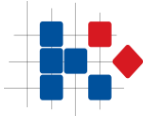


Croatian quarterly electronic communications market data for 1. quarter 2024.

Published: 18.9.2024

Data presented in this Summary of the quarterly electronic communications market indicators is based on statistical data HAKOM collects from all authorized operators quarterly. In certain cases, HAKOM cannot observe irregularities in reports/data until several consequent periods are compared. As a result, HAKOM emphasizes that minor discrepancies from actual data are possible. Also, the values of individual indicators in this report may deviate from the previously published values due to corrections and/or subsequently submitted reports by individual operators. HAKOM does not assume responsibility for the quality of data reports delivered by the operators.



Summary: Quarterly Key Data Report Q1 2024

First quarter of 2024 has seen the expected continued investments in fiber optic and cable network. That resulted in growth trend of investments in very high capacity networks (VHCN)

In the first quarter of 2024, the total revenue of the electronic communications market amounted to EUR 423,630,982, which is an increase of 4.62 percent compared to Q1 2023. Revenues from mobile network services are 5.76 percent higher, and revenues from fixed network services increased by 2.59 percent

The total number of mobile telephony service users is 2.22 percent higher compared to the same period last year. In comparison, total revenues from mobile telephony rose by 10.77 percent despite a small percentage drop in outgoing traffic (2.78 percent). At the same time, roaming traffic is lower by 7.33 percent

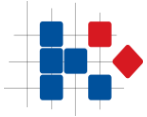
In Q1 2024, the total number of fixed telephony service users, traffic, and revenues continued to decline. Compared to the same period last year, the number of users was lower by 1.72 percent, total outgoing traffic decreased by 15.43 percent, and revenues from telephone services in the fixed networks were lower by 5.20 percent

In the first quarter of 2024, the number of fibre broadband lines increased by 35.75 percent, while the number of copper broadband lines decreased by 5.46 percent compared to the same period last year

The share of VHCN broadband lines in the total number of broadband lines in the fixed network is 40.55 percent. Additionally, the proportion of broadband lines with speeds exceeding 100 mbit per second increased to 41.93 percent.

The pay television market grew in total revenues and connections in the first quarter of 2024. Revenues were 3.89 percent higher, and connections were 1.46 percent higher than in the same period in 2023. Connections via IPTV technology continued to be the most common technology used (54.10 percent)

In the first quarter of 2024, there was a slight decrease in the number of connection points via Ethernet technology on the retail market of dedicated capacity, but it is still the most represented technology through which dedicated capacity is realized

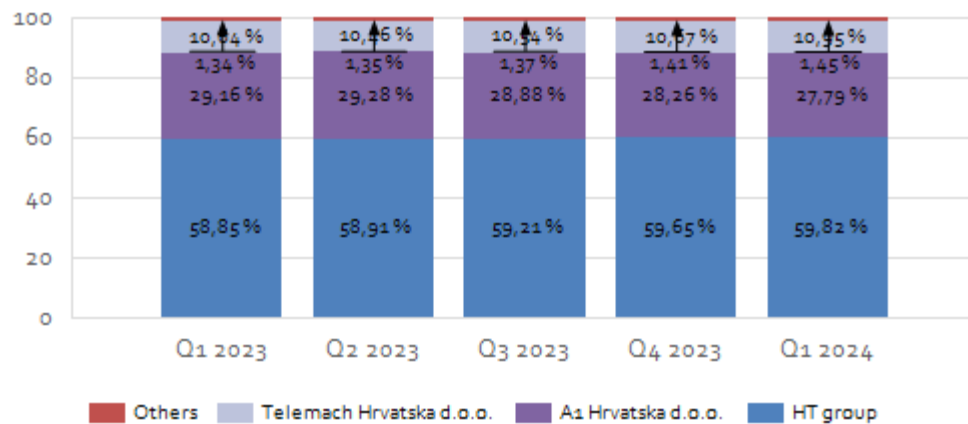


CROATIAN QUARTERLY ELECTRONIC COMMUNICATIONS MARKET DATA

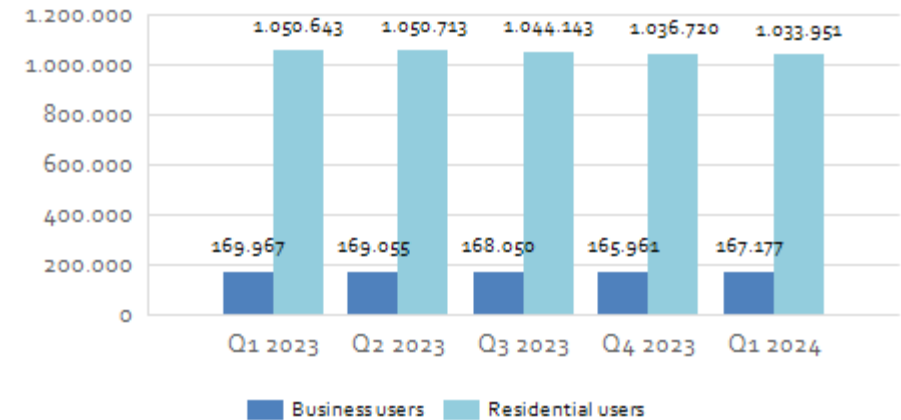
1. Quarter 2024.

Fixed telephony services	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Total fixed telephony services revenue	29.406.568,94€	-6,62 %	-5,19 %
Retail revenue	27.522.818,05€	-4,22 %	-4,46 %
Wholesale revenue	1.883.750,89€	-31,69 %	-14,70 %
Total number of fixed lines*	1.201.128	-0,13 %	-1,60 %
Number of subscribers	1.109.776	-0,48 %	-1,72 %
Fixed originating voice minutes (min)**	250.303.424	-2,67 %	-15,43 %

Fixed telephony service operator's market shares by number of lines

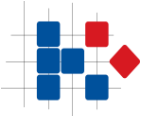


Fixed telephony lines



*CPS (carrier pre-selection) subscribers are included

**Includes all types of calls (local, national, international calls, calls to mobile networks and calls to VAS numbers)

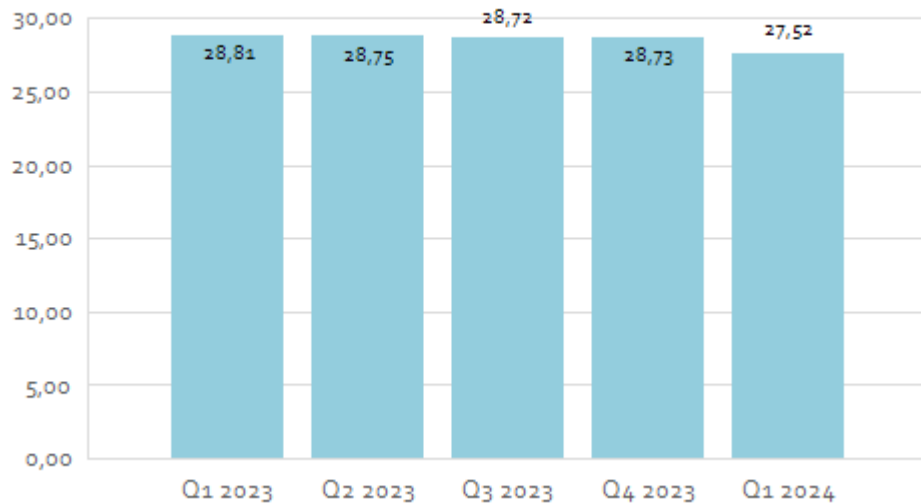


CROATIAN QUARTERLY ELECTRONIC COMMUNICATIONS MARKET DATA

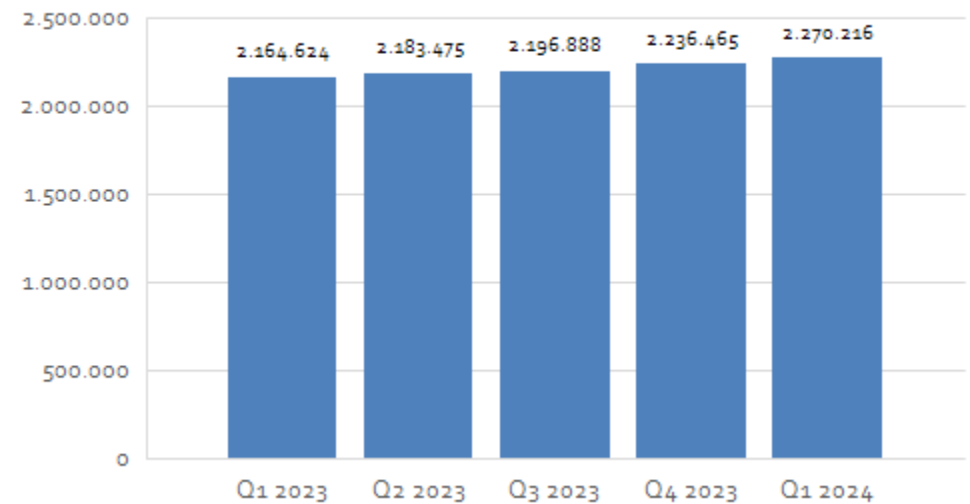
1. Quarter 2024.

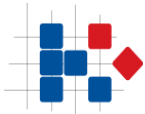
Fixed telephony services - bundles	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Stand-alone – fixed voice telephony subscribers	161.246	-4,55 %	-12,93 %
Number of bundled services subscribers – 2D	247.741	0,07 %	0,60 %
Number of bundled services subscribers – 3D	361.683	-0,46 %	-0,61 %
Number of bundled services subscribers – 4D	248.733	1,80 %	5,01 %

Fixed telephony service retail revenue (millions EUR)



Fixed telephony ported numbers





CROATIAN QUARTERLY ELECTRONIC COMMUNICATIONS MARKET DATA

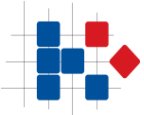
1. Quarter 2024.

Mobile telephony services	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Total mobile telephony services revenues	136.794.048,68€	-9,72 %	4,00 %
Retail revenue	124.184.635,60€	-8,41 %	10,77 %
<u>Retail revenue - Residential</u>	89.451.732,27€	-11,05 %	9,61 %
<i>Prepaid subscribers</i>	20.160.199,15€	-15,14 %	-4,73 %
<i>Postpaid subscribers</i>	69.291.533,12€	-9,78 %	14,63 %
<u>Retail revenue - Business</u>	34.732.903,32€	-0,83 %	13,89 %
Wholesale revenue	12.609.413,08€	-20,88 %	-35,09 %
Total number of active subscribers (3G, 4G, 5G)*	4.553.953	-0,19 %	2,22 %
Residential	3.713.203	-0,54 %	1,60 %
<i>Prepaid subscribers</i>	1.464.488	-3,58 %	-5,78 %
<i>Postpaid subscribers</i>	2.248.715	1,55 %	7,06 %
Business	840.750	1,36 %	5,06 %
Mobile penetration**	117,62 %	-0,19 %	2,22 %
Mobile originating voice minutes (min)***	2.680.717.263	-0,43 %	-2,78 %
International roaming traffic - own subscribers (min)	128.210.536	-0,25 %	-17,75 %
International roaming traffic - foreign subscribers (min)	85.116.675	-15,90 %	14,52 %
Total SMS sent	205.535.311	-4,18 %	-17,66 %
Total MMS sent	1.252.896	-20,37 %	-10,91 %

*Definition of active pre-paid subscriber: Subscriber who has used a mobile service or refilled the account in the last 90 days

**Mobile penetration has been calculated according to the last census of population from 2021

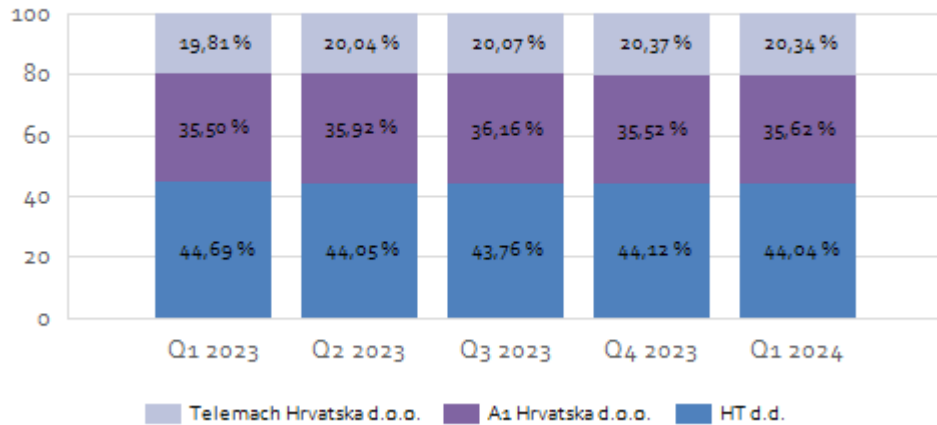
***Includes all types of calls (local, national, international calls, calls to mobile networks and calls to VAS numbers)



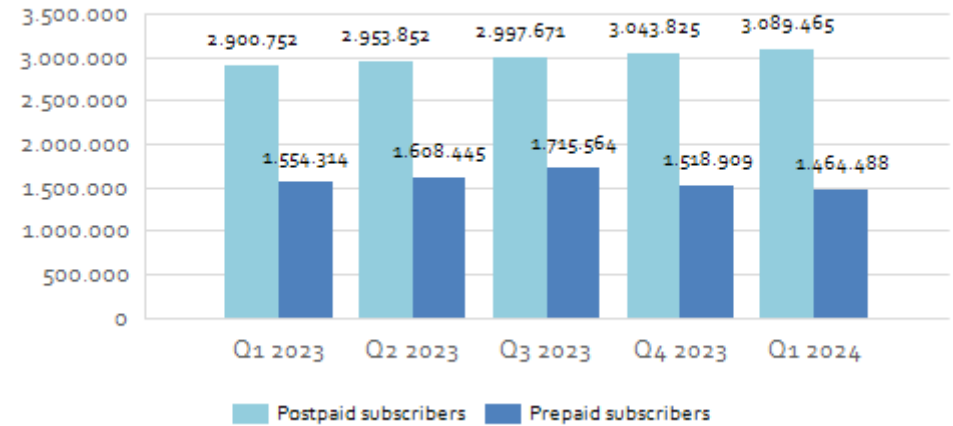
CROATIAN QUARTERLY ELECTRONIC COMMUNICATIONS MARKET DATA

1. Quarter 2024.

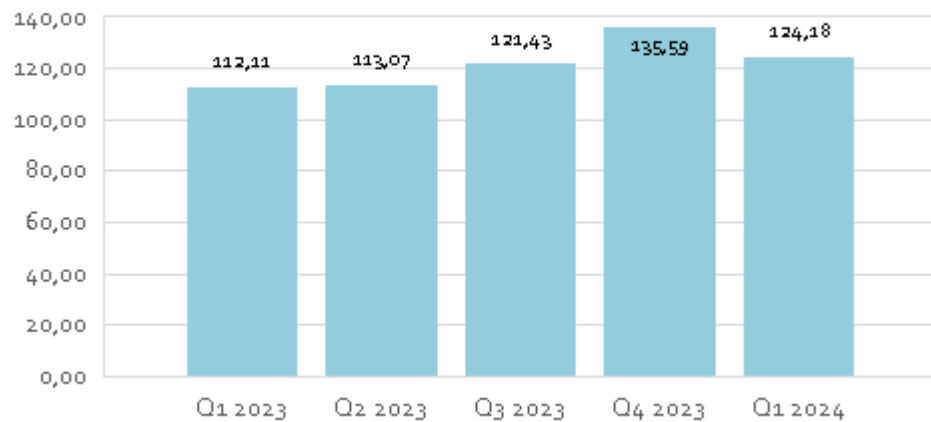
Mobile telephony operator's market shares by number of subscribers



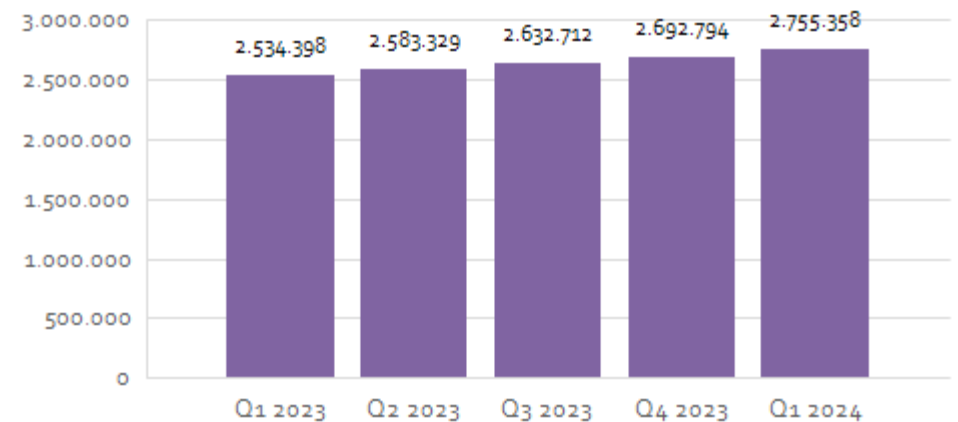
Mobile telephony service number of subscribers by quarter

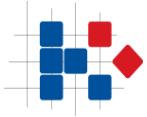


Mobile telephony service retail revenue (millions EUR)



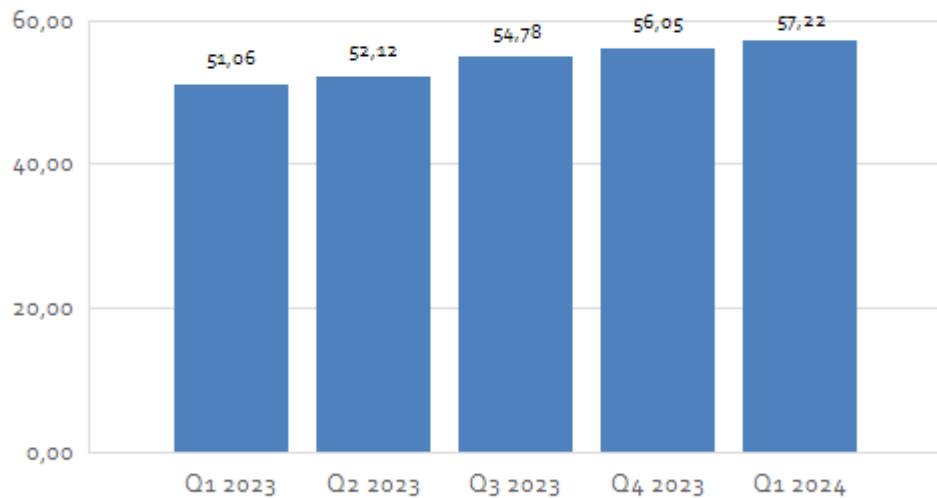
Mobile telephony ported numbers



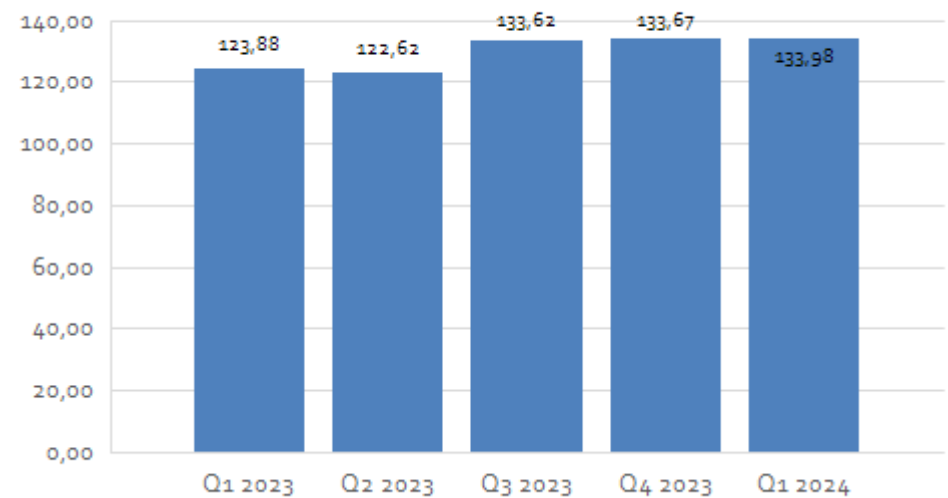


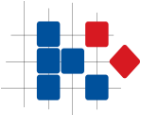
Internet access service (retail level) - revenues and total subscriptions	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Total broadband Internet access services revenues	191.442.539,33€	0,79 %	9,39 %
Fixed broadband Internet access service revenue	57.220.631,06€	2,09 %	12,08 %
Mobile broadband Internet access service revenue	133.978.754,82€	0,23 %	8,15 %
Satellite access revenue	243.153,45€	10,80 %	219,65 %
Total number of broadband subscriptions (lines)	6.584.669	0,50 %	3,53 %

Fixed broadband Internet access service retail revenues (millions EUR)



Mobile broadband Internet access service retail revenues (millions EUR)





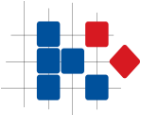
CROATIAN QUARTERLY ELECTRONIC COMMUNICATIONS MARKET DATA

1. Quarter 2024.

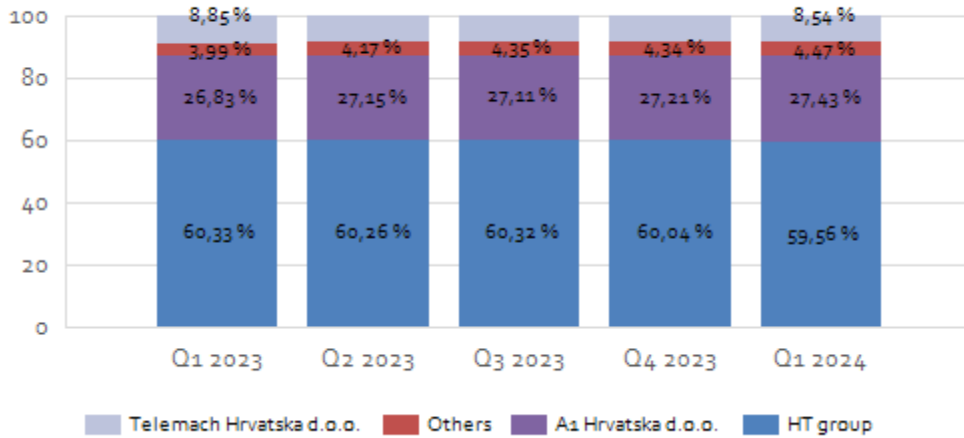
Internet access services (retail level) - fixed broadband network	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Fixed broadband Internet access service subscriptions (lines)*	1.120.891	1,05 %	3,50 %
<u>Copper access network</u>	618.964	-1,62 %	-5,46 %
<i>Access over own copper access network</i>	492.027	14,75 %	11,79 %
<i>xDSL based broadband using full local-loop unbundling</i>	40.030	-2,86 %	-14,60 %
<i>xDSL based broadband using shared access</i>	2	-33,33 %	-71,43 %
<i>Bitstream access over copper access network (xDSL)</i>	86.905	-45,40 %	-48,18 %
<u>Fiber optic access network</u>	283.109	8,59 %	35,03 %
<i>Accesses over own fiber access network</i>	248.840	20,78 %	49,84 %
<i>Fiber unbundling access</i>	17.491	7,00 %	28,79 %
<i>Bitstream access over fiber optic access network</i>	16.778	-56,25 %	-44,10 %
<u>Cable access network</u>	172.124	-0,77 %	-2,71 %
<u>Fixed wireless access (FWA)</u>	36.695	1,02 %	7,70 %
<u>Satellite access</u>	2.081	20,29 %	185,07 %
<u>High Quality Access</u>	7.918	0,99 %	15,24 %
<u>Fixed broadband traffic (TB)</u>	990.212	16,97 %	44,42 %

*Broadband access service at fixed location via mobile network is not included - it is included in the mobile broadband table.

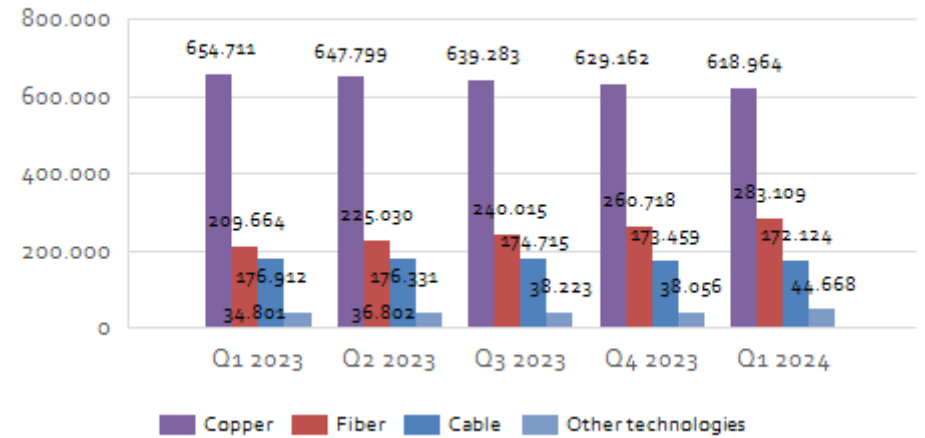
Internet access services (retail level) - bundles	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Number of standalone internet access service subscribers	4.536.240	0,24 %	3,15 %
Number of bundled services subscribers – 2D	394.976	0,20 %	2,11 %
Number of bundled services subscribers – 3D	418.910	-0,47 %	0,49 %
Number of bundled services subscribers – 4D	248.733	1,80 %	5,01 %



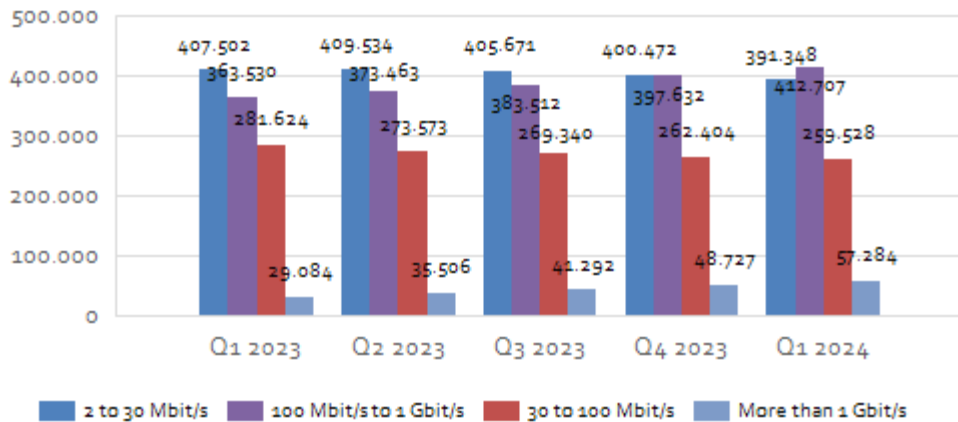
Fixed broadband Internet access service operator's market shares by number of lines



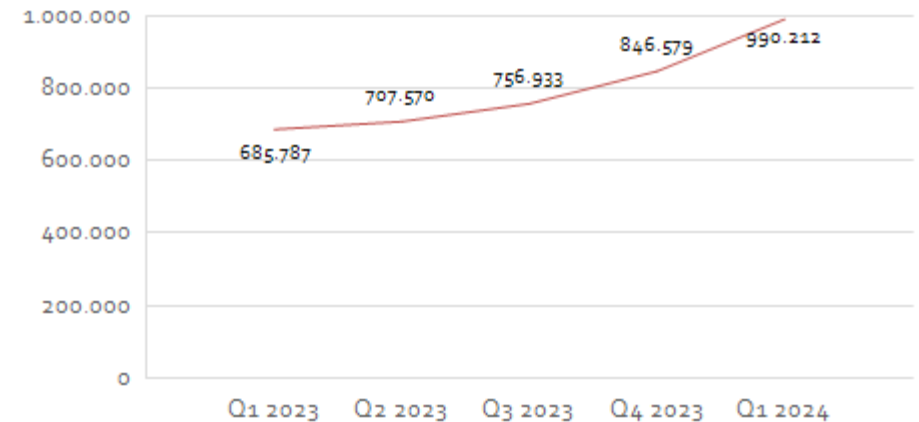
Fixed broadband Internet access service by technologies

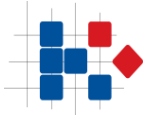


Fixed broadband Internet access service by download speeds



Total fixed broadband data traffic (TB)



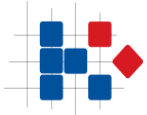


CROATIAN QUARTERLY ELECTRONIC COMMUNICATIONS MARKET DATA

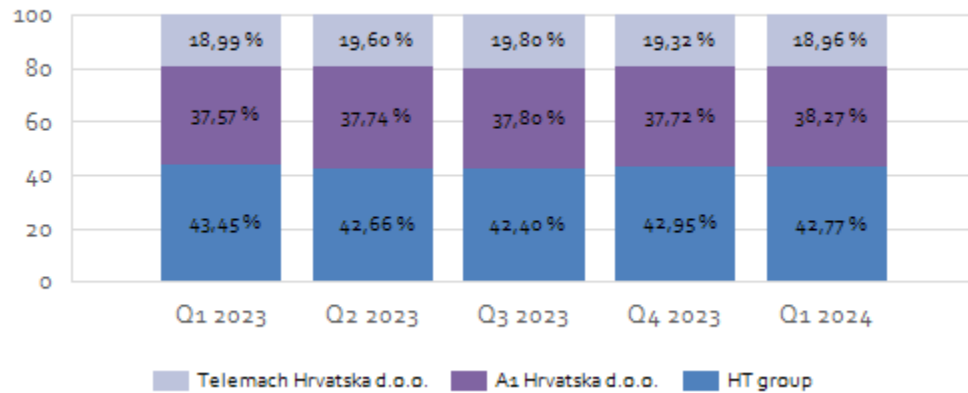
1. Quarter 2024.

Internet access services (retail level) - mobile broadband network	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Mobile broadband Internet access service subscriptions (3G, 4G, 5G etc)*	5.463.778	0,38 %	3,54 %
<u>Residential (3G and 4G)</u>	3.112.032	-5,91 %	-14,87 %
<i>Dedicated data subscriptions (cards/modems/keys etc.)</i>	153.943	-9,22 %	8,65 %
<i>Mobile phones*</i>	2.770.823	-5,86 %	-16,26 %
<i>M2M</i>	2	0,00 %	-33,33 %
<i>Broadband access at fixed location via mobile network</i>	187.264	-3,78 %	-8,57 %
<u>Residential (5G)</u>	980.092	19,85 %	178,61 %
<i>Dedicated data subscriptions (cards/modems/keys etc.)</i>	22.922	44,39 %	1.283,34 %
<i>Mobile phones</i>	943.065	19,27 %	172,66 %
<i>M2M</i>	0	#NA	#NA
<i>Broadband access at fixed location via mobile network</i>	14.105	26,17 %	231,80 %
<u>Business (3G and 4G)</u>	1.102.500	-0,41 %	-5,20 %
<i>Dedicated data subscriptions (cards/modems/keys etc.)</i>	130.773	-1,52 %	1,01 %
<i>Mobile phones</i>	622.667	-5,53 %	-13,13 %
<i>M2M</i>	299.105	12,90 %	11,98 %
<i>Broadband access at fixed location via mobile network</i>	49.955	-0,49 %	0,66 %
<u>Business (5G)</u>	269.154	27,79 %	151,80 %
<i>Dedicated data subscriptions (cards/modems/keys etc.)</i>	17.332	24,79 %	127,96 %
<i>Mobile phones</i>	218.068	28,02 %	161,20 %
<i>M2M</i>	31.908	28,96 %	113,00 %
<i>Broadband access at fixed location via mobile network</i>	1.846	11,68 %	125,12 %
<u>Mobile broadband traffic (TB)</u>	354.846	7,40 %	25,25 %

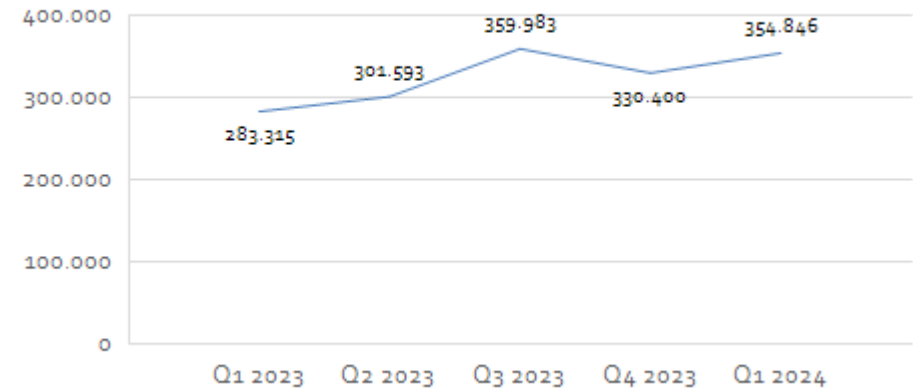
*Number of subscribers which have made an internet mobile connection in the last 90 days through mobile phones



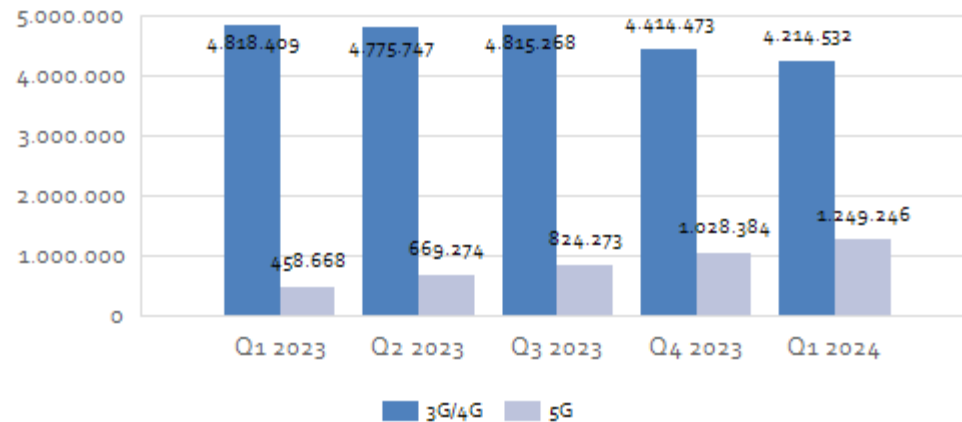
Mobile broadband Internet access service operator's market shares by number of subscriptions



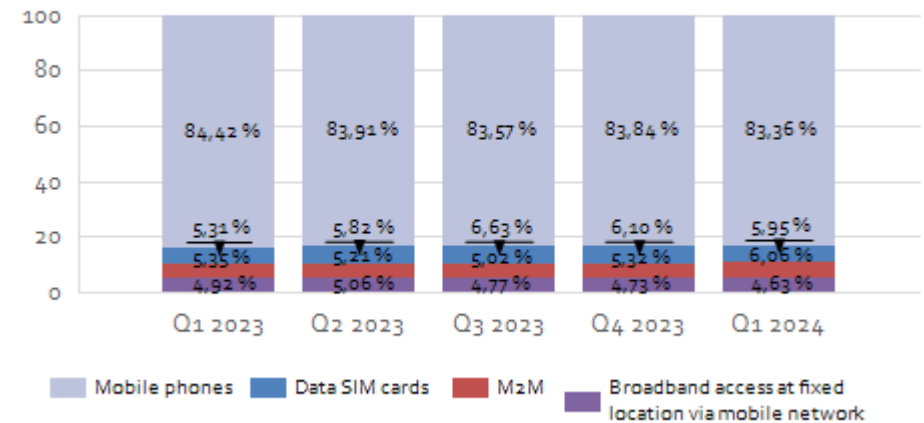
Total mobile broadband data traffic (TB)

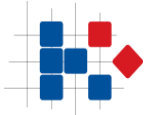


Mobile broadband Internet access service subscriptions by technologies

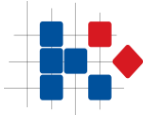


Mobile broadband Internet access service subscriptions by type of access

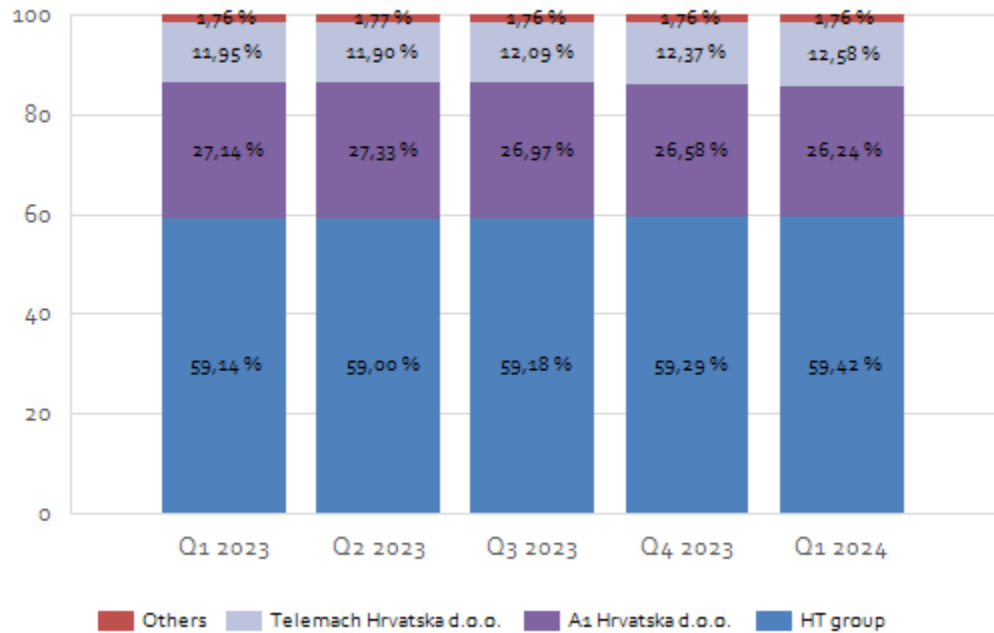




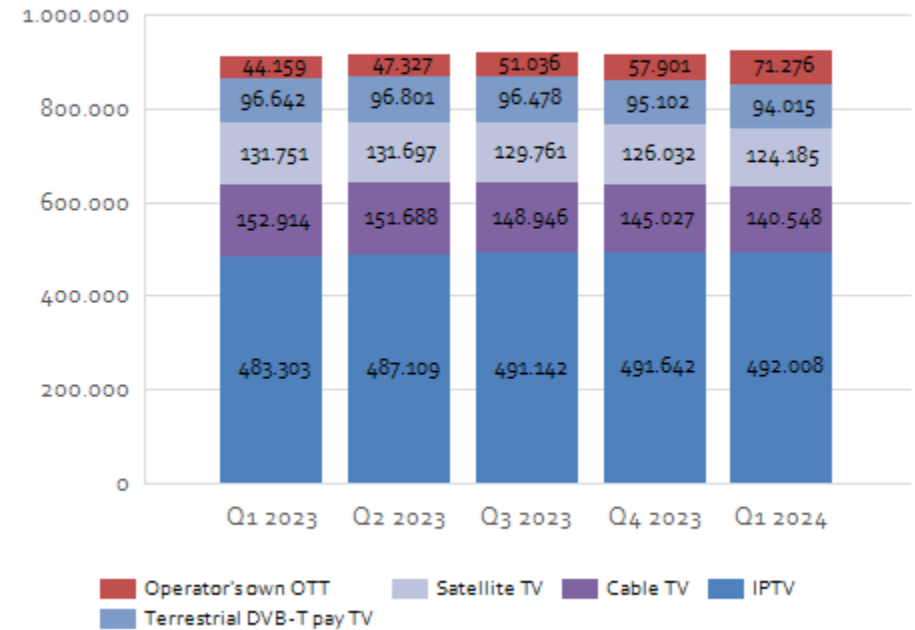
Television services	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Television services revenues	32.928.397,91€	0,03 %	3,89 %
Cable TV revenue	4.859.130,27€	-3,27 %	-13,89 %
IPTV revenue	19.602.654,09€	-0,11 %	7,73 %
Satellite TV revenue	3.915.022,80€	-2,67 %	-0,19 %
Digital terrestrial TV revenue	3.063.466,99€	-0,58 %	-1,43 %
Own OTT service revenue	1.488.123,76€	27,54 %	80,30 %
Total number of pay-TV subscriptions (lines)	922.032	0,69 %	1,46 %
Cable reception	140.548	-3,09 %	-8,09 %
<i>Residential</i>	136.967	-3,12 %	-8,20 %
<i>Business</i>	3.581	-1,92 %	-3,58 %
IPTV	492.008	0,07 %	1,80 %
<i>Residential</i>	465.302	0,05 %	1,73 %
<i>Business</i>	26.706	0,56 %	2,99 %
Satellite reception (SAT TV)	124.185	-1,47 %	-5,74 %
<i>Residential</i>	115.173	-1,69 %	-5,95 %
<i>Business</i>	9.012	1,45 %	-2,95 %
Digital terrestrial reception – pay TV	94.015	-1,14 %	-2,72 %
<i>Residential</i>	93.036	-1,17 %	-2,83 %
<i>Business</i>	979	1,87 %	8,78 %
Own OTT service	71.276	23,10 %	61,41 %
<i>Residential</i>	62.749	25,98 %	72,90 %
<i>Business</i>	8.527	5,35 %	8,39 %



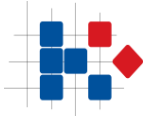
Pay TV operator's market shares by number of subscriptions



Pay TV subscriptions by technologies



Television services - bundles	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Stand-alone – TV subscribers	240.617	-0,55 %	-1,27 %
Number of bundled services subscribers – 2D	84.992	-1,26 %	-0,99 %
Number of bundled services subscribers – 3D	300.650	-0,52 %	0,48 %
Number of bundled services subscribers – 4D	248.733	1,80 %	5,01 %

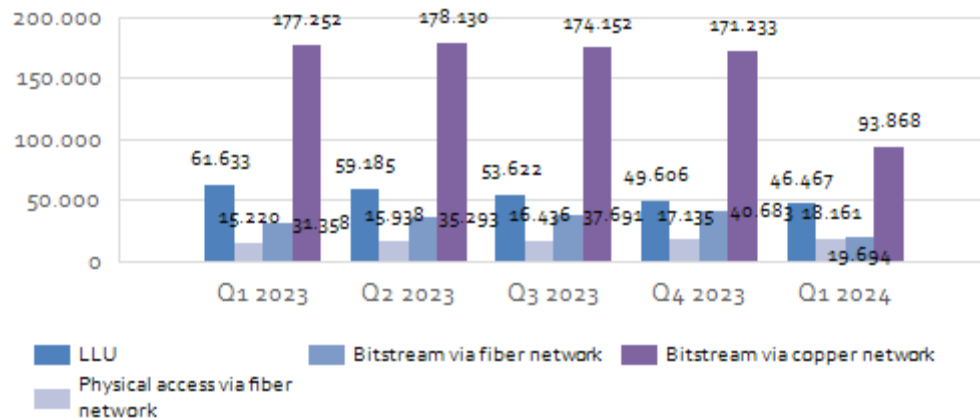


CROATIAN QUARTERLY ELECTRONIC COMMUNICATIONS MARKET DATA

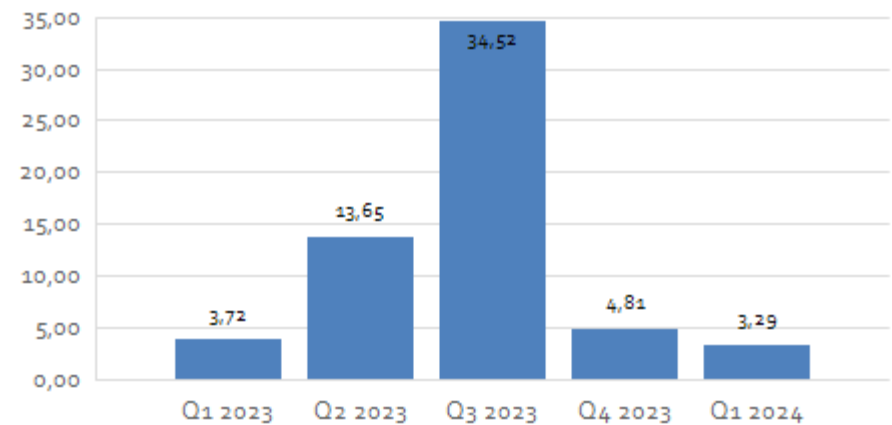
1. Quarter 2024.

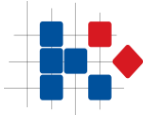
Wholesale broadband access	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Wholesale broadband access services via copper network revenues	3.253.196,99€	-39,30%	-41,42 %
Wholesale broadband access services via fiber network revenues	1.087.900,54€	-38,79 %	-20,29 %
Data roaming revenues	3.291.934,65€	-31,52 %	-11,59 %
Physical wholesale access via copper network(LLU)-number of lines	46.467	-6,33 %	-24,61 %
<i>Bitstream</i> wholesale access via copper network-number of lines	93.868	-45,18 %	-47,04 %
Physical wholesale access via fiber network (unbundled fiber at distribution node) - number of lines	18.161	5,99 %	19,32 %
<i>Bitstream</i> wholesale access via fiber networks - number of lines	19.694	-51,59 %	-37,20 %

Wholesale broadband access by type of service



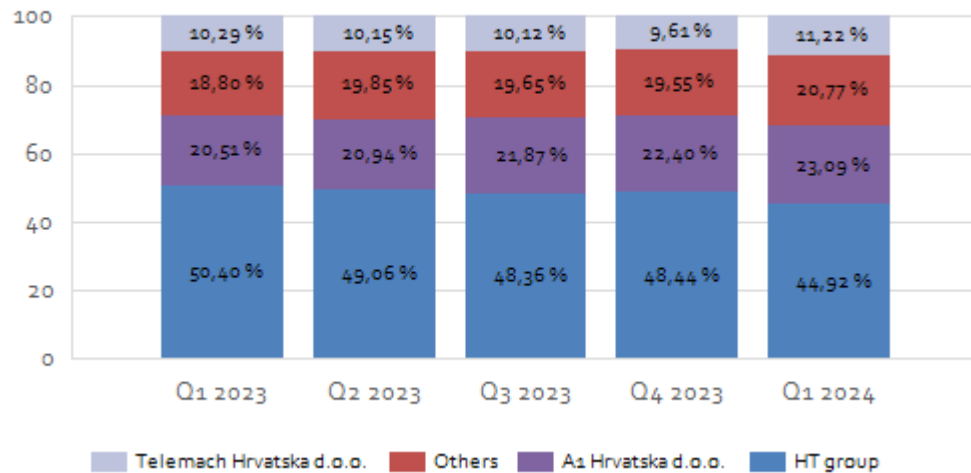
Data roaming revenues (millions EUR)



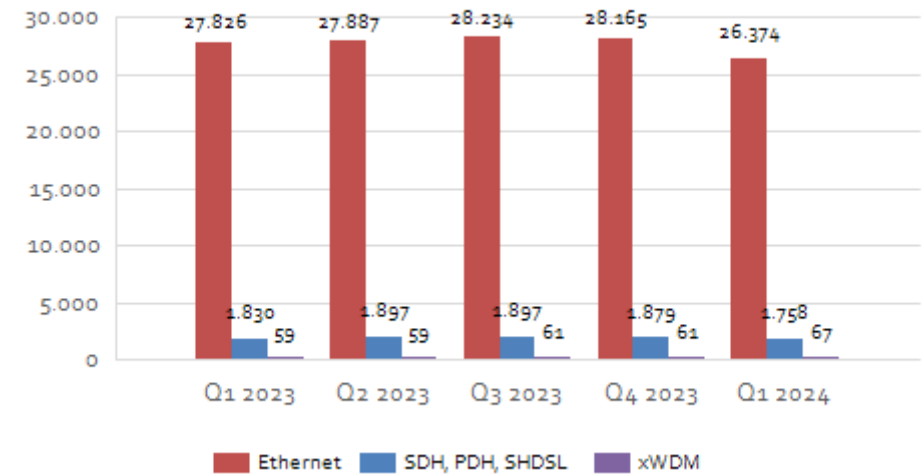


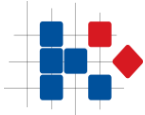
Dedicated capacity services (high-quality access) - retail level	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Traditional digital lines (SDH, PDH, (S)HDSL revenue	806.400,54€	9,03 %	26,50 %
Ethernet technology services revenue	11.177.134,14€	-3,27 %	-3,50 %
xWDM technology services revenue	445.363,48€	35,70 %	35,70 %
"Dark fiber" services revenue	486.122,75€	21,14 %	0,91 %
Total number of connection points of traditional digital lines (SDH, PDH, (S)HDSL)	1.758	-6,44 %	-3,93 %
Total number of Ethernet technology connection points	26.374	-6,36 %	-5,22 %
Total number of xWDM technology connection points	67	9,84 %	13,56 %
Total length of fiber as a part of "dark fiber" service (km)	6.164	28,82 %	30,07 %

Dedicated capacity market operator's shares by number of connection points



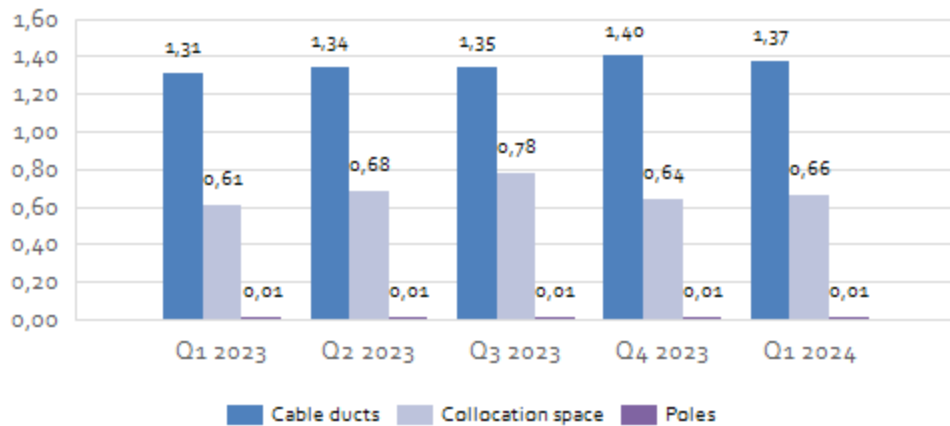
Dedicated capacity market connection points by technologies





Shared use of electronic communications infrastructure	Q1 2024	% Change Q1 2024 - Q4 2023	% Change Q1 2024 - Q1 2023
Cable duct system shared use revenue	1.371.594,52€	-2,07 %	4,44 %
Poles for installation of aerial network cables rental revenue	12.349,96€	18,01 %	37,68 %
Colocation spaces rental revenue	659.612,04€	3,38 %	8,25 %
Total length of shared use cable duct systems (km)	19.137	-3,65 %	4,24 %
Pipes length, 63-110 mm diameter (km)	0	#NA	#NA
Pipes length, 50 mm diameter (km)	0	#NA	#NA
Pipes length, 20-40 mm diameter (km)	6.181	-7,99 %	-6,93 %
Pipes length, 3-16 mm diameter (km)	12.956	-1,42 %	10,57 %
Total number of rented poles for the installation of aerial network cables	3.671	10,11 %	38,42 %

Shared use of electronic communications infrastructure revenues (millions EUR)



Total length of shared cable ducts (km)

