previous year.

The number of subscriptions via digital cable TV networks totalled 1.9 million, which was the same level as a year earlier.[4] Many households in multi-family residential buildings now have a digital connection via the property owner that is included in the rent, as well as a digital subscription with expanded channel offerings.

The number of subscriptions to TV via fibre increased with 4 percent to 1.8 million. Subscriptions via terrestrial networks decreased by 16 percent to 175,000, while

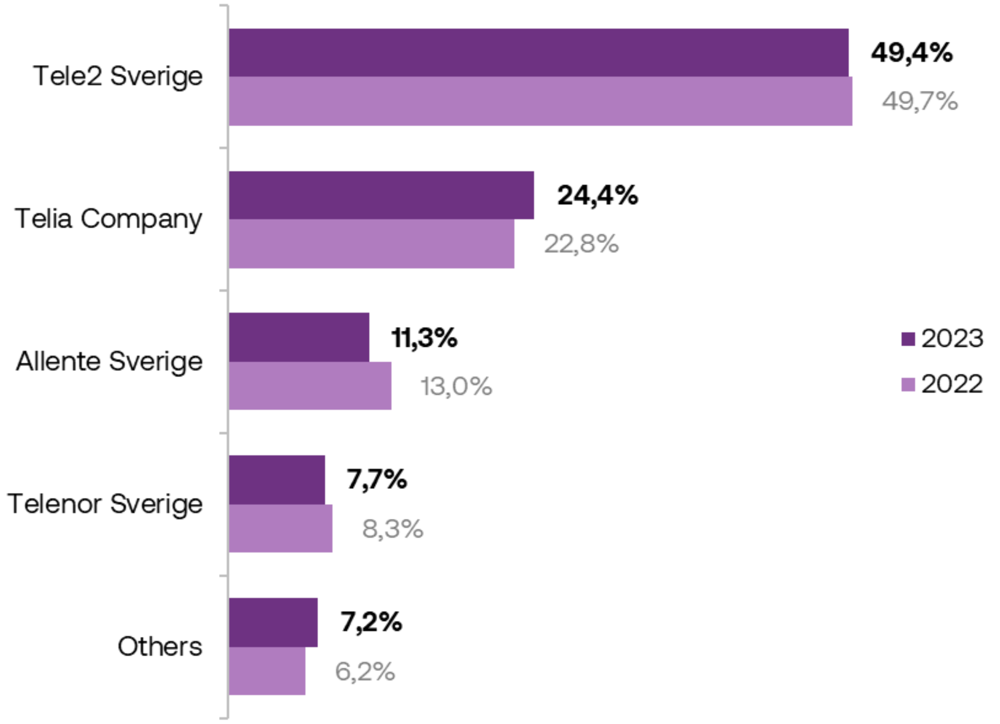
[4] From 2023 the calculation of analogue and digital cable television has changed to include all operators. This change has also been applied to previous years statistics of revenues and number of subscriptions to cable television. See the quality declaration (Kvalitetsdeklarationen) for more information.

satellite decreased by 11 percent to 322,000. The number of TV subscriptions via xDSL continued to decline, reaching around 10,000, a decrease of 57 per cent. The number of analogue cable TV subscriptions was 207,000, which was a decrease of 25 percent. Subscriptions via the SMATV network (via analogue or digital cable TV networks) were estimated at around 125,000, which is the same as last year.

5.2 Market share

The proportions for digital TV services are based on the number of pay-TV subscriptions broken down by digital distribution method. Between them, the four largest operators, Tele2, Telia Company, Telenor and Allente, accounted for 92.8 percent of subscriptions. The largest operator, Tele2, had a share of 49.4 percent which is similar to last year, while Telia increased from 22.8 to 24.4 percent.

Figure 16 Share of digital pay-TV subscriptions per operator 2022–2023 (percent)



5.3 Revenues

Revenues from basic package subscriptions related to pay-TV subscriptions amounted to SEK 7.3 billion, which is similar to the previous year. The reported revenues from supplementary package subscriptions increased by 4 percent and amounted to SEK 2.3 billion. The total revenues from TV services for basic and supplementary package subscriptions amounted to SEK 9.6 billion, which is an increase of 2 percent compared to one year earlier.

Table 3 Revenues from traditional pay-TV subscriptions 2020–2023 (SEK million)

	2020	2021	2022	2023
FIBRE	2 525	2 712	2 627	2 982
DIGITAL CABLE-TV	1 201	1 752	1 705	1 736
SATELLITE	2 097	1 800	1 790	1 587
TERRESTRIAL NETWORK	868	825	789	761
ANALOGUE CABLE-TV	866	229	226	188
XDSL	153	123	59	27
Total revenues	**7 710**	**7 444**	**7 197**	**7 279**

6. Other operational areas

6.1 Data communication services

Data communication services refers to services[5] used to e.g. connect office locations of companies and public authorities with various IP-based systems. Capacity services are provided between a fixed network access location at the end customers office location and a handover point. Revenues from dark fibre and capacity services to operators (wholesale customers) are not included in this data.

The total revenues from data communication services to end customers was SEK 2.6 billion during 2023, which is a decrease of 3 percent compared to 2022. Revenues from IP-VPN services decreased with 3 percent, to SEK 2.03 billion between 2022 and 2023. Revenues from capacity services also decreased during the same time period, but at a rate of 2 percent, to SEK 571 million.

Table 4 Revenues from data communication services to end customers (SEK million)

	2020	2021	2022	2023
IP–VPN	2 411	2 168	2 099	2 030
Capacity services	585	557	581	571
Total	**2 996**	**2 725**	**2 680**	**2 602**

6.2 Dark fibre and wavelengths

Dark fibre refers to fibre cable rented out without electronic equipment. Dark fibre is usually sold to wholesale customers, but in some cases also to end customers, such as larger companies or public authorities. Between 2022 and 2023, revenues from dark fibre connections to end customers and wholesale customers decreased by 2 percent, from SEK 5.8 billion to SEK 5.7 billion. The total combined revenues from Telia and STOKAB amounted to three fourths of all dark fibre revenues in 2023.

The optical light in a fibre can be divided into wavelengths, so that each wavelength functions as a channel. As with dark fibre, wavelength connections are mainly purchased by wholesale customers. In 2023, revenues from wavelength connections

[5] The services include VPN, Time based multiplexing (TDM) and Ethernet based capacity services.

to end customers and wholesale customers totalled SEK 327 million, an increase of 22 percent compared to the previous year.

Table 5 Revenues from dark fibre and wavelength connections (SEK million)

	2020	2021	2022	2023
Dark fibre	5 060	5 353	5 831	5 711
Wavelength connections	220	251	254	327

6.3 Bundled subscriptions

The number of bundled subscriptions decreased with 3 percent, to 1.4 million during 2023. The most usual combination is mobile telephony/mobile broadband + fixed broadband, and TV + fixed broadband. These two combinations together make up about two thirds of all bundled subscriptions in 2023.

Tele2, Telia, Telenor, Allente and Tre had together 98 percent of all bundled subscriptions. Tele2 alone has more than half of all bundled subscriptions in 2023.

Figure 17 Bundled subscriptions (thousands of subscriptions)